



The Business Case for Preventing and Reducing Restraint and Seclusion Use



The Business Case for Preventing and Reducing Restraint and Seclusion Use

U.S. Department of Health and Human Services
Substance Abuse and Mental Health Services Administration
Office of the Administrator (OA)



ACKNOWLEDGMENTS

This white paper was prepared for the Substance Abuse and Mental Health Services Administration (SAMHSA) by Janice LeBel, Ed.D., and is based on her issue paper, *The Business Case for Preventing and Reducing Restraint and Seclusion Use*. This publication was coordinated by Educational Services Inc. (ESI) under contract number 280-03-3603 with SAMHSA, U.S. Department of Health and Human Services (HHS). Leadership and coordination of this publication was provided by SAMHSA's Seclusion and Restraint Matrix Work Group.

DISCLAIMER

The views, opinions, and content of this publication are those of the author and do not necessarily reflect the views, opinions, or policies of SAMHSA, HHS, or the U.S. Department of Education.

PUBLIC DOMAIN NOTICE

All material appearing in this publication is in the public domain and may be reproduced or copied without permission from SAMHSA. Citation of the source is appreciated. However, this publication may not be reproduced or distributed for a fee without the specific, written authorization of the Office of Communications, SAMHSA, HHS.

ELECTRONIC ACCESS AND PRINTED COPIES

This publication may be downloaded or ordered at store.samhsa.gov. Or call SAMHSA at 1-877-SAMHSA-7 (1-877-726-4727) (English and Español).

RECOMMENDED CITATION

Substance Abuse and Mental Health Services Administration. *The Business Case for Preventing and Reducing Restraint and Seclusion Use*. HHS Publication No. (SMA) 11-4632. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2011.

ORIGINATING OFFICE

Office of the Administrator (OA), Substance Abuse and Mental Health Services Administration, 1 Choke Cherry Road, Rockville, MD 20857. HHS Publication No. (SMA) 11-4632, Printed 2011.



CONTENTS

Abstract.....	4
Introduction.....	5
The Economic Burden of Restraint and Seclusion Use	7
The Costs Associated With Reducing Restraint and Seclusion.....	13
Savings Resulting From Restraint and Seclusion Reduction	15
Recommendations.....	21
Conclusions	23
References.....	25

ABSTRACT

Objective: Examine the economic base of restraint and seclusion, and create a business case for reducing their use.

Method: Conduct a literature review of specific cost factors: violence and medical errors. Review the costs associated with restraint and seclusion use. Identify the costs, benefits, and savings reported by organizations that have successfully reduced their use. Consider industry perspectives and the unquantifiable cost of the consumer's experience.

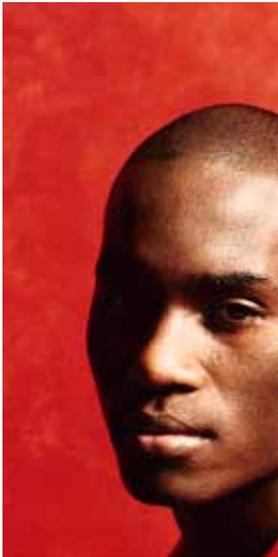
Results: Restraint and seclusion are violent, expensive, largely preventable, adverse events. The rationale for their use is inconsistently understood. They contribute to a cycle of workplace violence that can reportedly claim as much as 23 to 50 percent of staff time (LeBel & Goldstein, 2005; Flood, Bowers, & Parkin, 2008), account for 50 percent of staff injuries (Short et al., 2008), increase the risk of injury to consumers and staff by 60 percent (Florida taxwatch, 2008), and increase the length of stay, potentially setting recovery back at least 6 months (Florida taxwatch, 2008) with each occurrence. Restraint and seclusion increases

the daily cost of care (Cromwell et al., 2005) and contributes to significant workforce turnover reportedly ranging from 18 to 62 percent (Paxton, 2009), costing hundreds of thousands of dollars to several million (LeBel & Goldstein, 2005; Besemer, Siler, & Vargas, 2008). These procedures also raise the risk profile to an organization and incur liability expenses that can adversely impact the viability of the service. Many hospitals and residential programs, serving different ages and populations, have successfully reduced their use and redirected existing resources to support additional staff training, implement prevention-oriented alternatives, and enhance the environment of care. Significant savings result from reduced staff turnover, hiring and replacement costs, sick time, and liability-related costs.

Conclusion: Successfully reducing or preventing seclusion and restraint requires leadership commitment, resource allocation, and new tools for staff. Substantial savings can result from effectively changing the organizational culture to reduce and prevent the use of restraint and seclusion.



INTRODUCTION



Restraint and seclusion are coercive high-risk containment procedures used in many healthcare settings to control maladaptive behaviors. Their use adversely impacts organizations, their workforce, and the persons served (Haimowitz, Urff, & Huckshorn, 2006; LeBel & Goldstein, 2005; General Accounting Office [GAO], 1999a, 1999b). The case for reducing the use of restraint and seclusion considers

not only the physical and emotional risks but also the economic burdens inherent in their use (Flood, Bowers, & Parkin, 2008; LeBel & Goldstein, 2005).

The United States, other countries, organizations, and inpatient and residential facilities have implemented restraint and seclusion reduction initiatives from a clinical best practice imperative (National Association of State Mental Health Program Directors [NASMHPD], 2009; Nunno, Day, & Bullard, 2008; World Psychiatric Association, 2007). Several programs have demonstrated success in reducing their use and have reported fiscal benefits (LeBel & Goldstein, 2005; Murphy & Bennington-Davis, 2005; Sanders, 2009). Healthcare organizations that have not made this practice change should reconsider their use of restraint and seclusion from a best business practice imperative. This issue brief will highlight the reported economic costs associated with restraint and seclusion, and the fiscal benefits of reducing their use.

To construct the business case for restraint and seclusion reduction and prevention, it is important to review the impact of violence in healthcare, since it is the underlying base of these practices. Restraint and seclusion are not stand-alone procedures occurring in isolation.

Their use is proximal to conflict, which can result in workplace violence and, in turn, lead to organizational disruption, adverse events, and increased costs (Huckshorn & LeBel, 2009; LeBel & Goldstein, 2005).

Violence: A Significant Problem in Mental Health

Violence in healthcare is a significant international problem and an economic burden that adversely impacts the quality of care and safety of all involved (di Martino, 2003; Huckshorn & LeBel, 2009; International Labour Organization [ILO], 2002). Violence in the healthcare work place includes both violence toward staff and violence toward consumers. It is particularly problematic in the United States, where the health sector reports more than half of workplace aggression claims (ILO, 2002), the highest share of lost work time (Llewellyn, 2001). The cost of violence alone is estimated at more than \$35 billion (di Martino, 2003).

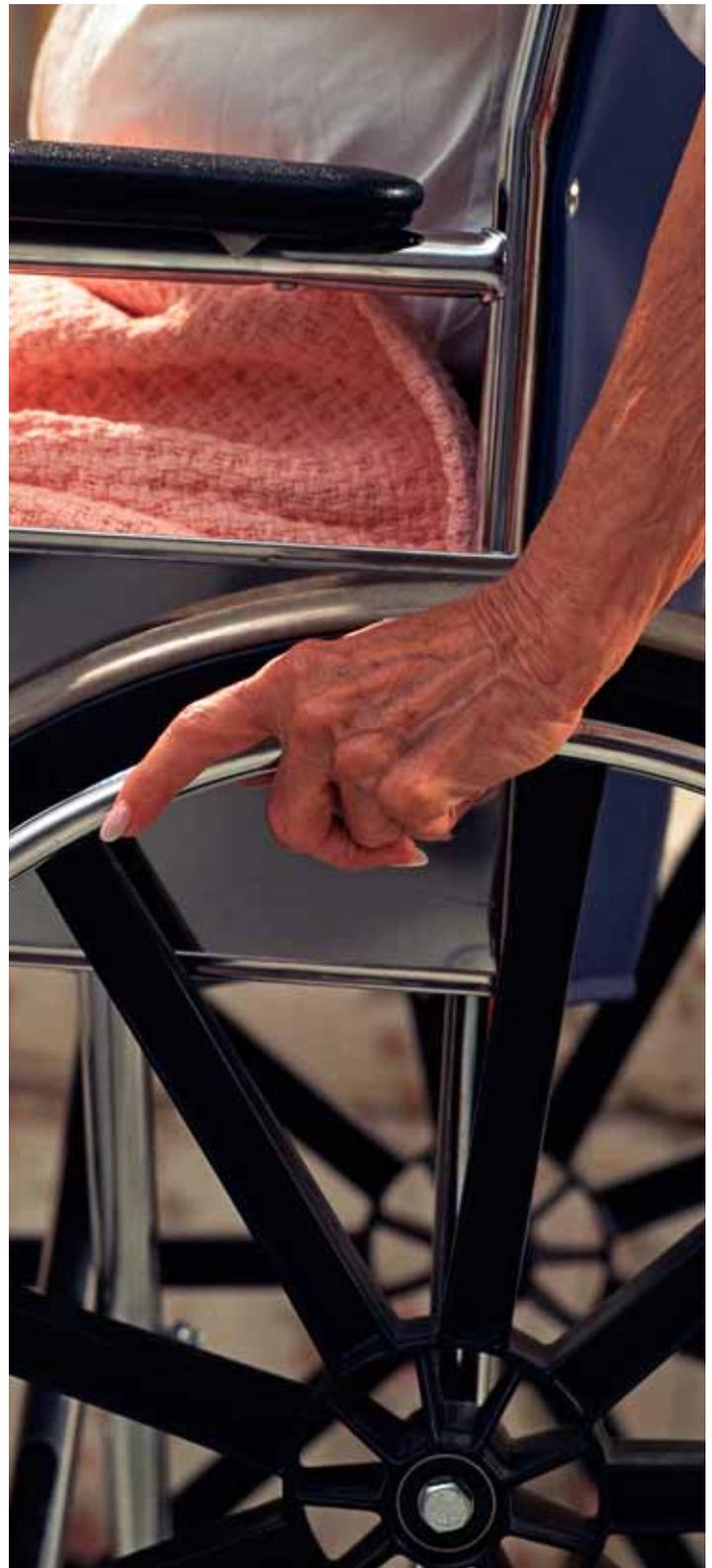
In mental health, violence is considered endemic (Richter & Whittington, 2006; Institute of Psychiatry [IOP], 2002). Staff injury rates in psychiatric hospitals reportedly exceed that of high-risk industry workers in other settings (Love & Hunter, 1996). Mental health workers are twice as likely to be assaulted as persons served (IOP, 2002) and three times more likely than other healthcare staff to be assaulted (Department of Justice, 2001). For many mental health professionals, violence is considered “part of the job” (Barron, 2008; Lanza, Zeiss, & Rierdan, 2006; Oud, 2006).

