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Evaluation of Workplace Violence Prevention Intervention

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List of Terms and Abbreviations

Addiction Treatment Centers (ATC)
Correctional Officers (COs)
Employee Assistance Programs (EAP)
Fellows of the American Academy of Nursing (FAAN)
Full-time equivalents (FTE)
Masters in Public Health (MPH)
No-Cost Extension (NCE)
Occupational Safety and Health Administration's (OSHA)
Principle Investigator (PI)
Project Advisory Group (PAG)
Psychiatric center (PC)
Public Employee Federation (PEF)
Workplace Violence Prevention (WPV)
Workplace Violence Program Quality (WVPQ) audit tool

Abstract

Background:

Workplace violence is well recognized, albeit inconsistently addressed, in the acute mental health setting. Workplace violence is also endemic in the social service workplace, yet is often not recognized as a hazard amenable to prevention.

Purpose:

The ultimate goal of this project was to reduce violence toward staff working in social service settings that treat and care for individuals who are mentally ill, mentally or developmentally disabled, addicted to drugs, alcohol, and/or other substances and those who exhibit a combination of these conditions.

Methods:

To achieve this goal, we conducted an assessment of risk factors for violence and occurrences of violence in a sample of Social Service Agency workplaces. Upon completion of qualitative studies in a number of agencies and a comprehensive risk assessment in the Addictions Treatment setting, we developed and implemented a comprehensive violence prevention program in six of thirteen residential Addiction Treatment Centers (ATCs) in one Eastern U.S. State, with the remaining seven centers in the State serving as a comparison group. The intervention was developed in concert with federal OSHA Guidelines for violence prevention. To evaluate the impact of the project intervention, we pilot tested a violence prevention process improvement checklist to measure early indicators of the impact on workplace violence prevention efforts.

Results:

Results from this research project include both process and formative outcomes. In more than 40 focus groups conducted across a range of social service workplaces, we documented a number of common risk factors for violence. Across settings, staff reported 1) patient populations with higher levels of acuity and complexity, with many staff feeling ill-equipped to meet the complex social and psychological needs of their clients; 2) inadequate support and resources for early intervention and management of patients resulting in costly and ineffective crisis interventions; 3) inadequate information on the risk factors/history of new patients leading to the potential for highly dangerous encounters; and 4) inadequate staffing to meet client/patient needs resulting in mandatory overtime and staff burnout; 5) powerful regulatory requirements for patient safety which put workers' safety at risk. The quantitative and semi-quantitative data generated from our work in addiction treatment centers found a significant inverse relationship between a strong violence prevention safety culture and physical violence at baseline. Results from the implementation and evaluation of violence prevention programming across the ATCs found that post-intervention a1113 ATCs reported improvements over the previous four years; but with the six intervention ATCs making somewhat greater improvements in violence prevention programming as compared with the seven comparison ATCs. However, since this Agency has been a leader in ongoing violence prevention efforts among the state's various health care and social service agencies, it is difficult to parse the relative impact of the grant-supported efforts and those associated with ongoing process improvement measures.

Conclusions and Implications:

The social service workplace presents formidable challenges to staff safety as a function of the complexity of the clients/ patients they serve, many of whom suffer from a combination of addiction,

mental health, and retardation issues, as well as repeated encounters with the criminal justice system. Yet the "silo-ing" typical of many social service and medical agencies, results in few agencies/facilities with sufficient staff, either numerically or by training, to deal with these complex and potentially dangerous patients. In addition, various regulatory and/or certifying bodies provide competing or even contradictory guidance and mandates, leading to compromised staff safety in the name of patient safety. As such, interventions must involve macro-level policy change, as well as changes at the level of the institution and unit as described in this report. Finally, the importance of a strong violence prevention safety culture at the agency, institutional, and unit-level cannot be overstated.

Section 1

Hiahliahts/Sianificant Findinas

Major *highlights*/findings from this research project include both process and formative outcome findings. Workplace violence is well recognized, albeit inconsistently addressed, in the acute mental health setting. Workplace violence is also endemic in the social service workplace, yet is often not recognized as a hazard amenable to prevention. Over the past seven years, much of our effort has involved reaching out to social service agencies in an attempt to engage them in violence prevention risk assessment and hazard control. For the most part, they have been reluctant to participate. In part, we learned their reluctance is related to their regulatory and certifying framework and structures that emphasize patient/consumer health and safety over that of workers'. Additionally, there is a great aversion to letting in "outsiders", including researchers. By contrast however, our partners in the intervention phase of this project, an eastern United States state agency that oversees a system of 13 residential addiction treatment centers (ATCs), demonstrated a strong commitment to consumer and staff safety.

The agency that oversees the 13 ATCs is considerably smaller than the other two agencies we had attempted to partner with for the intervention phase of the project. They have a strong history of violence prevention programming and training which was evident in the low level of staff physical assaults across the agency. We found that even in an environment with a relatively low rate of physical violence, the level of violence safety culture was predictive of violence. The intervention consisted of a number of process improvement activities that were based on the extensive risk analysis conducted in the first several years of the project.

To evaluate the impact of the project intervention, we pilot tested a violence prevention process improvement checklist to measure early indicators of the impact on workplace violence prevention efforts. Even though we were able to administer the checklist by phone to management and worker leaders across all 13 ATCs, we had limited number of interviews per ATC (related to the size of the ATCs) which limited our ability to quantitatively measure the impact of the comprehensive intervention. Post-intervention, the six intervention ATCs reported greater improvements in violence prevention programming as compared with the remaining seven ATCs. However, since this agency has been a leader in ongoing violence prevention efforts among the state's various health care and social service agencies, it was difficult to parse the relative impact of the grant-supported efforts and those associated with ongoing process improvement measures.

Translation of Findings

This participatory action research project included ongoing efforts to translate the findings from the various risk assessment activities in real time throughout the project. These findings were not only shared with the primary partnering agency but with other agencies throughout this state and via national audiences at conferences and workshops. In addition to meeting with numerous union and agency groups throughout the project, in the spring of 2008 we engaged photojournalist Earl Dotter to document the experience of the state's workers in a variety of social service workplaces. These photos were incorporated into an eight minute slide show depicting the risks inherent in social service work and some of the efforts to mitigate those risks. The slide show has been shown at both state and national workshops. In the final year of the project (NCE 2) we developed a workplace violence prevention website to to serve as a resource for social service workplaces and to house project

materials including the slide show. We have made the link to the slide show available to other key partners to post on their websites.

Outcomes/Relevance/Impact

In more than 40 focus groups conducted across a range of settings that provide community mental health, addiction treatment, juvenile justice, mental retardation and developmental disabilities services, we documented a number of common risk factors for violence. Across settings, staff reported 1) patient populations with higher levels of acuity and complexity, with many staff feeling ill equipped to meet the complex social and psychological needs of their clients; 2) inadequate support and resources for early intervention and management of patients resulting in costly and ineffective crisis interventions; 3) inadequate information on the risk factors/history of new patients leading to the potential for highly dangerous encounters; and 4) inadequate staffing to meet client/patient needs resulting in mandatory overtime and staff burnout; 5) powerful regulatory requirements for patient safety which put workers' safety at risk. Interventions directed at these risk factors must involve macro-level policy change as well as changes at the level of the institution and unit. This is particularly true for dealing with the complex patients referred to above in item 1, many of whom suffer from a combination of addiction, mental health, and retardation issues, as well as repeated encounters with the criminal justice system. Because of the "silo-ing" typical of many social service and medical agencies, there are few agencies/facilities with sufficient staff, either numerically or by training, to deal with these complex and potentially dangerous patients. Additional details and staff quotes related to these themes are described in the body of this report.

