Measured Response to Identified Suicide Risk and Violence: What You Need to Know About Psychiatric Patient Safety

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Within inpatient psychiatric settings exists evidence of a significant risk of violent incidents and incidents of deliberate self-harm. One of the most hidden and preventable mental health problems is the fact that approximately 1,500 suicides take place annually in inpatient hospital facilities throughout the United States. This article focuses on the advantages and disadvantages of risk and suicide assessment procedures while attempting to answer the following questions: What degree of risk currently exists on inpatient psychiatric facilities for harm to self and others? What can be done within the physical environment to protect the psychiatric patient? We discuss a combined risk and quality proactive approach to risk reduction through a safety equation integrating patient assessment, physical environment, program safety, and patient component to formalize a systems approach to the at-risk patient. [Brief Treatment and Crisis Intervention 5:121–141 (2005)]

KEY WORDS: risk assessment, actuarial tools, suicide, safety assessment, inpatient, suicide assessment, violence prevention, physical environment.

There is nothing easy when attempting to provide a safe environment for mentally ill patients who have been recently admitted to an inpatient psychiatric hospital facility. Challenges are literally around every corner, hidden within every nook and cranny. In this article, we discuss key concepts of patient safety within behavioral health care facilities with the overriding goal of preventing lethal consequences—patient suicides while under the monitoring of inpatient psychiatric staff. We present a combined quality and risk management approach to the establishment of a culture...
of safety. This approach encompasses four primary areas: The first is the assessment of patient potential for violence and suicidality. Second is the physical or built environment, focusing on aspects of and within the physical facility. The third area of focus is dedicated to programmatic approaches to patient safety. The fourth examines individual patient components that contribute to safety and risk factors.

We first provide an overview of known best practices in providing a safe treatment environment (built or physical environment) for mentally ill patients, focusing on available practice guidelines and evidence-based approaches to patient safety. Our focus then shifts to the patient component in patient-safety examining issues within the therapeutic milieu assessment, patient census, patient mix, or the combination of patient diagnosis on a given inpatient unit and staffing patterns. This, combined with patient assessment and the overall program approach to patient care, forms the facilities safety program. Finally, we review an approach to patient safety combining all outlined aspects into a consolidated approach to patient safety.

**Scope of the Problem**

The most significant risk factors for suicide include suffering from a severe mental disorder, such as psychosis or a mood disorder combined with substance abuse, and availability of a lethal method or suicide plan. Retrospective studies of deceased persons, also known as psychological autopsies, have consistently found that over 90% of individuals who die from suicide had two or more psychiatric diagnoses documented in their records. However, one of the most hidden mental health problems is inpatient suicides. Approximately 1,500 suicides take place in inpatient hospital units throughout the United States each year, and one third of these suicides take place while the high-risk patient is on 15-min checks (American Psychiatric Association [APA], 2003).

Several noteworthy studies have been completed on suicide methods and correlates of mentally ill persons who subsequently committed suicide either while in the hospital or within 1 year of discharge from the hospital. The majority of the suicides occurred in the community. When comparing hospital suicides to community suicides, the method of suicide seems especially significant. In the community, the most frequent method of suicide was with firearms. In contrast, 62% to 75% of the hospital-based suicides were from hanging or jumping from high places (Douglas, 2003; Shneidman, Farberow, & Leonard, 1962; Joint Commission on Accreditation of Healthcare Organizations, 1998; Kahne, 1968; Roberts, 1973). The implications of this research is that thorough suicide assessments and systematic patient safety protocols in psychiatric hospitals should both be major priorities.

In many instances, deaths by suicide can be prevented. When a patient verbalizes a suicidal threat and the plan to use a lethal method, it is imperative that the patient be involuntarily committed for a minimum of 48 to 72 hr for assessment and observation—including one-on-one observation. Rapid assessment, timely crisis intervention, medication stabilization, and placement in a secure facility with architectural barriers to suicide should be mandatory for all persons at imminent risk of suicide.

**Current Challenges to Providing Inpatient Psychiatric Safety**

Within the health care industry overall, and certainly in psychiatry, there are great challenges within the concept of “do no harm.” In 1999 the Institute of Medicine released its first report on
patient safety. This report is considered by most to be the “shot that was heard around the world” when addressing health care safety. This study, based on extrapolations, projected that 44,000 Americans die each year as the result of medical errors and that the number may be as high as 98,000. We drew a parallel between physician diagnostic errors resulting in patient deaths and psychiatrist’s diagnostic errors (inaccurate or incomplete suicide risk assessments) and medication-prescribing errors resulting in inpatient suicides and violent assaults on others in the inpatient environment. For example, documented evidence has shown that about one in every four mentally ill persons who was prescribed benzodiazepines—particularly Klonopin, with its long half-life—had a paradoxical reaction and rapidly became disinhibited, agitated, assaultive toward others, and/or suicidal in the hospital (Breggin, 1999). Yet, anecdotal reports suggest that in New Jersey alone, several psychiatrists in county-operated as well as private psychiatric facilities have continued to overmedicate mentally ill patients for many years with large doses of benzodiazepines and haloperidol injections.