Violence adversely impacts patients, staff, and organizations. Consumers who experience violence in psychiatric settings describe “sanctuary trauma” and iatrogenic effects (Anthony, 1993; Frueh et al., 2005; Robins, Sauvageot, Cusack, Suffoletta-Maierle, & Frueh, 2005). Staff exposed to violence report higher levels of burnout and more intentions to leave the field or change positions (Estryn-Behar et al., 2008).

Organizations affected by violence report significant workforce disruption, recruitment and retention problems, and decreased productivity and efficiency. In addition, many costs are incurred or increased, including workers' compensation costs, healthcare utilization, insurance premium costs, and legal expenses (Estryn-Behar et al., 2008; Stanko, 2002).

Violence is also the portal to restraint and seclusion use. Threatened or actual violence is considered the most widely accepted indication for restraint and seclusion use (Kaltiala-Heino, Tuohimaki, Korkeila, & Lehtinen, 2003). However, a large-scale study found that violence occurred in only 11 percent of restraint and seclusion episodes (Kaltiala-Heino, Tuohimaki, Korkeila, & Lehtinen, 2003). Others have determined that restraint and seclusion often result from violent, aggressive, or unsafe behavior that is poorly defined and understood, and may not be necessary (Fisher, 1994; Petti, Mohr, Somers, & Sims, 2001; Mohr & Anderson, 2001; Ray, Myers, & Rappaport, 1996).

Staff may precipitate violence, which results in restraint or seclusion use (Luiselli, Bastien, & Putnam, 1998; Natta, Holmbeck, Kupst, Pines, & Schulman, 1990; Goren, Singh, & Best, 1993). Conversely, a GAO investigation (1999a) found that restraint and seclusion contribute to assaults if not precipitate workplace violence. One study of psychiatric inpatient violence reported that 90 percent of staff injuries resulted from "staff-patient physical-contact interventions and 50 percent were specifically related to use of the patient restraint process" (Short et al., 2008). Behavioral research indicates that restraint and seclusion may cause, reinforce, and maintain aggression and violence on the ward (Daffern, Howells, & Ogloff, 2007). Collectively, these studies illustrate the chicken-egg, temporal contiguity conundrum and why violence in mental healthcare, and the fiscal implications therein, are inexorably linked to restraint and seclusion use.



1 THE ECONOMIC BURDEN OF RESTRAINT AND SECLUSION USE

The fiscal toll of workplace violence (violence toward staff) has been well studied (di Martino, 2003; Hoel, Sparks, & Cooper, 2001). The economic burden of restraint and seclusion (violence toward consumers) has only recently been reported (Cromwell et al., 2005; Flood et al., 2008; LeBel & Goldstein, 2005). As such, these costs have not been thoroughly explored (Huckshorn, 2006). The costs of restraint and seclusion that have been identified are conceptually similar to the costs of workplace violence and occur at three levels: (1) the systemic cost; (2) the organizational cost; and (3) the personal cost (di Martino, 2003).

Systemic Costs of Restraint and Seclusion

The systemic costs of restraint and seclusion are the larger economic bases of healthcare costs, which include workplace violence and organizational disruption, previously mentioned. Systemic costs also include preventable adverse events or medical errors that can follow restraint and seclusion use. Across healthcare, medical errors are a very serious problem potentially claiming up to 98,000 lives (Centers for Disease Control and Prevention, 1999) and costing \$29 billion in healthcare annually (Institute of Medicine [IOM], 2000).

Some healthcare disciplines have focused on medical errors for years and significantly reduced their occurrence (American Psychiatric Association [APA], 2009; Nath & Marcus, 2006). Psychiatry was criticized for its “late arrival on the medical error scene” (Shore, 2003). APA mobilized after the *Hartford Courant’s* exposé on restraint and seclusion deaths by creating a task force on patient safety (APA, 2003). The task force focused on preventable adverse events (errors that lead to injury) and adopted restraint and seclusion use as a priority (APA, 2003; Vanderpool, 2004).

Psychiatry now recognizes restraint and seclusion 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 relevance and systemic importance of restraint and seclusion being designated medical errors is clear as the Federal Government, several States, and some private insurers are adopting new parameters for compensating care resulting in a medical error or hospital-acquired condition. Specifically, certain “never events” will no longer be compensated (Centers for Medicare and Medicaid Services [CMS], 2008; National Quality Forum [NQF], 2006; UniCare, 2008). Never Events are preventable adverse events with serious consequences for the patient that should never happen in healthcare (CMS, 2008). Two never events are related to restraint and seclusion use: (1) death or serious disability associated with restraints; and (2) death or significant injury resulting from a physical assault (NQF, 2006). They have already been adopted by a number of States and private insurers.

Despite a range of restraint and seclusion never event estimates (GAO, 1999a, 1999b; Joint Commission, 2005; Weiss, Altimari, Blint, & Megan, 1998), the impact of this decision is significant since public funding represents roughly 40 percent of the revenue for mental health treatment facilities (GAO, 1999b).

The systemic cost of restraint and seclusion, like the systemic cost of workplace violence, is difficult to quantify, results in similar untoward outcomes, and significantly increases organizational and healthcare costs (Butchart et al., 2008; Hunter & Carmel, 1992; Hyde & Harrower-Wilson, 1995). The important distinction is that adverse events to consumers and staff resulting from never events will no longer be compensated by several funders. This policy shifts the cost of care resulting in untoward outcomes to providers and imposes a new demand on limited fiscal resources.

Organizational Costs of Restraint and Seclusion

A number of organizational costs result from restraint and seclusion use. 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 because of the lack of research (Flood et al., 2008; Huckshorn, 2006; LeBel & Goldstein, 2005). A time/motion/task analysis of restraint estimated the cost of one episode from \$302 to \$354, depending on the number of containing methods used (e.g., physical, mechanical, 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 the 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).

A recent study in the United Kingdom calculated the costs of conflict and containment in adult psychiatric units. Flood and colleagues determined that a single episode of manual restraint costs £145.27 and seclusion costs £200.07 (roughly \$240.24 and \$330.88, respectively) (Flood et al., 2008). The total cost of all containment in the United Kingdom's inpatient wards was estimated at more than £106,157,997 (approximately \$156 million). The researchers also estimated that half of all United Kingdom nursing resources were expended to manage conflict and implement containment procedures (Flood et al., 2008).

The work of Cromwell and his colleagues (2005) confirms that restraint and seclusion increase the cost of care due to additional staff time required to implement and monitor these procedures.

Their study resulted from a 1999 Congressional mandate to CMS to develop a prospective payment system for psychiatric hospitals and units in general hospitals (Cromwell & Maier, 2006). Cromwell's team reviewed the routine daily costs in 65 psychiatric units in 40 different facilities (acute, private, and public sector) across all shifts, 7 days a week. The daily cost of care was calculated and adjusted for resource intensity to reflect additional staff time per patient (Cromwell & Maier, 2006). The use of restraint and seclusion, and the monitoring time required represented the greatest resource intensity, accounted for the most nursing-staff time, and significantly increased the daily cost of care (Cromwell et al., 2005). The authors concluded, "Greater staff time and more resources are needed to keep these patients safe," (Cromwell et al., 2005).

In addition to staff time, several other restraint- and seclusion-related costs have been reported by inpatient and residential providers such as physical injuries to staff and persons served (Huckshorn, 2005; NASMHPD, 2009; Short et al., 2008). A Tennessee residential provider identified that 71 percent of staff injuries resulted from physical management techniques used with consumers (Bailey, 2006). One Florida psychiatric hospital determined that restraint and seclusion use increased the risk of injury to staff and consumers by 60 percent (Florida TaxWatch, 2008). Carmel and Hunter's well-known study (1989) of staff injuries from inpatient violence found significantly more injuries resulted from containing interventions (63 percent) compared to assaults (37 percent).

Injuries, in turn, contribute to workforce volatility (e.g., turnover, industrial accidents, absenteeism/sick time, replacement costs, hiring costs, training/retraining), which many organizations have cited as costly sequellae to restraint and seclusion use (Greene & Ablon, 2006; LeBel & Goldstein, 2005; Regan, Curtin, & Vorderer, 2006; Unruh, Joseph, & Strickland, 2007).

The Village Network in Ohio, for example, discovered during a retrospective review of their restraint and seclusion data, the year of their highest restraint use was also the year of their highest percentage of staff turnover (62 percent) (Paxton, 2009). Similarly, MercyFirst in New York experienced 50 percent staff turnover and more than \$2.7 million in turnover costs before reducing restraint and seclusion use and making other systemic changes (Besemer, Siler, & Vargan, 2008).

Liability Costs Related to Restraint and Seclusion Use

Liability matters are potentially the most significant fiscal consequence to restraint and seclusion. The insurance industry's perspective regarding an organization's use of these procedures was described by Nicholas Bozzo, Managing Director of Negley Associates, a leading underwriting management firm for behavioral healthcare and social service providers in the United States:

The insurance industry fully considers an organization's use of restraint and seclusion in their underwriting process. These actions affect many areas of insurance but particularly in worker's compensation, general liability, and professional liability. Our calculation for an organization's insurance expense is based on historical losses and expectations of future losses. We analyze the claims involving restraint or seclusion and review whether or not they have done everything possible to mitigate future loss and have implemented all the best practice training and prevention measures they can. If they do—we will insure them. If they use all those tools and still have a claim, then their insurance will be there to protect them. It's obviously in every organization's best interest to use best practices whenever using seclusion and restraint techniques and identify ways to eliminate the need for these techniques altogether. It's good sense, it's good patient care—it's good business (personal communication, March 23, 2009).

If harm results from restraint and seclusion use, the insurance industry and underwriters of mental health/behavioral health programs are involved. Worker's compensation claims for injury-related medical costs, time out of the workplace, and occasionally litigation and judgments against the employer may follow and be paid by the underwriter. This will raise an organization's experience modification factor, which is assigned to an organization and based on an industry average of the level of risk the agency poses to the insurance company and its history of claims made and paid. A rise in the experience modification factor increases the organization's risk profile and liability insurance premiums. Many organizations have reported significant liability costs associated with their use of restraint and seclusion (Bailey, 2006; LeBel & Goldstein, 2005; Murphy & Bennington-Davis, 2005; Rodman & Gordon, 2008; Sanders, 2009), and several leaders indicated that exorbitant liability policy premiums are a fiscally compelling reason to change practice (LeBel, 2009).

