RESTRAINT MINIMIZATION TASKFORCE

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Final Report

Redacted version with confidential CAMH information removed.

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Background

The CAMH Minimization Taskforce (the taskforce) was established to review a broad base of evidence, including practices, literature, guidelines, and standards, regarding best practices in restraint use and its reduction. The purpose of the taskforce was to make recommendations to the CAMH Medical Advisory Committee (MAC) regarding: 1. Effective strategies and approaches for reducing or minimizing the use of restraint and seclusion 2. Strategies and resources needed for implementing identified best practices.

(Confidential content redacted) The Risk Management Department, Nursing Practice and Professional Services, and others contacted other hospitals and requested and reviewed their restraint policies and procedures, in addition to reviewing literature. There were no appropriate benchmark data available with which to compare restraint use at CAMH. Benchmark data were not available due to a variety of factors, including variable definitions and methods of reporting

There was a general view among clinical leaders that CAMH was not behind or below standard in the area of restraint use but neither was CAMH a leader in the area of least restraint or minimal use of restraint. This general view, in combination with the activities and events discussed above, served as the catalyst for the need to identify and implement best practices. CAMH's commitment to client-centred, recovery-oriented, holistic care and the safe provision of therapeutic mental health treatment and care underpins the desire to not only improve by way of significant restraint reduction at CAMH but, in the long run, to provide leadership to other facilities and contribute to a significant restraint reduction throughout the Province.

The taskforce was established in Fall 2006 to make recommendations that would enable and facilitate CAMH to achieve its goal of significantly reducing restraint use. It is composed of diverse members including psychiatrists, advanced practice nurses, staff nurses, a recreation therapist and an education specialist, representing various clinical programs. The taskforce was co-chaired by a Psychiatrist and an Advanced Practice Nurse. Others involved in the activities of the taskforce included a Program Evaluation Manager who conducted the literature review at the request of, and in collaboration with, the taskforce and a clinical director and an administrative director who participated in a 2-day restraint-reduction training program.

Taskforce Activities

Taskforce members reviewed select articles, guidelines, and standards pertaining to restraint use and reduction. Members were interested in focusing on effective reduction

strategies that were not accompanied by an increase in injuries or reduction in one type of restraint with an increase in another type, for example, a decrease in physical restraint with a resulting marked increase in the use of chemical restraints. A Cochrane review on "Seclusion and restraint for people with Mental Illnesses" (Fenton, 2004) concluded that no controlled studies exist that evaluate the value of seclusion or restraint in people with serious mental illness. It confirmed reports of serious adverse effects resulting from the use of seclusion and restraints and recommended that alternative ways of dealing with unwanted or harmful behaviours needed to be developed. Please refer to Appendix 2 for a bibliography of reviewed documents and articles.

Literature Review

The above mentioned Cochrane review and other literature indicating the negative outcomes of restraint use and the need for alternative strategies and staff education served as a guide in establishing the approach and focus of the literature review. Therefore, the group decided that the literature review would not focus on the consequences of restraint use nor would there be an attempt to replicate work already done by way of looking solely at evidence arising from randomized controlled trials. Rather, the purpose was to systematically review seclusion and restraint reduction and prevention programs in psychiatric setting. It was decided that key elements of the review would be location identification, population and setting, program type and its key components, key results and restraint type(s) addressed by the program. The focus and key elements were communicated to and discussed with the person who conducted the literature review.

Literature Search

Articles published between January 2004 and March 2007 on seclusion and/or restraint reduction strategies were included in this review. Articles were obtained by searching CINAHL, Journals@ Ovid, HealthSTAR and PsychInfo using the following words alone or in combination: seclusion, restraint, reduction, psychiatric, containment, chemical restraint, rapid tranquilization, training, sensory room, comfort room, snoezelen. A review of the references of these articles resulted in the inclusion of a small number of additional articles that fell outside the specified time period but were considered to be of importance to this report. A total of 20 implementation strategies were reviewed and the results of these strategies were summarized in a comparison table. In addition, articles that included a description or discussion of the current literature on seclusion and restraint reduction strategies were also used in this review.

Key Findings Studies reporting success in terms of reducing seclusion and restraint rates tended to implement multi-level strategies that included several components, including involvement of leadership, staff training, identification of risk and/or development of

management plans, formal and informal engagement of staff and clients, creation of committees, establishment of review/debriefing processes, and communication of utilization rates.

Telephone interviews were also conducted. Facilities that have reported significant restraint reduction in the literature or mentioned to a taskforce member by another facility were contacted. There was a special section on seclusion and restraint in Psychiatric Services, September 2005 Vol. 56 No 9 that contained articles on restraint and seclusion reduction strategies and programs. One publication, titled *Pennsylvania State Hospital System's Seclusion and Restraint Reduction Program,* outlined the elements of the program, method of data collection, and reported significant reduction in the use of seclusion and restraint without an increase in staff injuries. A member of the taskforce contacted the lead author who provided additional details about the program; reduction strategies; successes, issues and challenges; and sustainability of the program and its achievements. Telephone discussions and interviews were also done with representatives at San Francisco Hospital and Bellevue Hospital as these facilities were achieving significant reduction in restraint use. Additionally, contact was made with the Maudsley Hospital in London, England. Telephone contacts and interviews led to additional contacts and the identification of key documents and site visits.

Review of Key Documents Taskforce members identified and review some key documents that included:

Roadmap to Seclusion and Restraint Free Mental Health Services (U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Association) This training package provides background material, lecture points, and presentation slides needed for facilitators to implement the seven training modules that demonstrate how to eliminate the use of seclusion and restraint. The goal of the curriculum is to provide direct care staff with the tools and knowledge needed to improve their skills in preventing and ultimately eliminating the use of seclusion and restraint. The curriculum is written from a client perspective and the content is based on the concept that recovery and wellness are essential in providing alternatives to the use of seclusion and restraint.

Review of Seclusion and Restraint Practices in Ontario Provincial Psychiatric Hospitals: Perspectives of Patients, Clinicians and Advocates (The Psychiatric Patient Advocate Office , October 2001.) The Psychiatric Patient Advocate Office (PPAO) in 2000 conducted a snapshot review of seclusion and restraint practices within Ontario Psychiatric Provincial Hospitals and the former Queen Street Mental Health Centre (Queen Street Site of CAMH). The review consisted of structured interviews with patients who had been secluded or restrained and direct care clinical staff, audits of health records, and review of relevant policies and procedures. While the review had significant limitations with respect to sample size and representation, important themes consistent with the

literature were identified. The report included a summary of findings and client-centred best practices recommendations in the use of seclusion and restraint. The report indicated that, "this snapshot review suggests that the implementation of a cross-sectoral, inter-ministerial task force with the mandate of standardizing and optimizing seclusion and restraint practices may be a critical success factor in addressing existing and emerging concerns and issues province-wide" (p. 50).

National Safety Priorities In Mental Health: A National Plan for Reducing Harm, (Commonwealth of Australia. 2005). This document outlines a plan intended to provide national direction in identifying, avoiding and reducing harm across all environments in which care of people with mental health disorders is provided. It aims is to provide guidance for achieving safer mental health services. The priorities identified as needing first attention at the national level were: "reducing suicide and deliberate self harm in mental health and related health care settings; reducing use of, and where possible, eliminating restraint and seclusion; reducing adverse events in mental health services; and safe transport of people experiencing mental health disorders" (p. 3).

Site visits to facilities providing mental health in-patient services that reported a significant reduction in restraint use were done, in order to see how programs operationalized or implemented their reduction programs. Visits also provided the opportunity to speak with direct-care staff regarding their experience of restraint reduction program and strategies. A list of questions was developed in advance of the visit and circulated to key CAMH stakeholders for review and input. Appendix 3 contains a list of questions asked and facilities visited.

Client Programming

At the three site visits, client programming was a notable component of client care and a significant aspect/strategy in the prevention and management of aggressive behaviour. In addition to the clinical and therapeutic benefits of meaningful activities/programs for clients, the provision of such programming was seen an important component in reducing the use of restraint and seclusion. Two of the sites could be described as having longer inpatient stays while one provided acute care psychiatric services. Programming was delivered differently among the sites. The longer stay sites had more centralized programming augmented with some unit-based programming, while the acute care site provided unit-based programming. All the sites visited had a significant amount of programming offered by members of the inter-professional team. For example, there were nurse led programs that focused on life skills, activities of daily living, and health promotion. One longer stay site provided each client with 20 hours per week of programming. This facility also presented data indicating that episodes of aggression were fewer during programming times.

Response Teams

One of the sites visited attributed some of its success in restraint reduction to the establishment of a Psychiatric Emergency Response Team (PERT). Another facility visited in the same state hospital system as that hospital achieved and maintained comparable outcomes without PERT. Instead, this non-PERT hospital had a system similar to CAMH code white response whereby staff come together and form a team at the time of a psychiatric emergency. One similarity for both the PERT and non-PERT approach is having a designated individual identified in advance to serve as the team leader or captain in the event of a psychiatric emergency.

Restraint Reduction Training

Some members of the taskforce along with a clinical and administrative director participated in a 2-day restraint reduction-training program offered by the National Training Assistance Center, a division of the National Association of State Mental Health Program Directors (NASMHPD)

The 2-day reduction training focused on an introduction to Six Core Strategies that any organization could use and customize to guide the development and implementation of its restraint reduction strategy. It discussed various ways to implement these strategies and included guest speakers who had experienced success with using these core strategies in their respective health care organizations. Throughout the training it was evident that each organization that achieved successful restraint reduction had a vision of restraint elimination and that leaders used data in a timely manner to customize, implement, and evaluate the reduction plan. The training included an analysis of some common assumptions regarding restraint use and consumer and staff perspectives on and experiences with restraint and seclusion use. It outlined and reviews The Six Core Reduction strategies listed below. These strategies were also consistent with the findings of our literature review on effective reduction programs and strategies.

