Implementation of the Six Core Strategies for Restraint Minimization in a Specialized Mental Health Organization

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ABSTRACT
Implementation of the Six Core Strategies to Reduce the Use of Seclusion and Restraint (Six Core Strategies) at a recovery-oriented, tertiary level mental health care facility and the resultant changes in mechanical restraint and seclusion incidents are described. Strategies included increased executive participation; enhanced staff knowledge, skills, and attitudes; development of restraint orders and decision support in the electronic medical record to enable informed debriefing and tracking of events; and implementation of initiatives to include service users and their families in the plan of care. Strategies were implemented in a staged manner across 3 years. The total number of mechanical restraint and seclusion incidents decreased by 19.7% from 2011/12 to 2013/14. Concurrently, the average length of a mechanical restraint or seclusion incident decreased 38.9% over the 36-month evaluation period. Implementation of the Six Core Strategies for restraint minimization effectively decreased the number and length of mechanical restraint and seclusion incidents in a specialized mental health care facility. [Journal of Psychosocial Nursing and Mental Health Services, 54(10), 32-39.]
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estraint, defined as a procedure that limits movement, is commonly used in mental health care to respond to and manage behavioral emergencies (Foster, Bowers, Nijman, 2007; Kynoch, Wu, & Chang, 2011; Sillas & Fenton, 2000). There are many types of restraint, including mechanical, physical, and chemical restraint as well as placement in seclusion. Emerging evidence has shown that these methods have significant adverse effects on service users, staff, and organizations, including exacerbation of aggression, injury to staff and clients, increased costs, retraumatization, and impairment of service user–staff relationships (Ashcraft & Anthony, 2008; Bonner, Lowe, Rawcliffe, & Wellman, 2002; Fisher, 2003; Foster et al., 2007; Lebel & Goldstein, 2005; Moran et al., 2009; Sequeira & Halstead, 2004). In response to these negative outcomes, legislations and guidelines have been introduced with the aim of minimizing restraint practices (American Psychiatric Nurses Association, 2014; College of Nurses of Ontario, 2009; MIND for Better Mental Health, 2013; National Institute for Health and Clinical Excellence, 2005; National Offender Management Service, 2015; Registered Nurses’ Association of Ontario, 2012; Royal College of Nursing, 2008). The current article reviews restraint minimization strategies and describes implementation of the strategies in a tertiary level mental health care facility.

LITERATURE REVIEW

The Six Core Strategies to Reduce the Use of Seclusion and Restraint (Six Core Strategies) is an evidence-based framework for organizational planning to reduce the use of restraint in health care settings (Huckshorn, 2004). This framework was developed as a guideline to improve recovery-based practices by minimizing aggression and, therefore, restraint. To be applicable in a variety of settings, the framework includes six general strategies and suggestions of how organizations may implement them, with customization to fit context. The Six Core Strategies are: (a) leadership toward organizational change; (b) using data to inform practice; (c) workforce development; (d) use of preventive/proactive tools; (e) service user roles in the organization; and (f) debriefing techniques. Incorporation of the Six Core Strategies into practice has resulted in: decreased incidents and hours of all types of restraint; decreased staff injury, absenteeism, and turnover; decreased service user injury, length of stay, medication use, and incidents of rehospitalization; and increased staff satisfaction (LeBel et al., 2014).

In light of high incidence of restraint and seclusion events and a commitment to transition to recovery-oriented practices, the current authors’ organization declared restraint minimization as an organizational goal, included change in restraint practices in a corporate action plan, and allocated resources for evaluation of restraint practices. The current article describes the process and value of the implementation of the Six Core Strategies at a recovery-oriented, tertiary level mental health care facility. It was hypothesized that there would be a decrease in the number of mechanical restraint and seclusion incidents, a decrease in total hours of mechanical restraint and seclusion, and decreased average time per incident.

