Introduction

Seclusion and restraint are coercive, high-risk containment procedures that contribute to the problem of violence against consumers and staff members in behavioral health care settings. In fact, an estimated 50 to 150 individuals die each year as a result of seclusion and restraint practices in facilities, and countless others are injured or traumatized (Weiss et al., 1998). These practices are detrimental to the recovery of persons with mental illnesses and adversely affect the quality of care and the safety of all involved (di Martino, 2003; Huckshorn & LeBel, 2009). Equally important, yet often less recognized, is the multilevel economic burden that is inherent in their use (Flood, Bowers, & Parkin, 2008; LeBel & Goldstein, 2005).

Based on clinical best practice, inpatient and residential mental health facilities in the United States and other countries have implemented initiatives to reduce seclusion and restraint use (National Association of State Mental Health Program Directors [NASMHPD], 2009; Nunno, Day, & Bullard, 2008). Several programs that have reduced their use have reported fiscal benefits (LeBel & Goldstein, 2005; Murphy & Bennington-Davis, 2005; Sanders, 2009). These facilities have changed their organizational cultures and practices and report that benefits and savings exceed the costs associated with the use of seclusion and restraint (LeBel, 2009). Given the potential savings, health care organizations should reconsider reducing seclusion and restraint from a “best business practice” imperative.

This issue brief, the fourth in a series, provides a summary of a recently developed white paper, The Business Case for Preventing and Reducing Restraint and Seclusion Use, authored by Janice LeBel, Ed.D. for the Substance Abuse and Mental Health Services Administration (SAMHSA). The paper describes the systemic, organizational, and personal costs of the use of seclusion and restraint practices as well as cost savings related to reduction in their use.
The Cost of Seclusion and Restraint Use

Although the fiscal cost of violence against staff members (workplace violence) has been well-studied, only recently has there been an exploration of the costs of violence against consumers associated with seclusion and restraint (Cromwell et al., 2005; Flood et al., 2008; Huckshorn, 2006; LeBel & Goldstein, 2005). This section of the issue brief will examine costs associated with seclusion and restraint at the systemic, organizational, and personal levels.

Systemic Costs

The systemic costs of seclusion and restraint are the larger economic bases of health care costs, which include workplace violence and organizational disruption such as decreased productivity and recruitment and retention challenges. Systemic costs also include preventable adverse events or medical errors that may follow seclusion and restraint use. Across health care, medical errors are a very serious problem potentially claiming up to 98,000 lives and costing $29 billion annually in health care (Institute of Medicine [IOM], 2000). Psychiatry now recognizes seclusion and restraint as medical errors “...of commission, perhaps errors of omission, causing either near misses or preventable adverse events in routine clinical practice” (Grasso et al., 2007).

The Federal Government, several States, and some private insurers are adopting new parameters for compensating care resulting in medical errors or hospital-acquired conditions. Specifically, certain “Never Events” will no longer be compensated (Centers for Medicare and Medicaid Services [CMS], 2008; National Quality Forum, 2006; and UniCare, 2008). “Never events” are defined by CMS as preventable adverse events with serious consequences for the patient that should never happen in health care (CMS, 2008). These “Never Events” include two occurrences related to seclusion and restraint use: (1) death or serious disability associated with restraints, and (2) death or significant injury resulting from a physical assault. The impact of this decision is significant, as public funding represents roughly 40 percent of the revenue for mental health treatment facilities (U.S. Government Accountability Office, 1999b).

Organizational Costs

Seclusion and restraint significantly increase a number of organizational and health care costs. The most significant day-to-day cost is the amount of staff time spent managing these procedures (Flood et al., 2008; LeBel & Goldstein, 2005). The full cost to an organization is unknown, but a time/motion/task analysis conducted within one State facility estimated the cost of one restraint episode to be between $302 and $354, depending upon the number of containment methods used (i.e., physical, mechanical, and/or medication) (LeBel & Goldstein, 2005). A 1-hour restraint involved 25 different activities and claimed nearly 12 hours of staff time to manage and process the event from the beginning until the end of all required tasks (LeBel & Goldstein, 2005). Collectively, restraint use claimed more than 23 percent of staff time and $1.4 million in staff-related costs, which represented nearly 40 percent of the operating budget for the inpatient service studied (LeBel & Goldstein, 2005). Flood et al. (2008) report 50 percent of nursing resources are used to manage seclusion and restraint-related incidents. The work of Cromwell and his colleagues (2005) confirmed that seclusion and restraint increase the cost of care due to additional staff time required to implement and monitor these procedures. They found that the monitoring time required during these procedures represented the greatest resource intensity, accounted for the most nursing-staff time, and significantly increased the daily cost of care (Cromwell et al., 2005).