“Wisconsin Mutual Insurance Company has learned a very serious lesson from this case ... seclusion is a real issue that needs to be dealt with on a proactive basis in order to avoid another record verdict of \$400,000 in [compensatory] damages and \$5 million in punitive damages.”

Bisek, B., *Scott Lawson v. Monroe County—A Lesson Learned, The Mutual Effort*, Vol. 4.3 (Summer, 1999) at 1. (as cited by Haimowitz, Urff, & Huckshorn, 2006)

Legal Costs of Restraint and Seclusion Use

Potentially the most costly sequellae to restraint and seclusion use are litigation costs and judgments awarded by the courts when injury or death results (Haimowitz et al., 2006; Hunter & Carmel, 1992; Stefan, 2002). The impact of an untoward outcome can affect the immediate functioning of an organization, as well as its long-term viability. As reported by Haimowitz and colleagues:

Recent increased scrutiny regarding the use of restraint and seclusion has resulted in a legal and regulatory environment that discourages their use and increases the risks of litigation for clinicians and facilities that rely on these practices. The legal consequences of inappropriate use of restraint and seclusion can include civil damages, administrative sanctions (including the loss of Medicaid and Medicare certification), and criminal prosecution. Moreover, litigation about these practices invariably consumes the facility's attention and resources, no matter what the ultimate outcome, with significant negative implications for the facility's reputation and staff morale (2006, p. i).

According to Susan Stefan (2002), a well-known legal expert with experience representing consumer-plaintiffs in restraint-related cases, "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." Legal actions can lead to judgments including fines ranging from several thousand dollars to multimillion dollar settlements, as well as incarceration or probation for staff. Some examples include:

1. A Texas hospital was fined \$30,000 after numerous violations were found involving the restraint of a 12-year-old boy, including the failure to obtain a physician's order before using restraints, to notify the patient's family as soon as possible, to have another staff member present, to ensure staff compliance with policies and procedures, and to maintain proper medical record documentation (Pittman, 2009).
2. A Wisconsin day treatment program provider was fined \$100,000 after pleading no contest to felony and misdemeanor charges of negligent abuse stemming from their restraint of a 7-year-old girl who died from that procedure (Quade, 2006). The staff member involved was found guilty of misdemeanor negligent abuse and sentenced to 60 days in jail and 1 year probation (Harter, 2007).
3. In a Massachusetts hospital, a head nurse ordered a consumer to be placed in four-point restraints. During the takedown, a staff member punched the patient in the head three to five times. When the incident was investigated, the head nurse stated that nothing untoward occurred. The consumer filed a civil rights suit in Federal court against the head nurse and staff involved, claiming excessive force, failure to protect, and a cover-up. Even though there was no serious physical injury, a jury awarded the person served \$100,000 in compensatory damages and over \$1 million in punitive damages. On appeal, all of the defendants' arguments and challenges to the punitive damage award were rejected. *Davis v. Rennie*, 264 F.3rd 86 (1st Cir. 2000), cert. denied, 535 U.S. 1053 (2002) (Haimowitz et al., 2006, p. 19).
4. In New Jersey, an adolescent boy was repeatedly restrained and abused in a residential program. A civil lawsuit was filed on his behalf against the program, director, and a psychiatrist, and resulted in a \$3.75 million settlement. Other suits followed: one patient was awarded \$6.5 million, and another received a \$4.5 million settlement. The State terminated the program's participation in the Medicaid program, and it subsequently closed in 1998, citing financial problems (GAO, 2008).

The Costs to Consumers Who Experience Restraint and Seclusion

The personal costs to consumers who are restrained or secluded have been recognized but received less attention in the literature (Bluebird, 2004; Whitaker, 2002). Persons served can be physically injured and may die during these procedures (Mohr, Petti, & Mohr, 2003; NASMHPD, 2009; Weiss et al., 1988). They may also be traumatized/retraumatized by the experience (Frueh et al., 2005; Robins et al., 2005), which can result in longer lengths of stay (Calkins & Corso, 2007; Ibikunle & Kettl, 2000; LeBel & Goldstein, 2005). Chattahoochee State Hospital estimated that each incident of restraint or seclusion could set the recovery of a person served back by as much as 6 months (Florida TaxWatch, 2008). Two studies of youths in Massachusetts inpatient and residential programs, respectively, found that restraint and seclusion use not only led to extended stays but also increased recidivism/readmission to the hospital or residential care (LeBel & Goldstein, 2005; Thomann, 2009). Beck and colleague's study (2008) of restraint and seclusion use in a forensic hospital found that adult consumers who were restrained or secluded the most had longer lengths of stay and were 75 times more likely to be physically abused while in care compared to those who had little or no restraint or seclusion experience.

Consumers may also experience subjective costs to interpersonal relationships, damage to the therapeutic alliance, and mistrust of the healthcare system and staff as a result of being restrained or secluded (Cohen-Cole, 1996; Frueh et al., 2005; NASMHPD, 2009; Robins et al., 2005). Additional personal costs to consumers are the opportunity costs incurred when treatment is not provided to those being restrained or secluded, as well as persons served who are not receiving care while staff attention is diverted to manage a restraint or seclusion.

According to Krueger (2009), patient time spent waiting for care not received “is just as real as the dollars they spend for medical services.” Failure to take patient time into account caused national healthcare expenditures to be significantly undercounted and leads to an exaggeration of productivity and understatement of actual healthcare costs (Krueger, 2009).

One Young Adult's Perspective of the Cost of Restraint

“Being restrained costs a lot! I was abused before I was put in programs. Being restrained made me feel the same way—except staff are supposed to help you, right?”

... It made me worse and took away my self esteem. How is that supposed to help me feel better? I don't get it.

Wouldn't it be cheaper if staff just listened?”

—Julianna, 19 years old

Besides the cost of care not received, there is the cost of being restrained or secluded to the person served. While no formula has been used to calculate this cost, Cynthia Conrad's work (2006) could be extrapolated for this purpose. Conrad calculated the cost of abuse/neglect to children in Connecticut's child welfare system. Using the Federal definition of abuse—"death, serious physical or emotional harm, sexual abuse or exploitation resulting from an act or a failure to act by a parent, custodian, or caretaker of a child under the age of 18"—and data from the child welfare system, Conrad determined the cost of each case of abuse and neglect, based on empirical probabilities, was \$6,055,675. Conceptually, this formulation could be applied to a consumer who is restrained or secluded. With all the necessary cautions regarding the applicability and generalizability of Conrad's data (2006), simply considering the possible cost to an individual who has been restrained or secluded this way is staggering.



Tanner Wilson

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.

2 THE COSTS ASSOCIATED WITH REDUCING RESTRAINT AND SECLUSION

Since the beginning of the national initiative, many organizations have reduced the use of restraint and seclusion with little to no additional fiscal resources (Huckshorn, 2006; LeBel et al., 2004; Smith et al., 2005). 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.... Staff training has been found to save the State money by directly reducing the frequency of restraint-related staff injuries, which represent costs of sick leave and overtime payments for staff to cover the shifts (GAO, 1999a, p. 21).

Successful organizations typically reallocate dollars to support an initiative to reduce the use of restraint and seclusion (LeBel et al., 2004; NASMHPD, 2009). In general, the costs identified by programs that have reduced the use of restraint and seclusion include (1) purchasing or implementing training curricula to promote practice change (e.g., models of care, crisis prevention, dispute resolution, etc.); (2) increasing staff supervision; and (3) training staff (e.g., compensating staff to attend or cover for those being trained, trainer costs, training costs [venue, food, technology, materials]) (GAO, 1999a; NASMHPD, 2009; Ohio Legal Rights Service [OLRS], 2003).

Many facilities have implemented one or both public domain restraint/seclusion reduction curricula funded by the Substance Abuse and Mental Health Services Administration (SAMHSA): NASMHPD's Six Core Strategies[®] curriculum (NASMHPD, 2009) and the Roadmap to Seclusion and Restraint Free Mental Health Services (SAMHSA, 2005). These resources are available at no cost and provide comprehensive information and training materials. Several success stories have been reported as a result of these tools (NASMHPD, 2009).

"Restraint and seclusion are costly in all kinds of ways—they are just plain costly. Whatever new costs we had were minimal. Most of the new training we put in place to reduce restraint and seclusion really were just good clinical practice and what we should be doing anyway."

—Andy Pond, LICSW, President and CEO, Justice Resource Institute—A multi-State, multi-service residential and outpatient treatment provider

Some organizations have purchased models of care and the curriculum and technical support that come with it. This approach is more costly, but restraint/seclusion reduction successes have also resulted (Banks & Vargas, 2009a, 2009c; Martin, Krieg, Esposito, Stubbe, & Cardona, 2008; Regan et al., 2006; Wilcox & Brown, 2006).

Other costs associated with restraint and seclusion reduction efforts include making environmental changes and purchasing sensory items to implement sensory-based interventions and create sensory or comfort rooms. These are important prevention tools that promote the consumer's self-calming skill development and provide within-program sources of sanctuary (Bluebird, 2008a; Champagne & Stromberg, 2004; Sailas & Wahlbeck, 2005).