METHOD

The current retrospective review examines restraint practices at a 326-bed, tertiary level, specialized mental health care facility in Ontario, Canada. Research Ethics Board approval was not necessary as this study reports evaluation of a corporate initiative. The facility had previously adopted a recovery culture and provided intensive trauma informed care and recovery education for all staff in 2008, which decreased restraint incidents by approximately 90% the following year (unpublished data). The Six Core Strategies were implemented in 2011 to further reduce restraint use. The following section describes the key activities that were implemented for each strategy. Strategies were implemented in a staged manner according to organizational capacity (Table).

Strategies

Strategy 1: Leadership Toward Organizational Change. This strategy states that an organizational plan is needed for restraint minimization, which clearly outlines the roles of all management and staff (Huckshorn, 2004). The plan also includes “witnessing” of events by executive management as a core activity (Huckshorn, 2004). Implementation of the Six Core Strategies in the authors’ organization began in 2011 with the development and implementation of a new restraint minimization policy. An “Alternative to Seclusion and Restraint” guide was also developed and distributed to staff and made available on all units. Executive management witnessing was implemented in 2012 with Recovery Rounds, an initiative in which a recovery team (comprising representatives from senior management, professional practice, peer support, and clinical ethics) witnessed, reviewed, and discussed all seclusion and restraint incidents with the clinical teams. In 2012, restraint minimization was identified as a corporate action plan and resources were allocated to research and evaluation activities. In 2013, restraint minimization was defined as a part of a publicly reported corporate quality improvement plan.

Strategy 2: Using Data to Inform Practice. This strategy clearly states that data should be used to inform practices, without being used punitively (Huckshorn, 2004). In October 2011, following implementation, a data collection process leveraging the electronic medi-
A clinical record (EMR) was developed. An order set was built into the EMR to fully document each restraint incident. Reflex orders (i.e., orders to support clinical decision making, which are automatically triggered by specific inputs) were embedded to trigger assessment and hourly reassessment, clinical monitoring, and service user debriefing tools. Data reporting was continuously updated to align with new initiatives (e.g., Recovery Rounds in 2012). Daily, monthly, and quarterly restraint data were compiled and reviewed by the senior team, clinical leadership, service users, and staff, and were used to inform future practices and quality improvement initiatives. For example, the data were a catalyst to the development of Recovery Rounds, described above, and data pulled from service user debriefing tools were reviewed and sent to clinical leadership teams. During 2012 and 2013, data collection and reporting practices were continuously enhanced in response to clinician feedback to provide relevant information for review and debriefing.

**Strategy 3: Workforce Development.** This strategy involves ensuring that staff are supported to develop and practice necessary skills (Huckshorn, 2004). In 2011, staff on-boarding (i.e., hiring and training) practices were modified to align with the new restraint and seclusion policy by revising interview questions and incorporating aggression de-escalation techniques and prevention strategies in the clinical orientation for new hires. Trauma-informed care became a prominent theme throughout training and mandatory annual training updates were implemented for all staff. Documentation within the EMR was also revised to reinforce learning by prompting clinicians to explore key domains of recovery-oriented care during their assessments.

**Strategy 4: Use of Preventive/Proactive Tools.** This strategy stresses the importance of implementing and using tools to prevent behaviors that often result in restraint or seclusion administration (Huckshorn, 2004). In 2011, the organization introduced various tools, including the Dynamic Appraisal of Situational Aggression Risk Assessment (Ogloff & Daffern, 2006), Mental Status Assessment, and Behavioural Profile Tool (developed locally within the organization), which were embedded in the EMR and completed daily to enable early identification of changes in behavior. De-escalation strategies identified in the service users’ crisis prevention plans (an element of the

<table>
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<tr>
<td><strong>Strategy</strong></td>
<td><strong>2011</strong></td>
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<tr>
<td>Leadership toward organizational change</td>
<td>• New policy</td>
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<td>Using data to inform practice</td>
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<td>Workforce development</td>
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Collaborative Plan of Care) could be used to prevent or reduce aggression and prevent the need for restraint.

