

Injury Among *Direct* *Healthcare Staff*

An unheralded occupational safety and health crisis

By Stephen M. Manning

DURING 2003, THE 25 MOST HAZARDOUS occupations in the U.S. recorded occupational injury rates ranging between 10.7 and 16.7 [BLS(a)]. Knowing this, imagine explaining to an organization's general manager why the incident rate of injury among employees in his company is above 32. That's right, in the past year, 32 of every 100 employees have suffered an injury that warranted medical treatment or caused them to miss a day or more of work.

This is the predicament faced by many public intermediate care facilities. Public intermediate care facilities for people with mental retardation (ICFMRs) are those facilities in the U.S. that provide residential care and treatment for those persons with intellectual deficits and related developmental disabilities. A survey conducted in 2004 by the Worker Health and Safety Program (WHSP), administratively located within the Div. of Health, Idaho Dept. of Health and Welfare (IDHW), revealed that the average rate of injury among direct healthcare staff working in ICFMRs is 32.7. Put in another context, the rate of injury among direct healthcare staff working in ICFMRs is twice that of metal foundry workers and almost three times that of workers in the meat processing industry—both workforces of comparable size.

Survey of National Public ICFMRs

WHSP advises IDHW executive management on matters of safety and health program development and risk management strategies, as these issues impact the department's workforce. IDHW administers three state hospitals, including Idaho State School and Hospital (ISSH), Idaho's only state-owned and operated ICFMR.

ISSH provides residential care for people with developmental disabilities and clients who have no other placement option because of severe behavioral or medical issues. The client census at this facility during 2003 ranged from 100 to 110; these clients are

served by approximately 220 direct healthcare staff. In 2003, ISSH reported 207 injuries to direct healthcare staff resulting in workers' compensation losses totalling nearly \$1 million. These circumstances unquestionably present the greatest challenge to WHSP in its mission to provide risk management strategies that protect staff at this facility.

No attempt was made in this survey to characterize either the cause of injury or the nature of the resulting injury, although this may be regarded as important data to collect in future research. However, if the experience of direct healthcare staff working at ISSH may be regarded as typical of other healthcare staff working in public ICFMRs, the data shown in Table 1 provide some perspective of the causes of injuries, their frequency and relative workers' compensation losses.

A considerable body of research with respect to violence and assaultive behavior in the healthcare industry has been developed over the past two decades. The available information stemming from this research has led some researchers to conclude that the industry is experiencing an epidemic of violence toward workers (Charney and Fragala; Lipscomb).

For example, a survey of assaultive behavior in Veterans Administration medical centers during one year found 24,219 incidents of such behavior in 166 facilities; 8,552 incidents involved battery or physical assault (Lehmann, et al). However, much of this research has focused on the assaults and violence in hospital emergency departments and psychiatric facilities. An examination of violence and assaultive behavior and associated injury among direct healthcare staff serving in public ICFMRs has not been as well developed nor chronicled.

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Table 1

Five Most Frequent Causes of Injury, ISSH (1998 to 2004)

Cause of Injury	Incidents	Losses	Average
Simple assault	369	\$758,008	\$2,054
Directing or redirecting client	290	\$774,324	\$2,670
Transferring client	158	\$729,914	\$4,620
Slips and falls	98	\$524,955	\$5,357
Injured while restraining	91	\$260,791	\$2,866

Note: "Directing or redirecting client" are those incidents in which the client's sudden or unanticipated movement results in a staff injury while assisting the client (may include unintended kicks, punches, etc.).

In April 2004, WHSP decided to determine whether the frequency of injury among ISSH direct healthcare staff was typical or atypical for public intermediate care facilities having similar client populations and staffing ratios. The program also sought to determine what lessons about mitigating hazards posed to direct healthcare staff could be learned from the experiences of other facilities throughout the U.S.

After initial efforts to collect this information, it became apparent that these data were not readily available to public healthcare researchers. Subsequently, WHSP crafted a two-page survey intended for distribution to the administrators of public ICFMRs throughout the U.S. to collect these data.

The Assn. of Public Developmental Disabilities Administrators (APDDA) was contacted to obtain a copy of its 2003-04 directory of state-operated public residential care facilities and their chief administrators. Distribution of the survey was restricted to large state-operated public ICFMRs (that is, those facilities serving 16 or more residents). A representative for all chief administrators in each state, referred to as the state coordinator, was contacted either by telephone or e-mail to request their assistance in distributing the survey to public residential care facilities in their respective states.

A total of 189 large state-operated public ICFMRs served 42,111 persons with

mental disabilities and related developmental disabilities in 2003 (Coucovanis, et al). A total of 106 ICFMRs in 36 states responded to the survey, which was distributed between April 15, 2004, and Oct. 15, 2004. The states of Alaska, Hawaii, Maine, New Hampshire, Rhode Island, Vermont and West Virginia as well as the District of Columbia reported that client services are now solely provided in a community-based setting and that these states no longer operate public ICFMRs.