However, behavioral health care is no stranger to the concept of protecting patients. For years behavioral health care facilities have provided standards, such as those for windows in psychiatric facilities that do not break and for shower rods that do. At the time of the Institute of Medicine report, the concept of patient safety seemed familiar to most psychiatric facility administrators and caregivers, who felt comfortable with methods established to provide patient safety.

The idea of the need to provide a safe environment for persons with severe mental illness is not new. The prediction of violence through risk assessments among a population of those who are seriously mentally ill is still being developed. Three forces have led to the attempt to develop better assessment tools to predict risk of violence toward self and/or others: the deinstitutionalization movement; civil rights and patient rights; and involuntary (civil) commitment proceedings. Deinstitutionalization—the closing of large and antiquated state mental hospitals—emerged as a way to create a less costly, less restrictive alternative to institutions while emphasizing the need to differentiate between inpatient and outpatient care criteria based on levels of risk (Glancy & Chaimowitz, 2005). The civil rights movement sparked the need for advocacy for persons with mental illness. Numerous civil commitment cases confirmed the need to invoke the professional opinion of psychiatrists or other mental health professionals in the determination of “dangerousness to self or others,” which has become the principal determinant of eligibility for involuntary commitment (Norko & Baranoski, 2005). The increased utilization of voluntary hospitalization for psychiatric patients further heightened the need to clarify criteria for voluntary versus involuntary commitment (Brakel, Parry, & Weiner, 1985; Glancy & Chaimowitz, 2005).

### Mental Illness and Violence

The difficulty in prediction of violence toward self or others stands despite numerous attempts to clarify risk factors within given populations. Many researchers (e.g., Diamond, 1974; Lansing et al., 1997; Roth, 1979; Shah, 1978; Stone, 1975) have attempted to critique the accuracy of prediction of violence within populations of psychiatric patients, with little success. The APA guideline for legislation on the psychiatric hospitalization of adults has stood as the primary source document on this topic. However, despite efforts to increase accuracy of assessing violence toward self or others, efforts have remained largely unsuccessful. The result has been an increased
responsibility on the part of psychiatrists to conduct this function, serving as an agent of social control (Bloom et al., 2005). This serves as somewhat of a catch-22 for psychiatrists because inability to complete accurate assessments may lead to the tendency to err on the side of institutionalization. But overprediction of harm is a consequence of attempting to predict a low-prevalence situation, which always leads to a large number of false positives.

Psychiatrists and social workers continue to struggle to develop more knowledge of factors related to suicide. Accepted predictors of risk are developed from a large number of studies that include various factors, such as demographic factors—specifically, being male over the age of 45; divorced or widowed; unemployed; experiencing socioeconomic stressors, such as high levels of debt; facing an inability to sustain day-to-day needs; or experiencing other psychosocial stressors. Predictors of violence toward self and others typically include the presence of comorbid psychiatric diagnoses such as depression, alcoholism, drug abuse, schizophrenia, and/or psychotic disorder. Predictors of imminent suicide risk include the presence of suicidal ideation and a specific plan; a history of suicide attempts, based on degree of lethality; and family history of suicide (Link, 1992; Link, Stueve, & Phelan, 1992; Morrissey, 2004; Swanson, Holzer, Gangu, & Jono, 1990).

Bush, Fawcett, and Jacobs (2003) have indicated three primary problems that limit the usefulness of currently understood correlates of suicide. First is the retrospective nature of previous studies. Most of the early studies compiled data after the suicide. This data collection method has a tendency to skew or distort the findings because persons associated with the cases most certainly recall interactions that seem to indicate, in retrospect, the individuals intent to end their lives. Passing comments, jokes, actions, and phrases are all considered possible signs that were missed. Additionally, this process tends to limit the possibility of rating symptom severity as a predictive correlate for suicide, thus limiting the effectiveness of previous studies.

A second area of concern is the establishment of a predictive timeline with respect to the act of suicide. When reviewing the case in retrospect, individuals may leave out specific indicators relevant to the case or misplace potential correlates within the timeline of the case autopsy. It is possible that persons may overlook certain presuicide behaviors that are indicative of a chronic risk and therefore predictive of the act’s occurring in the future. Yet, other actions and behaviors may be overstated, such as the better understood immediate risks observable within hours, days, or even weeks of the suicide. Therefore, the retrospective study makes it impossible to separate the chronic from the acute correlates for suicide. Within each of the stated issues is the issue of incompleteness of available data, for observations are based on snapshot recollections from a variety of observers who have knowledge of the suicide (Busch et al., 2003, p. 14).