The Six Core Reduction Strategies © - Huckshorn, K. (NTAC, 2006)

1. Leadership toward organization change
2. Use of data to Inform Practice
3. Workforce Development
4. Use of Seclusion and Restraint Prevention Tools
5. Full inclusion of Consumers and Families
6. Rigorous Debriefing [incident review].

CAMH Internal Scan

The taskforce members, throughout the work period of the taskforce, performed an internal scan of the CAMH organizational environment as it pertains to prevention and management of aggressive behaviour and restraint use. Several policies, processes, and documents that address this area, for example, Least Restraint Policy, Code White Policy, and the CAMH Bill of Client Rights were reviewed. Several key stakeholder groups and committees, for example, the Client Empowerment Council, the Family Council, Restraint Minimization Workgroup, and the Prevention and Management of Aggressive Behaviour Steering Committee (PMAB) also focus on management of aggressive behaviour and restraint use.

The Restraint Minimization Workgroup, under the leadership of Nursing Practice and Professional Services, focuses on practice issues related to the use of restraints and has worked on restraint data accuracy and utilization to prompt appropriate clinical care and follow up of patients who are restrained. This group developed and piloted a system to support data accuracy and timely follow up of restrained patients. The outcomes of the pilot include the automatic printing twice per day of restraint events reports on inpatient units. Nursing Practice and Professional Services worked with selected stakeholders to lead the redevelopment of the Restraint Events Tool on The Roster of Electronic Assessments Tools (TREAT).
This has generated various reports on restraint events and the establishment of a link between the Restraint Events Tool and the electronic Interdisciplinary Plan of Client Care to facilitate care planning when patients have been restrained.

The purpose of the PMAB Steering Group is to provide leadership and direction into the development of clear and consistent guiding principles, practices and staff competencies required for the effective prevention and management of aggressive behaviour of clients towards staff, other clients and visitors throughout CAMH. In addition, the Steering Committee identifies issues as they relate to CAMH policies.

One newly formed group, The Interprofessional Practice Collaboration Team expressed an interest in the CAMH restraint minimization initiative and at its request met with the taskforce to explore options and opportunities.

Taskforce Recommendations

Following review of a broad base of evidence, including practices, literature, guidelines, and standards regarding best practices in restraint use and its reduction, CAMH Minimization Taskforce makes the following recommendations. These recommendations consider best and effective strategies and approaches for reducing or minimizing the use of restraint and seclusion strategies and resources needed for implementation.

1. Provide restraint reduction training for CAMH clinical, administrative and managerial leaders offered by National Technical Assistance Center (NTAC). Expected outcomes include:

    - Identification of best practices in restraint reduction and in the prevention and management of aggressive behaviours
    - Development of a reduction action plan for CAMH/ and for customized reduction plans for clinical programs
    - Build skills of leaders and administrators and others in fostering and supporting a culture of safety that embraces and practices restraint reduction

2. Establish a steering group with representation from the Executive Leadership Team, clinicians, clients and families, and individuals from other stakeholder groups to implement the action plan and recommendations.

3. As a resource to the above mentioned steering group, create a position/role: of Client-Centred Practice & Restraint Prevention Advanced Nurse Leader/Director. Given the magnitude of this initiative, the organizational structure, and the multiple related-groups/activities across the organization, the Taskforce believes that this initial human resource investment essential to the coordination, implementation of a organization-wide vision and strategy. This person would be vital in supporting the clinical programs with reduction plan/strategies and in helping to foster a culture of safe restraint reduction.

4. Clinical and Administrative Directors and other clinical leaders of each clinical program with in-patient units consistently review and evaluate the reduction plan – sharing data, including restraint, seclusion data, injury data and outcomes with staff and other stakeholders. In addition, successful reduction strategies and alternatives to be shared with staff and other stakeholders.

5. Include all measures of restraint, mechanical/chemical and locked seclusion and associated injury data on the CAMH clinical dashboard. Maintain an inventory of successful strategies/alternatives to restraint.

6. Clinical and Administrative Directors provide quarterly summary reports to the Clinical Leadership Team and CAMH Quality Council.

7. Establish a process and or structure to review and make recommendations regarding client programming in terms of hours of programming per client per unit, types of programs, program goals, and involvement of the inter-professional staff in program delivery. There is evidence to suggest that episodes of aggression significantly decrease during client programming times.
8. Each clinical program to establish a process for timely monitoring of restraint/seclusion use data and to operationalize a rigorous restraint/seclusion incident review for each incident.
9. Clinical leaders and education services work together in collaboration with administrative leaders to develop and implement a staff development plan that focuses on prevention strategies, de-escalation strategies, and alternatives to restraint to augment the existing Prevention and Management of Aggressive Behaviour Training.
10. Review policies, procedures, and clinical care processes for potential inconsistencies between policy and practice and between policy and best practices. Develop and implement a plan to address gaps.
11. Each Clinical Program should customize a restraint and seclusion reduction plan in alignment with the overall CAMH reduction plan/strategy
12. Build in a program evaluation component into the restraint/seclusion reduction program/plan prior to its implementation.

Conclusion

The CAMH Minimization Taskforce was established to review a broad base of evidence, including practices, literature, guidelines, and standards, regarding best practices in restraint use and its reduction. The above stated recommendations are based on the group's review, activities, and findings. We believe that these recommendations will not only significantly assist with reducing the use of seclusion and restraint use but enhance the provision of safe client-centred care and transform practice.

Appendix 1

Seclusion and Restraint Use in Psychiatric Settings:

A Review of the Recent Literature on Reduction and Prevention Programs

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Seclusion and Restraint Use in Psychiatric Settings: A Review of the Recent Literature on Reduction and Prevention Programs

Background

Reducing the use of seclusion and restraint in psychiatric inpatient settings has become a focus of attention for front-line staff, hospital administrators, client advocacy groups, and policy-makers alike (e.g. see Fisher 2003; LeBel, Stromberg, Duckworth, Kerzner, Goldstein, Weeks, Harper, LaFlair & Sudders 2004; Sailas & Wahlbeck 2005; Huckshorn 2004). The purpose of the present report was to review recently published literature on seclusion and restraint reduction efforts and summarize the key findings identifying successes, challenges and gaps in the literature.

Definitions

Specific definitions for the terms *seclusion* and *restraint* frequently were not provided in the literature reviewed. Where seclusion was defined, it typically referred to a process that resulted in an agitated client being placed in a locked room (e.g. Sailas & Wahlbeck, 2005; Huckshorn, 2006; Sailas & Fenton, 2000; Schreiner, Crafton & Sevin, 2004).

The term restraint referred to a more multi-faceted concept. In articles where the definition was specifically given, mechanical, manual/physical, and chemical restraints were the types most frequently described. One author described *mechanical restraint* as "restricting a person's movement through the use of a mechanical device such as a backboard, net or papoose" (Prescott, Madden, Dennis, Tisher & Wingate, 2007 p. 96). Mechanical restraints may also refer to the application of straps over ankles, wrists, legs and/or chest (Schreiner et al. 2004). *Physical restraint* referred to manual restriction of movement and was defined in one study as physical holding lasting longer than five minutes (Greene, Ablon & Martin, 2006). LeBel et al. (2004) remarked that the definition of physical restraint differed across organizations and should be standardized between all influential governmental or other policy making bodies (e.g. Centre for Medicaid and Medicare Services, CMS; the Joint Commission on the Accreditation of Healthcare Organizations, JCAHO) to allow for more accurate comparisons of S/R utilization across different locations.

Chemical restraint (PRN or *pro re nata* medication administration) was defined as "use of psychotropic…medications for sedation…under conditions of agitation or possible physical aggression" (Donat, 2006 p. 215), or "involuntary intramuscular injections" for agitated clients (Damsa, Ikelheimer, Adam, Maris, Andreoli, Lazignac & Allen, 2006 p.432). Discussions about chemical restraint, or use of psychotropic medication for the purposes of controlling agitated behaviour, was not found as frequently in the literature reviewed in this report as the other types of restraint or seclusion.

In many articles it was not clear which of the three forms of restraint were targeted in the reduction strategy. As LeBel et al. (2004) remarked, continued efforts should be made in terms of clarification of terms and definitions in this area.

The phrase "seclusion and restraint" will be represented by "S/R" in the body of this report.

Literature Search

Articles published between January 2004 and March 2007 on seclusion and/or restraint reduction strategies were included in this review. Articles were obtained by searching CINAHL, Journals@ Ovid, HealthSTAR and PsychInfo using the following words alone or in combination: seclusion, restraint, reduction, psychiatric, containment, chemical restraint, rapid tranquilization, training, sensory room, comfort room, snoezelen. A review of the references of these articles resulted in the inclusion of a small number of additional articles that fell outside the specified time period but were considered to be of importance to this report.

A total of 20 implementation strategies were reviewed and the results of these strategies have been summarized in Table I: *Comparison Table of Seclusion and Restraint Reduction Strategies*. In addition, articles that included a description or discussion of the current literature on S/R reduction strategies were also used to help formulate this report.

Articles describing S/R in children and adolescents as well as adults were included in this review.

A review of the "grey literature" (unpublished reports/accounts, governmental or other organizational policies, etc.) was *not* included as a part of the present report. A review of relevant legislation and the grey literature in this area is recommended for a comprehensive appreciation of S/R use in psychiatric settings.

Key Findings

Table I includes a brief description of the key features and findings of the implementation strategies in each of the 20 published reduction strategies. There were no randomized, controlled trials of S/R reduction programs available within the published literature.