No data were received from facilities that are located in Alabama, Illinois, Indiana,

Kentucky, Michigan, New Mexico, New York or Utah by Oct. 15, 2004. A sum total of 92 public ICFMRs provided data used in this survey. The total client population represented by this sample is 20,955 or about 50 percent of the total client population served in large state-operated public ICFMRs.

Simple Assault in Workplace Violence

Issue

The rate of nonfatal occupational injury among direct healthcare staff in national public ICFMRs is exceedingly high and may be viewed as a special case of victimization in the workplace—that is, noncriminal *simple assault*. Simple assault is also characterized as Type II workplace violence (see sidebar on pg. 33) in mental healthcare settings.

How Does the Problem Compare to General Industry?

Addressing the problem of workplace violence is difficult because it has many sources and is measured using a range of statistical methods. The Bureau of Justice Statistics 2001 Special Report, "Violence in the Workplace, 1993-99" (Detis), however, may be used to compare the rate of "simple assault" across broad occupational categories. Simple assault accounts for more than 75 percent of all workplace victimizations.

Data from the National Crime Victimization Survey show the average annual rate of simple assault in the workplace (rate per 1,000 workers) by occupational category:

- Law enforcement: 95.8
- Mental health: 43.2
- Teaching: 14.9
- Retail sales: 14.1
- Medical: 11.4
- Transportation: 10.2
- Other: 5.1

Those persons working in the mental health field are second only to law enforcement officers for the incidence of simple assault while on duty.

Figure 1

Client Population Characterization



Figure 2

Direct Healthcare Staff Population Characterization



Responses to questions posed in the survey are used in this article to characterize national public ICFMRs by examining the client population, direct healthcare staff population and frequency of injury to that staff using the number of workers' compensation claims filed in 2003. Each question presented in the survey is printed at the beginning of the subsection. For statistical reference purposes, some subsections are concluded with a graphical representation showing the minimum, maximum and mean values. The inverted triangle in each figure represents the mean value of the data.

Number of Clients Served

Number of clients served (client census) at this facility.

Among the 92 facilities surveyed, the client census ranged from a minimum of 17 clients to a maximum of 781 clients. The mean value of clients served among surveyed facilities was 239 (Figure 1).

Number of Direct Healthcare Staff

Number of direct healthcare staff (for example, nurses, clinicians, developmental disabilities technicians, psychiatric treatment technicians) serving clients at this facility.

Each facility was asked to estimate the number of direct healthcare staff having day-to-day contact with clients. Examples of such positions would include nurses, clinicians, developmental disabilities technicians, psychiatric treatment technicians and social workers. The object was to estimate the direct healthcare staff population at risk of injury arising from direct contact with clients, con-

trasted to those staff who do not have direct contact with clients. The number of direct healthcare staff serving clients at each ICFMR ranged from 35 to 1,528. The mean value of direct healthcare staff was 411 (Figure 2). Direct healthcare staff populations greater than 1,170 are considered statistical outliers for this sample. [For the purposes of this article, statistical outliers are calculated as any element of the data set that is at least 1.5 times the interquartile ranges (the difference between the lower and upper quartile values) above the upper quartile value or below the lower quartile value.]

Number of Workers' Compensation Claims

Number of workers' compensation claims filed at this facility in 2003.

All ICFMRs reported the number of workers' compensation claims filed by direct healthcare staff during the 2003 reporting year. This information was requested for staff who filed a workers' compensation claim as a result of seeking medical treatment from a healthcare professional or as a result of missing one day or more of work as the result of an injury. The number of such claims filed in 2003 among these facilities ranged from zero to 610. The mean number of workers' compensation claims filed was 127 (Figure 3).

Ten percent of the facilities reported that more than 300 workers' compensation claims were filed

Characterization of Workplace Violence

While agreeing on a broader definition of the problem, occupational safety professionals and other analysts have come to a consensus that workplace violence falls into four broad categories:

Criminal Intent (Type I): The perpetrator does not have a legitimate business relationship with the establishment. The primary motive is usually theft and the use of a deadly weapon is often involved. Workers who exchange money, work late-night hours and/or work alone are at greater risk.

Customer/Client (Type II): The perpetrator is a "customer" or has a legitimate relationship with the business and violent act occurs while being served by the business. A large proportion of these incidents occur in the healthcare industry where victims are often caregivers.

Worker-on-Worker (Type III): The perpetrator is a present or former employee who commits an act of violence against coworkers, supervisors or managers. The motivating factor is often one or a series of interpersonal or work-related disputes.

Personal Relationship (Type IV): The perpetrator usually does not have a relationship with the business, but has a personal relationship with the intended victim. The perpetrator may be an abusive spouse or domestic partner.