The quantitative and semi-quantitative data generated from our work in ATCs found a significant inverse relationship between a strong violence prevention safety culture and physical violence. Results of our post intervention telephone interviews across all 13 ATCs found improvements in both intervention and comparison centers over the previous four years. The results from both the staff survey and phone interviews are detailed in the body of the report.

S e c t i o n 2
Scientific Report

Backaround on the Problem/Need for this Research

The ultimate goal of this project was to reduce violence toward staff working in social service settings that treat and care for the mentally ill, mentally retarded, developmentally disabled or other special need populations. To achieve this goal, we conducted an assessment of risk factors for violence and occurrences of violence in a sample of social service agency workplaces. Upon completion of qualitative studies in a number of agencies and a comprehensive risk assessment in the Addictions Treatment setting, we developed and implemented a comprehensive violence prevention program in six of thirteen residential Addiction Treatment Centers (ATCs), with the remaining seven centers serving as a comparison group. The intervention was developed in concert with federal OSHA Guidelines for violence prevention. The impact of the intervention on staff assault experience was evaluated via a series of semi-quantitative measures during the final year of the project. The specific aims of this five-year project were as follows.

1. Describe environmental, organizational, and behavioral/interpersonal risk factors for workplace violence present in the social service workplace.

2. Assess the assault experience of staff in this sample of social service workplaces.

3. Examine the relationship between organizational factors and staff assaults in these workplaces.

4. Design and implement a violence prevention intervention within the sample workplaces.

5. Conduct a process and outcome evaluation of the intervention in sample workplaces one year following program implementation.

All study aims were addressed throughout the course of the project. Reluctance to participate in the overall study by two of the highest risk state agencies, both which provide residential and/or institutional services to high risk youth, led to delays early in the project period. Though we had letters of support and had even begun meeting with a Project Advisory Group (PAG) for one of the agencies, both agencies ultimately withdrew their participation. Thus, we approached a third potential partner, the state agency that oversees the 13 ATCs. This agency is considerably smaller than the other two agencies and had a history of violence prevention programming and training. At least in part due to this, the staff in the ATCs experienced far less physical violence than staff in the originally targeted agencies (based on state workers compensation data and staff reports). In February 2004, the agency agreed to partner with the labor unions representing workers at their thirteen ATCs. Throughout the project we continued to attempt to work with the two high risk agency management and staff. Finally in 2008 and 2009 we were able to conduct field work, including focus groups and walk through evaluations, at select sites within these two large agencies.

To address the first three aims and to enhance and apply the research being conducted in the ATC, we also conducted field research in other social service agencies, both within and outside of this eastern state

Specific Aims 1-3

Eastern U.S. State-based Work

Mental Health Services

Community Mental Health

While the Principle Investigator (PI) and other project staff were working with state union co-investigators to identify and court agency/management project partners, we conducted and analyzed data from five focus groups of Public Employee Federation (PEF) members working as community mental health case managers (McPhaul, 2004). The workers provide case management and psychiatric social work services to persons with persistent and chronic mental illness who were living in the community. Caseworkers visit clients at least weekly in community centers, schools, and homes. The focus group participants identified multiple risks arising from work with mentally unstable clients in the community. They identified current safety measures in place in their agencies, and described the impact of social policy and budget changes on their safety. Caseworkers identified deficiencies in risk assessment, safety protocols, communication, accountability, and safety training as their most worrisome issues. They also described risk factors for violence including community factors, client diagnosis, family and household factors, and system factors.

State-run *Psychiatric* Centers

The LIMB team was approached by management and union representatives from two state-run psychiatric centers (PC), one in mid-2005 and the other in early 2006. Staff at each PC had become concerned about the level of workplace violence particularly Type II (patient on staff violence), and were seeking assistance in various aspects of developing workplace violence prevention programming.

At the first PC, we convened focus groups to obtain staffs assessment of the causes of violence at the facility and to discuss staff recommendations for reducing assaults. Additionally, we assessed the experiences of injured workers in obtaining post-assault support at that PC.

A number of issues were raised as potential causes of workplace violence. Inconsistent application of client behavior policies and crisis procedures were felt to be problems. Related to this was the move to reduce or eliminate staff putting their hands on patients:

> *"Patients feel they can get away with more* because *restraint/take-downs/seclusion are discouraged."*
> "Staff *feel vulnerable during take-downs due to new Joint Commission on Accreditation in Healthcare Organizations (JCAHO)* take *down restrictions."*
> *"If we can't restrain, then we need better* tools such as *better training, communication etc."*

It was *also* felt that communication and teamwork needed to be improved: "There are conflicting philosophies of care between the Treatment Mall (where patient programs are offered) staff and ward staff." Many participants believe that Treatment Mall staff, ward staff, and other members of the treatment team seem to work in their own domains or silos with little regular communication. Another issue that was felt to contribute to the risk of workplace violence was staff fatigue from overtime. Excessive and often mandatory overtime reduces staff vigilance and even empathy. Staff felt that additional training would be useful. A number of issues related to post-assault support were raised.

These included: inconsistent police response to serious assaults and the filing of criminal charges, and problems with the effectiveness of the Employee Assistance Programs (EAP).

In addition to the focus groups for in-patient staff, a group was convened for outpatient and residential staff. Their safety concerns were similar to those of other community mental health workers such as Intensive Case Managers. Their risk of physical assault appears less frequent than the inpatient mental health worker, however, due to their isolation and lack of security, the consequences of an assault may be more severe (i.e. more severe injuries or death). For that reason, it is critical to adopt feasible measures to reduce the risk of assault for community mental health workers and implement measures to reduce the severity of those assaults, should they occur.

On all of the issues raised, staff made specific recommendations. The UMB project coordinator has continued to attend many facility-level workplace violence prevention committee meetings. The recommendations that arose from the focus groups have been considered, and many have been implemented.

In 2006, the UMB team was approached by a second PC. This PC has three distinct program areas, inpatient children's and adult units, and outpatient/community programs. Separate focus groups were conducted of non-supervisory staff from each program area.

The types of violence encountered by staff are significant and include verbal abuse, hostility, threats, physical assault with and without injury, and property damage. For staff in the inpatient settings, especially the children's unit, this violence is a constant, near-daily occurrence. The outpatient/community groups describe visiting highly risky locations and homes, usually alone. In addition to describing significant violence and/or risks for violence, the staff identified the following root causes for violence:

- Some patients by virtue of their diagnoses are volatile and aggressive, but staff feel there is a lenient, uncoordinated approach to violent behaviors that perpetuates acting out on the units, especially the children's unit.
- Strict and burdensome incident reporting policies and paperwork result in the under-reporting of verbal and less severe physical violence.
- Staff do not feel supported by management in their attempts to stay safe and keep patients safe.
- Staffing shortages, high caseloads, and mandatory overtime exacerbate acting out by patients and can thwart violence prevention efforts.

In our written report to all of the stakeholders, the following recommendations were made.

1. Develop and communicate a clear definition of workplace violence.
2. Complete a comprehensive hazard assessment by incorporating the detailed focus group findings, reviewing incident reports and accident statistics, and visiting units and talking to staff.
3. Develop and communicate strategies to make sure that staff know about and can provide input to the violence prevention task force.
4. Re-evaluate the philosophy of care and care models to ensure that staff and patient safety are given equally high priority.
    a. Examine limit-setting, behavioral consequences, and reward systems using a multi-disciplinary approach that includes all job titles.

b. Develop a multi-disciplinary approach to the communication of and development of treatment care plans and patient progress monitoring.