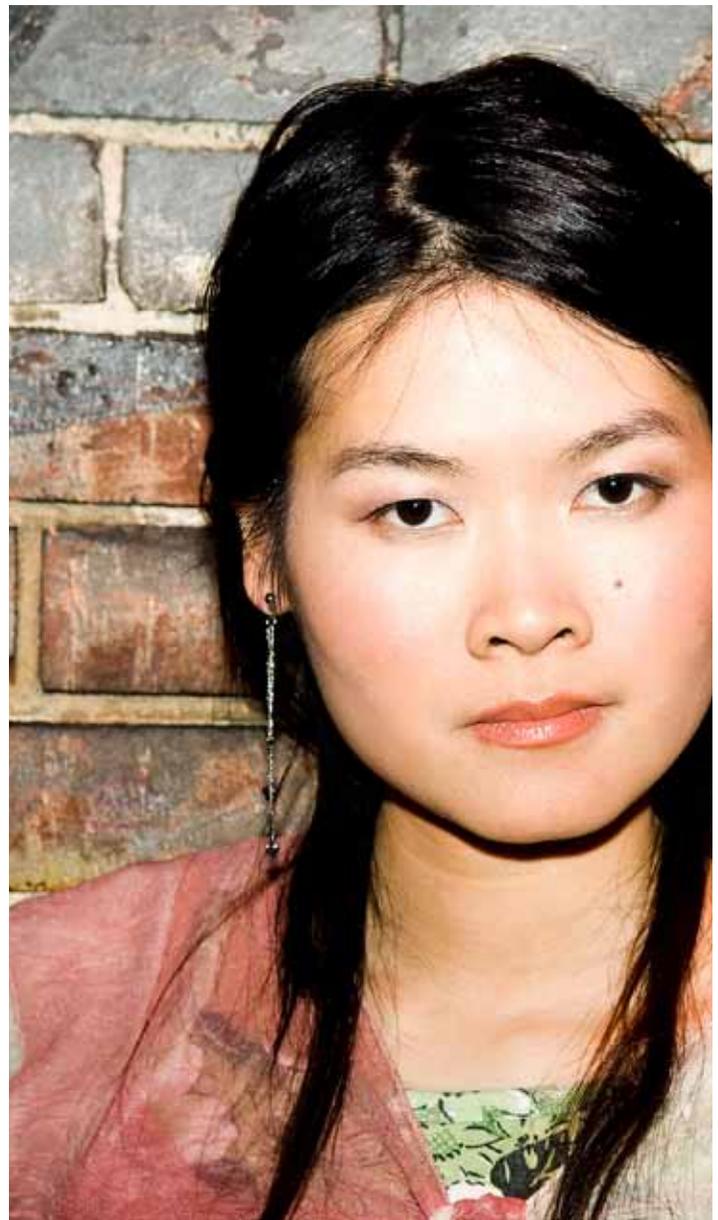
Occasionally, environmental repair and property destruction costs may be incurred (Banks & Vargus, 2009a; LeBel & Goldstein, 2005; OLRs, 2003). Some research suggests property destruction decreases when the use of restraint and seclusion is reduced (Banks & Vargus, 2009b).

A number of States and facilities have developed or expanded consumer roles for youth, adults, and families (Bluebird, 2004, 2008b; LeBel & Stromberg, 2008; NASMHPD, 2009) that are important vehicles for culture change, may help prevent conflict, and may reduce the use of restraint and seclusion. This effort can be accomplished by reexamining vacant positions and converting them into new advocacy roles for persons served or family members. Peers can assist staff and persons served in restraint/seclusion debriefing; facilitate early intervention strategies, such as comfort room design and use; participate in new staff hiring processes; assist with policy and procedure revisions; and represent the consumer perspective on how services can be more responsive to individual and family needs (Bluebird, 2004, 2008a, 2008b; LeBel & Stromberg, 2008; NASMHPD, 2009).

Some programs have incurred the cost of psychiatric service dogs as part of an organizational effort to change their culture and practice (LeBel & Goldstein, 2005; NASMHPD, 2009). All of Massachusetts' long-term care programs for youths have purchased one or more service dogs. From the adolescent's perspective, the dogs are one of the best features of the programs. According to a program director, "These dogs work faster than any PRN I've ever seen," and have proven to be very helpful crisis prevention resources (NASMHPD, 2009).

Many organizations have significantly increased staff supervision to support staff and help develop their crisis prevention skills. For example, the Cambridge Child Assessment Unit eliminated the use of restraint and seclusion, and increased the amount of weekly staff supervision to 4 hours a week during the change process (NASMHPD, 2009; Greene & Ablon, 2006;

Regan et al., 2006). The Pennsylvania State Hospital system also increased its staff annual training in crisis prevention and deescalation techniques. The system increased its training from once a year to four times per year to further its restraint and seclusion elimination effort and enhance staff's skill development (NASMHPD, 2009).



3 SAVINGS RESULTING FROM RESTRAINT AND SECLUSION REDUCTION



Identifying and measuring systemic restraint and seclusion reduction and savings is difficult. Few systemic efforts have been implemented. Most appear to be organization-specific or difficult to quantify, or lack savings analyses. However, a few inferential examples follow.

More than 11 years before the *Hartford Courant* exposé, the nursing home industry began a national effort to “untie the elderly” with the Omnibus Budget Reconciliation Act (OBRA) in 1987. This act advanced standards and afforded residents the right to be free from unnecessary physical or chemical restraint (Braun & Lipson, 1993). At the time OBRA was implemented, approximately 44 percent of nursing home residents were physically restrained (Engberg, Castle, & McCaffrey, 2008). By 2006, CMS data indicate that 9 percent of residents were restrained in U.S. nursing homes (Engberg, Castle, & McCaffrey, 2008). Even with data interpretation caveats, researchers confirm that restraint reduction with the elderly has occurred nationally and systemically (Engberg, Castle, & McCaffrey, 2008). The industry also reports that (1) using restraints is more costly than not using them; (2) restrained residents require more staff time; and (3) restraint reduction results in decreased staff turnover and decreased hiring, training costs, and worker’s compensation costs (Capezuti, Siegler, & Mezey, 2008; Texas Department of Human Services, 2003).

Another systemic intervention is NASMHPD’s Six Core Strategies[®] curriculum to prevent and reduce restraint and seclusion. More than 4,000 mental healthcare leaders from 48 States, Territories, and several countries have received training in this curriculum. The curriculum is also part of a large-scale evaluation project for SAMHSA’s State incentive grants to develop alternatives to restraint and seclusion. Significant reductions are being reported as a result of this training. Some examples include (1) Johns Hopkins Hospital reduced restraint and seclusion use by 75 percent with no increase in staff or consumer injuries (Lewis, Taylor, & Parks, 2009); (2) Chambersburg Hospital decreased medication use and ceased using restraint and seclusion more than 2 years ago (Barton, Johnson, & Price, 2009); (3) Florida State Hospital at Chattahoochee, Florida reduced its use by 54 percent and realized nearly \$2.9 million in cost savings from reduced worker’s compensation, staff and consumer injuries, and length of stay costs (Florida TaxWatch, 2008); (4) Idaho State Hospital South reduced its use approximately 90 percent in less than 4 years (J. Landers, personal communication, July 7, 2009); and (5) both Taunton and Westboro State Hospitals in Massachusetts reduced restraint and seclusion use more than 90 percent following the NASMHPD training and SAMHSA incentive grant participation (Huckshorn, Caldwell, & LeBel, 2008).

The Massachusetts statewide child/adolescent restraint and seclusion prevention initiative is another example of a systemic reduction effort with demonstrated savings (LeBel et al., 2004; LeBel & Goldstein, 2005; NASMHPD, 2009). Massachusetts has a privatized continuing care system for youth who need inpatient or intensive residential treatment in locked settings following acute care. The system comprises nine programs that have been operational for many years and were part of the statewide initiative from the outset. Using the system’s aggregate restraint/seclusion data for the year preceding the start of the initiative, a rate of episodes per consumer (22.7) was calculated and projected through FY 2008. This calculation yielded the number of episodes that would have occurred had there been no restraint/seclusion prevention initiative, assuming a consistent rate of use each year. A blended cost per episode was calculated using LeBel and Goldstein’s (2005) cost calculations for different types of restraint and applied to both the projected and actual use of restraint and seclusion each year.

The net result demonstrated systemic savings based on the number of episodes that did not occur as a result of the initiative. Overall, the system reduced restraint and seclusion use by 89 percent from FY 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 (Garinger, 2009; LeBel, 2009). (See Figure 1.)

Organizational Savings of Restraint and Seclusion Reduction

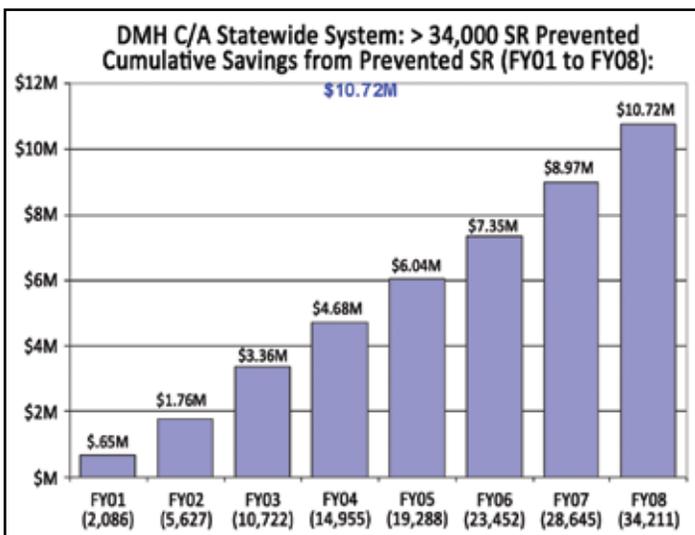
A number of savings have been associated with decreased seclusion and restraint use. These savings represent the obverse of costs associated with their use. Successful organizations report increased staff satisfaction (Murphy & Bennington-Davis, 2005; OLRs, 2003; Wilcox & Brown, 2006) and decreased staff turnover (Greene & Ablon, 2006; Regan et al., 2006; 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’ work on restraint reduction identified a 42 percent reduction in direct-care staff turnover and 24 percent decrease in turnover costs following Sanctuary model implementation and other systemic enhancements (2008). Their findings contributed to Banks and Vargas’s (2009a) research on Sanctuary model implementation in a number of settings. This larger study also reported reduced restraint and seclusion use and less staff turnover. Banks and Vargas (2009a) noted, “...staff began to see their facilities as places they wanted to continue to work at. This may be due to the feeling that their workplaces were safer and more healing places.”

Other organizational savings have been reported from restraint and seclusion reduction, such as reduced staff absenteeism (Besemer et al., 2008; OLRs, 2003; Unruh et al., 2007) and reduced staff injuries (Hellerstein, Staub, & Lequesne, 2007; Pollard,

Figure 1

Massachusetts Department of Mental Health Child/Adolescent Statewide Program

Restraints/Seclusions (SR) Prevented and Savings by Fiscal Year (FY)



Yanasak, Rogers, & Tapp, 2006; Sullivan et al., 2005). The University of Massachusetts's adolescent inpatient service reduced its use of mechanical restraint by 98 percent and realized an 86 percent reduction in staff's sick time use (LeBel, 2009). Other programs, such as the Cambridge Child Assessment Unit, Boston University Intensive Residential Treatment Program, and Salem Hospital (see Figure 2), effectively replaced restraint and seclusion, and subsequently reported near 100 percent reduction in staff injuries (NASMHPD, 2009).