Figure 3

Workers' Compensation Claims Filed During 2003 Claim Year

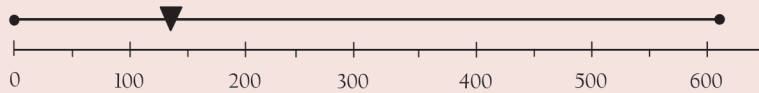
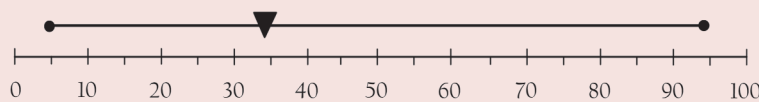


Figure 4

Workers' Compensation Claims per 100 Direct Healthcare Staff



during 2003. Seven facilities met the outlier criteria—that is, the number of workers' compensation claims filed is equal to or greater than 330.

Number of Claims per 100 Direct Healthcare Staff

Calculated value (total number of workers' compensation claims filed divided by 1/100 of the total direct healthcare staff population).

This measure serves two purposes:

1) It provides a standardized measure upon which to compare the frequency of injury or incidence rate at one facility to another regardless of the size of the direct healthcare staff population at any one facility.

2) It serves as an analog to the standard OSHA incidence rate of recordable cases where these values are not otherwise available through all facilities.

Discounting one facility that did not report any workers' compensation claims during 2003, the number of claims per 100 direct healthcare staff ranged from 4.7 to 94.1. The mean value was 32.7 (Figure 4). The value of 94.1 incidents per 100 direct healthcare staff meets the criteria of a statistical outlier for this measure.

Workers' Compensation Insurer Class

Respondents were asked to provide the class of workers' compensation insurance as private carrier, self-insured or state insurance fund.

Most ICFMRs surveyed (64 percent) indicated that workers' compensation insurance for direct healthcare staff was provided through a state insurance fund. Thirty-one percent of the respondents are self-insured, and approximately five percent are insured through private carriers.

Client Populations

The total client population served by the 92 facilities responding to the survey was 20,955. All but one facility serves an adult population between the ages of 18 and 64; only the New Jersey Green Brook

Regional Center is wholly dedicated to serving geriatric clients. Two of three facilities serve one or more geriatric clients over age 65. Forty-five percent of the facilities reported serving juvenile clients between ages nine and 17. No facility reported serving a client under age nine.

Dangerous or Aggressive Behavior Tendencies in the Client Population

Does this facility serve clients that may be characterized as dangerous or aggressive?

Most public ICFMRs in the U.S. serve client populations that have a mix of developmentally disabled, mentally ill or dually diagnosed residents. Many of these facilities serve

clients who have no other placement option because of severe behavioral or medical issues. These tendencies create an atmosphere that places direct healthcare staff at higher risk for injury compared to other healthcare professionals. Eighty-three percent of the respondents stated that at least some proportion of the client population could be characterized as dangerous or aggressive.

If the answer to the above question is yes, has the proportion of dangerous or aggressive clients relative to the total client population at this facility increased in recent years?

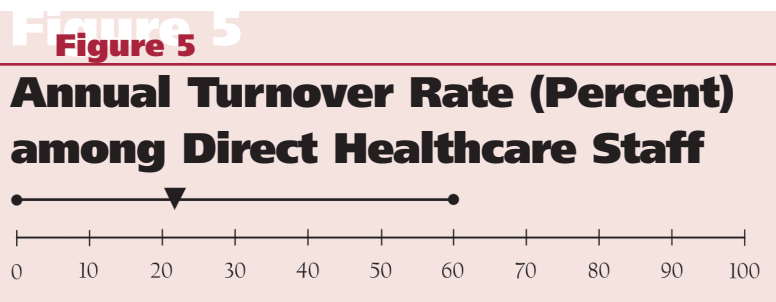
Among the 83 percent of facilities which indicated that at least some portion of the clients served could be characterized as dangerous or aggressive, 62 percent reported that the dangerous or aggressive portion of the client population is increasing. These data indicate that more than half of all facilities reported an increasingly violent client population.

The Home and Community Based Services (HCBS) waiver program was created in 1981. Given both its flexibility and its potential to promote individualization of services, HCBS is recognized in all states as a significant resource in the provision of community services as an alternative to institutional care. Today, all states provide HCBS and more than three times as many persons are served in small community-based settings as live in ICFMRs (Coucovanis, et al).

As a result of this migration, many persons demonstrating aggressive or maladaptive behaviors found to be unsuitable for placement in small community-based environments continue to be treated in large institutional settings. These conditions are supported by the observation made in the IDHW's 2004-05 "Facts, Figures and Trends":

Many ISSH admissions come from community providers who cannot manage the client's behavior, with many others referred by the

judicial system. These clients are frequently in crisis and in need of intensive treatment and behavior management. In FY04, 73 percent of admissions were clients who could not be successful in community settings or were referred to ISSH by the judicial system (IDHW).