Focus of Reduction Strategies: Seclusion, Restraint, or Both?

Fewer than half of the articles used in the comparison table defined the meaning of seclusion and/or restraint within their study. Most reports included information on rates of both seclusion and restraint (14/20 studies). Three studies reported on changes in physical/manual or mechanical restraint use only. Two studies addressed chemical restraint only, while four studies reported on rates of chemical restraint/PRN use in

addition to seclusion and other forms of restraint. These findings suggest that most published reduction strategies have targeted seclusion and non-chemical restraint together, while far fewer studies have included a focus on chemical restraint/PRN use.

Reduction Strategies: Key Components

There were no randomized, controlled studies available for review. Most studies described interventions put into place within a quality improvement framework and provided data on seclusion and/or restraint use prior and subsequent to the implementation of the program of intervention. The uncontrolled nature of these studies represents a significant limitation of the published literature to date.

The vast majority of published strategies to reduce S/R use involved multi-faceted interventions. Typically, numerous interventions were put into place at the same time or within a short period of time. It was therefore difficult in most instances to discern which individual interventions may have been most strongly linked to reductions in seclusion/restraint use (see Sailas & Wahlbeck, 2005).

Of the studies reviewed, reduction strategies typically involved two or more interventions falling into the following general and sometimes inter-connected categories: involvement of leadership, staff training, identification of risk and/or creation of management plans, formal or informal engagement of staff and clients, creation of committees, establishing review and/or debriefing processes, and communication of utilization rates. Seventy percent of the studies reviewed involved interventions that fell into three or more of these general categories.

Involvement of Leadership: Nine studies expressly indicated that part of their reduction strategy involved formal announcements from program or other leadership about the commitment to reduce S/R use (Pollard, Yanasak, Rogers & Tapp, 2007; Donat 2003; Smith, Davis, Bixler, Lin, Altenor, Altenor, Hardenstine & Kopchick, 2005; Sullivan, Bezmen, Barron, Rivera, Curley-Casey & Marino, 2005; Khadivi, Patel, Atkinson & Levine, 2004; Schreiner et al., 2004; LeBel et al. 2004; Fisher, 2003, Prescott et al. 2007). Continued involvement of leadership factored into the implementation strategy from involvement on committees, to participation in training, and continued discussion about S/R rates at staff meetings and other communications. Changes to the current culture or "status quo" were described as being important issues to be addressed by leadership (e.g. Sullivan et al. 2005). LeBel et al. (2004) remarked on the impact they considered leadership to have on their S/R reduction strategy, "[u]nits with leaders committed to no/low R/S [restraint/seclusion] that began operating during the initiative and that received strong support from DMH [Massachusetts Department of Mental Health] have maintained low rates of R/S. Units in which there was less commitment and insufficient leadership demonstrated less success" (p 42).

Staff Training*:* Ten reduction strategies involved some form of staff training or skill development. Aggression management and crisis intervention training were among the most frequently cited training programs implemented (e.g. Forster, Cavness & Phelps

1999; Fisher 2003; Jonikas, Cook, Rosen, Laris & Kim 2004; D'Orio, Purselle, Stevens, Garlow 2004; McCue, Urcuyo, Lilu, Tobias & Chambers 2004; Sullivan et al. 2005; Needham, Abderhalden, Meer, Dassen, Haug, Halfens & Fischer 2004). Little research is available on the quality and content of such training programs (Morrison & Love 2003; Farrell & Cubit, 2005; Bowers, Nijman, Allan, Simpson, Warren & Turner, 2006). Bowers, Nijman, Allan, Simpson, Warren & Turner (2006) indicated that staff report improved feelings of confidence after receiving such training, but how this translates into changes in clinical practice is not known.

Morrison & Love (2003) published an evaluation study of four different aggression management training programs rating each on content, feasibility, psychological comfort of staff taking the training, and cost. The Therapeutic Options and Professional Assault Response Training (see Morrison & Love 2004 for references) programs were rated the highest according to Morrison & Love's rating system. Farrell & Cubit (2005) evaluated 28 aggression management programs (including the four programs evaluated by Morrison & Love, 2003) against 13 content areas derived from various Australian governmental or mental health industry policy documents: orientation (policies, environment), people cost, causes, types, risk, communication, pharmacology, physical, restraint, seclusion, legal, leadership and debriefing (see Farrell & Cubit, 2005 for a full description of each content area). They found that the Critical Incident Positive Outcome (CIPO; the Rozelle Hospital, Australia) covered 11 of the 13 content areas, the INTACT program (Illawarra Area Health Service, UK) covered 10 of the content areas, and the Aggression Management and Workplace Violence Prevention and The Mandt System covering nine of the 13 content areas (Farrell & Cubit, 2005). They concluded that few of the programs reviewed adequately addressed orientation, pharmacology and the management of aggression, issues around the use of restraint, costs of aggression or seclusion (Farrell & Cubit, 2005). The authors note that offering training in aggression management programs has become a "highly lucrative, yet poorly regulated business" (from Beech & Leather, 2003 in Farrell & Cubit, 2005 p 45). Given the extent to which these types of programs are utilized, more research on the content and effectiveness of aggression management and crisis intervention training programs is clearly required.

Identification of Risk and Development of Management Plans: Seven reports indicated that part of their S/R reduction strategy involved implementing systematic methods to assess who might be at greatest risk for being secluded or restrained and/or developing individualized management plans to minimize the chance of seclusion or restraint should a person become agitated or aggressive (LeBel et al. 2004; Khadivi et al. 2004; Jonikas et. al 2004; D'Orio et. al 2004; McCue et. al 2004; Sullivan et. al 2005; Needham et. al 2004). Some groups reported use of standardized risk assessment tools (e.g. Needham et. al 2004 used the Broset Violence Checklist, BVC; D'Orio et al. 2004 used a combination of elements from the Overt Agitation Severity Scale and Overt Aggression Scale), whereas others reported adding a component assessing agitation/aggression potential to the pre-existing admission assessment (McCue et. al 2004). One restraint reduction strategy (Jonikas et. al 2004) involved two complementary components, the "advance crisis management" component and the "non-violent crisis intervention" component. The first involved interviewing clients (youths

and adults) within 24 hours of admission to determine S/R history, triggers for aggression, and to develop individual management plans. The second component involved training in non-violent crisis management. Use of restraints decreased by 48% in the quarter implementation of these two components and by 98% two quarters after implementation (Jonikas et. al 2004).

Sullivan et al (2005) describe a similar process of assessment and management plan development. In this report, assessment involved discussing the clients' history of violence and aggression and identifying specific behaviors typically expressed by that client when they get angry or have behaved aggressively in the past. The plan then involves creating a "realistic menu" (p 54) of potential interventions the client can choose from to help diffuse aggression (examples given included taking a walk, deep breathing, reading, creating artwork, watching television, talking to a friend or staff member, decreasing stimulation, listening to music, praying, meditation, etc.) Although it is important to note that some other strategies were incorporated into the overall S/R reduction effort, these authors reported a statistically significant reduction in S/R use post-implementation in terms of number of episodes of S/R and in length of time per episode. Those authors remark, "A dramatic decrease in restraint and seclusion can occur, even on an acute care inner city psychiatric service, when administration, unit staff and clients join together to assess violent potential, develop alternatives for managing that violence and empower patients to truly participate in their treatment plan" (Sullivan et. al 2005, p 63).

Formal and Informal Engagement of Staff and Clients*:* Five of the studies reviewed indicated that varying levels of staff and client engagement were important elements of the S/R reduction strategy (Fisher 2003; McCue et al. 2004; Schreiner et al. 2004; Bowers, Brennan, Flood, Lipang & Oladapo 2006; Pollard et al. 2007). Some studies reported conducting in-services, surveys, individual interviews, or focus groups with staff and/or clients (Fisher 2003; Schreiner 2004; Pollard et al. 2007), while others reported utilizing more informal interactions to obtain input, buy-in and to re-iterate the message of continued commitment to reduction of S/R (Pollard et al. 2007, Schreiner et al. 2004). Sullivan et al. (2005) reported that variability in the success of their reduction strategies between units was related to unit (or even hospital) culture, staff-buy in and team relationships. Smith et al. (2005) remark, "[p]ersonal leadership by direct care staff who applied their nonrestraint values helped to change the culture of restraint within the system" (p 1120).

Two strategies involved incentives for reducing S/R. Schreiner et al. (2004) described providing a pizza party or other unit incentive for the clients on units that met S/R reduction goals. This particular report actually implemented three staff interventions and three client interventions in their efforts to reduce S/R and the client incentive was only part of one of the efforts to engage clients in the process. McCue et al. (2004) described an element of their reduction strategy that involved a staff incentive. The unit with the lowest restraint rate in a given month was given a plaque as well as two movie passes to be raffled off among staff on that unit. As stated previously, these efforts were elements of larger, multi-faceted S/R reduction programs and it is not possible to glean

from these reports the extent to which efforts to engage clients and staff were related to reported reductions in S/R use.

Creation of Committees: Five studies reviewed indicated that an element of their S/R reduction strategy involved the development of a committee dedicated to assessing needs, exploring issues and implementing change related to S/R utilization (Pollard et al. 2007; D'Orio et al. 2004; Schreiner et al. 2004; Fisher 2003; Forster et al. 1999). These authors emphasized the importance of establishing a multidisciplinary committee including combining administrative and front-line staff members.