Moreover, many organizations have experienced significantly reduced worker's compensation and other workforce-related costs following restraint and seclusion reduction (Bailey, 2006; Florida TaxWatch, 2008; Murphy & Bennington-Davis, 2005 [see Figure 3]; Rodman & Gordon, 2008). LeBel and Goldstein's study (2005) of inpatient restraint reduction found the service's 91 percent reduction in use also resulted in reduced worker's compensation and medical costs (98 percent) and decreased costs to fill shifts vacated due to restraint injuries (77 percent). Other cost reductions attributed to decreased restraint and seclusion use include reduced workforce replacement costs (Paxton, 2009; Sanders, 2009) and less medication use (Barton et al., 2009; Murphy & Bennington-Davis, 2005; Sullivan et al., 2005).

Figure 2
Grafton's Reduced Workers' Compensation Costs

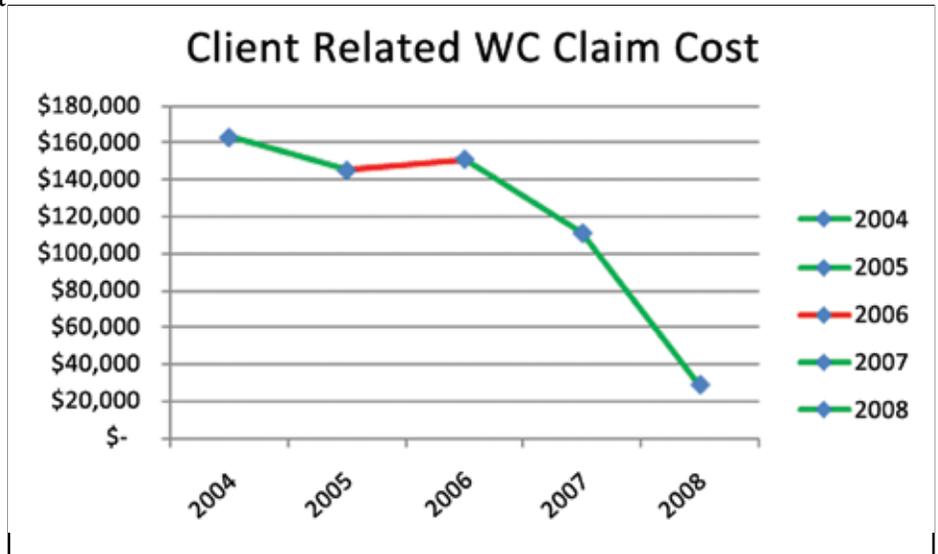
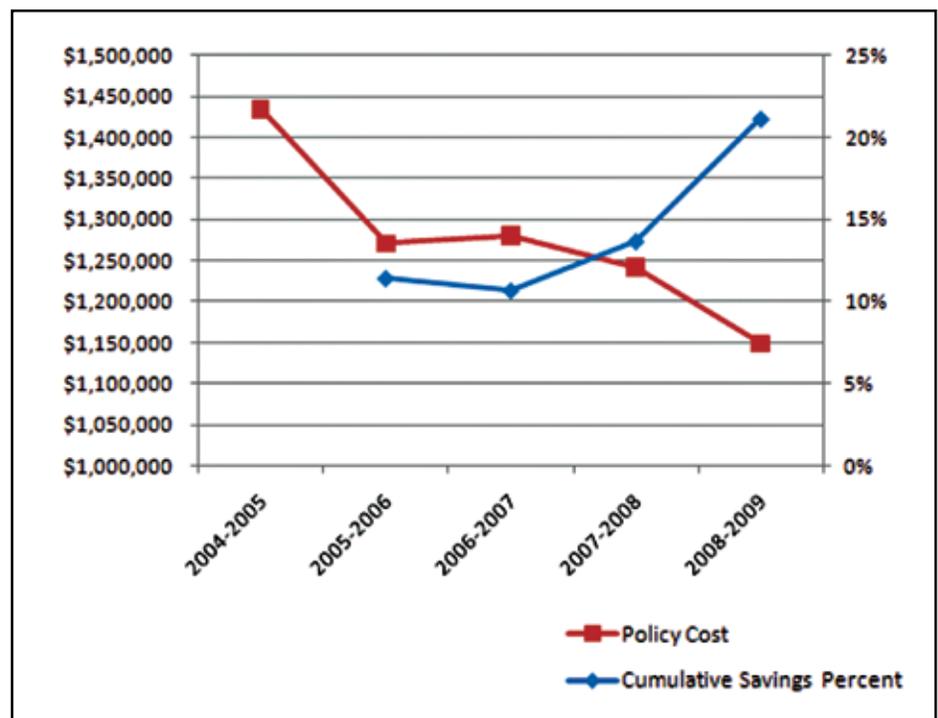


Figure 3
Grafton's Reduced Liability Premiums and Cumulative Savings



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.

Personal Savings or Benefits to Consumers from Restraint and Seclusion Reduction

When restraint and seclusion are reduced and prevented, people in care receive more effective care. The reported benefits to persons served include (1) fewer injuries; (2) shorter lengths of stay (LeBel & Goldstein, 2005; Martin et al., 2008; Murphy & Bennington-Davis, 2005; Thomann, 2009); (3) decreased recidivism/rehospitalization (LeBel & Goldstein, 2005; Paxton, 2009); (4) less medication (Barton et al., 2009; Murphy & Bennington-Davis, 2005; Sullivan et al., 2005; Thomann, 2009); and (5) increased positive outcomes/discharges or higher level of functioning at the time of discharge (LeBel & Goldstein, 2005; Murphy & Bennington-Davis, 2005; OLRs, 2003; Paxton, 2009). In short, people recover more quickly and may experience greater success in the community when violence is extracted from the treatment setting.

Another indication of perceived consumer benefit is found in higher patient satisfaction scores. Several facilities reported increased patient satisfaction following successful restraint and seclusion reduction efforts (LeBel & Goldstein, 2005; Murphy & Bennington-Davis, 2005; Thomann, 2009). Greater client satisfaction can also enhance a provider's reputation and business. Salem Hospital in Oregon, for example, eliminated seclusion and restraint several years ago. According to a facility leader,

“Our leadership placed great emphasis on enhancing our culture and developing the most from our program and its staff. As a result, our recent patient satisfaction results placed our organization in the top 10 percent nationally, and our business has never been stronger,” (R. Dezsofi, personal communication, April 2, 2009).

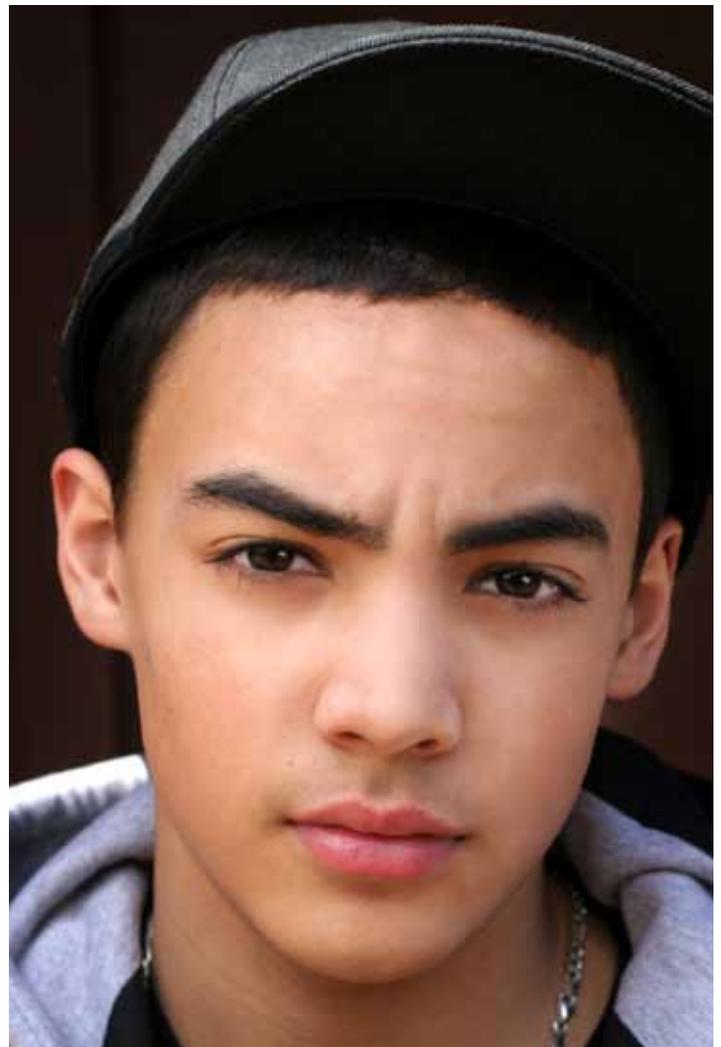




4 RECOMMENDATIONS

In order to continue to build the business case for restraint and seclusion reduction and prevention, a number of recommendations are offered:

1. The IOM (2009) recommended that national leaders develop guidelines for economic analysis and outcome measures for violence prevention interventions, and disseminate them widely to the field, funders, researchers, and other Government agencies. This effort should include restraint and seclusion prevention as well.
2. The IOM (2009) also recommended that the National Institutes of Health, in concert with other Government agencies, identify economic outcome measures for a range of healthcare prevention programs. For the purpose of determining the efficacy of restraint and seclusion reduction and prevention efforts, economic measures could include correlation analyses between the use of restraint and seclusion, and the length of stay, readmission/recidivism, staff and consumer injury costs, medication costs, and workforce costs (e.g., turnover, absenteeism, worker's compensation).
3. In addition, the IOM (2009) recommended there be a designated entity with authority to direct Federal resources to establish common prevention goals and to coordinate and lead this work across multiple agencies. This recommendation would appear to be particularly relevant to the practice of restraint and seclusion because their use extends into schools, jails and correctional facilities, nursing homes, hospitals, residential care, the airline industry, and other settings.
4. National leaders and accrediting bodies should develop and implement standardized restraint and seclusion definitions and consistent measurement methods across and within the industry. Without common parameters, a complete and accurate analysis of restraint and seclusion use, costs, and benefits is not possible.
5. Experts, researchers, and organization leaders should continue to study and publish on the fiscal impact and outcomes of restraint and seclusion use and prevention and reduction efforts.
6. Organization 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.