Direct Healthcare Staff Characterization

Data were collected to characterize the turnover rate of direct healthcare staff, as well as any educational and physical fitness pre-employment requirements for these employees. Questions were also posed to determine any professional certification requirements for these staff and the level of training provided to new employees. Position title descriptors for these staff include nurses, clinicians, developmental disability technicians, psychiatric treatment technicians, certified nursing assistants, physical therapists, recreational therapists, respiratory therapists, social workers and similar healthcare professionals.

Direct Healthcare Staff Turnover Rate

What is the estimated turnover rate of direct healthcare staff at this facility on an annual basis?

This question was posed to discern whether any other variables (e.g., number of clients, number of direct healthcare staff, number of workers' compensation claims) could be correlated to the turnover rate at these public ICFMRs. No significant correlation was determined to exist between turnover rate and any of these variables.

Eighty-eight of the 92 facilities reported their annual direct healthcare staff turnover rate. The rate ranged from zero to 60 percent. The mean turnover rate for all 88 facilities reporting was 21 percent (Figure 5). Three facilities exceeded the criteria for statistical outliers of this measure (53 percent).

If the mean turnover rate in national public ICFMRs is in fact approaching 21 percent as indicated by this survey, how does this compare to other industries and general industry at large? To answer this question, the author consulted the U.S. Bureau of Labor Statistics Job Openings and Labor Turnover Survey (JOLTS). JOLTS estimates the December 2004 total separations rate as a percent of employment in the private sector as 3.5 percent. The construction industry, having among the highest separation rates of any industry category, was estimated as 5.6 percent (not seasonally adjusted) for this period [BLS(b)]. Thus, the turnover rate within the survey population is very high by any means of comparison.

Educational Requirements

Are educational requirements a condition of employment [at the facility]?

In hindsight, it is clear that this question, as well as the question regarding professional certifications, should have been more clearly crafted. The intent of this question was to learn whether facilities had spe-

cial educational requirements of paraprofessional direct healthcare staff. The lack of clarity resulted in varied interpretations by respondents.

Seventy-eight percent replied that there were at least some minimal educational requirements of direct healthcare staff. The majority of facilities require direct healthcare staff to have, at a minimum, a high-school diploma or general equivalency diploma.

Physical Requirements

Are physical fitness requirements a condition of employment?

Sixty-one percent of respondents replied that there were at least some minimal physical fitness requirements as a condition of employment. Few facilities (approximately five percent) required or are considering an actual pre-employment physical capacity assessment. The most frequently cited physical fitness criterion was the ability to lift from 50 to 100 pounds and the ability to execute physical restraint procedures.

Professional Certifications

Are professional certifications required as a condition of employment?

As in a previous case, this question should have been crafted more carefully. The intent was to learn whether a facility had any special professional certification requirements such as successful completion of a recognized course curriculum. The intended focus of the question was direct healthcare staff other than registered nurses, certified nursing assistants or professional therapists. However, many respondents included healthcare professionals such as physicians, dentists, registered nurses or psychiatrists among those required to maintain professional certification. This was not the intent of the question and the failing lies with the ambiguity of the question as stated.

Sixty percent of respondents indicated that some certification was required of direct healthcare staff, but, as noted, many of these respondents included staff such as physicians, nurses and psychiatrists. One facility noted that direct healthcare staff must be certified as medical aides and pass a certification exam. Another noted that certification as a developmental disabilities care assistant through a vocational training center is required within three months of employment.

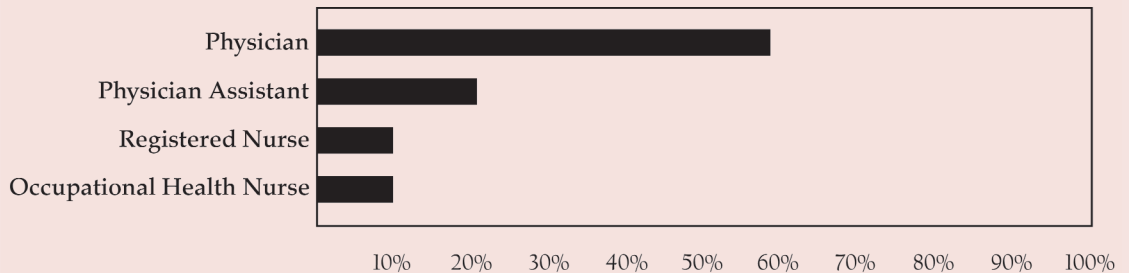
New Employee Orientation & Training

Please describe the level of new employee training or orientation for direct healthcare staff.

