Integration of the Audio-Visual Moylan Assessment of Progressive Aggression Tool (MAPAT) in a USA State Wide Training Program of Mental Health Workers

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Paper

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Introduction/Background

Aggressive and violent behavior toward health care workers in psychiatric hospital settings is a long recognized occupational hazard with significant psychological, physical and economic costs (U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Hunter, Carmel 1992). Numerous professional publications highlight the problem and emphasize the need for formalized staff training (one of many clinical and occupational approaches) to reduce the risk of violence and the related rate and severity of staff injuries (Infantino and Musingo 1985; Lehman, Medilla and Clark1983, Carmel and Hunter 1990, American Psychiatric Association Task Force on Clinician Safety (Task Force Report 33, Beech and Leather 2006).

Training programs are widely used and options include private (e.g. Non-violent Crisis Intervention, Crisis Prevention Institute) and public sector developed (States of NY, CT, et al) programs. In the United States, staff that work in psychiatric hospital settings, where restraints and seclusion are used, must meet the training requirements set forth by regulatory and accrediting bodies [Center for Medicare/Medicaid Services CFR Part 482 (CMS), The Joint Commission (TJC)]. Hospital policies and state laws (e.g., Connecticut General Statute 814e, Sec 46-154) typically include training requirements. The requirements include who should be trained (direct care staff that work in settings where restraints and seclusion are used), at what intervals (orientation and subsequent periodic reviews) and what the content must include. Competence in the theoretical knowledge as well as physical skill knowledge are commonly used measures.

Training Content

The content of most training programs includes information on early identification of escalating behavior and therapeutic verbal and non-physical interventions to prevent dangerous behavior from escalating to violence; and should violence occur, physically restrictive interventions to ensure the immediate physical safety of the staff, others, and importantly, the patient. The physical interventions used are typically based on martial arts techniques. In addition to the training requirements identified by the regulatory and accrediting bodies, a number of professional publications representing healthcare organizations (e.g., American Psychiatric Association, American Psychiatric Nurses Association) advocacy organizations (e.g., National Alliance on Mental Illness) have published position papers on the use of restraint and seclusion. National government agencies (e.g Substance Abuse and Mental Health Services Administration) and professional organization (e.g., National Association of Psychiatric Health Systems) have also played significant roles (over the past 13 years) in informing the content to include best practices (Learning from Each Other, Roadmap to Seclusion and Restraint Free Mental Health Services) for training in reducing the use of restraints and seclusion. While the safety of staff and others is addressed by these, the training requirements focus primarily on patient safety related to the use of restraints and seclusion. Content that is focused on reducing related staff injury rates and severity is not nationally regulated, however it also serves to inform training program content e.g., (OSHA: Guidelines for Preventing Workplace Violence for Healthcare and Social Service Workers – OSHA 3148-01R, 2004).

Over the past 30 years, much has changed and been learned about preventing and managing violence and the dangers of restraint and seclusion use. The widely published report “Deadly Restraints” (Weiss et al 1998) highlighted the dangers and played a significant role in educating the public about them. More effective psychotropic medications, therapies (e.g., Behavioral Therapies and Interventions) and a greater understanding of the effects of trauma have resulted in numerous evidence based practices to prevent and
manage violence. These, as well as advances in the risk assessment field as well as philosophical shifts (e.g., a greater focus on recovery, person centered treatment) have significantly changed clinical practice.

This paper/presentation will focus on a training effort by the United States, State of Connecticut’s Department of Mental Health and Addiction Services (DMHAS) Using the Audio-Visual Moylan Assessment of Progressive Aggression Tool (MAPAT) to enhance its training design.

The United States, State of Connecticut’s Department of Mental Health and Addiction Services (DMHAS) is the state agency (mandated by CT state law) that serves adults (18 years of age and older) with psychiatric and/or substance use disorders who lack the financial means to obtain these services. Approximately 2600 direct care staff provides services in both in-patient and out-patient settings at seven state operated facilities located throughout the state. These include psychiatrists, medical doctors, psychologists, nurses, social workers, therapists from various disciplines and assistants to the professional staff. Four of the facilities provide hospital level inpatient care and are staffed by approximately 1600 professional and paraprofessional mental health staff. In 1994, after eight years of using a private vendor company’s training program to prevent and manage violent patient behavior, DMHAS hired two registered nurses to assess the safety and safety training needs of its employees. The assessment findings resulted in the recommendation 1) to develop a centralized Safety Education and Training Unit (established in the Office of the Commissioner, Division of Safety Services’) and 2) to self develop a training program (Collaborative Safety Strategies Training Program- initially entitled the Behavioral Management Strategies Training Program). The establishment of the centralized Safety Education and Training Unit (SETU) ensured that training content and instruction were standardized as well as being cost efficient. The training assessment involved an extensive literature review; an assessment of several training programs available at that time and a statewide assessment of training needs.