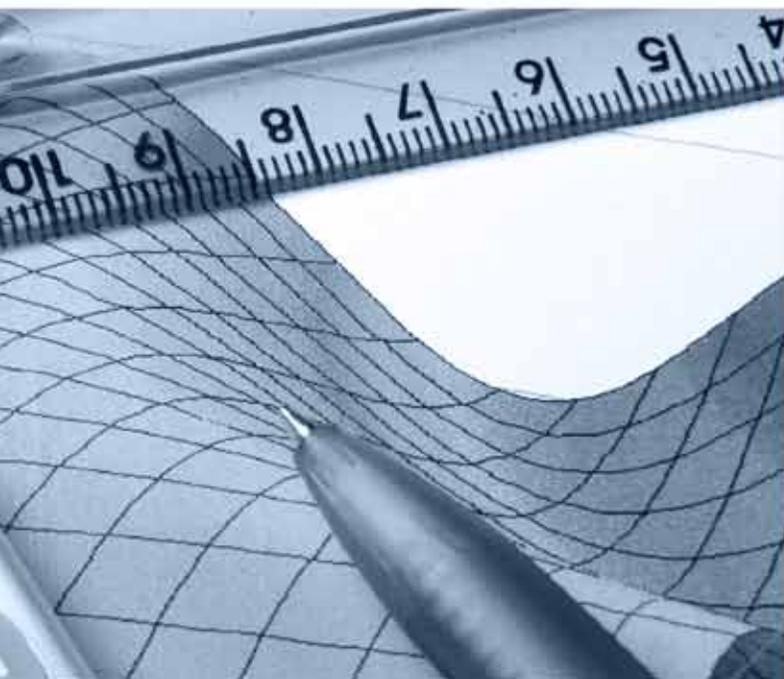
5 CONCLUSIONS

In summary, restraint and seclusion are very expensive, violent, and potentially harmful procedures that prolong recovery and raise the cost of care. Reducing and preventing their use can yield significant savings, enhance the quality of treatment, and result in increased satisfaction from those providing and receiving services. The full scope of the fiscal impact of restraint and seclusion is still being assessed. Many inpatient and residential providers who have reduced their use and changed their organizational culture and practice report that benefits and savings exceed the costs associated with their use (LeBel, 2009).

With the confluence of current fiscal resource constraints, compelling data about the adverse effects of restraint and seclusion, higher standards of practice demonstrated by many providers, and effective no- or low-cost resources available to help facilitate this change, providers who continue to use these non-evidence based practices and have not begun a reduction/prevention effort are challenged to justify continuing their business and practice as usual. Stated more explicitly by the IOM (2000, p. 3):

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 healthcare system that is supposed to offer healing and comfort.





6 REFERENCES

- American Psychiatric Association [APA]. (2009). *SAFE MD: Practical applications and approaches to safe psychiatric practice*. Arlington, VA: APA. Retrieved March 25, 2009, from <http://psych.org/Departments/QIPS/Downloads/SAFEMD.aspx>.
- APA Task Force on Patient Safety. (2003, February 10). *Recommendations to the APA Board of Trustees*. Retrieved November 28, 2008, from <http://www.psych.org/Departments/QIPS/Downloads/TaskForceReport.aspx>.
- Anthony, W. (1993). Recovery from mental illness: The guiding vision of the mental health service system in the 1990s. *Psychosocial Rehabilitation Journal* 16:11–23.
- Bailey, K. A. (2006). *Reducing restraints and eliminating seclusion: A journey to change*. The Holston United Methodist Home for Children experience. PowerPoint presentation. Retrieved March 17, 2009, from <http://keithbaileyconsulting.com/?download=Reducing+Restraints+and+Eliminating+Seclusion+-+A+Journey+to+Change+-KBC-HH.pdf>.
- Banks, J., & Vargas, L. A. (2009a). *Research Brief: Preliminary outcomes: Sanctuary in juvenile residential care (NYSOCFS)*. Andrus Center for Learning & Innovation. Retrieved March 11, 2009, from <http://andruschildren.org/Images/Sanctuary%20Model/Sanctuary%20Institute/Sanctuary%20in%20OCFS.doc>.
- Banks, J., & Vargas, L. A. (2009b). *Research Brief: Contributors to restraints and holds in organizations using the Sanctuary Model*. Andrus Center for Learning & Innovation. Retrieved March 11, 2009, from <http://andruschildren.org/Images/Sanctuary%20Model/Sanctuary%20Institute/Restraints%20and%20Holds%20-%20brief.doc>.
- Banks, J., & Vargas, L. A. (2009c). *Research Brief: Sanctuary in schools: Preliminary child and organizational outcomes*. Andrus Center for Learning & Innovation. Retrieved April 18, 2009, from [http://www.andruschildrencenter.org/Images/Sanctuary%20Model/Sanctuary%20Institute/Sanctuary%20in%20Schools-mktg%20\(2\).doc](http://www.andruschildrencenter.org/Images/Sanctuary%20Model/Sanctuary%20Institute/Sanctuary%20in%20Schools-mktg%20(2).doc).
- Barron, J. (2008, February 14). Working in mental health, the prospect of violence is a part of the job. *New York Times*. Retrieved June 30, 2009, from <http://www.nytimes.com/2008/02/14/nyregion/14psych.html>.
- Barton, S. A., Johnson, M. R., & Price, L. V. (2009, January). Achieving restraint-free on an inpatient behavioral health unit. *Journal of Psychosocial Nursing and Mental Health Service*, 47(1), 34–40.
- Beck, N. C., Durrett, C., Stinson, J., Coleman, J., Stuve, P., & Menditto, A. (2008). Trajectories of seclusion and restraint use at a State psychiatric hospital. *Psychiatric Services*, 59(9), 1027–1032.
- Besemer, D., Siler, J. and Vargas, L. A. (2008). *Sanctuary longitudinal study: Innovation, collaboration and frustration*. Paper presented at the Alliance for Children and Families National Conference, Baltimore.
- Bisek, D. (1999, Summer). Scott Lawson v. Monroe County—A lesson learned. *The Mutual Effort*, 4.3(1).
- Bluebird, G. (2004). Redefining consumer roles: Changing culture and practice in mental healthcare settings. *Journal of Psychosocial Nursing*, 42(9), 46–53.
- Bluebird, G. (2008a). *Comfort and comforting environments*. Alexandria, VA: National Association of State Mental Health Program Directors Office of Technical Assistance. Retrieved February 2, 2009, from http://www.nasmhpd.org/general_files/publications/ntac_pubs/SR%20Kickoff/Bluebird%20Comforting%20%20FINAL%201%202%2008.pdf.
- Bluebird, G. (2008b). *Paving new ground: Peers working in inpatient settings*. Alexandria, VA: National Association of State Mental Health Program Directors Office of Technical Assistance. Retrieved December 6, 2008, from http://www.nasmhpd.org/general_files/publications/ntac_pubs/Bluebird%20Guidebook%20FINAL%2002-08.pdf.
- Braun, J. V., & Lipson, S. (1993). *Toward a restraint-free environment*. Baltimore: Health Professions Press.
- Butchart, A., Brown, D., Khanh-Huynh, A., Corso, P., Florquin, N., & Muggah, R. (2008). *Manual for estimating the economic costs of injuries due to interpersonal and self-directed violence*. World Health Organization and U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. Retrieved February 28, 2009, from http://whqlibdoc.who.int/publications/2008/9789241596367_eng.pdf.
- Calkins, L., & Corso, A. S. (2007, September). Patient variables associated with the therapeutic use of seclusion and restraint in inpatient psychiatry. *New York Medical Journal*, 2(2). Retrieved April 9, 2009, from <http://newyorkmedicaljournal.org/archives.htm>.
- Capezuti, E. A., Siegler, E. L., & Mezey, M. D. (Eds.). (2008). *The encyclopedia of elder care: The comprehensive resource on geriatric and social care* (2nd ed.). New York: Springer Publishing Co., LLC.
- Carmel, H., & Hunter, M. (1989). Staff injuries from inpatient violence. *Hospital and Community Psychiatry*, 40, 41–46.
- Centers for Disease Control and Prevention (National Center for Health Statistics). (1999). Deaths: Final data for 1997. *National Vital Statistics Reports*, 47(19), 27.
- Centers for Medicare and Medicaid Services [CMS]. (2008, July 31). *Press Release: Medicare and Medicaid more aggressively to encourage greater patient safety in hospitals and reduce never events*. Retrieved March 28, 2009, from <http://www.cms.hhs.gov/apps/media/press/release.asp?Counter=3219&intNumPerPage=10&checkDate=&checkKey=2&srchType=2&numDays=0&srchOpt=0&srchData=never+events&keywordType=All&chkNewsType=1%2C+2%2C+3%2C+4%2C+5&intPage=&showAll=1&Year=&year=0&desc=&cboOrder=date>.
- Champagne, T., & Stromberg, N. (2004). Sensory approaches in inpatient psychiatric settings: Innovative alternatives to seclusion and restraint. *Journal of Psychosocial Nursing*, 42(9), 35–44.
- Cohen-Cole, L. (1996). *Double bind*. Atlanta, GA: Shame the Devil Press.
- Conrad, C. (2006). Measuring costs of child abuse and neglect: A mathematical model of specific cost estimations. *Journal of Health & Human Services Administration*, 29(1), 103–123.
- Cromwell, J., Gage, B., Drozd, E., Maier, J., Osber, D., Evensen, C., et al. (2005, February). *Psychiatric inpatient routine cost analysis*. Centers for Medicare and Medicaid Services, Baltimore.
- Cromwell, J., & Maier, J. (2006). Variation in staffing and activities in psychiatric inpatient units. *Psychiatric Services*, 57(6), 772–775.