All facilities responded that employee training

Figure 6

Type of Healthcare Professional Providing On-Site Emergent Care



and orientation are provided to newly hired direct healthcare staff. Training and orientation was typically characterized as 80 hours of classroom instruction, followed by 72 to 80 hours of on-the-job training in the accompaniment of experienced staff. Some facilities required as much as seven to eight weeks combined classroom and on-the-job training.

The instruction curriculum required of direct healthcare staff is designed to provide the highest level of competency-based training based on current best practices in the field of developmental disabilities. Those wishing to establish themselves as developmental disabilities professionals might consider the following instruction curriculum:

- Teaching Persons with Developmental Disabilities.
- Positive Approaches to Sensitivity and Values.
- Crisis Intervention through Proactive Response and Interventions.
- Aging.
- Self-Advocacy.
- Human Rights.
- Physical and Occupational Therapy.
- Understanding and Supporting a Person in the Autism Spectrum.
- Identifying Mental Illness in Persons with Developmental Disabilities.
- Documentation (HIPPA, ADA, Affirmative Action, Sexual Harassment).
- Community Inclusion.
- Drug-Free Workplace.
- Workplace Violence.
- Right-to-Know (CDS).

Safety & Risk Management Protocols

A stated objective for conducting the survey was to learn of accepted best practices used to protect the safety and health of direct healthcare staff working in public ICFMRs. Information collected in this portion of the survey was intended to characterize those best practices, policies, procedures or methods. Questions were posed to discern both accepted risk management and nonrisk management practices that positively influenced safety outcomes in facilities.

Direct healthcare staff working in public ICFMRs

must engage in crisis intervention at times to protect clients and others from those who exhibit aggressive or maladaptive behaviors. These procedures—broadly referred to as behavioral restraint procedures—are among the highest-risk activities in which direct healthcare staff engage. The use of such procedures can have physically and emotionally damaging effects (McCue, et al). A large proportion of injuries to direct healthcare staff may be attributed to engaging in behavioral restraint procedures. Thus, those facilities which institute comprehensive staff training that encourages adaptive patient behaviors and nonviolent staff intervention may benefit by reducing the rate of injury to direct healthcare staff (Jonikas, et al).

Survey respondents were asked to provide a brief description of the level of intervention training delivered to direct healthcare staff to promote a more therapeutic environment for clients and direct healthcare staff alike. Respondents were also asked to describe the level of immediate medical care available to direct healthcare staff who were injured on the job and whether this care is provided on site or through a local emergency care clinic. If immediate medical care is provided on site, respondents were asked whether the healthcare practitioner is a physician, physician's assistant, registered nurse, occupational health nurse or other type of practitioner.

Finally, respondents were asked what posed the most significant challenges in reducing direct healthcare staff injuries at their facilities.

Crisis Intervention Training

Please provide a brief description of client intervention training delivered to direct healthcare staff (for example, Mandt, modified-Mandt, Crisis Prevention Institute, non-violent crisis intervention, verbal judo).

Eighty-nine of the 92 facilities provided at least some feedback on client intervention training. Direct healthcare staff must take a disciplined response to the often-unpredictable behaviors they encounter serving clients in public ICFMRs. The level of crisis intervention training received before entering these environments can have a large impact on the quality of self-discipline, attitudes and motivations developed by direct healthcare staff. When these staff are prepared with an understanding of the precursors to

assaultive or maladaptive behaviors and their outcomes, they are better prepared to reduce risks.

A broad spectrum of crisis intervention training programs was reported by the respondents. Training programs are either private domain (i.e., subject to licensing agreements associated with registered trademarks) or were developed independently by state-sponsored developmental disabilities programs. Many of the state-sponsored programs are adaptations of the former.

The most frequently cited crisis intervention models were the Mandt System and Crisis Prevention and Supportive Interventions (Crisis Prevention Institute Inc.). The Professional Assault Response Training and Therapeutic Options (also referred to as therapeutic interventions) were also popular. Among some states, not all facilities exclusively use one crisis intervention model.

The focus of these programs is the management of aggressive or maladaptive behaviors and the de-escalation of potentially violent situations. Each program has been evaluated in psychiatric settings using a set of predetermined criteria. Although some programs may offer the advantages of newer theoretical and therapeutic principles, whether any one program is particularly efficacious in reducing the number of injuries among direct healthcare staff remains unclear. In the absence of more well-established clinical standards on the teaching of the management of aggressive behavior, it will remain difficult to determine program effectiveness in achieving desired outcomes (Morrison and Love).

Medical Treatment of Staff Injuries

Is an on-site medical provider available to provide treatment of direct healthcare staff injuries?

Half of all facilities responding (46) reported having some level of on-site emergent care available to direct healthcare staff who become injured or ill on the job. Respondents were also asked to characterize the type of healthcare professional providing treatment if the facility offered on-site emergent care.