Establishing Review and/or Debriefing Processes: Ten studies described a formalized review and/or debriefing process as part of their S/R reduction strategy (Pollard et al. 2007; Prescott et al., 2007; Donat 2003; Donat 2006; McCue et al. 2004; Jonikas et al. 2004; Khadivi et al. 2004; Schreiner et al. 2004; Fisher 2003; Forster et al. 1999). Review protocols required data on S/R utilization (frequency and duration) to be accurately documented and consistently monitored. Prescott et al. (2007) reported deploying a "rapid response team" within 24 hours of any episode of mechanical restraint. This team was charged with reviewing the treatment approach for the restrained client and working with the treatment team to implement changes as needed to avoid further restraint use. McCue et al. (2004) also reported a process of daily review of S/R episodes. Donat (1998, 2002b & 2003) described the development of a process whereby S/R information was reviewed by the administration on a monthly and later on a weekly basis. Individuals meeting or exceeding pre-determined criteria for number of episodes or length of time spent in seclusion or restraint were automatically flagged for follow-up. According to Donat's 1998 report, individual cases were flagged for follow-up if they were found to have six or more episodes or had spent 72 or more hours in S/R in a month. This follow-up consisted of sending a notification letter to the client's psychiatrist, psychologist and the chair of a committee developed to review and implement behaviour management plans (the Behavior Management Committee). This committee was then required to review the clients' treatment plan to "assess the behavioral integrity of the treatment plan" (p 15) and make improvements where necessary. Strong cognitive-behavioral skills were part of the clinical environment in the reports by Donat (1998, 2002b, 2003, 2006). Later, as the data reporting mechanisms improved facilitating administrative review on a weekly (instead of monthly) basis, these criteria were adjusted once (Donat 2002b) and then again (Donat 2003) until eventually any individual who underwent two episodes of seclusion or restraint in a week or for whom total time in S/R exceeded 8 hours in a week was flagged for review. Initial implementation (monthly administrative review process and behavioral treatment planning for flagged cases) resulted in a 62% reduction in monthly S/R rates in the six months after the reviewed and revised treatment plans were implemented (Donat 1998). Reducing the review period to every week and making adjustments to the criteria for follow-up and the follow-up procedure itself resulted in another 58% decrease in average number of hours of S/R use (Donat 2002b). Multiple regression analyses of the data collected from 1997 – 2002 and the various stages of implementation suggested that the most important predictor of reduced S/R use was the implementation of systematic administrative review (Donat 2003).

***Communication of S/R Rates**:* Eleven of the reviewed reports described ongoing communication of S/R utilization rates to staff as being part of their reduction strategy (Donovan, Siegel, Zera, Plant & Martin, 2003; LeBel et al. 2004; Donat 2003; Donat 2006; Bowers, Brennan, Flood, Lipang & Oladapo 2006; Smith et al. 2005; Pollard et al. 2007; McCue et al. 2004; Schreiner et al. 2004; Fisher 2003; Forster 1999). Fisher (2003) described posting S/R rates at the unit level in a location where all staff could see the rate and duration of S/R events in a given time period (e.g. monthly). Donovan et al. 2003 described a similar process, adding in the unit's target or goal utilization rates to the posting. Other studies described discussion of S/R rates and duration as part of weekly or monthly staff meetings at the unit level and/or the hospital administration level (e.g. Schreiner et al. 2004; McCue et al. 2004; Pollard et al. 2007). Donovan et al. (2003) reported using the BASIS-32 Plus Performance Measurement System to monitor S/R rates and compare their rates with those of other hospitals. Interestingly, Sullivan et al. 2005 reported an initial decrease in S/R rates after implementing their reduction strategies, but continued data analysis revealed a later increasing trend. They suggest that continued vigilance is required in order to maintain the benefits of S/R reduction strategies (Sullivan et al. 2005). Continued monitoring and communication of data may be necessary for continued S/R reduction.

***Other Components**:* Many of the studies reviewed described using strategies that go beyond the general categories described above. For instance, three of the studies reviewed included as part of their S/R reduction strategies implementation of some form of rapid response team (D'Orio et al. 2004; McCue 2004; Smith et al. 2005). Fisher (2003) described a component of their S/R reduction strategy that focused expressly on building and maintaining respect among and between staff and clients. To this end, a prominent consumer activist was invited to address all staff, a training session on interpersonal respect was provided, and the hospital created a formal policy indicating that basic respectful behavior was to performance requirement for all staff.

Two studies described implementation strategies that resulted in reduced rates of S/R, but did not fall into one of the categories listed above. Damsa et al. (2006) reported that simply having a person on the unit observing (and recording) the number clients given involuntary injections (chemical restraint) resulted in a 27% reduction of this behavior in the months of the observational study compared with rates in the three months prior to the study. Interestingly, the rate of chemical restraint increased again (to approximately pre-study levels) in the three months after observations ended (Damsa et al. 2006). Champagne & Stromberg (2004) described offering clients the opportunity to utilize a "sensory room" (more on this below) and found concurrent reductions in S/R utilization.

Key Components of S/R Reduction Strategies According to Descriptive Literature

Huckshorn (2004) describes six categories (or "core strategies") advocated by the National Association of State Mental Health Program Directors (NAMSHPD) as central to successful S/R reduction strategies:

1) leadership toward organizational change
2) using data to inform practice
3) workforce development
4) use of S/R reduction tools
5) consumer roles in inpatient settings; and
6) debriefing techniques

Fisher (2003) reviewed the literature on S/R use to date and described similar categories as being of critical importance in successful reduction strategies:

1) strong administrative endorsement
2) client participation
3) culture change
4) staff training
5) analyzing and using data
6) individualized treatment

The general categories of strategies used by actual S/R reduction programs (involvement of leadership, training, identification of risk and development of management plans, formal and information engagement of staff and clients, creation of committees, review protocols/debriefing and communication of rates) fit well with the key features identified in the descriptive literature. As noted previously however, most published reports described utilization of various combinations of these and other strategies. The uncontrolled nature of the studies makes it difficult to determine which components or combinations of components were most related to observed reductions in S/R use (see Smith et al. 2005).

Donat (2002) reported that S/R rates per month were reduced from 423 hours to 75 per month over the course of two years as there was a targeted and purposeful decrease in client census numbers and concurrent increase staff members. The staff: client ratio improved from 1:3.6 to 1:2.4 during the period of time Donat refers to in his 2002 article. However, the specific impact of this effort is not clear given that this occurred during the same period of time that several other strategies to reduce S/R use were implemented (e.g. Donat 2003 and 2006). This report on the association between staff: client ratios and S/R use was not included in Table I as it was not considered to be a targeted reduction strategy, rather an association observed within the context of a larger implementation strategy.

LeBel & Goldstein (2005) reported on the economic costs of restraint and found that these were reduced significantly as restraint use was reduced. They further reported that a statewide initiative to reduce S/R use (reported on in LeBel et al. 2004) not only produced the intended effect on one particular 30-bed adolescent unit, but also resulted in reductions in staff turnover, sick time, injuries to staff, and missed workdays. They also reported that property damage on the unit increased by 13% as restraint use was reduced, but remarked "[a]s staff developed greater skill in using alternatives to restraint, they also developed tolerance for minor environmental damage" (p 1113). Due to the fact that this report was focused on the economic impact of restraint use and aggregate

results of the statewide implementation project were included in LeBel et al. 2004, the 2005 LeBel & Goldstein article was not included in the review of published reduction strategies (and hence is not found in Table I).

Sailas and Wahlbeck conducted a review of S/R reduction strategies in 2005. They concluded, "[u]ncontrolled studies report success of programmes that reduce the use of coercion, but the overall evidence base for preventive programmes is weak" (p 558). This conclusion is consistent with the findings of the present review.

Alternatives to S/R Use

Several studies described taking an individualized approach to treatment planning in an attempt to reduce S/R use (e.g. Sullivan et al., 2005; Donat 2003; Jonikas et al. 2004). Some authors refer to "trauma-informed care", an approach that is sensitive to the history of trauma many consumers of mental health care may have experienced (e.g. Champagne & Stromberg, 2004; Huckshorn, 2004). Champagne & Stromberg (2004) suggest that one set of alternatives to S/R use are referred to as "sensory approaches". These approaches are said to facilitate 'self-organization' and Champagne & Stromberg (2004) remark "[k]ey to the process of self-organization is the way in which individuals manage sensory stimulation from the senses" (p 37). Examples of this type of approach include use of aromatherapy, putting weight on various areas of the body (through use of weighted blankets or vests), skin brushing and joint compression, or sensory rooms (also called Snoezelen or sensory modulation rooms) (Champagne & Stromberg, 2004). According to Champagne & Stromberg (2004) sensory rooms can be used for individuals or groups and offer a variety of sensorimotor activities "with calming and alerting options for each of the sensory areas" (p 41). Few published research studies exist on the effects of any of these sensory approaches, though the use of sensory rooms in particular is reportedly gaining popularity (Champagne & Stromberg, 2004). Champagne & Stromberg reported on a study where the availability of a sensory room over the course of the year resulted in positive client satisfaction ratings. During this period of time, S/R use was reduced on the unit by 54%, however, this was not a controlled study and the nature of the association between availability of the sensory room and the drop in S/R use was unclear.

Fowler (2006) reported that use of aromatherapy was perceived by adolescent clients to have a calming effect during times of crisis, however use of seclusion, restraints and PRN were not significantly reduced during their three-month study period.

How Changes in S/R Use Were Described

Five of the studies reviewed described rate of S/R use as total number of episodes (or hours of S/R use) per 1000 client days, a method that allows a comparison of rates over time given changing census numbers (Fisher 2003; Jonikas et al. 2004; McCue et al. 2004; Smith et al. 2005; Sullivan et al. 2005) One study reported rates per 100 hospital days (Needham et al. 2004). The remaining studies provided data on S/R use as

absolute numbers of episodes (or duration in hours) and percent change with the exception of Forster et al. (1999) who described the rate of restraint as number of annual admissions over number of episodes.