- Daffern, M., Howells, K., & Ogloff, J. (2007). What's the point? Towards a methodology for assessing the function of psychiatric inpatient aggression. *Behaviour Research and Therapy* 45, 101–111.
- Davis v. Rennie, 264 F.3rd 86 (1st Cir. 2000), cert. denied, 535 US 1053 (2002).
- Department of Justice [DOJ], Bureau of Justice Statistics. (2001). *National crime victimization survey. Violence in the workplace, 1993–99*. Retrieved March 28, 2009, from www.ojp.gov/bjs/pub/pdf/vw99.pdf.
- di Martino, V. (2003). *Workplace violence in the health sector: Relationship between work stress and workplace violence in the health sector*. Geneva, International Labour Office. Retrieved on December 14, 2008, from <http://www.ilo.org/public/english/dialogue/sector/papers/health/stress-violence.pdf>.
- Engberg, J., Castle, N. G., & McCaffrey, D. (2008). Physical restraint initiation in nursing homes and subsequent resident health. *Gerontologist*, 48, 442–452.
- Estryn-Behar, M., van der Heijden, B., Camerino, D., Fry, C., Le Nezet, O., Conway, P. M., et al. (2008, March). Violence risks in nursing—results from the European 'NEXT' study. *Occup Med (Lond)*. 58(2):107–14. Epub 2008 Jan 21. Retrieved March 27, 2009, from <http://ocmed.oxfordjournals.org/cgi/reprint/kqm142v1>.
- Fisher, W. A. (1994). Restraint and seclusion: a review of the literature. *American Journal of Psychiatry*, 151, 1584–1591.
- Flood, C., Bowers, L., & Parkin, D. (2008, September). Estimating the costs of conflict and containment on adult acute inpatient psychiatric wards. *Nursing Economic*, 26(5), 325–330. Retrieved December 1, 2008, from the CINAHL with Full Text database.
- Florida TaxWatch. (2008, June). Florida State Hospital—Chattahoochee wins award for reduced patient seclusion and restraint. *Adaptable achievements from the 2007 Prudential Financial Davis Productivity Awards competition*. Retrieved November 30, 2008, from <http://www.floridatxwatch.org/resources/pdf/TaxWatchDPA2007MGPweb.pdf>.
- Frueh, B. C., Knapp, R. G., Cusack, K. J., Grubaugh, A. L., Sauvageot, J. A., Cousins, V. C., et al. (2005). Patients' reports of traumatic or harmful experiences within the psychiatric setting. *Psychiatric Services*, 6(9), 1123–1133.
- Garinger, G. (2009). Office of the child advocate: Annual report 2008. Boston, MA: Commonwealth of Massachusetts. Retrieved July 22, 2009, from http://www.mass.gov/childadvocate/about/annual_report.pdf.
- General Accounting Office [GAO]. (1999a, September 7). *Mental health: Improper restraint or seclusion use places people at risk*. (GAO/HES-99-176). Washington, DC: United States General Accounting Office.
- General Accounting Office [GAO]. (1999b, October 26). *Extent of risk from improper restraint or seclusion is unknown*. (GAO/T-HEHS-00-26). Washington, DC: United States General Accounting Office.
- Goren, S., Singh, N., & Best, A. (1993). The aggression-coercion cycle: Use of seclusion and restraint in a child psychiatric hospital. *Journal of Child and Family Studies*, 2(1), 61–73.
- Grasso, B. C., Genest, R., Jordan, C. W., & Bates, D. W. (2003). Use of chart and record reviews to detect medication errors in a state psychiatric hospital. *Psychiatric Services* 54(5), 677–681.
- Grasso, B. C., Shore, M. F., Clary, C. M., Eng, B., Huckshorn, K. A., Parks, J. J., et al. (2007, September 26). Medication errors and patient safety in mental health. In J.A. Hart, & E. Saenger (Eds.), *Medscape CME*, Retrieved February 28, 2009, from http://cme.medscape.com/viewprogram/7809_pnt.
- Greene, R. W., & Ablon, J. S. (2006). *Treating explosive kids*. New York: The Guilford Press.
- Haimowitz, S., Urff, J., & Huckshorn, K. A. (2006, September). *Restraint and seclusion: A risk management guide*. Alexandria, VA, National Association of State Mental Health Program Directors.
- Harter, K. (2007, March 12). Wisconsin clinic fined \$100,000 in girl's death; employee gets 60 days jail. *Pioneer Press*. Retrieved February 2, 2009, from <http://www.isaccorp.org/ricelake/angellika-arndt.03.12.07.html>.
- Hellerstein, D. J., Staub, A. B., & Lequesne, E. (2007). Decreasing the use of restraint and seclusion among psychiatric inpatients. *Journal of Psychiatric Practice*, 13(5), 308–17.
- Hoel, H., Sparks, K., & Cooper, C. L. (2001). *The cost of violence and stress at work and the benefits of a violence and stress-free working environment*. A report commissioned by the International Labour Organization, Geneva, Switzerland. Manchester: University of Manchester Institute of Science and Technology. Retrieved November 25, 2008, from <http://www.ilo.org/public/english/protection/safework/whpwb/econo/costs.pdf>.
- Huckshorn, K. A. (2005, June). The relationship between S/R reduction and consumer and staff injury rates. In M. A. Nunno, B. Paterson, & L. B. Bullard, (Chairs), *Examining the safety of high-risk interventions for children and young people*. International symposium conducted at Cornell University, Ithaca, NY.
- Huckshorn, K. A. (2006). Redesigning State mental health policy to prevent the use of seclusion and restraint. *Administration and Policy in Mental Health* 33(4), 482–491.
- Huckshorn, K., Caldwell, B., & LeBel, J. (2008, August 4). *Status report of the national initiative*. Presentation at the SAMHSA Seclusion and Restraint Matrix Group Planning Meeting, Rockville, MD.
- Huckshorn, K. A., & LeBel, J. L. (2009). Improving safety in mental health treatment settings: Preventing conflict, violence and the use of seclusion and restraint. In S.S. Sharfstein, F.B. Dickerson, & J.M. Oldham (Eds.), *Textbook of hospital psychiatry* (pp. 253–265). Washington, DC: American Psychiatric Publishing, Inc.
- Hunter, M., & Carmel, H. (1992). The cost of staff injuries from inpatient violence. *Hospital and Community Psychiatry*, 43(6), 586–588.
- Hyde, C. E., & Harrower-Wilson, C. (1995). Resource consumption in psychiatric intensive care: the cost of aggression. *Psychiatric Bulletin*, 19, 73–76.
- Ibukunle, J. O., & Kettl, P. A. (2000, October). Seclusion of children in inpatient treatment. AACAP. Retrieved July 20, 2009, from <http://www.childadvocate.net/seclusion.htm>.
- International Labour Organization [ILO] (2002). Joint programme launches new initiative against workplace violence in the health sector. Press Release ILO/02/49. Retrieved June 13, 2009, from http://www.ilo.org/global/About_the_ILO/Media_and_public_information/Press_releases/lang--en/WCMS_007817/index.htm#note1.
- Institute of Medicine [IOM]. (2000). Executive summary. In L.T. Kohn, J.M. Corrigan, & M.S. Donaldson, (Eds.). *To err is human: Building a safer health system*. Washington, DC: National Academy Press.
- Institute of Medicine [IOM]. (2009). *Preventing mental, emotional, and behavioral disorders among young people: Progress and possibilities*. Mary Ellen O'Connell, Thomas Boat, and Kenneth E. Warner (Eds.). Committee on the Prevention of Mental Disorders and Substance Abuse Among Children, Youth and Young Adults: Research Advances and Promising Interventions; Institute of Medicine; National Research Council. Retrieved February 25, 2009, from <http://www.nap.edu/catalog/12480.html>.