These included physician, physician assistant, registered nurse and occupational health nurse.

Fifty-nine percent of the facilities that provide on-site emergent care to direct healthcare staff use the services of a licensed physician. Twenty percent provide an occupational health nurse; 10 percent provide either a physician assistant or registered nurse. Two facilities reported having all of these healthcare professionals available to treat injuries (Figure 6).

Designated Physicians

If off-site medical treatment is used for direct healthcare staff injuries, does your organization specify treatment by a designated physician?

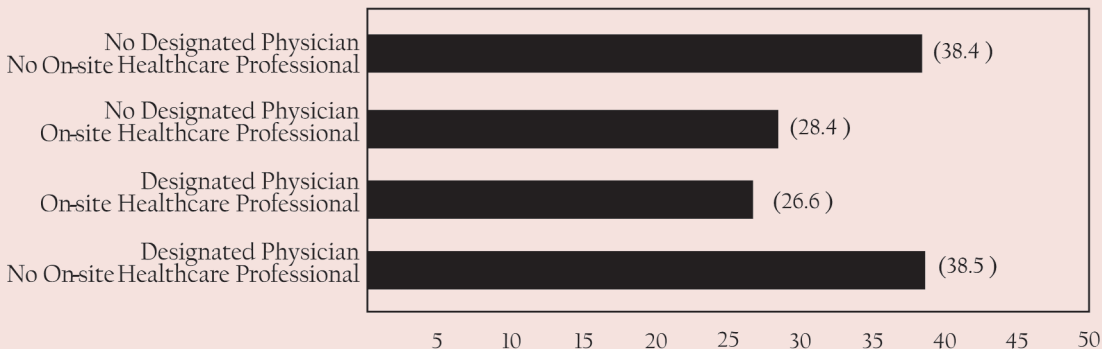
Some public ICFMRs have elected to include designated physicians or other healthcare professionals as part of their overall treatment program for injured direct healthcare staff. If the facility offers on-site emergent care for injured staff, the injured employee may be referred to a designated physician for follow-up consultation and care. The designated physician may be an occupational medicine specialist who cooperates with the facility in the administration of a return-to-work program. Benefits to the injured worker include timely access to treatment by a healthcare professional knowledgeable about worksite injuries, work rehabilitation and return-to-work options. Benefits to administration include the ability to choose a provider whose credentials meet the organization's standards, who is familiar with worksite risks and who will help the employer facilitate the earliest possible safe return to work for the injured employee.

Twenty-three percent of respondents neither offer on-site emergent care nor require injured employees to see a designated physician for treatment. Injured employees use their own discretion when selecting medical treatment. The average claim rate among this group was 38.4 claims per 100 staff.

Twenty percent do not require injured staff to seek treatment through a designated physician, but they do offer on-site emergent care. The average claim rate among this group was 28.4 claims per 100 staff.

Figure 7

On-Site Healthcare Staff Effect on Injury Rate*



*Effect of designated physician/on-site healthcare professional combination on direct healthcare staff injury rate (workers' compensation claims per 100 staff members).

The rate of injury among direct health-care staff working in ICFMRs is twice that of metal foundry workers and almost three times that of workers in the meat processing industry.

Thirty-three percent require injured employees to seek follow-up care with a designated physician and provide on-site emergent care. The average claim rate among this group was 26.6 claims per 100 staff—the lowest rate among the four different categories examined.

Twenty-five percent require an injured employee to seek treatment through a designated physician, but do not offer on-site emergent care. The average claim rate among this group was 38.5—the highest rate among the four different categories examined (Figure 7).

Accepted Risk Management/Safety Practices

Please describe any accepted risk management or safety practices that have positively influenced or have proven to be successful in reducing client-to-staff injuries.

All but eight of the 92 facilities provided some feedback to this question. The goal was to discern any accepted best management practices held in common among all facilities that may help reduce client-to-staff injuries and to learn of any new or innovative practices. Several risk management practices are common among state-operated public ICFMRs.

Management of Aggressive Behavior

Violence against direct healthcare staff in state-operated public ICFMRs and professional healthcare providers in general is well-documented and is a national concern. Data collected in this survey reflect the severity of the problem and its consequences.

A consistent risk management theme voiced by all respondents was the need to educate direct healthcare staff to recognize conditions that contribute to the escalation of aggressive or maladaptive behavior in clients and their clinical interventions. A critical element in this regard is developing an awareness of the risk factors associated with physical restraints. This also includes developing a self-awareness of their own response to the stimuli presented in confrontational situations.

A significant trend toward obviating the need to physically restrain clients in all but the most serious situations was also observed. Many facilities now restrict the use of physical restraint to those situations where the client's actions will clearly result in physical harm to the client or others. In many facilities, the destruction of property or noncompliance with directives is no longer regarded as sufficient reason to engage in physical restraint.