5. Improve the collegiality of the work environment by increasing clinical training and mentoring, reducing staff shortages and mandatory overtime, and ensuring respect for all staff and their contributions.
6. Develop a non-punitive incident de-briefing process that supports assaulted staff and includes mechanisms for changing practice and procedures, if necessary, and evaluating the effectiveness of those changes.
7. Examine strategies for reducing the risk from multi-assaultive patients (those few patients who commit the majority of assaults). Pilot test and evaluate those strategies.
8. Consider adding or inviting a patient advocate, such as a parent, to sit on the violence prevention task force.
9. Institute safety policies for high risk home visits that are aligned with agency-mandated safety policies:
    a. Develop visit safety protocols
    b. Improve the staff tracking system
    c. High risk home visits should not be done solo (use 2-person teams)
    d. Provide working cell phones/figure out cell phone coverage for dead zones
    e. Improve training

Following the receipt of that report, the PC has convened program-specific workgroups that have attempted to act on the information provided in the report. Those workgroups continue to meet. Again, the UMB Project Coordinator has attended many of the meetings. While workplace violence continues to be a concern there, all parties believe that progress has been made.

State-run Correctional Facilities

In 2008, the UMB team was approached by labor and management members of the workplace violence prevention team of the agency that operates the state prison system. We were asked to meet with the team, walk-through two prisons, and conduct a series of focus groups. The team was looking for assistance in their risk assessment activities and in identifying potential preventive measures. Separate focus groups were conducted for each of three bargaining units: one for the correctional officers; one for the professionals, including teachers, counselors, and medical personnel; and one for the support staff, including maintenance, dietary, and housekeeping. In general, the concerns were greatest in the program areas, including classrooms and medical units, as opposed to on the cell blocks. In many of the classrooms, there are too many student-inmates assigned. This presents a significant hazard, as the inmates are virtually on top of each other and the teacher is unable to safely move about the classroom. A number of communication issues were raised, including the lack of an effective system for communicating relevant information to civilian staff, particularly when incidents occur among the inmate population that potentially affect the prison's programming or staff safety. Similarly, staff felt that there do not appear to be clear procedures for civilian staff to respond to potentially violent situations, to report those situations, nor clarity as to how incidents (or risks) are investigated. Civilian staff also felt that they are not adequately trained in identifying, responding to, or reporting potential workplace violence situations.

Finally, Type III (coworker) violence seemed to be a major concern. Specifically, many people reported a significant gulf between the civilian/professional staff and the correctional officers (COs). There is tension/fear of retaliation from a small number of the COs, but nothing is reportedly done about it. Overall, it was felt that workplace violence incidents (Type II and III) experienced by the civilians are not taken seriously and are not thoroughly investigated. Type II incidents experienced by the COs however, appear to be taken extremely seriously.

Juvenile Justice Setting

The state agency responsible for many children's and family services, including the operation of the juvenile justice system agency, had been approached in 2003 to participate in the NIOSH-funded project for which this report is being written. After tentatively agreeing, the agency withdrew following a violent, highly-publicized incident that occurred in 2004. However, in early 2008, the UMB team was asked to conduct a series of focus groups in that agency. The goals were to gather data to be used in the risk assessment process for the agency's workplace violence prevention (WVP) Program and to serve as a template for similar assessments to be done by the agency's WVP committee. Focus group participants from two of the youth detention facilities described their work environment as chaotic and dangerous to staff and youth, alike. Widespread verbal and physical violence was reported, with virtually no consequences. In addition, staff stated that they were afraid to attempt to control youth for fear that an allegation of abuse would be filed with potentially disastrous consequences to staff. Focus groups for field staff and staff from regional and central offices were also held. While these jobs appeared to be much safer than those in the detention facilities, significant risks were identified, nonetheless.

A significant Type I risk existed for staff from the regional office. The office is located in a high-crime area, and parking is only available a significant distance *away.* Incidents had occurred, but no actions had been taken. Field staff faced a significant risk of both Type I and Type II violence. Many visits are conducted in remote and/or high-crime areas, and the visits are typically conducted alone. While the statistical risk of an incident appears to be fairly low, the potential severity is high, as no one may be nearby to provide assistance. In the home office, widespread Type III violence, mostly bullying and harassment, was reported. Many staff expressed frustration:

"Staff have raised issues *for* years. *Nothing has happened."*
"Central office *won't come out and* assess."
"We are not respected *for our work."*

Aoencv Providing Care to Individuals with Mental Retardation and Developmental Disabilities

As mentioned earlier, throughout the project we continued to attempt to work with this agency's management and staff. Finally in 2009 we were able to conduct field work including focus groups and walk through evaluations at select facilities. Six well-attended focus groups were conducted for children's units, adult units, and outpatient/community units. There were overlapping concerns including staffing issues (e.g. mandatory overtime), equipment/technology/supplies issues (e.g. gates/safety technology not working), and consumer issues (e.g. allegations and false accusations of staff abuse to clients). Among the strengths of these facilities is the dedicated staff committed to the care and well-being of consumers.

Western State-based Work

Aoencv Providinq Care to Individuals with Mental Retardation and Developmental Disabilities

The UMB team was asked by a state agency in the western US that provides care to individuals with mental retardation and developmental disabilities to assist in the evaluation of their work environment. This request was jointly submitted by that state's Department of Health and Welfare's Worker Health and Safety Program. We were particularly interested in conducting this field study given our lack of access to a similar work setting at that time. The field study included walk-through surveys, focus groups, and individual and small-group meetings with staff, administrators, managers, and the safety

committee. The risks appeared to vary, based largely on the mix of clients served in a particular unit. In many areas, the annual incidence rate of OSHA-reportable violence incidents exceeded 100 incidents per 100 full time equivalents (FTE). A few clients, "multi-assaultive patients", appeared to be responsible for a disproportionate number of assaults. One young man reportedly had sent 16 staff to the hospital during the prior month. Not surprisingly, staff turnover appeared to be a major issue. While many of the findings and recommendations were unit-specific, the facility overall lacked significant workplace violence prevention programming. Guidance was provided on the establishment of such a program. In addition, a few general recommendations were made, both to safeguard staff and to ensure the provision of safe and high quality care:

- Units are fully staffed with their assigned number of direct care staff
- All staff have experience with the unit's current clients
- There is consistent application of behavior plans

Community Mental Health Services

In 2006, the UMB team received a request from a healthcare workers union in a western US state to assist in identifying the risks faced by their members and to develop potential solutions. One of their members, a community mental health worker, had been recently murdered while conducting a home visit. The UMB team spent four days in the state, holding meetings with mental health managers, state mental health and safety experts, labor leadership, and consumer advocates. In addition, focus groups of community health workers from four distinct regions were held. The following themes emerged from the staff focus groups and meetings:

- A respectful and effective therapeutic relationship is the foundation for caring for the mentally ill. The ability to form and sustain therapeutic relationships is compromised by high caseloads, burdensome paperwork, and highly stressful work environments.
- Caseloads have increased and many case managers believe the increased caseloads diminish the effectiveness of case management and other services by causing staff burnout, reduced ability to develop trusting and therapeutic relationships with patients, less knowledge of patient history, and pressure to cut corners or conduct home visits alone.
- Home visits are generally done alone (i.e. not in pairs), but visiting in pairs is considered much safer.
- Clients are more acutely ill, more often have co-occurring substance abuse disorders, and are much more likely to be violent.
- It is difficult and sometimes impossible to obtain relevant information pertaining to a client's past history of aggression, assault, and criminal behavior.
- Staff safety training is critical, but many staff report little or no safety training, and inconsistent safety policies.

