Implementation Study

Reducing the Use of Seclusion and Restraint in Psychiatric Emergency and Adult Inpatient Services—Improving Patient-Centered Care

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Abstract
The reduction of seclusion and restraint (S/R) use has been given national priority by the US government, The Joint Commission, and patient advocacy groups. It is associated with high rates of patient and staff injuries and is a coercive and potentially traumatizing intervention. The New York City Health and Hospitals Corporation (HHC) is the largest municipal health care system in the country, with 11 HHC facilities operating psychiatric emergency services and inpatient psychiatric services. HHC operates 1117 adult inpatient psychiatric beds with an average length of stay of 22.2 days that generated over 19,000 discharges in 2009. In 2009, there were over 36,000 psychiatric emergency services visits. HHC’s Office of Behavioral Health provides strategic leadership, planning, and support for the operations and quality objectives of these services. In January 2007, the corporate office initiated the Seclusion and Restraint Reduction Initiative, with a sequenced, intensive series of interventions and strategies to help focus the behavioral health leadership and staff on the need for continued culture change toward a more patient-centered and safe system of psychiatric emergency and adult inpatient care. From 2007 to 2009, there was a substantial decline in HHC’s overall rate of S/R incidents in inpatient units. The more substantial impact was in the reduced overall time spent in S/R; the reduced frequency of use of S/R; and the reduced likelihood of patient injury from S/R use.

Introduction

Context
Regulators and advocates have called for the reduction of seclusion and restraint (S/R) use in inpatient psychiatric settings. S/R is viewed as a treatment failure rather than a treatment intervention. S/R is associated with high rates of patient and staff injuries and is considered a coercive and potentially traumatizing intervention with no established therapeutic value. New York City Health and Hospitals Corporation (HHC) has a long history of S/R-reduction efforts with successes in both psychiatric inpatient and emergency services. In 2007, to build on these gains and to continue the culture change from a medical model to a patient-centered rehabilitation and recovery-oriented service system, HHC launched the Seclusion and Restraint Reduction Initiative. Since 2000, HHC has sought to change the attitudes and beliefs of clinical professionals about mental illness and recovery by providing education about rehabilitation and recovery in a discussion and dialogue format presented by paid part-time consumer advocates. As part of this effort, HHC established a Peer Counselor program to offer jobs to mental health consumers who want to enter or re-enter the workforce as advisors, mentors, and/or advocates for those seeking psychiatric treatment at HHC hospitals. They were included in the interdisciplinary teams on the inpatient, emergency service and outpatient services.

Kick-off
On January 20, 2007, a large corporatewide kick-off event was held, led by the Corporate Executive Vice President and his management team. The goals of the initiative included further reductions in S/R use and continued culture change to make the psychiatric inpatient and emergency services more patient centered and trauma informed. Interdisciplinary change teams that would be in charge of the initiative at each
facility were established. Teams included all disciplines, Peer Counselors, hospital security staff, and training and quality-improvement personnel. At the kick-off, data sharing and data transparency were also discussed and 2006 baseline data on S/R use were distributed. Facilities were informed that monthly data submissions to the corporate office were a requirement. A competition was announced with a prize for the facility demonstrating the greatest improvement in a year.

Materials and Methods

Phased Interventions/Strategies

Using the corporate Office of Behavioral Health as Seclusion/Restraint Reduction Initiative Project Manager (planning phase): In late 2006, HHC asked the Commissioner of the New York State Office of Mental Health to request for HHC-wide implementation “Creating Violence Free and Coercion Free Mental Health Treatment Environments for the Reduction of Seclusion and Restraint” training from the National Association of State Mental Health Program Directors’ Office of Technical Assistance (OTA). This nationally recognized training module was reserved for state-run facilities. HHC was awarded an external two-year grant for staff retraining. This enabled HHC to have the necessary resources to manage and implement the training and other implementation strategies of the initiative.