- Institute of Psychiatry [IOP]. (2002). The recognition, prevention and therapeutic management of violence in mental healthcare, UKCC, London, UK. Retrieved on January 18, 2009, from http://www.positive-options.com/news/downloads/UKCC_-_Therapeutic_Management_of_Violence_-_summary_-_2002.pdf.
- Joint Commission on Accreditation of Healthcare Organizations [Joint Commission]. (2005). The Joint Commission's sentinel event policy: Ten years of improving the quality and safety of healthcare. *Joint Commission Perspectives*, 25(5), 1–5.
- Kaltiala-Heino, R., Tuohimaki, C., Korkeilad, J., & Lehtinen, V. (2003). Reasons for using seclusion and restraint in psychiatric inpatient care. *International Journal of Law and Psychiatry*, 26(2), 139–149.
- Krueger, A. B. (2009, February 10). A hidden cost of healthcare: Patient time. *New York Times*. Retrieved February 10, 2009, from <http://economix.blogs.nytimes.com/2009/02/09/a-hidden-cost-of-health-care-patient-time/?scp=2&sq=Alan%20B.%20Krueger&st=cse>.
- Lanza, M. L., Zeiss, R., & Rierdan, J. (2006). Violence against psychiatric nurses: Sensitive research as science and intervention. *Contemporary Nurse*, 21, 71–84.
- LeBel, J. (2009, May). *Setting the stage for change: The Massachusetts Department of Mental Health restraint and seclusion prevention initiative*. Paper presented at the Interagency Leadership Forum to Prevent the use of Restraints in Residential Programs, Shrewsbury, MA.
- LeBel, J., & Goldstein, R. (2005). The economic cost of using restraint and the value added by restraint reduction or elimination. *Psychiatric Services*, 56(9), 1109–14.
- LeBel, J., & Stromberg, N. (Eds.). (2008, May). *Creating positive cultures of care: A resource guide* (2nd ed.). Boston, MA: Massachusetts Department of Mental Health.
- LeBel, J., Stromberg, N., Duckworth, K., Kerzner, J., Goldstein, R., Weeks, M., et al. (2004). Child and adolescent inpatient restraint reduction: A state initiative to promote strength-based care. *Journal of the American Academy of Child and Adolescent Psychiatry*, 43, 37–45.
- Lewis, M., Taylor, K., & Parks, J. (2009). Crisis prevention management: A program to reduce the use of seclusion and restraint in an inpatient mental health setting. *Issues in Mental Health Nursing*, 30(3), 159–164.
- Llewellyn, B. (2001). Workplace violence: Implications for workers compensation in the United States. Paper presented at the Tri-National Conference on Violence as a Workplace Risk, November 29–30, 2001, Montreal, Quebec, Canada.
- Love, C. C., & Hunter, M. E. (1996). Violence in public sector psychiatric hospitals. *Journal of Psychosocial Nursing*, 34(5), 30–34.
- Luiselli, J. K., Bastien, J. S., & Putnam, R. F. (1998). Behavioral assessment and analysis of mechanical restraint utilization on a psychiatric, child, and adolescent inpatient setting. *Behavioral Interventions*, 62, 366–374.
- Martin, A., Krieg, H., Esposito, F., Stubbe, D., & Cardona, L. (2008). Reduction of restraint and seclusion through collaborative problem solving: A 5-year prospective inpatient study. *Psychiatric Services*, 59, 1406–1412.
- Mental Health Corporations of America [MHCA]. (2008). 2008 Negley awards for excellence in risk management: The journey towards eliminating the use of physical restraints, Grafton, Inc. recipient of the President's award. *MHCA Executive Report*. Second quarter, supplement. Retrieved March 1, 2009, from <http://www.mhca.com/ExecReport/ER-2008-Q2-Supplement.pdf>.
- Mohr, W. K., & Anderson, J. A. (2001). Faulty assumptions associated with the use of restraints with children. *Journal of Child and Adolescent Psychiatric Nursing*, 14(3), 141–151.
- Mohr, W. K., Petti, T. A., & Mohr, B. D. (2003). Adverse effects associated with physical restraint. *Canadian Journal of Psychiatry*, 48, 330–337.
- Murphy, T., & Bennington-Davis, M. (2005). *Restraint and seclusion: The model for eliminating their use in healthcare*. Marblehead, MA: HC Pro, Inc.
- Nath, S. R. & Marcus, S. C. (2006). Medical errors in psychiatry. *Harvard Review of Psychiatry*, 14(4), 204–211.
- National Association of State Mental Health Program Directors [NASMHPD]. (2009). Training curriculum for creation of violence-free, coercion-free treatment settings and the reduction of seclusion and restraint, 7th edition. Alexandria, VA: National Association of State Mental Health Program Directors, Office of Technical Assistance.
- National Quality Forum [NQF]. (2006, October 16). *Press release: National Quality Forum updates endorsement of serious reportable events in healthcare*. Retrieved March 28, 2009, from <http://www.qualityforum.org/pdf/news/prSeriousReportableEvents10-15-06.pdf>.
- Natta, M. B., Holmbeck, G. N., Kupst, M. J., Pines, R. J., & Schulman, J. L. (1990). Sequences of staff-child interactions on a psychiatric inpatient unit. *Journal of Abnormal Child Psychiatry*, 18, 1–14.
- Nunno, M. A., Day, D. M., & Bullard, L. B. (Eds.). (2008). *For our own safety: Examining the safety of high-risk interventions for children and young people*. Arlington, VA: Child Welfare League of America, Inc.
- Ohio Legal Rights Service [OLRS]. (2003, May). *A closer look: How they did it: A review of how six children's residential mental health facilities are attempting to reduce or eliminate the use of seclusion and restraint*. Retrieved December 15, 2008, from http://olrs.ohio.gov/ASP/pub_7_HowTheyDidIt.asp#costs.
- Oud, N. E. (2006). Aggression management training programs: Contents, implementation and organization. In D. Richter, & R. Whittington (Eds.), *Violence in mental health settings: Causes, consequences, management* (pp. 193–2102). New York: Springer Science+Business Media, LLC.
- Paxton, D. (2009, January 9). *Creating and supporting coercion-free and violence-free treatment environments: The Village Network and the Knox County Children's Resource Center restraint reduction effort*. Paper presentation. Columbus, OH: Ohio Association of Child Caring Agencies Learning Community conference.
- Petti, T. A, Mohr, W. K., Somers, J. W., & Sims, L. (2001). Perceptions of seclusion and restraint by patients and staff in an intermediate-term care facility. *Journal of Child and Adolescent Psychiatric Nursing*, 14, 115–127.
- Pittman, D. (2009, February 24). *Pavilion pays \$30K fine after 9 violations found*. Retrieved February 25, 2009, from http://www.amarillo.com/stories/022409/new_12654841.shtml.
- Pollard, R. A., Yanasak, E. V., Rogers, S. A., & Tapp, A. (2007). Organizational and unit factors contributing to reduction in the use of seclusion and restraint procedures on an acute psychiatric inpatient unit. *Psychiatric Quarterly*, 78, 73–81.
- Quade, E. (2006, December 15). Clinic, staffer enter 'no contest' pleas in conjunction with child's death. *Barron News Shield*. Retrieved November 26, 2008, from http://www.wzire.com/site/news.cfm?newsid=17596143&BRD=1132&PAG=461&dept_id=157660&rft=6.
- Ray, N. K., Myers, K. J., & Rappaport, M. E. (1996). Patient perspectives on restraint and seclusion experiences: A survey of former patients of New York State psychiatric facilities. *Psychiatric Rehabilitation Journal*, 20, 11–18.
- Regan, K. M., Curtin, C., & Vorderer, L. (2006 February). Paradigm shifts in inpatient psychiatric care of children: Approaching child- and family-centered care. *Journal of Child & Adolescent Psychiatric Nursing*, 19(1), 29–40.

- Rennie v. Davis, supra, 264 F. 3d 86 (1st Cir. 2001).
- Rennie v. Davis, supra, id., Lombardo v. Stone, 2001 U.S. Dist. LEXIS 12340 (S.D.N.Y. Aug. 22, 2001) *24 n.8.
- Richter, D., & Whittington, R. (Eds.). (2006). *Violence in mental health settings: Causes, consequences, management*. New York: Springer Science+Business Media, LLC.
- Robins, C. S., Sauvageot, J. A., Cusack, K. J., Suffoletta-Maierle, S., & Frueh, B. C. (2005). Consumers' perceptions of negative experiences and "sanctuary harm" in psychiatric settings. *Psychiatric Services*, 56(9), 1134–38.
- Rodman, R., & Gordon, T. (2008). *The Village Network's strategic thinking 2008*. Conference presentation. Retrieved November 29, 2008, from <http://www.alliance1.org/Conferences/National2007/materials/B4/balanced.pdf>.
- Sailas, E., & Wahlbeck, K. (2005). Restraint and seclusion in psychiatric inpatient wards. *Current Opinion in Psychiatry*, 18(5), 555–559.
- Sanders, K. (2009). The effects of an action plan, staff training, management support and monitoring on restraint use and costs of work-related injuries. *Journal of Applied Research in Intellectual Disabilities*, 22(2), 216–220.
- Shore, M. F. (2003). Examining the evidence: Contributing factors. *Psychiatric Services*, 54(12), 1599–1603.
- Short, R., Sherman, M. E., Raia, J., Bumgardner, C., Chambers, A., & Lofton, V. (2008). Safety guidelines for injury-free management of psychiatric inpatients in precrisis and crisis situations, *Psychiatric Services* 59(12), 1376–1378.
- Smith, G., Davis, R., Bixler, E., Lin, H., Altenor, A., Altenor, R., et al. (2005). Pennsylvania state hospital system's seclusion and restraint reduction program. *Psychiatric Services*, 56 (9), 1115–1122.
- Stanko, E. A. (2002). Knowledge about the impact of violence at work in the health sector, In C. L. Cooper & N. Swanson (Eds.). *Workplace violence in the health sector: State of the art* (p. 49–60). International Labour Organization. Retrieved January 16, 2009, from http://www.who.int/violence_injury_prevention/injury/en/WVstateart.pdf.
- Stefan, S. (2002). Perspectives from the field: Legal and regulatory aspects of seclusion and restraint in mental health settings. *Networks, Summer/Fall, Special Edition*, 3–4, 8, 12.
- Substance Abuse and Mental Health Services Administration [SAMHSA]. (2005). *Roadmap to seclusion and restraint free mental health services*. DHHS Pub. No. (SMA) 05-4055. Rockville, MD: Center for Mental Health Services, Substance Abuse and Mental Health Services Administration. Retrieved December 16, 2008, from <http://mentalhealth.samhsa.gov/publications/allpubs/sma06-4055/>.
- Sullivan, A. M., Bezmen, J., Barron, C. T., Rivera, J., Curley-Casey, L., & Marino, D. (2005). Reducing restraints: Alternatives to restraints on an inpatient psychiatric service—utilizing safe and effective methods to evaluate and treat the violent patient. *Psychiatric Quarterly*, 76(1), 51–65.
- Texas Department of Human Services. (2003). Reducing the use of restraints in Texas nursing homes. Retrieved January 16, 2009, from http://qmweb.dads.state.tx.us/clr/restraint_brochure.pdf.
- Thomann, J. (2009). *Factors in restraint reduction in residential treatment facilities for adolescents*. Unpublished doctoral dissertation, Massachusetts School of Professional Psychology, Boston.
- UniCare State Indemnity Plan [UniCare]. (2008, December). *Memorandum to members: Important changes to your coverage under the UniCare state indemnity plan*. Andover, MA. Retrieved January 4, 2009, from <http://unicarestatementplan.com/nonpayPrevEvnts.html>.
- Unruh, L., Joseph, L., & Strickland, M. (2007). Nurse absenteeism and workload: Negative effect on restraint use, incident reports and mortality. *Journal of Advanced Nursing*, 60(6), 673–681.
- Vanderpool, D. (2004). Use of S&R: Patient safety, risk management considerations. *Psychiatric News*, 39(5), 20–21.
- Weiss, E. M., Altimari, D., Blint, D. F., & Megan, K. (1998, October 11–15). Deadly restraint: A nationwide pattern of death. *Hartford Courant*.
- Whitaker, R. (2002). *Mad in America: Bad science, bad medicine, and the enduring mistreatment of the mentally ill*. New York: Basic Books.
- Wilcox, P. D., & Brown, S. (2006, November 30). *Creating a culture of connection: The transformation of an agency*. Paper presentation at the National Association for Children's Behavioral Health Annual Meeting and Training, St. Petersburg, Florida.
- World Psychiatric Association. (2007, June 6–8). Thematic Conference: *Coercive treatment in psychiatry: A comprehensive review*. Dresden, Germany. Retrieved January 14, 2009, from <http://www.biomedcentral.com/bmcpsychiatry/7?issue=S1>.

WE WOULD LIKE TO THANK THE FOLLOWING CONTRIBUTORS:

Raul S. Almazar
Josette Banks
Maggie Bennington-Davis
Dawn Besemer
Kristina Boldebuck
Rick Dezsofi
Kathy Blanchette
Chris Botte
Nicholas Bozzo
Resa Brandfonbrener
Beth Caldwell
Donna Coley
Raymond Flannery
James Gaynor
Ken Holbert
Kevin A. Huckshorn
Richard A. LeBel
Greg Martin
Caroline McGrath
Eric L. Masi
Bruce Meltzer
Wanda Mohr
Dana Papke
David Paxton
Sylvia Piper
Andy Pond
Kim Sanders
Chris Shipps
Susan Stefan
James Stewart
Lydia Todd
Joyce Welch
Karen, Richard, and Tanner Wilson