Several other seclusion- and restraint-related costs, such as physical injuries to staff members and persons served, have been reported by inpatient and residential providers (Huckshorn, 2006; NASMHPD, 2009). Injuries to staff members, in turn, contribute to workforce instability (e.g., turnover, industrial accidents, absenteeism/sick time, replacement costs, hiring costs, training/retraining), which can be extremely costly to an organization (LeBel & Goldstein, 2005; Unruh, Joseph, & Strickland, 2007).

In addition to these economic burdens, organizations must address liability and legal costs. Liability matters may be the most significant fiscal consequence of seclusion and restraint. Many organizations have reported substantial liability costs associated with these practices (LeBel & Goldstein, 2005; Murphy & Bennington-Davis, 2005; Sanders, 2009) and several organizational leaders indicated that exorbitant liability policy premiums are a fiscally compelling reason to change practice (LeBel, 2009).

When injury or death occurs from seclusion and restraint use, litigation costs and judgments awarded by the courts also have the potential to be the most costly result (Haimowitz et al., 2006; Stefan, 2002). Stefan noted, “Tort claims can involve a number of different causes of action: excessive force, medical malpractice, failure to protect, assault and battery, and failure to maintain a safe environment” (Stefan, 2002). Legal actions can lead to judgments including fines ranging from several thousand dollars to multimillion dollar settlements as well as incarceration and/or probation for staff members.
A Family’s Experience of the Ultimate Restraint Cost

Tanner Wilson was 9 years old when he was admitted to a residential program in Iowa. Within 24 hours of his admission, Tanner’s leg was broken in a physical restraint. His leg required surgery, a body cast, and rehabilitation. He returned to the program using a walker. His leg was broken a second time in a separate incident at the program. Fifteen months after he was admitted, Tanner died while being restrained in a “routine prone physical hold.”

Tanner was the son of Karen and Robert Wilson. His mother recounted:

Tanner was our only child. We sacrificed everything for him. He needed help, and that’s what we wanted to get for him. We never thought this would happen. Nothing can bring Tanner back. We trusted this program to care for him. Our lives are changed forever. We would ask every healthcare leader to look at that child or that person being restrained, as though they were your own child. Tanner paid the ultimate price of restraint, but we hope his death and his story will help people to think twice, think about what they are doing, and to not take people to the floor... there has to be a better way. We are grateful for the beautiful memories we have of Tanner—because that’s what we have to go on these days.

Costs to Consumers

The personal costs to consumers who are restrained or secluded have been recognized but have received less attention in the literature. Consumers can be physically injured, and deaths have resulted from these procedures (NASMHPD, 2009; Weiss et al, 1998). They may also be traumatized or retraumatized by the experience, which can result in longer lengths of stay (Calkins & Corso, 2007; LeBel & Goldstein, 2005). Two studies of youth in Massachusetts inpatient and residential programs, respectively, found that seclusion and restraint use not only led to extended stays but also increased recidivism/readmission to the hospital or residential care (LeBel & Goldstein, 2005; Thomann, 2009).

As a result of being restrained or secluded, consumers may experience subjective costs to interpersonal relationships, damage to the therapeutic alliance, and mistrust of the health care system and providers (NASMHPD, 2009). Additional personal costs to consumers are the “opportunity costs” incurred when treatment is not provided to those being restrained or secluded and when other consumers are not receiving care while staff attention is diverted to manage a seclusion or restraint procedure. Krueger (2009) noted that failure to take consumer time into account causes national health care expenditures to be significantly undercounted and leads to an overestimate of productivity and an understatement of actual health care costs.
A Provider Makes a Compelling Practice and Business Case

One example of cost savings and benefits of restraint and seclusion reduction is the Grafton School, Inc. Grafton is a large, nonprofit organization in Virginia serving children and adults with autism and mental retardation, most with comorbid psychiatric diagnoses. Following a longstanding institutional history of utilizing a restraint-centric approach to managing escalating assaultive behaviors, Grafton initiated an agency-wide restraint reduction effort in the Fall of 2004 when the new CEO issued a mandate: “Eliminate restraints without compromising employee and client safety” (Mental Health Corporations of America [MHCA], 2008; Sanders, 2009). Each regional facility was then charged with creating an evidence-based strategic plan to eliminate restraints (MHCA, 2008; Sanders, 2009).