The key assessment findings that led to the decision to self develop the training included the need for a greater focus on clinical prevention and management of violence, e.g.: risk assessment, special populations and cultural diversity, the need for content and skill training on the risks of restraint use and how to apply mechanical restraints and a greater focus on preventing and responding to violence when working in the outpatient and homecare settings. The Department’s decision was based on the belief that its clinical and training resources could develop training that would have greater clinical content and would provide greater flexibility in making revisions in an efficient and cost effective manner. The benefits of self developed training have been largely realized in light of the many previously noted changes. The Safety Education and Training Unit is responsible for conducting Collaborative Safety Strategies Training for all newly hired and existing professional and paraprofessional direct care staff. Training for newly hired employees is conducted at a central location and annual review training is conducted on-site at the seven facilities. The CSS (Collaborative Safety Strategies) New Employee Training Program teaches direct care staff how to prevent and manage the risks associated with dangerous and/or violent patient behavior using a variety of therapeutic interventions and should they fail or be determined to be ineffective; how to intervene, including the use of physical and mechanical restraints or seclusion to protect the patient and others from harm and to reduce the rate and severity of injuries.

Training is provided in 3 formats:
- CSS New Employee 3 day training program (newly hired staff)
- CSS Annual In-patient Review five hour class (existing staff)
- CSS Annual Outpatient Review five hour class (existing staff)

The training meets the training requirements set forth by regulatory, licensing and accrediting bodies previously noted. More importantly, the content is grounded in the best clinical and safety training practices. Concepts that promote recovery, recognize the role of other factors (e.g. trauma) that contribute to violence, and a focus on prevention and the use of least restrictive interventions underlie the content.

The Collaborative Safety Strategies Annual Inpatient Review Training Program (CSS IR)

The CSS IR is taught to existing staff who work in four DMHAS in-patient settings. It consists of seven Modules that cover six overarching learning objectives. To successfully complete the course, staff must demonstrate knowledge by achieving a written test score of at least 80; actively participating in learning activities and accurately demonstrating the ability to perform physical skills as follows:

1. Create and maintain safe and therapeutic environments of care that are grounded in understanding the underlying causes of anger and related dangerous and violent behavior.
2. Use risk management strategies to prevent dangerous behavior from escalating to violence.
3. Use verbal and non-verbal communication with co-workers and patients in non-emergency and emergency situations to reduce the risks to staff, patients and others who are associated with dangerous and violent behavior.

4. Use a variety of safety strategies in escalating and crisis situations to reduce the risk of physically, medically and emotionally traumatizing effects resulting from dangerous and violent behavior and the use of Restraint/Seclusion.

5. Correctly use all of the CSS physical techniques in emergency situations and should they fail to be executed correctly, take immediate corrective action to reduce the rate and severity of injuries to staff, patients and others.

6. Use mechanical restraints and seclusion per DMHAS Restraint and Seclusion Policy’s and manufacturer’s instructions to prevent use related physical injury or death.

The seven modules include:

**Module One: Introduction and Overview**
The objectives and completion requirements are reviewed. A contextual framework is provided that addresses workplace violence and national injury rates for staff as well as DMHAS data regarding the use of restraints and seclusion.

**Module Two: Creating Safe and Therapeutic Environments**
Staff learns how to create and maintain safe and therapeutic environments of care that are grounded in understanding the underlying causes of anger and related dangerous and violent behavior. Two integrated models for understanding violence: the Cycle of Dangerous Behavior and phases of a Crisis are reviewed.

**Module Three: Physical Techniques (Protective Skills)**
Physical skills to protect against being grabbed (e.g., hair, wrists), strikes and chokes are taught using physical demonstration. Staff practices the skills and must provide an accurate return demonstration. A number of scenarios are practiced so that staff has the opportunity to dynamically use the skills.

**Module Four: Risk Management**
The hallmark of the CSS Annual Inpatient Review is its focus on risk management. Staff learns how to identify the major clinical, situational and environmental risk factors that increase the risk for violence, with a focus on triggering situations and situational awareness. Risk and protective factors are addressed that serve to inform critical thinking and decision making to determine interventions that have the greatest potential to succeed. The DMHAS Policy and philosophy for preventing and managing dangerous behavior are reviewed.