A number of recommendations were made, including:

Continue legislative and policy efforts to increase funding for community mental health with the ultimate objective of improving the quality of patient services through reduced caseload size.
Continue legislative efforts to mandate accompanied visits for high risk visits in the home. First visits, those where there is reason to believe the patient is in crisis, and those where child custody or institutionalization issues may exist, should always be conducted in pairs.
Create a tripartite Labor-Management-Consumer Statewide Health and Safety

Committee with responsibility and authority over Division of Mental Health workplace safety matters.

- Conduct a baseline comprehensive statewide survey of community mental health workers and their employers.
- Create a Statewide Violence Prevention Training task-force with responsibility for developing a training curriculum and certifying trainers.

Ultimately, the UMB report as well as a press conference held to unveil the report supported the passage of legislation to mandate safety measures on high risk home visits.

Aims 4 and 5

The intervention study was conducted within the state agency overseeing the 13 ATCs. Institutional review board approval was obtained from the University of Maryland prior to beginning the research and annually thereafter.

In June 2004, a statewide project advisory group (PAG) was formed to advise all aspects of the intervention study. Later that month a request for applications was sent to all (n=13) ATCs inviting their participation. Criteria for selection as an intervention ATC included evidence of joint labor/management interest in workplace violence prevention, utilizing a brief application signed jointly by labor and management. The PAG reviewed and discussed all applications. Six ATCs met the inclusion criteria and were selected as intervention sites in August 2004. Subsequently the PI and field coordinator conducted an initial site visit of each of the six study ATCs. The initial site visit included a meeting with the ATC director and union representatives and a brief walk-through of the facility. A second site visit was conducted in early 2005 to meet with direct care staff, to answer staff questions regarding the study and to recruit focus group participants and local leadership team volunteers.

Worksite Hazard Analysis

Key informant interviews with the Director of one of the ATCs, the agency's Directors of Employee Relations and of the Bureau overseeing the ATCs, and leaders of the two local unions were conducted early in the project to provide important background and context to the UMB project team.

During March-April 2005, we convened staff focus groups, designed and conducted to provide the research team with a better understanding of the context in which the ATCs operate, the work environments themselves, and to assist in evaluating existing violence prevention programming within the facilities. A secondary aim was to provide a forum for staff to discuss their workplace violence experiences. A total of seven staff focus groups were conducted among the six intervention ATCs. Focus group discussions were audio-taped and transcribed by UMB. The labor and management leadership team at each ATC were provided with a brief written report summarizing the findings from their focus group, as well as the summaries from the other ATCs' groups, with the identity of the specific ATCs removed. The UMB project coordinator then traveled to each ATC, meeting with the team to discuss those reports. Staff were encouraged to disseminate the findings to their colleagues, to engage as much of the facility as possible in the development and implementation of any intervention measures. Additionally, all of the reports were also shared with and discussed by the entire PAG.

An environmental survey of study workplaces was conducted by the project consultant/architect, Kevin Murrett, the study PI and project director in May/June 2005. Mr. Murrett was accompanied by the PI and project coordinator on these walk-through surveys. These tours were led by local ATC

staff, and Mr. Murrett was also provided with the opportunity to speak with individual staff. Again, individual written reports were provided to each ATC and discussed in person. They were also shared with the PAG.

In 2006, eight client focus groups were convened, to obtain clients' perspectives as to the safety climate in their ATC, and the factors that contribute to stress or violence in the facility. The findings were analyzed and combined into a single report which was shared with the PAG.

A survey was developed to identify and measure facility-level risk factors for violence, including staff perceptions of the quality of existing OSHA program elements, and ultimately to guide violence prevention programming. The survey, modeled after one we previously used in a study of state-run psychiatric centers (Lipscomb, 2006), was refined by information gleaned from the other risk assessment activities, in particular staff focus groups. The questionnaire was developed in consultation with and pilot tested among the members of the study's PAG, drawn from the agency's management and its labor unions. In mid-2006, the survey was offered to all staff at each of the 13 ATCs. Project staff distributed the survey in-person at the facilities; staff were provided the time necessary to complete the survey during work. Project staff then collected the completed surveys. Staff not present when the survey was distributed were provided a copy of the questionnaire along with a pre-addressed, postage paid envelope to complete and return by mail.

Workers were queried about the frequency of experiencing four types of client-committed workplace violence events in the past year: (clients) raising their voice in a threatening way including profanity; physically threaten you; push, hit, kick or strike you, and; threatening to harm you if they encounter you away from the facility. Response categories ranged from never/very rarely to greater than once per day on a 4-point Likert scale. Because of the low frequency of physical violence reported by staff, responses to the four items were summed and dichotomized in the analysis as "never" vs. "any". Those workers who reported experiencing none of the four items were placed in the reference group for the composite variable, and those with any incidence of one or more of these events were in the indicator group. Correlations among the 4 items ranged from 0.13 to 0.56.

We screened ten predictors for inclusion into multivariate models and included those with $p<.20$. Variables describing client-staff interactions included working with clients who "actively resisted the therapeutic program" and working with clients "when their history of violence was unknown". These were dichotomized at midpoint, with those experiencing them at least a few times weekly included in the indicator category. Variables describing characteristics of the work organization and derived from the OSHA guidelines included: "Does the management at your center have an overall commitment to violence prevention?"; "Staff members are meaningfully involved in violence prevention efforts"; "A joint staff/management health and safety committee meets regularly"; and "There are enough employees to get the job done". For each of these, the variables were measured on a 5-point Likert scale, and recoded such that the presence of a frequent/positive climate (often or always) comprised the reference group, and the less frequent/negative climate categories collapsed to form two indicator groups, seldom or sometimes, and never/hardly ever.

A scale was created with ten items derived from and measuring staff's self assessment of their ability to employ violence prevention techniques taught as part of an existing mandatory yearly training program. The scale was the sum of their responses on a 5-point Likert scale (not at all = 1 and very much = 5). The first five items asked the worker "How often would you say you do the following when working with a client for the first time"; "review a client's record to determine the potential for violence", "work with clients to create mutually agreed upon goals and expectations for behavior", "get to know the person's pet peeves, interests, dislikes and background", and "think about your own emotional triggers" . The next five items asked about the frequency of use of de-escalation

techniques when with an agitated client, including: "When a client you are working with exhibits agitated body language (clenched fists, pacing, etc.), how often are you able to": "identify the person's feelings back at them", "reassure the person that things are, or will soon be under control", "redirect the person's energy to another task, or object", "praise any steps the person makes to regain control", and "follow-up on the incident with the person once he/she has regained control". The summative scale was divided into tertiles, with the reference group having scores of 37-45 (high score on training items), and with scores of 30-36, 0-29 as the two indicator groups.

Finally three items reflecting characteristics of the worker, including years working in that facility (< 1 year vs. 1 year or more), shift worked (8 hour day shifts versus any other shift), and mandatory overtime (none versus any) were screened for inclusion in the model.

Six large color posters, each one summarizing the risk analysis findings from one of the intervention ATCs, were prepared and posted in each of those facilities. The PI and project coordinator visited each ATC to review and answer any questions about the posters.