Comparison Table

Table I summarizes the critical elements of the 20 published S/R reduction strategies reviewed for this report. The geographic location of the study, information on the population and setting, the general type of S/R reduction program implemented, a brief summary of the key components of the program, the types of activities the strategy was aimed at reducing, and the key results and findings are provided. Please refer to the complete reference for further information about each strategy.

Reported Outcomes

Reduction in S/R Episodes or Duration of Events*:* Most studies reported success in terms of reducing the use of seclusion and/or restraint after implementation of their reduction strategies. **Please refer to Table I for specific rates of reduction and other important outcomes for each individual study**.

Some studies described overall reductions in S/R use, but with observed differences between units or wards. For example, Needham et al. (2004) described a "ward effect" where implementation of the same strategy on two similar units resulted in differing outcomes where one unit had significantly lower levels of S/R and the other had no significant change. Sullivan et al. 2005 described similar findings.

Bowers, Brennan, Flood, Lipang & Oladapo (2006) described a program that was intended to reduce incidents of violence or rule-breaking ("conflict behaviours") in addition to PRN use, special observations, physical restraint, seclusion and other behaviors (collectively called "containment strategies"). While the strategy did result reductions in conflict behaviors, no reduction in containment was observed, representing the only report reviewed that published unsuccessful results (at least from the perspective of S/R reduction strategies).

Reduction in PRN/Chemical Restraint: Sullivan et al. 2005 indicated that while their reduction strategy focused on seclusion and non-chemical forms of restraint, use of PRNs did not significantly increase over the study period. Jonikas et al. (2004) reported that there were no significant changes to medication prescription practices during the course of their study. Schreiner et al. (2004) similarly reported no change in PRN use during the period of time that other S/R use was being reduced. Although not specifically targeted in their S/R reduction efforts, LeBel et al. (2004) observed reductions in the use of "involuntary medication" as other forms of S/R were reduced.

Reduction in Injuries*:* Some studies also included data beyond changes in rates or duration of S/R use. Several studies reported reductions in staff and/or client injuries

along with reductions in S/R use. For instance, Greene et al. 2006 found that staff and client injuries requiring medical attention decreased from an average of 10.8 incidents per month to an average of 3.3 incidents per month after implementation of the Collaborative Problem Solving approach (see Table I and Greene et al. 2006 for further details). LeBel et al. (2004) also found a reduction in staff and client injuries (by 27% and 12% respectively) when rates of S/R were reduced. Forster et al. (1999) also found a reduction in staff injuries with reductions in S/R use. McCue et al. (2004) reported no change in client assaults on other clients, suicide attempts or gestures and self-inflicted injuries. Importantly however, McCue et al. (2004) did report a significant increase in client assaults on staff post-implementation. The authors suggest that most of these assaults took place in the six months after implementation and when this time period is removed the results are no longer significant. However, Khadivi et al. (2004) also reported significant increases in assaults on staff and in assaults on other clients after implementing their S/R reduction strategy. These observed increases in client assaults occurred over the course of the post-implementation follow-up and not during one particular period of time, as in the McCue et al. (2004) report. Khadivi et al. (2004) speculated that their results may have been observed because they did not provide staff with additional specific training in non-violent aggression management, however it is of note that such training was provided in the McCue et al. study where similar findings were observed. Bowers, Nijman, Allan, Simpson, Warren & Turner (2006) also report an increase in aggressive incidents while staff were away at a five-day training course for aggression management and in the four weeks after staff returned from the one day annual update course. Clearly, continued research on S/R reduction strategies and client aggression is required.

Other Variables of Interest: Pollard et al. (2007) reported that average length of stay, census numbers, staff numbers, rates of discharge and client acuity levels did not change as rates of S/R changed during the course of implementing their strategies. Monitoring other important variables like these will assist in providing a more complete understanding of the impact of S/R reduction strategies in the future.

Summary

Review of 20 recently published reports on seclusion and/or restraint reduction strategies as well as descriptive literature in the area suggests the following:

1. The definitions of *seclusion* and *restraint* should be standardized to allow for clearer understanding of the behaviors being targeted for reduction and to facilitate more accurate comparisons between locations.

2. Studies reporting success in terms of reducing S/R rates tended to implement multi-level strategies that included several of the following components:
    - i. Involvement of leadership
    - ii. Staff training
    - iii. Identification of Risk and/or Development of Management Plans

iv. Formal and Informal Engagement of Staff and Clients
v. Creation of Committees
vi. Establishment of Review/Debriefing Processes
vii. Communication of Utilization Rates

3. These observed strategic categories fit relatively well with descriptive literature suggesting that there are six “core strategies” for S/R reduction programs: leadership toward organizational change, using data to inform practice, workforce development, use of S/R reduction tools, consumer roles in inpatient settings, and debriefing techniques (Huckshorn, 2004; Huckshorn 2006).

4. More research is required on the quality and content of aggression management training programs for staff, as well as on the impact such training programs may or may not have on S/R reduction strategies.

5. More research on the association between S/R reduction strategies and rates of client assaults is required.

6. Methods for capturing and reporting data on S/R utilization rates should be standardized to allow for more clear comparisons between locations.

7. The possibility of “ward effects” exists. The unique culture and environment of each setting should be considered in the development of an S/R reduction strategy.

8. Controlled trials are required to better understand which components of existing S/R strategies are most related to the outcome of reduced S/R use.

Reference	Location	Population/ Setting	Program Type	Key Components	Key Results
Pollard, Yanasak, Rogers & Tapp (2007)	USA – Washington	• VA hospital • Secure, acute mental health unit	Implementation of standards by accrediting body (JCAHO) through a series of formal and informal interventions implemented by facility/unit leaders	JCAHO standards for utilization of S/R released in 2000 (focusing on organizational leadership in committing to restraint free environment). In order to meet the JCAHO standards facility leadership implemented: • Discussions re: alternatives to S/R • Exploring staff concerns through informal discussion and formal focus groups • Positive feedback for use of alternatives • Videotapes (focusing on risks of restraint, alternatives, and leadership commitment on reduction.) • Update of policies and procedures for S/R use • Clinical leaders to review all restraint episodes • Committee formed to identify areas for improvement in client care and safety. • Data discussed at monthly meeting of clinical executives	Target: Seclusion ☒ Physical Restraint ☒ Mechanical Restraint ☒ Chemical Restraint/PRN ☐ Study period: 46 months (October 1998 to July 2002). JCAHO standards implemented at month 28. Results: Average S/R hours were significantly reduced from an average of 182.48 hours pre-implementation to an average of 55.64 hours post-implementation. • LOS, unit census, number of staff, number of discharges, client acuity ratings were not significantly different across the study period, suggesting that these were not factors influencing the reduction in S/R hours.
Prescott, Madden, Dennis & Wingate (2007)	USA – Maine	• Adult, adolescent & child acute psychiatric care hospital	Rapid Response Teams (RRT)	• Used organizational strategy called a "rapid cycle approach" (whereby a change is implemented and evaluated over a matter of weeks) to evaluate efficacy of RRT • RRT (medical director, clinical supervisor and nurse manager of unit where	Target: Seclusion ☐ Physical Restraint ☒ Mechanical Restraint ☒ Chemical Restraint/PRN ☐ *Mechanical restraints were target of this intervention, though rate of physical restraints also decreased Study period: 6 weeks pre-change and 6 week

Reference	Location	Population/ Setting	Program Type	Key Components	Key Results
				restraint episode occurred) meets with "receiving team" (attending physician, charge nurse and master's level clinician working with client) within 24 hours of a restraint event to discuss interventions to reduce likelihood of future restraint episode. • Recommended treatment changes are documented on specific form. • Coverage for RRT required 7 days/week.	implementation phase Results: • Total number of mechanical restraint episodes decreased by 36.4% in implementation phase from 77 to 49 episodes. • Total number of clients restrained decreased by 12% in implementation phase from 25 to 21. • Despite the fact that physical restraint use was not target of this study (or subject to review by RRT), the number of physical restraint episodes decreased 44.3% during implementation phase from 79 to 44 episodes. Limitation: • Uncontrolled: There was a 6% reduction in census during that which may have affected results.
Donat (2006)	USA - Virginia	• Public psychiatric hospital	Clinical/administrative review procedure focused on reducing PRN use	• All instances of PRN entered into database and reviewed on a weekly basis by Psychology Director. • Any cases of 3 or more uses of PRN in a week are flagged for follow-up. • The treatment team is notified and is required to conduct a self review (with detailed guidelines to structure review) and produce report for Psychology	Target: Seclusion ☐ Physical Restraint ☐ Mechanical Restraint ☐ Chemical Restraint/PRN ☒ Study Period: (unclear, post-2003) Results: average number of individuals exceeding weekly criterion reduced by 40% (statistically significant change from 20.8 people per week in the 20 weeks prior to implementation to 12.4 people in the 52 weeks post-implementation).