**Module Five: Strategies for Enhancing Safety and Interrupting the Cycle**
The focus of this Module is on early intervention. Staff learns the key elements of non-emergency and emergency planning for patients at risk for violent behavior and that pre-planning is essential. They learn that the 3 W’s (Sculli, Sine 2011) are an efficient and effective way to communicate in emerging behavioral emergencies. A number of verbal intervention skills are taught including using Conflict Resolution to resolve conflicts early; how to set limits effectively (recognizing that limit setting is often a trigger) and how to verbally de-escalate a patient who is escalating. They also learn that there are some patients for whom verbal interventions don’t work and/or are contraindicated and less—not more- interpersonal stimulation may help. This is all taught within the context that diagnosis, age, developmental considerations, gender issues, ethnicity and history of trauma may affect the way a patient reacts to physical contact, thus early verbal and non-physical intervention is critical.

**Module Six: Managing a Code involving the use of Restraints (Physical and Mechanical) and Seclusion**
The focus of this module is on managing an emergency code using a variety of physically restrictive interventions (Escorts, Assists and Takedown) and seclusion along the continuum of least to most restrictive. Since most injuries occur during the process of containing violent behavior (Carmel & Hunter, 1989), there is a major focus on using the Team Approach during physical interventions and the roles of both the Team Leader and members in preventing the rate and severity of injuries. Restraint and seclusion application and discontinuation of mechanical restraints is practiced with a focus on their risks and how to manage them using the A-E assessment (Hollins, 2010).
Module Seven: Safety Strategies for Escalating and Crisis Situations

The focus of this module is on critical thinking and decision-making skills in escalating and crisis situations to reduce the risk of physically, medically, and emotionally traumatizing effects resulting from dangerous and violent behavior and the use of restraints and seclusion. Staff learns how to provide intensive care for the patient in restraints as well as for the staff who were involved in the crisis, and the importance of post-crisis debriefing activities for staff, the involved patient, and others who witnessed it, in order to reduce the associated medical, physical, and emotional risks.

Training Design

Adult learning principles serve as the foundation for course design. The CSS IR design uses a mix of lecture, facilitated discussions, written and oral learning activities, overheads, and physical skill training. In its early years, the CSS IR used role plays with the instructors playing the roles patients. Recommendations for training programs encourage a focus on core principles that can be applied to specific situations (Johnson, 2010). Case studies provide an excellent opportunity for staff to accomplish this. They provide the opportunity for staff to actively practice critical thinking and decision-making skills in the classroom setting. In 2012, the CSS Annual Inpatient Review Training Program was revised. One of the revision goals was to increase learning opportunities to practice and master clinical risk assessment, critical thinking, and decision-making skills. Over recent years, CSS had increasingly used simulated role play scenarios for this purpose. Simulated role plays were eliminated in 2011 as they were often met with resistance by employees that felt they were contrived. Thus they were ineffective. Instead, case studies with a photo (retrieved from ClipArt) to depict the patient are now presented and followed by a facilitated discussion that involves active questioning about the case to provide the opportunity for staff to practice and master risk assessment, critical thinking, and decision-making skills. Classroom participation significantly increased following the visual depiction of the patient with staff commenting that it appeared more realistic. This led the SETU to explore making a video scenario and had the internal resources to accomplish it.

In March 2012, Sharon Ciarlo, as part of the literature review, read the article entitled, Frequency of assault and severity of injury of psychiatric nurses in relation to the nurses' decision to restrain (Moylan, Cullinan 2011) and learned of the Moylan Assessment of Progressive Aggression Tool (MAPAT). Permission to use the MAPAT in CSS Training was obtained. In September 2012, the MAPAT videotape was implemented into the Collaborative Safety Strategies Annual In-patient Review (CSS-IR) Training. Prior to implementation, the nine Safety Education Instructors conducting the training were trained in its use. The MAPAT is an instrument that has been in use for the purposes of training and evaluation in relation to decision making by psychiatric nurses in situations of patient aggression. It has also been used in research studies to identify nurses' decision to restrain aggressive patients and what factors or characteristics may influence the decision to restrain. The instrument was developed based on a thirty-year literature review from the disciplines of psychology, medicine, nursing, law enforcement, and governmental sources related to the trajectory of escalating aggression (Byrnes, 2003; Kay, Wolkenfeld, & Murrill, 1988; Lange, 1966; Metropolitan Nashville Police Department. 1999; Navis, 1987; Phillips & Nasr, 1983; Pisarcik, 1981; Silver & Yudofsky, 1987; Yudofsky et al., 1986). These sources supported that the vast majority of aggressive behavior (but not all) follows a predictable pattern which includes behavioral and verbal indicators that occur during the various phases of the aggression cycle. This literature also discusses how individual characteristics such as psychosis, substance abuse, emotional instability, and impulsive behavior can trigger aggressive episodes. Additionally, situational and environmental factors were identified which contribute to aggression.