Safe Lifting & Transfer

In many state-operated public ICFMRs, low-back trauma arising from unsafe lifting and transfer of clients is a leading cause of injury to direct healthcare staff. A significant portion of new-employee orientation is dedicated to body mechanics, use of mechanical lifts, and other safe lifting and transfer techniques. Many facilities now emphasize the use of mechanical lifting techniques. When these lifts are not allowed because of the client's medical necessity, one-person lifts are strictly prohibited.

Accident Review & Investigation

More than 75 percent of respondents indicated that incidents which resulted in an injury or lost time to direct healthcare staff are investigated by a review authority within the facility. This authority typically is an accident review board, local safety committee or similar group. The injured employee and his/her supervisor are interviewed to determine the root causes of the incident and to determine corrective actions. Most facilities suggest that such reviews occur at least monthly; many convene such investigations within seven to 15 days following an incident. When a staff injury is sustained during an intervention requiring the emergency physical restraint of a client, the incident is typically reviewed within 24 hours.

Many facilities require that advanced or applied behavioral support master trainers be included as integral members of the incident review team for all direct healthcare staff injuries. Some respondents suggested that a qualified mental retardation professional participate in any incident where a client-to-staff injury was of a particularly egregious nature or was the result of an emergency physical restraint. Several facilities reported the use of a database to manage and store information associated with injury data and to identify emergent trends that may not otherwise become apparent.

Return to Work

Less than 20 percent of respondents reported that the implementation of an effective return-to-work program for injured direct healthcare staff has resulted in reduced workers' compensation losses. When coupled with the participation of an occupational medicine physician or other healthcare professional knowledgeable about the diagnosis and treatment of worksite injuries, work rehabilitation and return-to-work options, the injured employee benefits from a timely return to work. An important consideration in the implementation of a return-to-work program is prior identification and availability of light-duty assignments to accommodate the recovery of the injured employee. When such assignments can be accommodated, effective communications between the injured employee, the treating physician and facility administration are critical.

Nonrisk Management Practices

Please describe any "nonrisk management" practices that have influenced safety outcomes (for example, incentive programs, salary increases or other benefits).

Twenty-three percent provided feedback on this question or responded that their facility used non-risk management practices to influence safety outcomes. Among those facilities that employ such practices, most reported using some form of employee recognition program such as injury-free employee certificates, employee-of-the-month recognition and safety award certificates. One facility commented that an award is issued quarterly to the operating unit with the lowest injury rate. Any operating unit receiving the award for four consecutive quarters is recognized with a facility-sponsored cookout.

One facility noted an innovative approach to returning injured employees to work. It has established a Caring Committee made up of coworkers. The committee's purpose is to maintain contact with employees who are on extended leave. The committee shows support, care and concern for the injured employee and encourages him/her to return to work as soon as possible.

Significant Challenges

What presents the most significant challenges in reducing direct healthcare staff injuries at this facility?

Eighty-five percent of respondents commented on the significant challenges presented in reducing direct healthcare staff injuries. Evaluation of these comments identified 15 distinct issues.

Assaultive or Aggressive Behavior of Clients

The assaultive or aggressive nature of client populations was the most frequently cited challenge faced by direct healthcare staff in public ICFMRs. Many public ICFMRs receive those clients whose persistent and difficult-to-manage behaviors have not been successfully treated elsewhere. These clients often exhibit highly active, sometimes "explosive" behaviors that are difficult to anticipate. One respondent commented, "This is the nature of the business."

Lifting, Pushing & Pulling Injuries

Low-back injuries are second only to injuries sustained through client-to-staff interventions and these injuries were cited as the second-most pressing challenge faced by public ICFMRs. Much of the difficulty arises when, as a matter of convenience, staff do not use mechanical or assistive devices to transfer clients. The training aspects of proper lifting and transfer techniques also pose a significant challenge for facility administration.

Staff Training

Maintaining a competent workforce requires continual training and technical assistance across multiple disciplines. Training issues can place real demands on personnel and financial resources. The limitation of training time and the failure of staff to adhere to training principles and to follow established procedures were also frequently cited challenges.

Aging Client & Staff Populations

Facilities were almost evenly divided as to whether the client populations were becoming increasingly aged. In facilities where this is the case, it presents a challenge to caregivers who provide for their daily needs.

In addition, in many facilities, the average age of the direct healthcare staff population is increasing. Analysis of workers' compensation data for staff working at ISSH indicates that an older direct healthcare staff population is more susceptible to injury. When injury does occur, the period of recovery tends to be longer in duration and the concomitant workers' compensation costs rise accordingly. However, it is important to note that the issue of worker susceptibility to injury with age throughout

general industry is not as clear-cut and remains a topic in need of further research.