Reference	Location	Population/ Setting	Program Type	Key Components	Key Results
				Director. If requested, formal review by Behavior Management Committee is held (to provide assistance to team on altering behavioral treatment goals). • If an individual exceeds weekly criterion 3 weeks in a row, review by BMC is required.	
Damsa, Ikelheimer, Adam, Maris, Andreoli, Lazignac & Allen (2006)	Switzerland	• psychiatric emergency department	Observation of agitated clients to reduce use of involuntary IM injections	• Authors noted a reduction in the use of chemical restraint during course of an unrelated study that involved observing clients with psychomotor agitation before and after IM injection. • Observations were recorded using standardized tools. • No interventions in addition to recorded observations were involved.	Target: Seclusion ☐ Physical Restraint ☐ Mechanical Restraint ☐ Chemical Restraint/PRN ☒ Study period: 3 months baseline, then 3 months of observational study, followed by 3 months post-observational study. Results: number of involuntary IM injections (chemical restraints) were reduced by 27% during the 3 month observational study period. Rates returned to baseline levels during the 3 months after observational study ended.
Greene, Ablon & Martin (2006)	USA – Massachusetts	• Child and Adolescent • 13-bed locked unit, average age 9 years) • Average LOS 14 days	Collaborative Problem Solving (CPS)	• Cognitive-behavioural • Requires staff training, changes to occur in staff/client interactions • Views aggression as result of poor cognitive skills (flexibility, frustration tolerance, problem solving). • 3 Treatment Goals: 1. help caregivers identify factors contributing to aggression 2. make caregivers aware of the options for handling	Target: Seclusion ☒ Physical Restraint ☒ Mechanical Restraint ☒ Chemical Restraint/PRN ☒ Results: • Statistically significant decrease in R/S after implementation (but only reported restraint results) • In 9 months pre-staff training in CPS there were 281 episodes of restraint, in 15 months post-training there was 1 episode. • Staff and client injuries were also reduced from an average of 10.8 injuries

Reference	Location	Population/ Setting	Program Type	Key Components	Key Results
				problems (with CPS being one of the options) 3. help caregivers and children learn to solve problems collaboratively	per month pre-training to an average of 3.3 injuries per month post-training.
Bowers, Brennan, Flood, Lipang & Oladapo (2006)	United Kingdom	• Two 18-bed generic acute psychiatric admission wards	Model developed to identify route to low-conflict, high-therapy psychiatric wards.	Definitions: Conflict = violence to self or others, rule breaking, absconding, substance use or medication refusal Containment strategies = PRN, special observation, physical restraint, psychiatric intensive care, seclusion, locking ward door and time out • Model developed by authors suggests low-conflict environments will be achieved through improved staff attitudes and working practices, rather than high levels of containment. • Intervention involved assigning 2 City Nurses to work with unit staff 3 days/week for one year to implement model. • Feedback on outcomes periodically provided to units during intervention year	Target: Seclusion ☒ Physical Restraint ☒ Mechanical Restraint ☐ Chemical Restraint/PRN ☒ Study period: 3 months baseline, 1 year intervention Results: While rates of conflict (specifically aggression, absconding and self-harm) were significantly reduced, rates of containment were not.
Sullivan, Bezmen, Barron, Rivera, Curley-Casey & Marino (2005)	USA – New York	• 5 units, 117 adult, co-ed beds Diagnoses: schizophrenia 36%, Major Depressive Disorder (15%),	Violence safety program Overarching goal of reducing S/R use while maintaining staff and client safety and a therapeutic environment.	• Feb. 2001 announcement of commitment to reduce S/R use to as close to zero as possible • Nurses and clients work together to complete violence assessment tool involving:	Target: Seclusion ☒ Physical Restraint ☐ Mechanical Restraint ☒ Chemical Restraint/PRN ☒ Study period: 1998 – 2003 (program implementation in 2001) Results:

Reference	Location	Population/ Setting	Program Type	Key Components	Key Results
		Bipolar Disorder (15%)	New leadership expectations: safety will be increased by reducing use of S/R, clients to be supported by staff in choosing their own interventions for managing aggression, creative support offered to clients instead of control, cultural differences in anger expression to be examined, client empowerment and collaboration emphasized.	1. documenting historical precipitants to violence 2. identifying specific behaviours client expresses when aggressive 3. creation of a realistic list of intervention options for clients should these behaviours occur (including physical, social, environmental and spiritual options) • Training courses for staff including 8 hour Crisis Intervention course, Alternatives to Restraint and Seclusion, and Cultural Diversity	• Significant reduction in number of clients confined [defined as restraint and seclusion] per 1000 patient days from 5.8 patients in 1998 to 1.6 in 2003. • Significant reduction in confinement events per 1000 patient days from 10.9 events in 1998 to 3.2 in 2003. • Significant reduction in total confinement hours per 1000 patient days from 36.6 hours in 1998 to 6.6 hours in 2003. • Use of intramuscular injections was tracked on only one unit between 2001 and 2003. Use of PRN IM medications did not change significantly between 2001 and 2003.
Smith, Davis, Bixler, Lin, Altenor, Altenor, Hardentstine & Kopchick (2005)	USA - Pennsylvania	• 9 state psychiatric hospitals • Data from clients over 18 years of age civilly committed over an 11 year period (1990–2000)	Variety of changes and strategies	*Leadership*: restraint reduction/prevention movement in existence even before 1990. Individual and group leadership from direct care staff and community advocates thought to have significantly influenced culture of S/R use within hospitals during study period. Particular leadership from Charles Curie, deputy secretary of the State Office of Mental Health and Substance Abuse Services. *Advocacy Efforts:* organized efforts challenging policies led by parents or former clients. *State Policy Change:* there were three changes to state policy on the use of S/R between 1990-2000, each requiring more	Target: Seclusion ☒ Physical Restraint ☐ Mechanical Restraint ☒ Chemical Restraint/PRN ☒ Data Tracked: 1990-2000 Results: • Seclusion rate decreased from a high of 7.2 episodes per 1000 patient days (1991) to 0.3 episodes per 1000 patient days in 2000. • Average number of hours in seclusion decreased from a high of 11.6 hours (1991) to 1.3 hours (2000) • Mechanical restraint rate decreased from a high of 6.4 episodes per 1000 patient days (1991) to 1.2 episodes per 1000 patient days (2000). • Average number of hours in restraint decreased from a high of 12.1 hours (1992) to 1.9 hours (2000).

Reference	Location	Population/ Setting	Program Type	Key Components	Key Results
				oversight, training, or tighter requirements for the use of S/R. Use of medications for controlling behaviour was prohibited by state policy. *Psychiatric Emergency Response Teams (PERTs):* using teams of 7 staff (volunteer, on-call) to manage a crisis using conflict resolution, mediation, therapeutic communication and violence prevention skills. Report immediately to calling of a code. Staff debrief immediately after crisis, then there is a separate debriefing with clients later. “PERTs are credited for eliminating the use of seclusion and dramatically decreasing the use of restraint in Allentown [State Hospital]”(p 1119). *Unit Size/Staff:Client Ratios:* Average unit census decreased (from 36 to 32) between 1990 and 2000. Concurrently, numbers of staff (nurses and psychiatric aides) were increased. *Incident Management System:* state-wide implementation of data management system that allowed staff at a unit level to request data on any of the 35 performance indicators hospitals were required to report on (including S/R and PRN/STAT utilization). Data are summarized monthly and communicated within and without	• Staff injuries tracked from 1998 to 2000. Rate of injuries caused by client assault resulting in lost work time was not significantly changed during that time. • In one hospital (Allentown State Hospital) data on S/R use after implementation of PERTs was available from 1998 to 2000. During this period, 70% of incidents PERT teams responded to were managed without S/R use. • At publication (2005), five of the nine hospitals involved had eliminated the use of seclusion.

Reference	Location	Population/ Setting	Program Type	Key Components	Key Results
				the hospital. *Second generation antipsychotics:* prevalence and availability increased during study period. *Increase in quality and quantity of treatment:* described as a change in hospital culture. Greater emphasis on functional programming, providing therapy to all clients.	
Needham, Abderhalden, Meer, Dassen, Haug, Halfens & Fischer (2004)	Switzerland	• Adult • Two 12-bed acute psychiatric admission wards (1 urban, 1 rural) • 721 admissions during 10 month study period (576 clients, 41% female, average age 38 years, 62% involuntary, resulted in 7732 hospital days) • 38% diagnosed with psychotic disorders, 16% mood disorders	Implementation of a systematic risk assessment procedure and standard aggression management training course	Risk Assessment: used Broset Violence Checklist (BVC) at admission and twice a day for next 3 days. Nurses rate client behaviours and obtain overall rating out of 12. Aggression Management Course: by N.E. Oud (unpublished). Nurses trained on 35 lessons over 5 days of training.	Target: Seclusion☐ Physical Restraint ☐ Mechanical Restraint ☐ Chemical Restraint/PRN ☐ **Unclear – refers only to "coercive measures" but does not define the term Study period: 10 months. (baseline 3 months, risk assessment procedure implemented at month 3, aggression management training implemented at month 7.) Results: coercive measures decreased at each study period from incidence rates of 4 (per 100 hospitalization days) at baseline, to 2.9 after implementation of systematic risk assessment procedure, to 2.3 after the staff training was implemented. Overall reduction in coercive measures was statistically significant. • During the study period, rates of aggressive incidents and severity of aggressive incidents were unchanged (per 100 hospital days) • Differences were noted between the 2 wards studied, where one ward had a reduction in aggressive incidents, but no reduction in rates of coercive methods used, while the other ward had the opposite