Based on this information, an audio-visual depiction of a patient demonstrating the cycle of escalating aggression was made using professional actors. It is a 5 minute sequence with a time elapse recorded at the bottom of the screen. The behavior of the patient follows the trajectory described by Maier (1996 as cited in Moylan, 2009) and reflecting the concepts of the sources previously cited: beginning restlessness→tensing of small muscles and pacing→increased pacing and fisting of fingers→verbalizations increasingly pressured→tensing of facial muscles→increase in voice volume and large muscle tensioning→generalized verbal threats→specific threats of violence with discrete act of violence against property→violence against persons. Beginning restlessness→tensing of small muscles and pacing→increased pacing and fisting of fingers→verbalizations increasingly pressured→tensing of facial muscles→increase in voice volume and large muscle tensioning→generalized verbal threats→specific threats of violence with discrete act of violence against property→violence against persons.

After the film was made, it was then submitted to a panel of 10 nurse experts who held Master’s degrees and were Nurse Practitioners or Clinical Nurse Specialists in Psychiatry/ Mental health with a minimum of ten years of clinical practice. All ten of the nurses confirmed that the situation shown on the video was realistic and congruent with the cycle and patterns of aggressive behavior that they had witnessed multiple times throughout their careers establishing content validity. Additionally, it was submitted to 20
psychiatric staff nurses who agreed that the instrument appeared to be an accurate and realistic depiction of aggression as it occurs in the course of their practice. This supported face validity in that the instrument appears to portray what it is meant to portray. Although face validity has only superficial importance, it “should be included in every test for validity” (Treece & Treece, 1986, p. 265). Test-retest reliability was then established by 24 graduate psychiatric/mental health nurses who were asked to identify at what point in the progression of aggression the patient was an immediate danger to himself or others. Analysis using a Pearson Product-moment correlation resulted in an “r” of .89, giving strong support for reliability. The reliability was retested using 15 staff nurses and an “r” of .88 was obtained. The findings in relation to both of the test-retest studies are congruent with a level of reliability acceptable for use (Carmines & Geller).

The MAPAT is currently in use in several European countries and has been translated into Dutch. Testing done in 2012 by statistical and clinical experts from Kings College in England have confirmed the validity and reliability of the MAPAT.

The MAPAT is used at the end of the CSS-IR Risk Assessment module. This module teaches staff how to assess the risks of danger with a focus on situational risk assessment. It is played in its entirety and is followed by a facilitated discussion with key questions that include:

1. Were there things that you noticed about the situation immediately – specifically,
   a. Was there anything about the patient that was of concern? The focus here is on specific patient behaviors.
   b. Was there anything about the environment that was of concern? The focus here is on situational awareness, e.g., access to exit, items that could be dangerous, the fact that she was alone with him in a confined space.
2. What is the triggering event?
3. Were there other things that triggered him after she arrived? What were they?
4. What information is missing that would help you more thoroughly assess the risks and analyze the situation? We direct them to consider patient and staff risk and protective factors.

Discussion

The use of videos in training is an effective teaching and learning tool for case studies. Unlike a written scenario, where staff can read at their own pace, or re-read information to ensure that they haven’t missed key information, videos more accurately replicate real situations when not all information is thoroughly processed. The MAPAT is proving to be an excellent tool because of its accuracy in depicting a patient demonstrating the cycle of escalating aggression. It is used to help staff practice risk assessment, critical thinking and decision making skills. The facilitated discussion is focused on the clinical behavior of the patient; the situational and environmental risk factors, as well as at what points could/should the Nurse have intervened and what interventions should she have taken. After viewing the MAPAT, the inaccuracy in processing all the information becomes evident during the facilitated discussion. This provides an opportunity for staff to identify how their individual assumptions and attitudes as well as their knowledge level can impact their ability to understand and interpret the information and ultimately use sound clinical judgment to determine what interventions to take. It also reinforces the importance of communicating clinical observations with other staff and engaging them in critical thinking and decision making about the risk for violence. The discussion about the nurse’s actions, or lack thereof, is lively and provides the opportunity to reinforce how her lack of response contributed to the assault. It invariably raises the question about whether or not she was assessing the situation or whether or not her skills for intervening were appropriate in response to the behavior. While it is easy for staff to make judgments about what they saw and express their opinion on whether or not they would respond as the nurse did, it contributes to thoughtful individual reflection. Finally, the use of the MAPAT and related facilitated discussion provides the opportunity for making and defending clinical decisions. The accuracy of the video in depicting the cycle of escalating aggression including violent behavior provides an excellent opportunity for staff to practice and master the skills needed to reduce both the use of restraints and seclusion and the rate and severity of staff injuries.

Future training plans for its use include building a case study to accompany it as well as expand its use in the CSS New Employee Training Program. A current research study by the authors to evaluate the effectiveness of the MAPAT is in its preliminary phase. Data related to assault and injury rates and frequency of restraint and seclusion use will be examined.

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