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Effectiveness of Six Core Strategies Based on Trauma Informed Care in Reducing Seclusions and Restraints at a Child and Adolescent Psychiatric Hospital

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OBJECTIVE: The purpose of the study was to determine the effectiveness of six core strategies based on trauma informed care in reducing the use of seclusion and restraints with hospitalized youth.

METHODS: The hospital staff received training in March 2005 in six core strategies that are based on trauma informed care. Medical records were reviewed for youth admitted between July 2004 and March 2007. Data were collected on demographics, including age, gender, ethnicity, number of admissions, type of admissions, length of stay, psychiatric diagnosis, number of seclusions, and restraints.

RESULTS: Four hundred fifty-eight youth (females 276/males 182) were admitted between July 2004 and March 2007. Seventy-nine patients or 17.2% (females 44/males 35) required 278 seclusions/restraints (159 seclusions/119 restraints), with average number of episodes 3.5/patient (range 1–28). Thirty-seven children and adolescents placed in seclusion and/or restraints had three or more episodes. In the first six months of study, the number of seclusions/restraints episodes were 93 (73 seclusions/20 restraints), involving 22 children and adolescents (females 11/males 11). Comparatively, in final six months of study following the training program, there were 31 episodes (6 seclusions/25 restraints) involving 11 children and adolescents (females 7/males 4). The major diagnoses of the youth placed in seclusion and/or restraints were disruptive behavior disorders (61%) and mood disorders (52%).

CONCLUSIONS: This study shows downward trend in seclusions/restraints among hospitalized youth after implementation of National Association of State Mental Health Program Directors six core strategies based on trauma informed care.

Introduction

Restraints and seclusions are physical interventions used to contain patient's aggressive behavior in in-patient settings. Such procedures have been considered by patients and their families as aversive and traumatizing, and in the worst case scenarios, deaths have been reported. The Centers for Medicare and Medicaid Services (CMS) and Joint Commission (formerly JCAHO) has set specific guidelines regarding use of seclusion and restraints (JCAHO, 2001). According to the CMS and Joint Commission, these interventions are only to be used when there is an imminent risk to the patient or others (Health Care Financing Administration, 2001). After the initiation of seclusion or restraint, the patient needs to be evaluated face to face within 1 hr by a licensed independent practitioner (Health Care Financing Administration). More

recently a lot of concern about the negative impact has been raised but evidence-based studies of various proposed methods to reduce restraints and seclusions has been limited (Gaskin, Elsom, & Happell, 2007). In the past few years, various regulatory agencies and professional groups like the Association of Child and Adolescent Psychiatric Nurses, American Academy of Child and Adolescent Psychiatry (AACAP), American Psychiatric Association (APA), Centers for Medicare and Medicaid Services (CMS), and National Association of State Mental Health Program Directors (NASMHPD) have provided specific guidelines to reduce the use of restraints and seclusions. They have emphasized that these restrictive interventions be used in the most extreme circumstances only when patients pose imminent risk of harm to themselves or others (Atkins & Ricciuti, 1992). With this background, the hospital received training by NASMHPD in March of 2005 emphasizing the six core strategies to be implemented in reducing restraints and seclusions. These are based on trauma-informed and strength-based care, with the focus on primary prevention principles (Master, Bellonci, & Bernet, 2002). They included (a) leadership towards organizational change, (b) use of data to inform practice, (c) workforce development, (d) use of restraint and seclusion reduction tools, (e) improve consumer's role in inpatient setting, and (f) vigorous debriefing techniques.

The aim of the study was to determine the effectiveness of these six core strategies developed by the NASMHPD based on Trauma Informed Care in reducing seclusions and restraints among youth during psychiatric hospitalization.