Reference	Location	Population/ Setting	Program Type	Key Components	Key Results
					results. • Further research required to understand ward effects.
McCue, Urcuyo, Lilu, Tobias & Chambers (2004)	USA – New York	• 135-bed psychiatric inpatient service in large, urban public hospital • 70% involuntary admissions, • 6 co-ed units • over 50% diagnosed with schizophrenia, schizoaffective disorder or depressive disorders	Implementation of 6 different initiatives devised by multidisciplinary committee with goal of reducing use of restraint.	1. Added identification of clients who may be at risk for use of restraints to admission evaluation. 2. Stress/Anger Management for clients (offered 4 hour-long sessions per week) 3. Staff received education/training on crisis intervention through videotaped series from Crisis Prevention Institute Inc. including *The Art of Setting Limits* and *Nonviolent Crisis Intervention*. 4. Developed Crisis Response Team (3 nursing staff, 2 security staff available 24/7on a rotating basis) 5. Daily review of all episodes of restraint use. Discuss events leading to episode, what could have been done differently and plan to avoid use in future for that client at departmental team meeting. 6. Monthly Incentives for staff including plaque to be displayed on unit with lowest restraint rate and 2 movie passes to be raffled off to staff on that unit.	Target: Seclusion☐ Physical Restraint ☒ Mechanical Restraint ☒ Chemical Restraint/PRN ☐ Study period: pre-implementation (April 1996-March 1999), implementation began April 1999-September 1999, then post-implementation April 1999 – March 2001 Results: • Restraint use significantly reduced from pre-implementation rate of 7.99 episodes per 1000 patient days to post-implementation rate of 3.7episodes per 1000 patient days. • There was no significant change in client to client assaults during this time. • There was a significant change in client to staff assaults during this time (from average of .24 per 1000 patient days to .48). The greatest peak was in the six months post-implementation. When this time period is removed from analysis, no longer a significant increase. Unclear why this occurred. • There was no significant change to rates of suicide attempts, and non-significant decrease in self-inflicted injuries during the study period. • These 6 interventions were implemented with no additional staff and minimal additional cost to the program.
D'Orio, Purselle, Stevens &	USA – Atlanta, GA	• Psychiat	Implementation of variety of interventions	First issue leading to	Target: Seclusion☒ Physical Restraint ☒

Reference	Location	Population/ Setting	Program Type	Key Components	Key Results
Garlow (2004)		ric emergency service with an average of 1327 client contacts per month. • clients sent to Secure Observation Unit if agitated, suicidal, homicidal or disorganized. • SOU diagnoses include substance use disorders (35%) and psychotic disorders (25%).	devised by multidisciplinary "safety committee" with goal of reducing S/R episodes and increasing compliance with existing hospital standards for S/R use.	increased S/R use identified by safety committee was "ineffectual management of problematic behaviours and inadequate monitoring" (p 582) To address these issues: a) introduced "response team" for behavioural emergencies b) all staff were re-trained in management of aggression emphasizing verbal de-escalation techniques c) initiated use of an agitation rating scale. Clients identified on scale as being higher risk were "intensively managed with de-escalation methods, timeouts, and medication for specific target symptoms" (p 582). d) Video surveillance of unit was improved (a 5th camera was purchased)	Mechanical Restraint ☒ Chemical Restraint/PRN ☐ Study period: (January 2000 – June 2001) pre-implementation period of 9 months and post-implementation period of 9 months. Results: • Average number of episodes of S/R per month was significantly reduced from 65.2 at pre-implementation to 38.1 post-implementation (39% reduction). • An increase in compliance with pre-existing hospital performance improvement standards relating to S/R was observed at post-implementation from 96% compliance to 100% compliance.
Jonikas, Cook, Rosen, Laris & Kim (2004)	USA – Chicago, IL	• 3 units youth, general adult and adults in clinical trials	Restraint Reduction Program including 2 components: Advance crisis management and Non-violent crisis intervention	*Advance Crisis Management*: Development of a unique crisis management plan for each client. Staff interview client within 24 hours of admission to discuss restraint history, triggers and develop plan for use of de-escalation techniques. Client retains copy of plan. Plans are reviewed at weekly team meetings. Training included all staff being required to study a training manual and video (developed by Jonikas et. al	Target: Seclusion☐ Physical Restraint ☐ Mechanical Restraint ☒ Chemical Restraint/PRN ☐ Study Period: July 2000 – December 2002 (implementation July and October 2001) Results: • The adolescent unit had a 48% reduction in its restraint rate (defined as total number of patient hours in restraints per quarter, divided by number of patient

Reference	Location	Population/ Setting	Program Type	Key Components	Key Results
				2003). *Non-Violent Crisis Intervention:* one day training session for staff developed by Crisis Prevention Institute Inc. focusing on non-violent management of aggressive behaviour and increasing awareness of factors precipitating crises. When staff notice escalating behaviour, the client's unique plan goes into place. If client is managed without restraints, there is a debriefing with the client to discuss which elements of the plan worked best. If restraints are used, debriefing occurs afterwards to review and revise plan as needed.	days multiplied by 24 and then by 1000) in the first quarter after training and a 98% reduction 2 quarters after training. The restraint rate on this unit remained low for the remainder of the study period. • The general psychiatry unit had a 85% reduction in its restraint rate in the first quarter after training and a 99% reduction 2 quarters after training. The restraint rate on this unit also remained low for the remainder of the study period. • The clinical research unit had a 51% reduction in its restraint rate in the first quarter after training and a 98% reduction 2 quarters after training. The restraint rate remained at 0 during the remainder of the study period.
Khadivi, Patel, Atkinson & Levine (2004)	USA – New York	• 3 psychiatric units in an inner city hospital. Clients are often admitted involuntarily.	Variety of interventions intended to help hospital meet JCAHO standards on S/R use.	The intervention in this study was not described in a detailed fashion because the main purpose of the study was actually to look at the impact of a reduction in S/R use and client violence. The authors describe several initiatives that were undertaken in an effort to reduce S/R use focusing on early recognition and intervention including staff education, the addition of inpatient violence history on intake forms, continuous monitoring by nurses during an episode of S/R, post-event debriefing, review of all events by a senior nurse and doctor.	Target: Seclusion ☒ Physical Restraint ☐ Mechanical Restraint ☒ Chemical Restraint/PRN ☐ Study period: 2 years (one year prior to implementation and one year after implementation) Results: • There was a significant decrease in episodes of S/R from pre-implementation (310 episodes) to post-implementation (148 episodes) representing a 52% reduction in S/R use. • However, there was also a significant increase in the number of assaults on staff (from 21 pre-implementation to 83 post-implementation) and on other clients (from 67 pre-implementation to 85 post-

Reference	Location	Population/ Setting	Program Type	Key Components	Key Results
					implementation) • The authors note that this finding is in contrast with another study (Forster, Cavness & Phelps, 1999) that found a reduction in staff injuries at the same time as a reduction in S/R use. • The authors speculate that this may have resulted from the fact that the training provided to staff was not specifically focussed on non-violent management of aggression.
Schreiner, Crafton & Sevin (2004)	USA – Louisiana	• Adolescents • 23 bed co-ed unit for individuals with co-morbid developmental delay and DSM Axis 1 disorders.	Multi-Stage Assessment and Intervention program to reduce mechanical restraint and locked seclusion.	*Assessment Phase*: developed a multidisciplinary committee that collected and reviewed baseline data on S/R use, conducted interviews with clients and staff around S/R use and discussed observational data collected by committee members called to crisis events. (this phase lasted 3 months) *Intervention Phase*: began with a formal announcement to all staff that S/R reduction was going to be a unit priority. Team meetings were held to discuss the JCAHO standards and monthly data on S/R utilization was provided to "engage them [staff] as project partners" (p 456). 3 staff interventions were implemented: a) re-education (in-services, addressing S/R use myths that came to light during interviews in assessment phase, reviewing S/R reduction strategies already in place, providing special training for key	Target: Seclusion ☒ Physical Restraint ☐ Mechanical Restraint ☒ Chemical Restraint/PRN ☐ Study period: June 2000 – March 2001 (assessment phase 3 months, intervention phase 7 months) Results: • Seclusion events were reduced by 35% (from a monthly average of 18.67 events during the assessment phase to 12.14 events during the intervention phase) • Restraint events were reduced by 43% (from a monthly average of 37.67 episodes during the assessment phase to 21.43 episodes during the intervention phase) • There was no change in PRN utilization during the study period.

Reference	Location	Population/ Setting	Program Type	Key Components	Key Results
				decision-makers b) modeling desired behaviour c) staff feedback 3 client interventions were implemented: a) goal setting (reviewing and discussing unit goal of S/R reduction with clients) b) group instruction/ contingencies (reviewing de-escalation and anger management techniques, prize (e.g. pizza party) for clients on unit that reduced S/R use by specific amount during a specified time period c) focus on specific outlier clients (in R/S 3 or more times in 30 days – prompts further interventions)	
LeBel, Stromberg, Duckworth, Kerzner, Goldstein, Weeks, Harper, LaFlair & Sudders (2004)	USA – Massachusetts	Child & Adolescent psychiatric units across the state (8 child units, 13 adolescent units, and 4 mixed units)	Strength-Based Care	The State Mental Health Authority (SMHA) implemented several state-wide interventions in an effort to achieve system change. Mandate to reduce and ultimately eliminate S/R use officially announced in September 2001. SMHA provided data analysis, quality improvement strategies, regulatory oversight and technical assistance (including monitoring visits, a safety tool to help create individualized prevention plans, roundtable discussions and conferences/	Target: Seclusion ☒ Physical Restraint ☐ Mechanical Restraint ☒ Chemical Restraint/PRN ☐ Study period: (November 1999 – August 2002) 1 year pre-implementation , 22 month intervention period Results: • Reductions were documented in S/R use post-implementation in 78.2% of units • Total number of episodes of S/R use per 1000 patient days were reduced by 72.9% of child units, 59% of mixed child/adolescent units, and 47.4% of adolescent units.