Workers' Compensation Abuse

Several comments were made about the real or perceived abuse of state workers' compensation systems. Some respondents believe that workers' compensation benefits are too easily accessible and that as a result too many disincentives exist for the early return to work of injured employees. This condition is exacerbated by filing of claims for minor injuries or the filing of wholly illegitimate claims that otherwise go uninvestigated.

Other less-frequently cited challenges include:

- lack of direct healthcare staff awareness of their environment and a tendency for them to engage in power struggles with clients or to react prematurely to aggressive or maladaptive behaviors;
- management of medically complex or nonambulatory clients;
- accountability of staff supervisors and poor direct healthcare staff attitudes;
- lack of management support for new or innovative approaches to problem solving;
- retention of qualified staff;
- slips and falls and injuries sustained while protecting a falling client;
- staffing and overtime pay issues;
- fiscal constraints;
- management of light-duty programs;
- physical fitness or conditioning of direct healthcare staff.

Discussion

A stated goal of conducting this survey was to develop a framework on which to compare the frequency rate of injury among direct healthcare staff working at ISSH with other public ICFMRs throughout the U.S. The study also sought to benefit from lessons learned about programs that better protect direct healthcare staff. Chief administrators or their designees representing a total of 92 public ICFMRs in 36 states responded to the survey. Collectively, these facilities provide care to nearly 21,000 developmentally disabled, mentally ill or dually diagnosed clients.

A corps of some 38,000 dedicated direct healthcare staff who provide daily care and quality support to these individuals is also represented in the survey. During the 2003 reporting year, the average frequency rate of injury per 100 direct healthcare staff working in these public ICFMRs was 32.7. This measure clearly indicates that serving as a direct healthcare professional in public ICFMRs is among the more hazardous jobs in the U.S. for nonfatal occupational injury.

Of the 38,000 direct healthcare staff characterized in the survey, 11,768 filed workers' compensation claims in 2003. Although no workers' compensation cost data were collected in this survey, the loss experience of ISSH over the past five years may be used as an indicator. This approach would certainly provide a conservative cost estimate for workers' compensation losses for the sample population, as Idaho

As a first step, SH&E professionals directly affected by these issues should engage in a dialogue with the broader mental health community.

ranked 39th in workers' compensation benefits paid during 2002. Moreover, the total benefits paid in Idaho that year were approximately 24 percent of the national average (NASI).

The average cost associated with a workers' compensation claim at ISSH is approximately \$3,500. Using a range of \$3,000 to \$4,000 per claim, direct workers' compensation losses for the sample population could conservatively be estimated to be between \$35 and \$47 million. Indirect cost could in addition be as high as eight times that amount (HSE) representing annual workers' compensation losses approaching \$425 million for the sample population alone. Workers' compensation losses of this magnitude can reasonably support the argument that the injury rate among direct healthcare staff in public ICFMRs has reached proportions of a public healthcare crisis.

Six of 10 facilities surveyed responded that the dangerous or aggressive proportion of their client population served is increasing. As clients having more adaptive behaviors are placed in community-based settings, the remaining population is ascribed with the characteristic of "more aggressive." The data collected in this survey are not sufficient to definitively support such a conclusion, but the data do emphasize the need to educate direct healthcare staff in the management of aggressive behavior. The clinical and therapeutic value of managing aggressive behavior was regarded as one of the most important risk management activities in which a public ICFMR can engage.

One parameter that had an apparent impact on reducing the number of workers' compensation claims per 100 staff is the availability of an on-site healthcare professional to provide emergent care for injuries. Where a healthcare professional was available to provide immediate care, the average claims per 100 staff measure was reduced by more than 10 points. When combined with the use of a designated physician to provide follow-up care, this mode of treatment showed the best claims per 100 staff measure of 26.6.

Conclusion

The first step should be to recognize the gravity of this public healthcare problem and to understand that it will require a greater degree of collaborative research to discover its solutions. Those SH&E professionals directly affected by these issues should begin by engaging the broader mental health community in a dialogue to that end. An effective means of doing so is to actively participate in forums such as the National Occupational Injury Research Symposium, as well as in the annual meetings of groups such as ASSE and American Public Health Assn.

The author also suggests that NIOSH continue to help support and sustain such research through its National Occupational Research Agenda, particularly through the Surveillance Research Methods strategic plan. The initial research efforts should focus on improving the quality and specificity of injury data among direct healthcare staff serving in

national public ICFMRs. Only when the degree and severity of the problem is better understood can more effective methods of protecting direct healthcare staff be developed.

Although not initially intended to serve as a scientific survey, the data collected through this survey have provided WHSP valuable insight into the accepted best management practices used to protect direct healthcare staff. The first and last concern of these healthcare professionals is always the safety and quality of life of the people they serve. This sense of dedication often comes at a high price to their own safety and health. It is important for everyone touched by these challenges to remember that the safety and health of the client cannot be separated from the safety and health of the caregiver. ■

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