In 2013, sensory modality carts and sensory modality assessments were introduced to aid with emotional self-management (Huckshorn, 2004; Lebel & Champagne, 2010). Service users worked with an occupational or recreation therapist to learn to regulate and organize the intensity and nature of responses to sensory input. This therapy helped with recognition and reduction of distress and with self-regulation of mood and behavior.

Strategy 5: Service User Roles in the Organization. This strategy emphasizes the need to allow service users and their families to have a meaningful role in the organization (Huckshorn, 2004). Prior to the organizational implementation of the Six Core Strategies, a number of programs were already in place to allow service users the opportunity to participate in an organizational role, and these continued. These programs included opportunities for supported employment in various departments and participation in various councils, committees, and advocacy groups. Service users and their families were able to have a meaningful role in the organization through their respective councils. The Service User Experience Team listened to service user concerns, compliments, or questions and communicated issues to management and teams to be addressed. In 2011, tools, such as the Behavioural Profile Tool and Collaborative Plan of Care (both developed locally by the organization), were implemented to remind clinicians of the importance of including service users and their families in the decision-making process. These tools are used to mitigate future restraint events by prompting an early discussion of how and why restraint may be used. To enhance the role of families in treatment and the organization, the Family Resource Centre opened in 2013 to provide a space for families to share experiences, access resources, attend family-specific groups, and connect with other families for support and encouragement.

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Strategy 6: Debriefing Techniques. This strategy highlights the importance of debriefing service users and staff following the event to mitigate adverse effects and use the learnings to inform future events (Huckshorn, 2004). In the organization, the debriefing process following a restraint event was formalized in 2011 and a new policy on reflective practice and debriefing was implemented in 2012. The formalized service user debriefing occurred as soon after the event as clinically indicated to: (a) acknowledge the trauma and retraumatization that may have occurred; (b) explore the event from the service user’s perspective; (c) identify opportunities to provide support to the service user; (d) identify triggers and antecedent behaviors that may have resulted in the use of restraint; (e) discuss alternative behavior and healthy coping strategies that may effectively minimize the future use of restraint should similar situations reoccur; (f) consider alternatives, de-escalation strategies, and least restrictive interventions; and (g) begin to repair the therapeutic relationship, which may have been damaged during the restraint event. The service user debriefing was documented in a tool in the EMR. Staff debriefing was implemented to gain the staff perspective of the event and allow staff to process their reactions and responses to the restraint event. In 2012, a new policy on reflective practice and debriefing was implemented, which included quarterly audits and analysis of debriefing notes. In 2013, tools for service user and staff debriefing were optimized by revising the questions and changing the layout to improve usability and comprehensiveness of the tool.

Data Collection and Processing
Data were compiled from the EMR database and monthly summary data (with no linkage to service user or staff identities) were provided to the research team. The primary outcome was total number of restraint incidents, calculated as the total number of mechanical restraint and seclusion incidents across the hospital. Only events preceded by aggression were included (i.e., safety events, such as use of consented restraint in the geriatric program for falls prevention, were not included). Secondary outcomes included number of mechanical restraint incidents; the number of seclusion incidents; average hours per total restraint incident; average hours per mechanical restraint incident; and average hours per seclusion incident. Data were totaled or averaged across each month for the three fiscal years examined (April 2011 to March 2014). Linear trends were visually examined to describe change over time.