Qualitative Results:

Qualitative data from the sources described above provided researchers with important insights which, in part, explained the low level of staff physical assaults experienced in these potentially high risk workplaces. Management and direct care workers concurred on why there was not more physical violence given the risk factors for violence prevalent among ATC residents (i.e. substance abuse and a history of criminal/violent behavior) and attributed these conditions to a combination of the following factors. First, most admissions are voluntary, with residents having a recent history of living on the street or in jail and as such, most residents view this admission as a last chance for recovery. If a resident is mandated by the courts, hence "a forensic patient" and he/she violated the rules, they could be returned to prison.

> *"when referrals are from the criminal justice system,* we have a *backup, you know, a consequence, where if they really do hit somebody, they know they're gonna* get *kicked out and put back in jail."*

This condition, combined with strict enforcement of policies prohibiting violence, appears to be effective in preventing physical violence toward staff. We were told by both staff and residents that often other residents will intervene in resident-on-resident disputes to prevent actual fights from breaking out, thus saving their fellow resident from being dismissed from the program. Another factor was that patients had more contact with other patients than with staff members. While patients may have been angry or frustrated with staff members, they released their aggression on fellow patients. *"They grumble about us but they take it out on each* other."

Perhaps most importantly, the agency's Central Office, as well as most of the individual ATCs, had an ongoing program of quality improvement which sets this agency apart from many other state social service agencies. To a great extent, this explains why this research team was able to gain access to this organization and conduct the work described in this manuscript with such strong staff participation.

Finally, some staff explained the lack of physical violence toward staff as a function of treatment staffs' personal experience with substance abuse (i.e. self, family, or other loved ones in recovery). They hypothesized that a strong sense of trust and empathy exists among these staff and residents. Even with this, however, we heard that the environment was very stressful, with constant vigilance required because of the potential for physical violence and other forms of assault. Some staff felt a

lack of administrative support and were frustrated by the lack of preventive interventions. "...and the *history of this facility is like you know,* people *don't, nothing happens until something happens."*

Failure to address staff concerns made them feel more vulnerable. We also heard from staff that expectations were a factor that could either precipitate or diffuse violence. Unmet expectations were a source of stress in the already vulnerable client population. This included an expectation of certain types and quality of food, privileges (e.g. smoking), facility conditions, and staffing (especially on weekends). Treating the patients as individuals with dignity was believed to diffuse violence. Another source of expectations that could be protective or destructive was the staffs expectations of insurance companies and administration. Staff felt that they were increasingly "forced to do more with less", which was believed to be both stressful and dangerous.

> "...1'm *glad we don't deal with* managed care. *They think* that a *30-day* rehab can be compressed *to maybe 72 hours."*

The complexity and situation-specific context of these comments provide evidence for the need for both qualitative and quantitative measures of the work environment.

Quantitative Results:

A total of 409 completed surveys were received for an overall response rate of 77%. The workforce was 59% female, with the majority of staff (55%) reporting more than five years of experience in their current ATC; approximately 13% had been in their current ATC for less than one year. Approximately three-fourths of staff reported day shift only, and a similar fraction reported not working any mandatory overtime during the prior month (Table 1).

Table 1: Participant Demographics (n=409)'

Variable	N	
What is your gender?		
Female	239	58.9
What is your job title?		
Medical	106	26.1
Counselor	216	53.2
Maintenance	17	4.2.
Management	26	6.4
Administration	41	10.1
How long have you worked in your current facility?		
<1 year	52	12.7
>1-3 years	89	21.8
>3-5 years	43	10.5
>5-10 years	102	25.0
>10-15 years	55	13.5
>15 ears	67	16.4
On what shift do you regularly work?		
days	305	75.1
evenings	63	15.5
nights	22	5.4'
rotate among shifts	16	3.9

On average, including any paid and unpaid overtime, how many *hours a week do you usually work?*		
20 hours	37	9.3
21-36 hours	14	3.5
37-40 hours	267	66.8
41-50 hours	73	18.3
>50	9	2.3
How many hours, *if any, did you work mandatory overtime in the past* month?		
None	302	75.7
s 8 hours	68	17.0
> 8-16 hours	171	4.3
>16 hours	12	3.0

* Missing data so column totals do not all add up to 409

The frequency with which staff reported experiencing the four types of violence ranged from 37% for " clients raise their voices in a threatening way to you" to 1% for "clients hit, push, kicked, or struck you" (Table 2).

Table 2: Frequency of Staff Reported Violence Past 12 Months (n=409)*

Type of Violence	Frequency	N	
Clients raising their voice in a threatening way including profanity	*Never/very rarely*	256	33.2
	A few time a month	104	25.7
	A few times a week	31	7.7
	Greater *than once a day*	14	3.5
Clients physically threaten you	*Never/very rarely*	381	94.3
	A few time a month	17	4.2
	A few times a week	3	0.7
	Greater *than once a day*	*3*	0.7
Clients push, hit, kick or strike you	*Never/very rarely*	399	98.8
	A few time a month	3	0.7
	A few times a week	*0*	-
	Greater than once a day	*2*	0.5
Clients threatening to harm you if they encounter you away from the facility	Never/very *rarely*	395	97.5
	A few time a month	5	1.2
	A few times a week	3	0.7
	Greater than once a *day*	*2*	0.5

* Missing data so column totals do not all add up to 409

Bivariate analysis of the odds of violence by patient characteristics, safety climate, training items, and staff work characteristics yielded a number of statistically significant associations (Table 3). Among patient characteristics, the odds of experiencing violence among staff who also reported frequently (> a few times/month) working with clients who "actively resist the therapeutic program" was 3.11 (95% CI = 1.91, 5.04) while the odds of violence among staff reporting frequently working with clients "when you don't know about their history of violent behavior" was 2.51 (95% CI = 1.65, 3.82). Violence was significantly associated with all four safety climate variables, with the frequency of a negative climate associated with increasing odds of violence ranging from 1.75 for staff involvement in violence prevention efforts "seldom or sometime" to 4.01 for management commitment to violence prevention " never/hardly ever". For the variable "staff involved in violence prevention", the lowest category "not at all" did not reach statistical significance, due in part to the small number (n=1 5) reporting this level of involvement. A low or lower score on the violence prevention training scale was not associated with violence. The only staff work characteristic significantly associated with violence was mandatory overtime (OR = 1.86).

Table 3: Odds Ratio (95% CI) for Staff Reported Violence by Individual Client and Safety Climate Covariates (n=409)`

	Odds Ratio	95% CI
Management is committed to violence prevention		
Often-always	308 (76.2)	
Seldom-sometimes	79(19.6)	2.61 (1.58-4.33)
Never/ hardly ever	17(4.2)	4.01(1.44-11.16)
There is enough staff		
A lot-very much	128 (31.9)	
Not much- somewhat	222 (55.4)	1.52 (0.95-2.43)
Not at all	51 12.7	2.77 1.42-5.41
Staff is involved in violence prevention		
A lot - very much	234 (58.2)	
Not much- somewhat	153 (38.1)	1.75(1.15-2.67)
Not at all	15(3.7)	2.44(0.85-6.98)
Health and safety committee meets regularly		
A lot-very much	180 (46.2)	
Not much- somewhat	146 (37.4)	1.88 (1.18-2.97)
Not at all	64 16.4	2.44_(1.36-4.39)
Violence Prevention Training Scale		
High	139 (34.0)	
Medium	158 (38.6)	1.0 (0.63-1.60)
Low	112 27.4	0.76 0.45-1.28
Years in facility < 1 year)	52 12.7	1.05 .72-1.53
Shift worked d e r than 8 hour days	107 25.6	1.37 0.870-2.17
Mandatory over time (any)	100 (24.3)j	1.86 (1.17-2.96) J

When the above covariates were entered into a multiple logistic regression analysis, client actively resisting program (OR = 2.34, 95% CI = 1.35, 4.05) and working with clients for whom the history of violence is unknown (OR = 1.91, 95% CI = 1.18, 3.09) were significantly predictive of violence. Management commitment reported as "never/hardly ever" and "seldom or sometimes" was associated with violence (OR = 4.30 and OR = 2.31 respectively) when controlling for all other items,

however the odds associated with the lowest level of commitment did not reach statistical significance (Table 4). An inverse relationship between staff violence and employee involvement in violence prevention was non-significant.