Corporate culture change training (planning and implementation phases): Three two-day training sessions were held in early March 2007 and July 2007, with a total attendance of nearly 760 leadership and direct care staff. On the basis of the National State Mental Health Program Directors’ OTA training model, participants were introduced to six core strategies that have been proven to reduce S/R use including concepts of primary and secondary prevention, leadership roles and responsibilities, key characteristics of trauma-informed care systems, using data to inform practice, environmental factors that can be modified to create a safer or calmer environment, rigorous post-event debriefing, and consumer and family roles in the inpatient setting. At the end of the second day, staff gathered by facility to develop a facility-specific work plan to implement the six core change strategies.

Eleven facility-specific consultations (planning and implementation phases): As a next step in assisting the facilities to develop their work plans and to identify opportunities and strategies for improvement, HHC contracted with OTA faculty to provide consultation consistent with the OTA training. The visits occurred between July 9 and September 11, 2007, and focused primarily on the adult inpatient units of each hospital. Several hospitals included their child and/or adolescent units as part of the site-visit consultation. Several of the hospital-visit consultations also addressed issues specific to Emergency Department programs and/or forensics programs. The consultants used a review protocol for the HHC consultation and site reviews that is an adaptation of the formal review instrument developed for a Substance Abuse and Mental Health Services Administration-funded eight-state OTA evaluation project. At each site, the consultants met with the facility’s behavioral health leadership team, quality-improvement staff, nursing leadership, and frontline staff to get a thorough picture of the facility’s efforts to reduce the use of S/R. The consultants also reviewed S/R documentation in a random sample of facility records. After each site visit, they prepared summary reports of their findings, and their analysis of hospital strengths and priority areas recommended for improvement. Over 100 HHC behavioral health leaders participated in these leadership sessions. Consultants also met with numerous staff and consumers.

Crisis de-escalation training (implementation phase): Train-the-trainer models for crisis prevention and management were developed and provided in August-September 2007 and in May 2009. Sixteen highly interactive Mandt training sessions were provided for groups of 35 behavioral health staff to help them develop crisis de-escalation skills. The Mandt System teaches the use of a graded system of alternatives, which uses the least amount of external management necessary in all situations. HHC also used the Crisis Prevention Institute (CPI) train-the-trainer model of crisis management and de-escalation. CPI trained 69 staff members.

Sensory modulation tools and approaches (implementation phase): Sensory modulation approaches and tools on an inpatient psychiatric service are an emerging best practice. The use of sensory modulation approaches means that the need for more coercive measures such as S/R is reduced. HHC hired sensory modulation experts to train HHC staff at the end of November 2007 and again in May 2009 with a total of 334 staff trained. The corporation also used grant dollars to purchase sensory modulation equipment for each inpatient psychiatric unit operated by the corporation. Each of the 58 units received a variety of sensory tools (including a rocker, weighted blankets, and vests) and a rolling cabinet in which to store them. As part of the training, staff were able to view and rehearse use of equipment. HHC has recently published a guideline on the use of sensory modulation tools and techniques on inpatient psychiatric services that has been distributed along with a staff training module to reinforce effective and safe use of this emerging best practice.
Data transparency (planning and implementation phases): HHC facilities were asked to submit S/R data to the corporate office before the project was officially announced so that a baseline could be analyzed and shared. Since the kick-off, facilities have been submitting data on S/R restraint use and patient and staff injuries associated with the use of S/R. This data was reviewed monthly by the HHC Council of Directors of Psychiatry of the Departments of Psychiatry at each of the 11 acute care hospitals and lessons learned were discussed. The data is also shared quarterly in a comprehensive data book with corporate and individual facility S/R trend charts. This project was the first time that individual facility data was shared. In addition, in July 2007, HHC included individual facility S/R on its quarterly dashboard/corporate performance report.

Managing agitated patients workgroup (implementation phase): In November 2007, 11 months after the start of the initiative, HHC established a workgroup to focus on how to better manage agitated patients. The workgroup resulted in several initiatives that had an impact on the HHC Seclusion and Restraint Reduction Initiative: 1) various models of psychiatric emergency response teams were explored and shared with HHC facilities; 2) training modules for hospital police were created to clarify their role when asked by the clinical staff to respond to a patient who is agitated or in crisis; and 3) the corporation created a new job title called a Behavioral Health Associate. Behavioral Health Associates receive extensive crisis prevention and de-escalation training and perform some of the duties that had been assumed by hospital police.