Methods

This retrospective study was based on data collected at a state psychiatric hospital with adult and pediatric population. The children and adolescents units were part of the child and adolescent hospital in a separate building totaling 26 beds. The 26 beds were divided into three units in the same building, including a 9-bed adolescent girls unit, 9-bed adolescent boys unit, and 8-bed unit for younger children (ages 6 to 12), including both girls and boys. The children and adolescents were admitted through a number of different ways, including court order admissions, admissions from tertiary care psychiatric units in the various hospitals in the state who require longer-term hospital stabilization, from emergency departments across the state, and from residential treatment facilities. The hospital also had school on the campus for these children and adolescents.

This study was approved by the State Institutional Review Board. Medical records were reviewed for all youth hospitalized between July 2004 and March 2007. Demographic and clinical variables were abstracted and included age, race, gender, admission diagnosis, length of stay, and admission status (Delaney & Fogg, 2005). During the study period, the number of admissions, discharges, and patient census remained pretty much unchanged. Information on the use of restraints/seclusions was gathered using a standard form that was completed every time a patient was placed in restraint or seclusion. Seclusion was defined as an involuntary confinement of a patient in a room from where they are physically prevented from leaving; restraint was defined as a manual or mechanical device to restrict a person's physical ability to move.

In March of 2005, the senior administrative, medical, nursing, and senior school staff at the hospital was trained on the six core strategies mentioned above in a national training. The major components of the training and implementation are described below according to the six core strategies:

Leadership Toward Organizational Change

Leadership of any organization plays an important part in bringing major culture change. The senior management of the facility created a goal of reducing seclusion and restraint, a high priority. The vision was shared with all the staff in different meetings and communications. The reasons for this goal were shared, including avoiding traumatization and retraumatization of the patients and staff, decreasing injuries, enhancing best practices, and ultimately improving treatment outcomes and staff morale. In the beginning of the project, hospital leadership developed a plan for reducing seclusion and restraints and allocating resources and looking at removing barriers to the plan. Looking and analyzing seclusion and restraint data became a standing agenda item for Hospital Leadership Meetings and Medical Executive Meetings. The team that received the initial training met regularly to look at the progress and to implement various strategies, and was called the Trauma Reduction Team. Goals and targets were established for the inpatient units with the primary teams including child psychiatrists, child psychiatric APRNs, nurses, psychologists, social workers, and other direct care staff, and the information received at the national training was disseminated to the team members. Further measures to explain and inform staff included regular grand rounds, all staff meetings, and staff training besides monthly meetings to evaluate the progress of various steps. This laid the groundwork for further training of the hospital staff and inculcating the strategies in day to day work with the patients (LeBel et al., 2004). On the way, the best practices were recognized and rewarded throughout the hospital, and successes were celebrated.

Use of Data to Inform Practice

Data play an integral role in the performance improvement projects. The data which were collected and analyzed regarding seclusions and restraints included age, gender, ethnicity,

date of admission, psychiatric diagnosis, unit, time of the shift, staff involved, injuries to the patient and staff. The data were shared in all staff meetings, regularly with clinical teams, and were posted on the respective units monthly. The data were helpful in creating healthy competition between the units and monitoring progress. Various supportive resources were infused for units that might be having struggles at different times. Clinical reviews were conducted in a nonjudgmental and supportive way for patients requiring a higher number of seclusions and restraints, to look at various reasons for seclusions and restraints and what can be done in the future to prevent them.

Workforce Development

The hospital created a treatment environment that was based on Trauma Informed Care, facilitates recovery, and was inclusive through development of staff education and training. The staff was educated during orientation as new employees, and regularly regarding neurological, biological, psychological, and social effects of trauma, and the prevalence of these experiences in patients receiving mental health services (Delaney, 2006; Hammer, Springer, Beck, Menditto, & Coleman, 2010). The principles of recovery-oriented care, including person-centered care, respect, dignity, partnerships, and self-management, became an integral part of the staff trainings. These principles were also included in job descriptions, competencies, and performance evaluations. The staff was trained to avoid judgmental terms like "manipulative," "borderline," "attention seeking," and "noncompliant." This was regularly emphasized in morning reports and various clinical meetings.