The third identified problematic area is a lack of comparison groups. Without the presence of comparison groups, it is impossible to determine whether a correlate documented within the case was actually associated with the suicide or a clinical feature of an underlying disorder (e.g., depression, schizophrenia, addiction). Thus, it becomes impossible to determine if patients who are depressed and expressing suicidal ideation have a higher rate of suicide than those who are depressed and denying suicidal ideation (Bush et al., 2003, p. 15).

Bush and colleagues (2003) examined charts for 76 patients who committed suicide while in the hospital or immediately following discharge. For each case, the researchers evaluated the week before suicide looking for standard risk predictors and using items from the
Schedule for Affective Disorders and Schizophrenia (SADS) in order to determine the presence and severity of symptoms believed to correlate with acute suicide risk. With regard to standard suicide predictors, only 49% of those studied \((n = 37)\) had any prior suicide attempt; 39% \((n = 30)\) were admitted for suicidal ideation, but 78% denied suicidal ideation in their last communication with staff regarding potential suicide risk; and 46% \((n = 35)\) showed no evidence of psychosis. On the schedule ratings, 79% \((n = 60)\) met criteria for severe or extreme anxiety and/or agitation. The findings indicate that standard risk assessments were of limited value in protecting this group from suicide. The authors of this study concluded that adding severity of anxiety and agitation to current assessment may assist in identification of patients at acute risk for suicide, thus providing effective treatment interventions with the at-risk population (p. 14).

**Challenges in Protecting Mentally Ill Patients and Society**

At this point, it is important to note that even in those populations at highest risk, 84% of those studied were not violent. Even the most sophisticated methodology of predicting violence was less than 50% accurate in predicting violence among the general population. More state hospitals have closed in the 5 years from 1990 to 1995 than in the preceding 20 years. From 1990 to 1997, per capita state expenditures on mental health dropped 7%, to the point where states accounted for less than 2% of all dollars spent for mental health care. In 2001, mental health ranked among the top three priorities in only 17 of the 50 states. (Bazelon Center for Mental Health Law, 2001).

What is the impact of the states’ retreat from the responsibility of providing care for persons with mental illness? In some states, such as Massachusetts, where the state no longer provides any acute psychiatric hospital care, the burden and half of the cost has been turned over to the federally subsidized Medicaid program. The problem in this transition is that Medicaid covers only 80% of the cost in inpatient care within this state, leaving private hospitals to decide how to cover a 20% loss. To further complicate matters, uninsured patients who do not qualify for Medicaid coverage receive indigent or free care, as private institutions are required to admit these patients and absorb the costs of care—that is, if the hospital wishes to remain part of the Medicaid program.

The final blow lies in many states’ budget deficits, where mental health services and Medicaid—as well as other human service programs used by persons with chronic mental illness and substance abuse—are being targeted as the nation’s governors, along with Congress and Health and Human Services officials, begin talks aimed at fundamentally changing the Medicaid program to curb its rapidly rising costs. Health and Human Services secretary Michael Leavitt reported hopes to implement $60 billion dollars in spending cuts over the next 10 years (Advisory Board, 2005).

In light of the collapsing mental health treatment delivery system, hospitals will likely continue to see an increasingly acute population of psychiatric patients. This increase will be due largely to a lack of available beds, stricter admission criteria, prioritization of the sickest and most at-risk patients, and a continually shrinking pool of resources for the population of mentally ill seeking treatment (Hogan, 1999; Mossman, 2000).

We have developed an equation for patient safety based on the following components:

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\text{Patient assessment} + \text{Physical environment} + \text{Program safety} + \text{Patient component} = \text{Safety program}
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Patient Assessment

Assessment of Potential Risk for Violence

The National Health Service in the United Kingdom indicates that best practice discharge should document assessment of risk to harm self or others before release to the community. Furthermore, all parties should agree on any additional risk management strategies and clearly document them in the care or treatment plan (Glancy & Chaimowitz, 2005).

Yet, as discussed, considerable debate remains regarding the accuracy of such risk assessment tools. Early instruments tended to rely heavily on historical (static) data, such as the number of prior suicide attempts and deaths or violent assaults on others. This is based on the belief that historical data provide better reliability and stability of trend over time. In diametric contrast is the clinical practice model of risk assessment that relies on snapshots of the dynamic and changing nature of the client case across temporary states of treatment and stabilization. These opposite approaches (clinical prediction versus the use of standardized prediction scales) prompted practitioners to ask which type of risk assessment is a more accurate predictor of both short-term and long-term violence.

