

# Reducing Mechanical Restraints in Acute Psychiatric Care Settings Using Rapid Response Teams

## Abstract

Behavioral healthcare providers and accrediting bodies have encouraged the development of practices which reduce the use of restraint for persons receiving acute psychiatric treatment. Rapid response teams, which have proven highly effective in improving outcomes for emergent medical patients, may be a useful technique for reducing restraints in behavioral healthcare settings. Utilizing a rapid cycle process improvement approach, a rapid response team was convened following each episode of restraint involving a mechanical device in an inpatient psychiatric treatment facility. Initial results, during a six-week rapid cycle change process, showed that mechanical restraints were reduced by 36.4%. A positive, unintended effect of the rapid response teams was a reduction in physical restraints (44.3%) as well. Changes in hospital census during the implementation process did not appear to explain the reduction in restraints. Rapid response teams and rapid cycle process improvement are discussed as useful change vehicles for behavioral healthcare organizations.

## Definition of Problem Area and Change Goal

Two of the co-authors (MD, LM) jointly identified an opportunity to improve patient care by reducing the number of restraint episodes throughout the hospital. The specific change project was developed to reduce the overall number of restraints involving a mechanical device, including net restraints, papoose restraints (primarily used with children), and backboard restraints. The proposed intervention for reducing restraint episodes was the introduction of a rapid response team, analogous to teams that have helped reduce the number of patient deaths in acute medical/surgical hospitals.

## Development of Change Team and Restraint Response Team

The change team included senior administration, nursing managers, clinical supervisors (master's level counselors and social workers), a physician, and a psychologist. The team worked together to develop a restraint rapid response team, which would meet following any instance of mechanical restraint over a three-week change period. The desired outcome of this intervention was to reduce the number of restraint episodes, compared with a three-week baseline period. Following any instance of mechanical restraint, a restraint response team was activated, consisting of 1) the medical director or assistant medical director, 2) the clinical supervisor, and 3) the nurse manager from the service where the restraint occurred. Within 24 hours of the beginning of the restraint episode, the restraint response team met with the "receiving team," consisting of the restrained patient's attending physician, the charge nurse from the patient's program area, and the master's level clinician working with the patient. These consultations were specifically designed to be brief (15-20 minutes) and to address the question, "What can be done to reduce the likelihood that an additional restraint will occur with this patient?" No limitations were placed on potential treatment options or strategies. The response team physician had the option of writing medication orders or modifications to the treatment plan if s/he desired. As the response team was required to meet within 24 hours of the restraint episode, seven-day-a-week coverage was arranged. Members of the change team rotated a call schedule for staffing the response team on weekends and holidays. Senior level managers had historically been present in the hospital, or available for consultation, during weekend hours and thus were involved seven days a week.

## Time Frame

Rapid cycle process improvement emphasizes the implementation of discrete changes over brief time periods. Thus, the initial intervention period for assessing the impact of the restraint response team was three weeks. At the end of the first three-week period the data was encouraging and the project was extended another three weeks. Baseline data was gathered for the six-week time period prior to implementation of the response team, using restraint log sheets maintained in each program area. Because of concern that a decrease in mechanical restraints might be offset by a corresponding increase in physical restraints (holds without backboard, papoose, or net), data on the number of physical restraint episodes was collected over the same six-week pre-change and six-week implementation time periods.

## Results

The total number of mechanical restraints declined 36.4%, from 77 during the baseline period to 49 during the first six weeks of using the restraint response team. The total number of patients who received a mechanical restraint declined to a lesser degree, by 12% (25 during baseline; 21 during change phase).

The data supports the effectiveness of using a restraint response team to reduce the use of mechanical restraints in acute psychiatric settings. Mechanical restraints declined by about one-third during a 6-week period using a rapid cycle process improvement approach.