Use of Restraint and Seclusion Reduction Tools

Using primary prevention principles, a variety of tools and assessments were included in the individual treatment plans. The staff at the hospital was retrained in utilizing preventative measures including awareness about the patient's trauma history, formulating and utilizing safety plans, use of comfort rooms, occupational therapy techniques, and de-escalation approaches prior to the use of restraints and seclusions (Goren, Singh, & Best, 1993; Martin, Krieg, Esposito, Stubbe, & Cardona, 2008). Therapeutic communication between the patient, family, and staff was encouraged as the team set out to identify triggers and warning signs about each individual patient. Efforts were made to share reports of near misses and what worked in certain situations.

Improve Consumer's Role

The staff members were educated regarding the importance of patient and family involvement in safety plans and setting individual goals. The patients, families, family advocates, and case workers were encouraged and welcomed in the treatment meetings and evaluation conferences. All the units held regular community meetings involving the patients who gave suggestions for improvements on the units. Regular surveys involving the children and adolescents, families, and case workers were initiated. Complaints were addressed by management in a timely fashion.

Debriefing Techniques

Various debriefing activities were initiated, including immediate postevent debriefing and formal debriefing done within 48 to 72 hr. The debriefings were done in a nonpunitive and supportive way. The debriefings included the staff members and the patient involved. The immediate debriefing look at the emotional support needed for the patient and staff involved and any immediate changes required in the treatment plan. The formal debriefing looked at the incident in a root cause analysis fashion. This rigorous problem-solving procedure identifies what went wrong, what could have been done differently, and how to avoid similar incidents in the future. Interventions to mitigate the impact of traumatization and retraumatization to the patient and staff were implemented.

Categorical and normally distributed continuous variables were, respectively, compared across time using logistic regression analysis.

Results

Four hundred fifty-eight children and adolescents (276 females/182 males) were admitted to the hospital between July 2004 and March 2007. Of the 458 patients, 17.2% or 79 patients (44 females/35 males) required seclusion and/or restraint (Figure 1). During this timespan, there were 278 restraints or seclusions (159 seclusions/119 restraints) with mean number of episodes 3.5/patient (range 1–28). In the first six months of the study, prior to the implementation of NASMHPD strategy, the total number of restraints and seclusions episodes was 93 (73 seclusions/20 restraints), involving 22 children and adolescents (females 11/males 11). Comparatively, in the final six months of study following the training program, there were 31 episodes (6 seclusions/25 restraints) involving 11 children and adolescents (females 7/males 4). Of the 79 patients requiring seclusion and/or restraint, 25 (32%) were involved in three or more incidents.

The mean age of the patients requiring seclusion and restraint was 14.4 years (range 8–17 years). Their average length of stay was 70.6 days (range 11–177 days). The sample consisted of 63.3% Caucasian youth, 12.6% African American youth, 8.9% Native Americans, 6.3% Hispanics, and 8.3% others. The diagnostic composition of the sample included