RESULTS
Over the course of the evaluation period, the number of hospitalized service users per month was relatively stable (mean = 332; SD = 8; range = 314 to 340 service users). There was an initial decrease in the number of incidents from April to June 2011, after which the number of incidents increased over the summer months and spiked in Octo-
ber 2011 with 206 incidents, primarily accounted for by the 179 seclusion incidents. The spike in incidents in October 2011 coincided with the implementation of new data collection processes within the EMR and may be an artefact of improved reporting rather than a true spike in incidents. This spike was followed by a substantial decrease in incidents in November to a low of 17 total incidents in December 2011. The number of incidents remained relatively stable thereafter with the exception of August and September 2013 when there was a spike in incidents (Figure 1A). There was a trend for a slight decrease in incidents across the 36 months for total restraint incidents, although the decrease was at a rate of less than one incident per month (Figure 1A). Overall, there was a 19.7% decrease in the total number of restraint incidents in the 2013/14 fiscal year (April 2013 to March 2014) compared to the 2011/12 fiscal year (April 2011 to March 2012), primarily due to the 28.3% decrease in the number of seclusion incidents (Figure 1B).

In July 2011, there was a substantial spike in the total seclusion and overall restraint hours (Figure 2A). Following this spike, total hours remained relatively stable, but increased until February 2013, when total hours dropped and remained low, with the exception of a spike in the summer months of 2013 (Figure 2A). There was an overall trend for a decrease of 54.6 hours per month for total restraint and 54.1 hours per month for seclusion with no substantial trend for the change in mechanical restraint hours (Figure 2A).

There was a 42.3% decrease in total restraint hours from the 2011/12 fiscal year to the 2013/14 fiscal year, accounted for primarily by the 51.1% reduction in total seclusion hours over the same time period (Figure 2B).

Average hours per restraint incident were initially variable with a spike in July and December 2011. Average hours per restraint remained relatively stable and high from April to November 2012, after which average hours per restraint decreased and remained low for the remainder of the follow-up period (Figure 3A). This decrease coincided with the implementation of the Recovery Rounds witnessing initiative. There was a trend for a decrease of 0.5 hours per restraint event per month, primarily accounted for by the trend for a decrease of 0.6 hours per seclusion event per month (Figure 3A). The average hours per restraint incident decreased 38.9% from 2011/12 to 2013/14, primarily due to the 42% decrease in average hours per seclusion over the same time period (Figure 3B).

The number of unique service users who experienced mechanical restraint remained relatively unchanged, ranging from 5 to 22 service users per month (1.6% to 6.5% of the sample). The number of unique service users who experienced seclusion also remained relatively stable, ranging from 14 to 42 service users per month (4.1% to 12.4% of the sample) (Figure 4).

**DISCUSSION**

In 2011, the Six Core Strategies (Huckshorn, 2004) were implemented at a tertiary level mental health care facility to further align clinical practices with recovery principles. In accordance with these goals, the current initiative resulted in an approximately 19.7% reduction in the number of restraint incidents and 38.9% reduction in the average length of restraint incidents. The success was likely in part due to the executive commitment to the project. Commitment of the senior management team ensured adequate resources for training, and participation in Recovery Rounds supported
recovery culture at all organizational levels. These factors have been identified as important facilitators to restraint minimization initiatives (Bak et al., 2015; Curran, 2007). Notably, adoption of Strategy 2: Using Data to Inform Practice led to the development of the Recovery Rounds initiative (aligned with Strategy 1: Leadership Toward Organizational Change), which appeared to be an important contributor to the reduction in average hours per seclusion, as there appeared to be a decrease following implementation. Other than the implementation of new data collection practices via the EMR in October 2011 (which may have resulted in a spike due to artefact of improved reporting practices), there were no other clear temporal relationships between implementation of individual initiatives and change in restraint practices.