	Total Patient Bed Days	Percentage of Beds Occupied	Number of Mechanical Restraints	Number of Patients Receiving Mechanical Restraint	Number of Mechanical Restraints per 1,000 Patient Bed Days	Number of Physical Restraints	Number of Patients Receiving Physical Restraints	Number of Physical Restraints per 1,000 Patient Bed Days
Pre-Change Period 5/16/05 to 6/26/05	3,702	96.8%	77	25	20.8	79	28	21.3
1 <sup>st</sup> Change Period 6/27/05 to 8/7/05	3,479	91.0%	49	21	14.1	44	22	12.6
Percent Change	-6.0%	-5.8%	-36.4%	-16.0%	-32.2%	-44.3%	-21.4%	-40.8%

**Restraint Debriefing Peer Review Document**

Patient Name: \_\_\_\_\_ Date/Time Consultation done: \_\_\_\_\_

Date/Time of Restraint being reviewed: \_\_\_\_\_

Attending: \_\_\_\_\_

Height: \_\_\_\_\_ Weight: \_\_\_\_\_ Age: \_\_\_\_\_

Diagnoses: \_\_\_\_\_

Current Medications: \_\_\_\_\_

Medical Issues: \_\_\_\_\_

Review of Case: \_\_\_\_\_

Review of Recent Mechanical Restraint: \_\_\_\_\_

Triggers and Pathway Deficits: \_\_\_\_\_

Recommendations: \_\_\_\_\_

The goal of the change was not to reduce first-time restraints, but to decrease the likelihood that a patient would experience a second (or more) restraint. Future research might usefully focus on strategies to reduce the likelihood of a first restraint episode. Several artifacts of the change process were noted by change team members, many of which had a positive impact on treatment processes in the hospital.

- Response team meetings provided opportunities for "real time" supervision and experiential learning. Participants in the meetings reported that the quality of supervision improved when consultation occurred soon after a significant event.
- An improvement in more traditional, scheduled clinical supervision was also reported, due to the fact that supervisors and supervisees had several data points (response team meetings) over which they could examine recurring psychodynamic themes and issues.
- Line staff reported an improved sense of competence in their ability to manage difficult patients.
- Documentation of team meetings led to perceived improvement in the quality of the medical record, and staff began to reference meeting documentation as the latest revision to patients' treatment plans.
- Team meetings offered opportunities for the response team to offer a brief analysis of the patient's cognitive deficits and to suggest proactive strategies for dealing with likely anticipated responses from this patient when faced with known areas of challenge.
- Finally, the response teams improved the timeliness of treatment plan adjustments by making restrained patients an immediate priority. Perceived turf battles that previously resulted in slow implementation of treatment plan changes were diminished through the use of a focused review.

*Not all of the process artifacts associated with the change were positive.*

- Coordinating a meeting within 24 hours of a restraint episode put increased demands on the time of physicians, clinicians, and nurses.
- Staff participating in the restraint review process had to maintain a high degree of scheduling flexibility in order to organize meetings for at least six busy practitioners.
- Documenting the meetings also added paperwork to the medical record.
- In some cases we were able to eliminate other medical record documentation by using the restraint response team summary as the required peer review for internal utilization management.
- One final process artifact, perhaps less tangible, but extremely important, was that staff members involved in restraints outside of the standard hospital day (i.e., those working evenings, nights, and weekends) reported a strong sense of increased support from the hospital after response teams were implemented.
- The presence of senior medical staff, clinicians, and nurses on treatment units following restraint episodes was not only accepted, but welcomed.
- On some occasions, staff members not required to attend response team meetings asked to join the process. Response team meetings appeared to have the effect of mitigating, if not transforming, the inevitable negative feelings that accompany restraint of an aggressive patient.

## Implications for Behavioral Health

The use of rapid cycle performance improvement techniques is an effective strategy for implementing changes. This approach allows organizations to quickly evaluate the efficacy of any single change, and helps to create a culture of change within healthcare settings. Ineffective changes can be identified and abandoned quickly, while effective changes can be adopted. All changes are viewed as one step in an ongoing process of program improvement. In a healthcare environment that increasingly emphasizes use of least restrictive environment and reduction in episodes of physical and mechanical restraint, applying the model of rapid cycle performance improvement to restraints can have valuable effects for patients and staff in behavioral health care settings.