Grafton focused on key reduction strategies, including (1) leadership oversight and review of every event; (2) supporting clients in crisis; and (3) providing staff with new training, tools, and management support. Since 2004, Grafton has reduced restraint use by 99.8 percent and was nationally recognized for this achievement (MHCA, 2008). In addition, Grafton identified many fiscal benefits and savings subsequent to reducing restraint use (Sanders, 2009). Positive outcomes included (1) reduced client related staff injuries by 41.2 percent; (2) reduced staff turnover (10 percent) with estimated annual savings surpassing $500,000; (3) reduced employee lost time and lost time expenses (94 percent); (4) reduced number of worker’s compensation claims (50 percent) [See Figure 1]; (5) reduced total cost of worker’s compensation claims; (6) reduced liability premiums (21 percent) and cumulative savings in excess of $1,239,167 [See Figure 2]; (6) reduced worker compensation experience modification factor (more than 50 percent) with a cumulative modification change of 62 percent; and (7) more than $483,470 in cumulative worker’s compensation costs savings. Grafton also realized other benefits such as increased staff satisfaction and staff perception of greater safety on the job (MHCA, 2008).

There are several important features to Grafton’s experience. First, Grafton’s documentation of an array of reduction benefits is an important feature of the initiative as they are not often reported in restraint and seclusion prevention efforts. Second, two months after Grafton began its effort, a tragic restraint associated sentinel event occurred redoubling the leadership team’s commitment to the importance of reducing and preventing the use of restraint and seclusion. Third, Grafton studied the range of reduction outcomes, which are not often considered in restraint and seclusion prevention initiatives.

Costs Associated With Reducing Seclusion and Restraint

Since the beginning of the national initiative to prevent and reduce seclusion and restraint, many organizations have reduced the use of these practices with little to no additional fiscal resources (Huckshorn, 2006). Weiss and colleagues (1998) reported: “… with strong leadership, the physical restraint of patients can be minimized—indeed, nearly eliminated—safely and without exorbitant cost.” Likewise, the GAO found, “…training in alternatives to restraint and seclusion and maintaining adequate staff levels are costly, but they can save money in the long run by creating a safer treatment and work environment…” (GAO, 1999a, p.21).

Figure 1
Grafton’s Reduced Workers’ Compensation Costs

Figure 2
Grafton’s Reduced Liability Premiums and Cumulative Savings
Successful organizations typically reallocate dollars to support the effort (NASMHPD, 2009). In general, the costs identified by programs that have reduced the use of seclusion and restraint include: (1) purchasing and/or implementing training curricula to promote practice change (e.g., models of care, crisis prevention, dispute resolution); (2) increasing staff supervision; and (3) encouraging staff training (e.g., compensating staff to attend or cover for those being trained, trainer costs, training costs such as venue, food, technology, materials) (GAO, 1999a; NASMHPD, 2009).

Curricula such as NASMHPD’s Six Core Strategies© (NASMHPD, 2009) and the Roadmap to Seclusion and Restraint Free Mental Health Services (SAMHSA, 2005) are available at no cost, provide comprehensive information and training materials, and are showing positive results (NASMHPD, 2009; see also Issue Brief #2 in this series, Major Findings From SAMHSA’s Alternatives to Restraint and Seclusion (ARS) State Incentive Grant (SIG) Program). There are other models and technical support packages available for purchase that also show positive results (Banks & Vargas, 2009).

Other costs associated with seclusion and restraint reduction efforts may include making environmental changes (such as creating sensory or comfort rooms) and purchasing sensory items to implement sensory-based interventions. Occasionally, environmental repair and property destruction costs may be incurred; however, some research suggests property destruction decreases during the restraint/seclusion reduction process. (Banks & Vargas, 2009; LeBel & Goldstein, 2005)

A number of States and facilities have developed or expanded consumer roles for youth, adults, and families (NASMHPD, 2009). Hiring or engaging consumers by reexamining vacant positions and converting them into new advocacy roles for persons served and/or family members may help prevent conflict, reduce the use of seclusion and restraint, and change the organizational culture.

Savings Resulting From Seclusion and Restraint Reduction

Systemic and Organizational Cost Benefits

Systemic interventions include the adoption of programs such as NASMHPD’s Six Core Strategies© curriculum, which has shown significant reduction in seclusion and restraint and resultant savings to systems and organizations. Selected examples include Johns Hopkins Hospital, which reduced use of seclusion and restraint by 75 percent with no increase in staff or consumer injuries (Lewis, Taylor, & Parks, 2009); and Florida State Hospital at Chattahoochee, FL, which reduced use by 54 percent and realized nearly $2.9 million in cost savings from reduced workers’ compensation, staff and consumer injuries, and length-of-stay costs (Florida TaxWatch, 2008).