Reference	Location	Population/ Setting	Program Type	Key Components	Key Results
				Grand Rounds). Individual units selected their own specific strategies/models to help guide their efforts in reaching S/R reduction goals (e.g. Collaborative Problem Solving Model, Grotberg's resiliency model). The specific strategies are not explained in detail in this report.	• Number of hours per episode decreased on child and adolescent units by 22% and 55.5% respectively. Number of hours per episode actually increased (by 23.1%) on the mixed units, but the authors report that this was due to one outlier unit. • Staff injuries were reduced by 27% and client injuries were reduced by 12% as S/R was reduced • Use of "involuntary medication" was reduced by 51.5% on child units, 38.4% on adolescent units, and 66% on mixed units during the study period.
Champagne & Stromberg (2004)	USA	• 24-bed psychiatric unit within a general hospital	Sensory-Based Alternatives to S/R Use	• Provided clients with opportunities to have sessions in a sensory modulation room during times of distress • The room included a selection of seats included beanbag chairs and rockers, pictures of nature scenes, bubble lamp, music, health-oriented books and magazines and "other items that addressed each of the sensory areas" (p 42).	Target: Seclusion☒ Physical Restraint ☐ Mechanical Restraint ☒ Chemical Restraint/PRN ☐ • The primary goal of this quality improvement project was to rate client perceptions about the effectiveness of the room in lowering levels of distress. Results of a qualitative questionnaire suggested that 89% of the sessions in the sensory room resulted in a positive effect, 10% were rated as having no effect, and 1% were rated as having a negative effect. • Rates of S/R use were reduced during the one-year study period by 54% (episodes per 1000 patient days). Actual S/R rates pre and post-implementation were not provided.
Donat (2003)	USA – Virginia	• Public psychiatric	Organizational change program with ultimate goal of reducing	• Creation of Behavior Management Committee (BMC) (with	Target: Seclusion☒ Physical Restraint ☒ Mechanical Restraint ☒

Reference	Location	Population/ Setting	Program Type	Key Components	Key Results
		hospital • Diagnoses = 70% schizophrenia/ schizoaffective disorder	seclusion and restraint. Used a variety of strategies centred around clinical/administrative review processes.	expertise in behavior management strategies) • Monitoring of S/R use (recorded in database) by Risk Management Officer. Monitoring was originally monthly, then later as data management ability improved, monitoring occurred weekly. • Setting criteria for review: Initial criteria included six episodes of S/R or 72 total hours of S/R per month. Later lowered threshold for review several times, ultimately requiring review for any instances of two episodes or eight hours of S/R in a week. • Reports of individuals who met/exceeded criteria sent to client's psychiatrist, psychologist and the BMC. If continued to meet/ exceed criterion for longer than two weeks, BMC review required. • Review by BMC must be conducted within two weeks and involved assessment and improvement of the clients' behavioral	Chemical Restraint/PRN ☐ Study period: 5 years (1997 – 2002) Results: • Initial implementation of administrative review of S/R utilization and initial criteria/review process resulted in 62% reduction in monthly hours of S/R rates in the 6 months post-implementation (from an average of 18.8 hours per month to an average of 7.2 hours per month). • Changing threshold for review by treatment team, and changed criteria for review by BMC resulted in a 58% reduction of total hours of S/R use (from 1100 hours of S/R per month in the year prior to the change to 507 hours per month in the year after the change). • Multiple regression analysis suggested that implementation of administrative review (of the weekly S/R data) was the intervention that had the greatest impact in terms of reducing S/R use. • Donat 1998 & 2002b may also be reviewed for additional detailed information on the results of this reduction effort).

Reference	Location	Population/ Setting	Program Type	Key Components	Key Results
				treatment plan.	
Donovan, Siegel, Zera, Plant & Martin (2003)	USA – Connecticut	• 107-bed child and adolescent psychiatric hospital (5-18 years old)	"ABCD" Program (Autonomy, Belonging, Competence, Doing for others)	• Program was implemented in 1999 with the goal of promoting collaboration between all levels/disciplines of staff and stated that the ABCD elements represented the core values of the program. • Token-economy system was de-emphasized. Instead, verbal feedback to clients and forming positive relationships between staff and clients was emphasized (thought to promote autonomy). • Encouraged staff-client coaching, emphasis on client being part of unit environment and notion that aggression violated social norms (belonging). • Clients given developmentally appropriate tasks to promote feelings of competence. • Shared activities and responsibilities on the unit to promote importance of doing for others. • Used the BASIS-32 Plus Performance Measurement System and a hospital database to monitor S/R rates and compare the program data with data from other hospitals. • A model car dashboard was created and prominently displayed in a central staff area	Target: Seclusion ☒ Physical Restraint ☐ Mechanical Restraint ☒ Chemical Restraint/PRN ☐ • In the two years post-implementation, episodes of S/R use were reduced by 26% and duration of episodes were reduced by 38% (actual rates not provided.) • Prior to implementation of the ABCD program S/R rates were above JCAHO performance guidelines. After program implementation rates were within the JCAHO performance guideline targets.

Reference	Location	Population/ Setting	Program Type	Key Components	Key Results
				showing frequency and duration of S/R use and the unit goals for each.	
Fisher (2003)	USA – New York	• Adult • 19 wards, forensic psychiatric population • 50% with LOS less than 30 days, 15% with LOS over 1 year	Variety of strategies involved in formal S/R reduction program including development of workgroup, staff training, interventions focusing on increasing "interpersonal respect", post-episode review, monthly data monitoring/feedback, focused pharmacological interventions, DBT	• Initiated program in 1999 Hospital administration publicly announced support for effort and support was requested from all levels of staff at hospital meetings, etc. Performance Improvement Workgroup developed to focus on S/R reduction efforts. Hospital information management services directed to assist workgroup. • Conducted survey of staff and clients to assess culture re: S/R use and current practices. • New York State Office of Mental Health (NYSOMH) implemented requirement for standardized training for all staff across the state – Preventing and Managing Crisis Situations (developed by NYSOMH). Emphasized staff awareness of situations leading to violent behaviour and non-violent de-escalation techniques) • 3 initiatives focussing on increasing respect between clients and staff 1. prominent consumer and activist gave	Target: Seclusion ☒ Physical Restraint ☐ Mechanical Restraint ☒ Chemical Restraint/PRN ☐ Study Period: 1999 to 2001 Results: • 67% reduction in S/R episodes (measured in physician orders for either seclusion or restraint per 1000 patient days) between 1999 and 2001. • Hours per episode was also reduced during the study period (92%). In 1999 maximum duration of physician's restraint or seclusion order was reduced from 4 hours to 2 hours. In 2000, maximum duration was reduced again to 1 hour.

Reference	Location	Population/ Setting	Program Type	Key Components	Key Results
				lecture for all staff 2. staff training session on respect 3. formation of hospital policy explicitly indicating respectful behaviour was performance requirement for all positions. • Implementation of 2 post-S/R episode debriefing sessions. The first is immediate, the second a short time later and involves client. • Data on rates of S/R provided to staff on a monthly basis along with monthly targets and goals. • Individuals with 3 or more episodes in a month identified and further review provided. • "Aggressive use of clozapine" (p 11) and commitment to continue trying new pharmacological therapies • use of dialectical behavior therapy principles to reduce behaviours believed to precipitate S/R use.	
Forster, Cavness & Phelps (1999)	USA – California	• Adult • 83-bed acute care hospital with emergency service and 4 locked units	Variety of interventions including development of workgroup, staff training, weekly review of data, publicizing data throughout hospital	• Created multidisciplinary Management of Assaultive Behavior workgroup (frontline staff and administration) • Group created a 1 day training course mandatory for	Target: Seclusion☒ Physical Restraint ☐ Mechanical Restraint ☒ Chemical Restraint/PRN ☐ Study period: 2 years (12 months pre-implementation, implementation in December

Reference	Location	Population/ Setting	Program Type	Key Components	Key Results
		• Average LOS 9-16 days.		all staff with client contact. Course included teaching awareness of precipitants to violence, alternatives to S/R, and increasing "safe staff reactions to violence" • Course included all staff being placed in 5 point restraints, self-defense, optimal containment techniques, discussion of inappropriate use of S/R, role-playing verbal techniques. • Weekly team meetings to include some discussion of S/R issues • Displayed and publicized rates of S/R use throughout hospital	1995, 12 months post-implementation) Results: • Annual rate of restraint (# annual admissions/#episodes) reduced by 13.8% post-implementation (from 2379 episodes in 2660 admissions to 2380 episodes in 3010 admissions) • Average duration of seclusion or seclusion plus restraints per episode was reduced by 54.6% post-implementation (from 13.9 hours per episode to 6.3 hours per episode) • Staff injuries were reduced by 18.8% post-implementation (from 48 incidents to 38 incidents)

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Appendix 3- Questions for Pennsylvania re Restraint Reduction Program

1. What measures have you used in determining the effectiveness of your program?
2. How are injury rates related to client aggression pre and post program implementation
3. What supports are needed in implementing the program? Challenges? Things that can be done differently?
4. Do you have a falls prevention program? Tools?
5. What is your existing restraint usage? Were there reductions/increase in chemical/mechanical/seclusion? How does it vary among hospitals and among service areas? Forensic program/ emergency?
6. Emergency Restraint Policy/Procedure – monitoring/documentation
7. Has the program impacted on the use of chemical restraint? PRN medication usage?
8. When and how did you introduce the vision of 'no restraint' to staff/others? Did you use words such as "treatment failure" What were the initial responses/reactions of risk management, legal department, physicians, nurses and others. How did you address concerns?
9. How did you build the Psychiatric Emergency Response Team? Who is on the team/how does the team function? What is done on third shift when there is no team.
10. Do you have in-patient units for individuals dually diagnosed with developmental disability and psychiatric disorder? How do you prevent and manage behaviours in this population. How do you support their involvement in activities? Do you use restraints or know of other facilities that use restraints in a therapeutic manner – used to help clients engage in activities as opposed to being isolated?
11. What system or process have you used in psychiatric emergency departments to prevent restraint use – particularly in circumstance where the police have escorted a handcuffed person who is already agitated? (There is no emerg. So ask about what is done in the general hospital ERs when clients present)
12. What education has your staff received? How much? How often? Content? Does the education/training vary depending on staff role and area of work? Has the program been evaluated?
13. May we review you policies/tools/ "psychiatric advance directive"?
14. What was the nature and extent of client participation in the Restraint Reduction Program?