Table 4: Odds Ratio (95% CI) for Staff Reported Violence Regressed by Client and Safety Climate Covariates (n=357)

	Odds Ratio	95% CI
Work with clients who actively resist program (> few times a month)	2 34	1.35, 4.05
Work with clients when history is unknown (> few times a month)	1.91	1.18, 3.09
Management commitment to violence prevention often/alwa s	1.0	
Management commitment seldom/sometimes	2.31	1.18, 4.55
Management commitment (never/hardly ever)	4.30	0.76, 24.22
Enough staff to get the job done (a lot/ve much	1.0	
Enough staff (not much/somewhat	1.31	0.75, 2.28
Enough staff not at all	1.45	0.60, 3.48
Staff Involved In violence prevention a lot/very much	1 .0	
Staff Involved In violence prevention (not much/somewhat	0.77	0.42, 1.41
Staff Involved In violence prevention (not at all	0.38	0.07. 2.0
Health And Safety Committee meets re ularl a lot/ve much	1 .0	
Health And Safety Committee meets re ularl not much/somewhat	1.67	0.97. 2.88
Health And Safety Committee meets regularly (not at all)	1.63	0.78, 3.42

The risk of workplace violence in public residential ATCs has not previously been described. We utilized a combination of qualitative and quantitative research methods to begin to describe the risk and potential for violence prevention in this setting. The prevalence of staff physical violence within the agency's treatment facilities was lower than would be predicted based on the risk factors for violence among the resident population served. In an attempt to understand this experience, we conducted key informant interviews and focus groups with management, direct care staff and residents, all of which converged on a number of factors which they believed explained the low level of physical violence towards staff. We then conducted a quantitative staff survey to validate these qualitative data, to measure the more subtle (less physical) forms of violence, and to examine safety climate and other factors associated with this violence. When we combined the rare physical assault

(reported by – 1% of staff) with the more common verbal and threatening behaviors, we identified a number of factors significantly associated with violence toward staff. As expected, one measure of resident characteristics/behavior, "resisting the therapeutic program", was associated with three times the rate of violence; whereas staff not having access to a resident's history of violence was associated with 2.5 times the risk of violence. The perception of low management commitment to violence prevention (one measure of safety climate) was significantly associated with 2-4 times the risk of violence. The lack of regular meetings of the health and safety committee was associated with a 60% increase (borderline significance) in staff violence.

The findings from this extensive risk assessment were discussed with the statewide PAG over the remainder of the project to identify system-wide changes that could be implemented as part of the intervention. In addition, the research team met with individual ATC intervention site leadership teams on a regular basis over the duration of the project and used the risk assessment findings as the basis for designing and implementing (or in many cases, supplementing existing) ATC-specific violence prevention strategies. At both the statewide level and in many of the ATCs, efforts were directed toward strategies to improve the discovery and transmission of risk information at the time of admission. In addition, ongoing efforts were directed toward enhancing the meaningful involvement of staff in violence prevention efforts, specifically via local health and safety committee work.

Interventions directed at controlling exposure to violence in the health care and social service settings differ dramatically from traditional hazard control strategies that use as a framework, the industrial hygiene hierarchy of controls. In these settings, the hazard is the patient and the "dose" of the hazard may vary from day to day (based on dynamic staff and patient interactions) and month to month (based on the admission and discharge of high risk patients), therefore it is impossible to "engineer out the problem". Environmental controls are necessary but not sufficient for violence prevention. Such controls include limiting access to and from the clinical care setting, removing furnishings and other objects that could be used as weapons, and eliminating "blind" spots where passive surveillance of potentially violent clients is limited. Once these environmental controls are in place, a complex set of administrative and behavioral strategies are essential to protect staff and other clients from violence. These strategies are built on a process of risk analysis and continuous process improvement and will vary among work settings.

Intervention Evaluation:

The use of a mixed method study design was employed to evaluate the impact of comprehensive violence prevention programs in these complex and dynamic settings. Our previous research has demonstrated that individual qualitative or quantitative measures may not adequately assess risk nor program impact (Lipscomb, 2006). Collectively, however, a mix of qualitative and quantitative measures contributes important new information to the prevention of violence in high risk health and social service settings.

ATC and PAG-level key informant phone interviews were conducted in the summer of 2008. The interviews were conducted to assess the project's impact on leading indicators of violence prevention programming. The first set of interviews was conducted with the eight members of the statewide PAG. This group consisted of five management representatives from either the OASAS central office or one of the ATC's, six representatives who were staff in an ATC and members of the Public Employees Federation and three ATC staff who were members of the Civil Services Employees Association. The PAG was asked to rate the impact/effectiveness on six project areas. On average, these interviewees rated the PAG meetings, staff survey and the architect audit as most influential.

Table 5: Telephone Survey Results – Project Advisory Group (PAG) – Overall program impact assessment and selected program element impact scores. (1= lowest and 1- = highest)

	Overall Impact	Staff Focus Groups	Architect Survey	Client Focus Groups	Staff Survey	PAG Meetings
Mgmt n=5)	6.6	6.8	6.6	7.3	7.5	6.8
PEE (n=6)	7.4	8.2	8.2	6.4	7.8	8.2
CSEA (n=3)	5.3	6.0	7.0	8.0	7.0	9.0
Total	6.4	7.0	7.3	7.2	7.4	8.0

Figure 1: Phone Survey Results – PAG

Phone Survey Results - PAG

- Some of the themes mentioned:
  - o Improved/created awareness X8
    - "Improved labor relations first and foremost. Empowerment of workers to have some say or opinion regarding the environment they work in; they are listened to more now. Creates a safe and healthier work atmosphere..."
  - o Helped with workplace violence assessment X5
  - o Improved labor relations X3
  - o Provided workplace violence education X2

Figure 2: Phone Survey Results – PAG

Phone Survey Results – PAG

Re: What OASAS can do now that project is ending

- Some of the themes mentioned:
  - a Keep momentum/education going X4
  - o Review and ensure policies are up-to-date
    - "What we're finding, with the slumping economy, etc. is that people are more stressed, so there's a greater potential for workplace violence; think that we need to be vigilant and review policies and make sure are still viable and up-to-date; while workplace violence has never been a huge problem [with their organization] doesn't mean it won't be in future"

The second set of interviews was conducted with at least one management representative and one union member in each of the 13 ATCs. The interviewer administered the Workplace Violence Program Quality (WVPQ) audit tool during this phone interview. This audit tool was designed to assess program improvements over time. The audit was conducted by telephone interview with one manager who is familiar with patient and staff safety procedures as evidenced by their formal responsibility for these and one labor designee who provides direct care and serves on either patient or staff safety committee or serves as shop steward or other elected union officer. The audit was completed and scored by the PI in collaboration with the industrial hygienist. The scores were reported back to the PAG, the facility management and direct care staff with the environmental evaluation report.