Corporate guidelines for developing facility-specific restraint and seclusion policies and procedures (implementation phase): In December 2007, HHC issued corporate guidelines to assist HHC facilities with the revisions that would need to be made to their facility-specific policies and procedures to bring them in line with changes in The Joint Commission and, more importantly, in Centers for Medicaid and Medicare Services regulations. The guideline addresses both behavioral and medical-surgical restraints and went further than federal or state requirements by imposing a two-hour maximum limit on an S/R order for adults, two hours less than what is allowed by Centers for Medicaid and Medicare Services and New York State Office of Mental Health.

A corporate psychiatric emergency services assessment (implementation phase): On January 6, 2008, HHC implemented a psychiatric emergency assessment form developed by the HHC Office of Behavioral Health through a corporatewide workgroup that is used in all the Psychiatric Emergency Services (PES) that includes a trauma assessment, which explores the impact of past trauma on current functioning, patient preferences regarding effective calming measures, triggers for agitation, and preferences regarding S/R use.

Results
The total number of S/R incidents by calendar year is summarized in Table 1. Please note that we were

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of episodes</th>
<th>No. of staff injuries</th>
<th>No. of patient injuries</th>
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<tr>
<td></td>
<td>Adult inpatient</td>
<td>PES</td>
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<td>Restraints</td>
<td>Seclusions</td>
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<td>Adult inpatient</td>
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<tr>
<td>2007</td>
<td>940</td>
<td>1399</td>
<td>1047</td>
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<td>2008</td>
<td>782</td>
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<td>32</td>
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<tr>
<td>2009</td>
<td>643</td>
<td>235</td>
<td>737</td>
<td>25</td>
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PES = psychiatric emergency services

Figure 1. Frequency of restraint per 1000 patient hours.

Figure 2. Frequency of seclusions per 1000 patient hours.
ORIGINAL RESEARCH & CONTRIBUTIONS

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Also, the duration per episode of restraint (Figure 4) went from a mean of 246.81 minutes to 57.62 minutes between 2007 to June 30, 2009, a 77% reduction and the mean duration per episode of seclusion (Figure 5) decreased from 88.78 minutes to 50.50 minutes, a 43% reduction.

A one-way analysis of variance (ANOVA) of the mean differences between 2007, 2008, and 2009 was conducted (Tables 2 and 3). The overall change in inpatient restraint rate did not achieve statistical significance. However, the patterns of use of these methods did change significantly reflecting more targeted and safer use, and significant reduction in the most acute treatment areas. For the adult inpatient service, reductions in frequency of seclusion, mean duration per restraint and mean duration per seclusion were significant at 0.04. Patient injury (restraint) reduction was significant at 0.05. In the PES settings, frequency of restraints was significant at 0.02 and patient injury was significant at 0.03.

Given that at the outset of the Seclusion and Restraint Reduction Initiative some facility leadership and staff were concerned that further reductions in S/R use would be difficult especially with the advent of including counts of manual restraints in the S/R data, these declines strongly speak to the success of the initiative. Unfortunately, staff injuries have remained generally level, which could reflect that despite fewer restraints, those patients that are restrained represent a core of significantly violent or agitated patients that contribute to injury.

Discussion
What Worked and How Well

In our view, the success of the initiative derives from the sequencing of the implementation strategies/interventions; each building upon lessons learned with the aim of sustainability. Among the most critical individual strategies were:

Involvement of the leadership: The express interest of the HHC President in this initiative and the decision to manage it centrally gave it a focus that had not existed in prior efforts to reduce and/or eliminate S/R use. Leadership committed to organizational change is the first of the six National State Mental Health Program Directors OTA core strategies to reduce S/R use. Further, part of the project’s charter was the understanding that the Director of Psychiatry would be in charge of the change effort, not his/her designee. Progress on the initiative was routinely shared with the HHC Directors of Psychiatry, Administrators of Psychiatry, and Psychiatric Nursing Directors and
provided by the HHC President to the Corporation to Hospital executives and the HHC Board of Directors.

Corporate culture change training: It was critical to the project’s success that HHC facilities embrace the culture shift involved in moving toward a less coercive, more recovery-oriented system of services. Use of S/R could no longer be considered as a treatment option, but as a treatment failure. The National State Mental Health Program Director OTA training was chosen as it focuses on why mental health services need to change and how they can better support mental health consumers in their recovery.