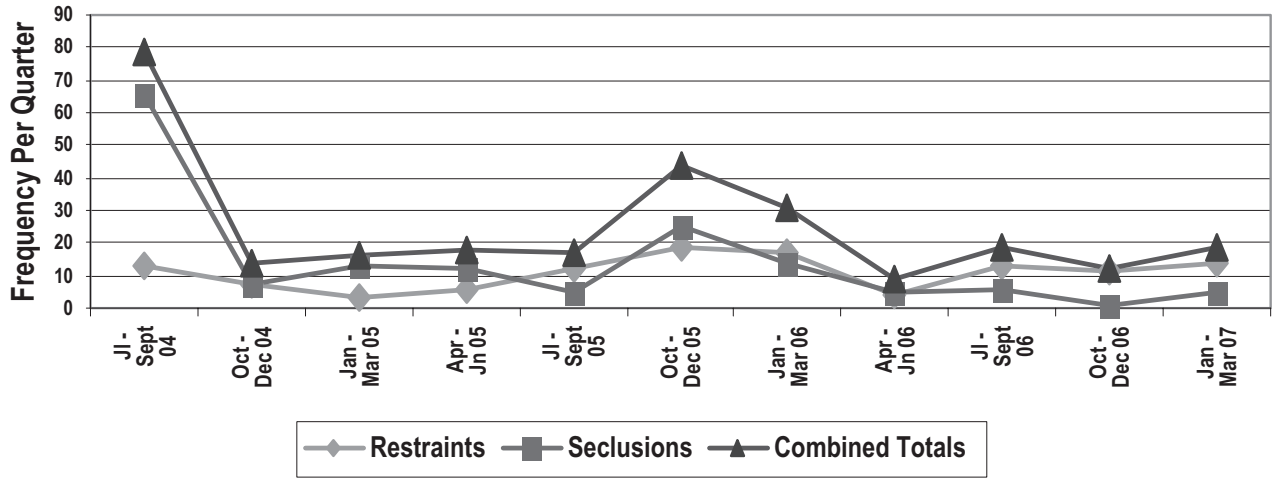

Figure 1. Use of Seclusion and Restraint between July 2004 and March 2007

various DSM-IV diagnoses, including: disruptive behavior disorders (attention deficit hyperactivity disorder, oppositional defiant disorder, and conduct disorder) accounting for 61% of the total sample. Other disorders included mood disorders (52%), reactive attachment disorder (24%), psychotic disorders (16%), anxiety disorders (18%), substance abuse disorders (16%), pervasive developmental disorders (14%), and mental retardation (14%). Out of the 79 patients, 51 (64.5%) were admitted voluntarily, 16 (20.3%) were emergency admissions, and 12 (15.2%) were committed or court ordered. The study showed higher rates of disruptive behavior disorders and mood disorders among hospitalized youths requiring seclusions or restraints. There was a direct correlation between the number of incidents and the length of stay; patients involved in three or more incidents had longer average length of stay (85 days) as compared with patients involved in less than three incidents (64 days).

Discussion

Our findings show marked reduction in the use of restraint and seclusion in a psychiatric inpatient setting for children and adolescents after implementation of the NASMHPD six core strategies based on trauma informed care. After a significant decline postimplementation, the advantage was maintained throughout the course of the study except for solitary elevation in one quarter of 2005. In analyzing our data, we hypothesize that this relative increase could be explained by the psychosocial impact of the annual holidays, one particular patient requiring a high number of seclusions and restraints, and absence of certain key faculty members and managers during that time. Our emphasis was on identifying a clear change based on implementing the techniques that have been universally agreed upon as the model for further reduction of aversive methods in the treatment of psychiatrically ill children and adolescents.

This study needs to be appreciated for providing further evidence to our belief that preventive trauma-informed and inclusive treatment planning along with adequate staff training and monitoring will go a long way in reducing the use of restraints and seclusions. (Donovan, Plant, Peller, Siegel, & Martin, 2003; LeBel et al., 2004)

There were certainly several limitations that need to be taken into account. First, we did not have the data to express our results as per thousand patient days, leaving us at a disadvantage to evaluate the impact of census on our results. Secondly, our efforts to put these theoretical strategies into practice could have been inadvertently biased by the concurrent dialectical behavior therapy initiative on the adolescent girls unit. Third, this is a retrospective study over about 33 months, but this construct would not affect the quality and the validity of the study. Lastly, longer baseline data before the implementation of this project was not available. However, we feel that this is yet another step in validating the evidence base behind NASMHPD Core Strategies based on trauma informed care for decreasing restraints and seclusions in inpatient psychiatric facilities.

Conclusions

In summary, this study had shown that over a long period of time, restraint and seclusion reduction can be possibly maintained and safely implemented in an inpatient setting through the collaborative and concerted effort of staff by utilizing the six core strategies based on trauma informed care advocated by the NASMHPD. It is also encouraging to note

that despite the multiple efforts, the positive results of the techniques were achieved relatively quickly and sustained over a long period of time. We continue to emphasize the clinical need for further reduction and eventual elimination of restraints and seclusions as best practice in the field of child and adolescent mental health.

Disclosures

The authors report no competing interests.

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