The WVPQ audit tool contains 15 elements, each scored on a scale of 0 (absent) to 10 (highly effective). The strength of the tool is the ability to generate both a total score but also to evaluate sub-elements of the workplace violence program. Tool elements include the following:

1) Written policy on workplace violence prevention;
2) Committee structure and function for staff safety including 2a) Involvement of direct care. staff on safety committee;
3) Risk assessment process including 3a) Sharing of risk data with staff;
4) Evaluation of physical environment;
5) Security technology including 5a) Personal alarm, camera surveillance, weapons detection, lighting, key control/locks;
6) Staff training on violence prevention;
7) Needs assessment for staff training;
8) Compliance with staff training policy
9) Post assault programs for injured staff; 9a) Debriefing post assault with staff and management;
10) Crisis response team;
11) Clinical procedures for dealing with violent patients.

Results of the 21 phone interviews of the ATCs' labor and management representatives found that 100% of intervention group ATCs reported having a workplace violence policy when compared to the 57% among the comparison ATCs. As seen in Table 6, the intervention group reported more workplace violence programming (75% versus 21% of comparison ATCs). More of the intervention ATCs reported adding or redeploying staff for violence prevention than comparison ATCs (58% versus 36%).

Table 6: Phone Survey Results – ATCs

Elements of Workplace Violence at Your ATC

Question	Intervention	Control
Workplace violence policy (created/modified 4yrs)	6/6 (100%)	4/7 (57%)
Workplace violence program	3/6 (50%)	1/7 (14%)
Workplace violence practices (developed/modified 4yrs)	6/6 (100%)	3/7 (43%)

Workplace violence prevention building modifications	5/6 (83%)	6/7 (86%)
Add or redeploy staff	4/6 67%	3/7(43%)

When asked to rate the effectiveness of workplace violence prevention program elements, the intervention group ranked their overall program an average of 8.7 whereas the comparison ATCs ranked their program an average of 7.4. Intervention ATCs were more likely to have violence committees than were comparison facilities. Also, intervention facilities rated their training more effective than did the control group, 7.6 versus 7.1. The comparison group scored higher than the intervention group on "response to workplace violence incidents", 9.1 versus 8.1. Because of the small overall number of interviews conducted, the data did not merit any type of test statistic to evaluate the significance of these differences.

Table 7: Phone Survey Results – ATCs Rating on scale of 1-10

Question	Intervention (6 sites, 11 interviews)	Control (7 sites, 9 interviews)
Workplace violence program effectiveness	8.7	7.7
Workplace violence building modification effectiveness	7.5	7.8
Workplace violence prevention training effectiveness	7.5	7.1
Response to workplace violence incidents	8.2	9.1

Evaluation/Research to Practice

The Project Advisory Group (PAG), key staff and management participants from each for the 6 ATC's and the research team came together for a final meeting and review of the project. The purpose of the meeting was to present the overall findings of the project and develop a blueprint for the agency to carry the work forward. Reaction to the researchers' presentations was encouraged and captured via flip charts and summarized.

Violence Prevention Training - Participants commented that the locally developed violence prevention training might give staff a false sense of security. Trainings need to heighten sensitivity to this phenomenon. Staff also noted that individuals who have good de-escalation skills are more likely to be called upon in dangerous and escalating incidents. Discussion also addressed possible changes needed in the violence training curriculum and the need for more trainers.

Incident Reporting - Specific policies, procedures and incident reporting forms were discussed in terms of integrating into training and practice. This valuable discussion highlighted the agency's commitment to a data system from which an on-going hazard analysis could continue.

Discussion of architect survey – participants found architect's report very useful; and tended to implement whichever suggestions were economically feasible; some even commented that a more detailed report from architect would be helpful. Facilities that implemented architect's

recommendation notes that changes relieved some of staffs stress and staff were pleased with the improvements. It was noted that there were cultural and size differences among the various ATCs.

Participant discussion - Staff and management commented that the low number of incidents was due to the fact that patient issues are addressed before they become larger issues. The importance of knowing patients' history, including prior involvement in the criminal justice system was also noted and emphasized. Some noted the logistic and temporal difficulties in regards to obtaining patient histories and suggested that perhaps facilities need the ability to access patient histories should be written into law. This is the type of policy level change that organized labor and management can work on together and relieve direct care staff of these burdens. Finally, it was noted that perhaps staff should treat everyone as if there was some level of risk.

Conclusions

This is one of the first studies to study workplace violence in the social service workplace. The focus of the first phase of this project was the assessment of risk factors for violence and the occurrences of violence across a range of social service workplaces. In more than 40 focus groups conducted across a range of settings, staff consistently reported 1) patient populations with higher levels of acuity and complexity, with many staff feeling ill equipped to meet the complex social and psychological needs of their clients; 2) inadequate support and resources for early intervention and management of patients resulting in costly and ineffective crisis interventions; 3) inadequate information on the risk factors/history of new patients leading to the potential for highly dangerous encounters; and 4) inadequate staffing to meet client/patient needs resulting in mandatory overtime and staff burnout; 5) powerful regulatory requirements for patient safety which put workers' safety at risk . Interventions directed at these risk factors must involve macro-level policy change as well as changes at the level of the institution and unit.

The quantitative and semi-quantitative data generated from our work in ATCs found a significant inverse relationship between a strong violence prevention safety culture and physical violence. Results of our post intervention telephone interviews across all 13 ATCs found improvements in both intervention and comparison centers over the previous four years. Future research will include modifying and validating the violence prevention checklist across a larger number of social service workplace and/or work units. This project utilized a compendium of measures and strategies, many of which were tested and demonstrated to have pragmatic value to the organization. For example, the survey provided evaluation data of the locally developed violence prevention training in addition to exposure and climate data. The staff focus groups provided useful insights into both positive and negative management styles which were reviewed by the senior system manager prompting management changes. The Project Advisory Group (PAG) became a rich source of insight into management practices and the regulatory and budget climate while demonstrating the value of working relationships between union, management and research partners.

The overall project demonstrated the challenges of accessing workplaces and developing, intervening and evaluating the impact of violence prevention programming in the social service work setting. Future research is needed to evaluate the impact of workplace violence legislation in addressing these challenges in high risk, difficult to access workplaces. Future work should also examine private and non-for-profit social service workplaces.

Publications and Presentations

Publications:

McPhaul, K., Lipscomb, J., (2004). Workplace Violence in Health Care: Recognized but not Regulated, OJIN, 9(3). http://www nursinQworld.org/MainMenuCategories/ANAMarketplace/ ANAPeriod icals/OJ I N?TableofContentsNolume92004/N umber3Seotember30NiolenceinHealt hCare.aspx

Lipscomb, J.A. (2005) Homicide and assault. In Levy 85, Wegman, D.H., Rest, K., Weeks, J., (Eds.). Preventing Occupational Disease and Injury (2nd edition), 253-6. Washington, DC: American Public Health Association.

McPhaul, K.M., Lipscomb, J.A., (2005). Participatory action research: a protective research design. *New Solutions,* 15(1), 53-61.

Geiger-Brown, J., Muntaner, C., McPhaul, K., Lipscomb, J., Trinkoff, A.M., (2006). Abuse and Violence During Home Care Work as Predictor of Worker Depression. *Home Health* Care *Services Quarterly.* 26(1), 59-77.

*Lipscomb, J., McPhaul, K., Rosen, J., Geiger Brown, J., Choi, M., Soeken, K., Vignola, V., Wagoner, D., Foley, J., Porter., (2006). Violence Prevention in the Mental Health Setting: the New York State Experience. *Canadian Journal of Nursing Research,* 38(4).