The months with increased restraint incidents did not appear to temporally coincide with specific initiatives. There was a notable increase in restraint during the summer of 2013. Examination of the data by unit showed increased restraint use on specific units related to unique patients, not organization-wide (data not shown). Although the data cannot provide a definitive reason for the increase in events and hours of seclusion, it may be speculated that this could be a result of case mix, as a small percentage of service users often account for a large proportion of restraint incidents and hours (Hendryx, Trusevich, Coyle, Short, & Roll 2010; Knutzen et al., 2014; Oster, Gerace, Thomson, & Muir-Cochrane, 2016; Whitehead & Liljeros, 2011). In August 2013, the number of unique service users experiencing mechanical restraint reached 37 (11.3%), one of the highest values after the first year of the initiative. This finding suggests that other factors, such as staff turnover or substitute staffing, may have been an issue, as restraint is more likely to occur when staff members are less experienced or unfamiliar with service users (Ashcraft & Anthony, 2008; Bak et al., 2015; Curran, 2007). It should be noted that, despite a spike in incidents over the summer months, the 2013/14 fiscal year showed an overall decrease in total seclusion hours (Figure 2B) and average hours per seclusion (Figure 3B).

Internationally, other institutions implementing the Six Core Strategies have realized greater reductions in restraint incidents, with decreases ranging from 66% to complete elimination of restraint practices over a period of 1 to 3 years (LeBel et al., 2014). A 49% reduction in hours per restraint incident was also reported (LeBel et al., 2014). The current study realized only a 19.7% reduction in restraint incidents and 38.9% reduction in the hours per incident. The greatest reduction occurred in total seclusion hours and average hours per seclusion in 2013/14—the year following the implementation of Recovery Rounds. Specifically, in December 2012, there was a decrease in the hours of seclusion and overall restraint per incident—both of which remained lower thereafter—coinciding with the implementation of Recovery Rounds. The temporal relationship suggests that Recovery Rounds had an important impact on restraint practice. Although other initiatives may have also contributed to the decrease in seclusion hours, executive-level witnessing and review of restraint events are considered key strategies in restraint minimization (Donat, 2003; Huckshorn, 2004). In addition, Recovery Rounds included discussion around trialing release and ensured the service user understood the reasons for his/her restraint event. These discussions
may have resulted in problem solving to allow for earlier release, thus accounting for the reduction in overall seclusion hours and average hours per seclusion incident.

LIMITATIONS

Because the setting was a tertiary level mental health care facility serving individuals with serious and persistent mental illness, these strategies and findings may not be generalizable to other populations. Other organizations should, however, be able to select strategies that would be useful to their population and modify them accordingly. Data collection directly in the EMR was implemented at the onset of the current study; thus, EMR data were only available from the start of the implementation of the Six Core Strategies and baseline data pulled manually from clinic notes are of questionable quality and were therefore not used for comparison. However, because initiatives were implemented sequentially, there were continual improvements over time, which were captured by the data. Implementation of the Six Core Strategies was not an initial strategy for restraint minimization, but rather a process improvement initiative to further align practices with recovery-based principles and promote further reduction of restraint use. Significant reductions in restraint use prior to the implementation of the Six Core Strategies may have preempted more significant findings. On the other hand, previous recovery education and establishment of an organizational recovery culture may have facilitated implementation.

CONCLUSION

Application of the Six Core Strategies with staged implementation of initiatives resulted in reduced use of restraint, over and above previous reductions following intensive staff training. These findings suggest that the Six Core Strategies are valuable to a restraint minimization program, even when previous initiatives have resulted in considerable reductions in restraint. Continued feedback and evaluation will ensure sustainability and further reduce restraint use.

Figure 3. Changes in average hours per overall restraint, seclusion, and mechanical restraint event over time. (A) Monthly data. Green circles, solid line, overall restraint; orange circles, dotted line, seclusion; blue squares, dashed line, mechanical restraint. Solid trendline for overall restraint; dashed trendline for seclusion; dash-dot trendline for mechanical restraint. (B) Data per fiscal year. Green bar, April 2011–March 2012; orange bar, April 2012–March 2013; blue bar, April 2013–March 2014.

Figure 4. Unique service users experiencing seclusion and mechanical restraint over time. Orange circles, dotted line, seclusion; blue squares, dashed line, mechanical restraint. Dashed trendline for seclusion; dash-dot trendline for mechanical restraint.
REFERENCES


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