The Massachusetts statewide child/adolescent seclusion and restraint prevention initiative is another example of a systemic reduction effort with demonstrated savings (LeBel & Goldstein, 2005; NASMHPD, 2009). Overall, the system reduced seclusion and restraint use by 89 percent from Fiscal Year 2001 through 2008 and avoided more than 34,037 restraints—realizing an average of $1.33 million savings per year and more than $10.72 million in cumulative savings since the start of the initiative (LeBel, 2009). [See Figure 3].

Organizations that have successfully reduced the use of seclusion and restraint report increased staff satisfaction and decreased staff turnover (Paxton, 2009). LeBel & Goldstein’s (2005) study of restraint reduction on an inpatient service also reported an 80 percent reduction in staff turnover. Besemer and colleagues’ (2008) work on restraint reduction identified a 42 percent reduction in direct care staff turnover and a 24 percent decrease in turnover costs following systemic changes and enhancements.

Other organizational savings include reduced staff absenteeism (Besemer et al., 2008; Unruh et al., 2007) and reduced staff injuries (Pollard, Yanasak, Rogers, & Tapp, 2007). The University of Massachusetts’ adolescent inpatient service reduced their use of mechanical restraint by 98 percent and realized an 86 percent reduction in staff members’ sick time use (LeBel, 2009).
Moreover, many organizations have experienced significantly reduced workers’ compensation and other workforce-related costs following seclusion and restraint reduction (Florida TaxWatch, 2008). LeBel and Goldstein’s study (2005) of inpatient restraint reduction found a 91 percent reduction in use, which resulted in a 98 percent reduction in workers’ compensation and medical costs and a 77 percent decrease in costs to fill shifts vacated due to restraint injuries. Other cost reductions attributed to decreased seclusion and restraint use include reduced workforce replacement costs (Paxton, 2009; Sanders, 2009) and less medication use (Barton et al., 2009; Murphy & Bennington-Davis, 2005).

**Consumer Benefits**

When seclusion and restraint are reduced and prevented, consumers receive more effective care. The research is clear about the benefits to persons served: (1) fewer injuries; (2) shorter lengths of stay (LeBel & Goldstein, 2005; Murphy & Bennington-Davis, 2005; Thomann, 2009); (3) decreased recidivism/rehospitalization (LeBel & Goldstein, 2005; Paxton, 2009); (4) less medication use (Barton et al., 2009; Murphy & Bennington-Davis, 2005; Thomann, 2009); and (5) increased positive outcomes/discharges and/or higher levels of functioning at time of discharge (LeBel & Goldstein, 2005; Murphy & Bennington-Davis, 2005; Paxton, 2009). In short, people recover more quickly and may experience greater success in the community when violence is removed from the treatment setting.

**Recommendations**

In order to continue to build the business case for seclusion and restraint reduction and prevention, a few recommendations have been offered by experts within the field:

- National leaders and accrediting bodies should develop and implement standardized seclusion and restraint definitions and consistent measurement methods across and within the industry. Without common parameters, a complete and accurate analysis of seclusion and restraint use, costs, and benefits is not possible;
- Experts, researchers, and organization leaders should continue to study and publish on the fiscal impact and outcomes of seclusion and restraint use and prevention and reduction efforts; and
- Organizational leaders should also assess current practices that contribute to conflict, violence, and seclusion and restraint and consider approaches implemented by others to help prevent and reduce their use.

**Conclusion**

The goal of this issue brief was to describe the systemic, organizational, and personal costs of the use of seclusion and restraint practices as well as the cost savings and benefits related to the reduction in their use. These practices are expensive, violent, and harmful procedures that prolong recovery and raise the cost of care. Reducing and preventing their use can yield significant savings, enhance quality of treatment, and increase satisfaction for those providing and receiving services. The full scope of the fiscal impact of seclusion and restraint is still being assessed.

Compelling data about the adverse effects of seclusion and restraint, higher standards of practice demonstrated by many providers, and effective no-cost resources are available to help facilitate reduction and prevention of seclusion and restraint practices. Providers who have not begun to engage in these efforts will be challenged to justify continuing practice as usual. Stated more explicitly by the IOM (2000):

> The status quo is not acceptable and cannot be tolerated any longer. Despite the cost pressures, liability constraints, resistance to change and other seemingly insurmountable barriers, it is simply not acceptable for patients to be harmed by the same health care system that is supposed to offer healing and comfort...
Seclusion is the involuntary confinement of a person alone in a room or area from which the person is physically prevented from leaving. 42 C.F.R. §482.13(e)(1)(ii); See also 42 C.F.R. §483.352.

2 Restraint is any manual method, physical or mechanical device, material, or equipment that immobilizes or reduces the ability of a person to move his or her arms, legs, body, or head freely. 42 C.F.R. §482.13(e)(1)(i)(A). See also 42 C.F.R. §483.352.
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