*McPhaul, K., Rosen, J., Bobb, S., Okechukwu, C., Geiger-Brown, J., Kauffman, KK., Johnson, J., Lipscomb, J., (2007). An exploratory study of mandated safety measures for home visiting case managers. *Canadian Journal of Nursing Research,* 39(4), 172-190.

"McPhaul, K., London, M., Rosen, J., Murrett, K., Flannery, K., Lipscomb, J., (2008). *Environmental Evaluation for Workplace violence in Healthcare and Social Services.* Journal of Safety Research, 39, 237-250.

Lipscomb, J., London, M., McPhaul, K., (2008). Responding to the Epidemic of Workplace violence in Public Sector Health Care and Social Service workplaces. Chapter in Lies, M., (Ed.). *Preventing and Managing Workplace violence — Legal and Strategic Guidelines.* ABA Book Publishing, Chicago, 11.

Lipscomb, J., Rosen, J., London, M., McPhaul, K., (2009). Workplace Violence in Charney, William, (Ed.). Handbook of Hospital Safety.

*Lipscomb, J., McPhaul, K., Flannery, K., London, M., (in review). Workplace Violence Prevention in State-Run Residential Addiction Treatment Centers. *Work: A Journal of Prevention,* Assessment *& Rehabilitation.*

Lipscomb, J., 2010 Forward in "Workplace Violence in Mental and General Health Settings". Editor Michael R. Privitera. Jones & Bartlett Learning.

Selected Presentations:

Lipscomb, J.A., "OSHA Violence Prevention Guidelines: An Effective Strategy for Preventing Workplace Violence." New York State Public Employees Federation Health and Safety Conference, Albany NY, 2003.

Lipscomb, J.A., "Violence Prevention in the Mental Health and Social Services Workplace: Intervention Effectiveness Research In-Progress." University of California San Francisco, Occupational and Environmental Research Grand Rounds, 2003.

Lipscomb, J.A., "Workplace Violence Prevention in the Mental Health Setting." National Occupational Injury Research Symposium, Pittsburgh, PA, 2003.

Lipscomb, J. A. "Developing and sustaining participatory research partnerships between clinicians, worker organizations and academics", American Public Health Association Annual Meeting, San Francisco, CA, 2003

Lipscomb, J. A. "Violence Prevention in the Mental Healthcare Setting: Evaluation of an Intervention Based on OSHA Guidelines", American Public Health Association Annual Meeting, Washington DC, 2004.

Lipscomb, J.A., McPhaul, K., London M. NIOSH-sponsored "Partnering to Reduce Workplace Violence: Translating Research to Practice" conference in Baltimore, Maryland (November, 2004) and the Public Employee Federation (PEF) Nurses Conference in New York (April 2005).

Lipscomb, J. A. "Workplace investigation and intervention research: Working with multiple partners without losing your soul", American Public Health Association Annual Meeting, Boston, MA, 2006

Lipscomb, J. A. "Workplace violence prevention: Responding to the lack of an OSHA standard", American Public Health Association Annual Meeting, Boston, MA, 2006

Lipscomb J.A. "Preventing Workplace Violence" Workplace Hazards to Nurses and other Healthcare Workers: Promising Practices for Prevention, Marborough, MA, June 8, 2007

Lipscomb J.A. "Evaluation of Workplace Violence Prevention Interventions", NORA Symposium – Research to Practice, Minneapolis, MN, June 13, 2007

Lipscomb J.A. "A Program of Research Addressing Workplace Violence", NIOSH-wide Science Seminar, Atlanta, GA April 8, 2008

Lipscomb J.A. "Workplace Violence and Human Services Workplace: What Can Be Done to Keep Care Workers Safe?", Anne Cain Memorial Lecture, University of Maryland, Baltimore, April 25, 2008

Lipscomb J.A. "Workplace Violence Research in the Public Sector Health Care and Social Service Workplace: A Decade of Research", NIOSH science seminar, Atlanta, GA, April 15, 2008

Lipscomb J.A. "Workplace Violence Typology" Invited Workshop Presentation at the Civil

Service Employee Association Biannual Health and Safety Conference, Lake Placid, NY, April 26, 2008

Lipscomb, J. A. "Workplace Violence in NYS and the Impact of Regulation", American Public Health Association Annual Meeting, Philadelphia, PA, 2009.

Lipscomb J.A. "Workplace Violence: the US Perspective" invited presentation at the European Agency for Safety and Health at Work seminar on Violence and Harassment at Work, Brussels, Belgium Oct 6-7, 2009.

Lipscomb, J. A. "Workplace Violence in NYS and the Impact of Regulation", American Public Health Association Annual Meeting, Philadelphia, PA, 2009.

McPhaul, KM – "How Safe is your Workplace – Security Technology for Workplace Violence". Professional Issues Conference, Health Professionals and Allied Employees (HPAE), Trenton, NJ. October, 2007

McPhaul, KM (Invited) Keynote Speaker: Workplace Violence in Health Care, Wesley College, Sigma Theta Tau annual conference, October, 2007

Lipscomb, J. Johnson, J and McPhaul, KM, (Invited Panel) Ann Cain Lecture, University of Maryland School of Nursing, Ending Workplace Violence against Human Service Workers, May, 2008.

McPhaul, KM (Invited) Keynote Speaker: Workplace Violence: Keeping our Patients Safe. SEIU Nurse Alliance of Pennsylvania – Nurses Week Conference, May 2008 Allentown, PA.

McPhaul, KM, Lipscomb, J., Johnson, J., Chen, YM, Geiger-Brown. National Occupational Injury Research Symposium (NOIRS) 2008 Workplace Violence in Addictions Treatment Facilities.

Inclusion Enrollment Report

This report format should NOT be used for data collection from study participants.

Study Title: Evaluation of Workplace Violence Prevention Intervention

Total Enrollment: 828 Protocol Number: H-22324

Grant Number: R01 OH007948

PART A. TOTAL ENROLLMENT REPORT: Number of Subjects Enrolled to Date (Cumulative)

Ethnic Category	Females	Males	Sex/Gender Unknown or Not Reported	Total
Hispanic or Latino	0	0	0	0
Not Hispanic or Latino	0	0	0	0
Unknown (individuals not reporting ethnicity)	503	325	0	828
Ethnic Category: Total of All Subjects*	503	325	0	828
Racial Categories				
American Indian/Alaska Native	0	0	0	0
Asian	0	0	0	0
Native Hawaiian or Other Pacific Islander	0	0	0	0
Black or African American	0	0	0	0
White	0	0	0	0
More Than One Race	0	0	0	0
Unknown or Not Reported	503	325	0	828
Racial Categories: Total of All Subjects*	503	325	0	828

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PART B. HISPANIC ENROLLMENT REPORT: Number of Hispanics or Latinos Enrolled to Date (Cumulative)

Racial Categories	Females	Males	Sex/Gender Unknown or Not Reported	Total
American Indian or Alaska Native	0	0	0	0
Asian	0	0	0	0
Native Hawaiian or Other Pacific Islander	0	0	0	0
Black or African American	0	0	0	0
White	0	0	0	0
More Than One Race	0	0	0	0
Unknown or Not Reported	503	325	0	828
Racial Categories: Total of Hispanics or Latinos* *	503	325	0	828

These totals must agree. ** These totals must agree.

Inclusion of Children

Not applicable.

Materials Available for Other Investigators

Data analysis and manuscript preparation continues. Other investigators interested in using these data may contact the PI in writing stating the data set they would like to access and for what research purpose. If the request is legitimate and does not involve data analysis underway by the research team, the PI will provide access to de-identified data via CD.