Data analysis and transparency: As the project progressed, we changed data collection from a quarterly to a monthly basis to make it more actionable. Each of the Directors were given a data analysis of three indicators of S/R use: a) total duration of S/R per 1000 patient hours; b) frequency of S/R per 1000 patient hours, and c) corporate mean duration of S/R per 1000 patient hours. For the PES, “100 patients registered” was used as the denominator. Each of these indicators was analyzed at the corporate and facility levels. When the total duration of S/R indicator was added to a corporate quality indicator dashboard, key stakeholders beyond the Departments of Psychiatry also became interested and involved in the project’s success.

Facility-specific consultations: Facility-specific consultations were extremely useful because they gave an opportunity for immediate feedback from the experts on each facility’s specific issues related to S/R reduction. The consultants’ reports offered a clear future roadmap with suggestions and resources for areas needing improvement.

Limitations—Barriers Encountered and Methods Used to Address Them

Corporate culture change to a rehabilitation and recovery-oriented service system: Some HHC leadership and direct care staff were fully committed to maximum reductions and the associated culture change; others were not as focused on the goal. Culture change is always extremely difficult. As stated earlier, HHC has used a number of strategies to promote the shift to a more patient-centered, rehabilitation and recovery-oriented behavioral health services including the development of “Work from the Heart: Improving Patient-Centered Care,” a toolkit disseminated to all the HHC Departments of Psychiatry. The hiring of Peer Counselors for psychiatric inpatient and emergency services and the consumer-led staff dialogues have been very successful with leaders and direct care staff. Another strategy that seemed especially effective in engaging facility leaders was the data transparency and the competition that it created.

Summary

The HHC Seclusion and Restraint Reduction Initiative incorporated sequenced implementation strategies and interventions, each building upon lessons learned, with the aim of sustainability of practice change in this area across a very large and diverse system of care. Among the most critical individual strategies were leadership involvement, facility culture change, the learning of concrete de-escalation skills, and the use of data to drive system change. These resulted in reduced, but significantly more targeted and safer use of these methods. These lessons learned can be shared with other hospitals addressing similar issues at very little or no cost. 

Use of seclusion/restraint could no longer be considered as a treatment option, but as a treatment failure.

Table 2. Analysis of variance—adult inpatient

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<th>Labels</th>
<th>Type</th>
<th>F-test</th>
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<td>Frequency of seclusion episodes per 1000 patients hours</td>
<td>Between groups</td>
<td>4.788</td>
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<tr>
<td>Mean duration per restraint episode</td>
<td>Between groups</td>
<td>4.819</td>
<td>0.04</td>
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<tr>
<td>Mean duration per seclusion episode</td>
<td>Between groups</td>
<td>4.932</td>
<td>0.04</td>
</tr>
<tr>
<td>Patient injury (restraints) per 1000 patient hours</td>
<td>Between groups</td>
<td>4.411</td>
<td>0.05</td>
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Table 3. Analysis of variance—psychiatric emergency services

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<tr>
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<th>Type</th>
<th>F-test</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency of restraint episodes per 100 patients registered</td>
<td>Between groups</td>
<td>6.128</td>
<td>0.02</td>
</tr>
<tr>
<td>Patient injury per 100 patients registered</td>
<td>Between groups</td>
<td>5.192</td>
<td>0.03</td>
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1 New York State’s Office of Mental Health is one of eight state grantees in the Alternatives to Restraint and Seclusion State Infrastructure Grant Project (S/R-SIG), an initiative of the Substance Abuse and Mental Health Services Administration’s (SAMHSA) Center for Mental Health Services (CMHS), designed to promote the implementation and evaluation of best practice approaches to preventing and reducing the use of seclusion and restraint in mental health settings.
Disclosure Statement
The author(s) have no conflicts of interest to disclose.

References

Misery
Of all the miseries that afflict human life and relate principally to the body, in this valley of tears I think nervous disorders in their extreme and last degrees are the most deplorable and beyond all comparison the worst.
—The English Malady, George Cheyne, 1671-1743, British physician, medical writer, proto-psychologist, philosopher, and mathematician