According to Mossman (2000), both types of prediction are equal in their abilities to predict violence in the short, medium, and long term. Others have argued that assessment or actuarial tools are more effective, saying that the use of clinical judgment to assess potential risk of violence should be used as an independent adjunct to scaled assessment tools. This debate seems to be mute in that most guides (Violence Risk Appraisal Guide) require clinical judgment as a component of protocol (Glancy & Chaimowitz, 2005).

The Historical Clinical Risk-20 (HCR-20) protocol combines historical data, clinical judgment, and standardized measures in a 20-item scale designed to identify critical factors indicative of risk for violent behavior within the mentally ill population. Ten items consider historical factors; five items focus on risk management; and five items evaluate current clinical variables, such as impulsivity, negativity, levels of insight, and response to treatment. Risk management factors include treatment compliance, social support, stress factors, and exposure to potentially destabilizing triggers for violence. All of the above are factors that can be observed and rated within the clinical environment, hence supporting clinical work (Douglas, Ogloff, Nicholls, & Grant, 1991; Glancy, 2005).

Assessment of Suicidality

Initial and ongoing assessment of suicidality is the foundation for providing safe care within the inpatient psychiatric setting. The APA (2003) has indicated that comprehensive suicide assessment should

- Identify psychiatric signs and symptoms
- Assess past suicidal behavior, including intent of self-injurious acts
- Identify family relationships, family history of suicide, mental illness, and dysfunction
- Identify current psychosocial stressors and nature of current crisis
- Identify client strengths and vulnerabilities
- Determine the degree of suicidality (high, medium, low—based on suicide scale)
- Determine suicide intent, any plan, and lethality
- History of suicide attempts or self-harm
- Describe psychosocial situation (score on the Global Assessment of Functioning scale)
- Establish a multiaxial diagnosis (according to the Diagnostic and Statistical Manual of
In 1999, suicidal ideation occurred in an estimated 5.6% of the U.S. population, with approximately 0.7% of the population attempting suicide. The incidence of completed suicide is much lower. In the general U.S. population, the incidence of suicide is approximately 10.7 suicides for every 100,000 persons, or 0.017% of the total population per year (APA, 2003). The rarity of suicide (even within groups of known risk factors) contributes to the impossibility of statistically predicting suicide.

To date, no definitive empirical evidence exists to prove the reliability and effectiveness of formal, structured assessment tools used to predict suicide attempts or completions (APA, 2003; Jacobs, 1999; Kanapaux, 2004; Sherer, 2003; Sullivan, 2005). According to Malone, Szanto, Corbitt, and Mann (1995), the use of unstructured assessments poses its own risks. Malone and colleagues reported that clinicians failed to document prior suicide attempts among admitted suicide patients nearly 25% of the time. Additionally, in 38% of discharge patients, clinicians failed to document recent suicidal ideation or planning assessments. Using chart reviews, Bush and colleagues (2003) found inadequate suicide assessments in 78% of inpatient completed suicides. Overall, 51% lacked documentation of prior suicide attempts; 29% were on no suicide precaution protocols; and 28% had no current self-harm contracts. Furthermore, of 50 patients who had documented information on suicidal ideation in their charts, 78% had documented denials of such ideation in their last contact with staff. Finally, 79% of the patients had documentation in their charts of severe levels of anxiety or agitation within the week prior to the complete suicide.

While there is no clear evidence that a structured clinical assessment tool is effective in preventing a potential inpatient suicide, such an assessment approach is helpful in providing a systematic template for staff in assessing suicidal ideation. A systematic protocol facilitates the use of a common language to communicate concerns about suicide risk and patient safety among staff. The APA guideline for the assessment and treatment of patients with suicide behavior is such a tool (APA, 2003). For a detailed discussion of evidence-based suicide assessment measures, see Roberts and Yeager’s (2005) chapter in the 3rd edition of the Crisis Intervention Handbook.

Physical Environment

In considering the safety of psychiatric inpatients, it is important to compile a list of physical safety features within the inpatient facility: It may seem overly simple to indicate a list of safety features that can improve the safety of an inpatient psychiatric unit. However, patient safety begins with an awareness of safety features maintained within the facility. The list simply provides a logical place to begin. Direct care staff are frequently not aware of actions taken by the management or hospital administration to ensure patient safety. A review of shifting staffing patterns provides evidence of numerous opportunities for communication to break down among the staff who are responsible for maintaining the safety of the care environment. Therefore, a comprehensive listing of safety initiatives accompanied by frequent review of this list facilitates both the frequency and the accuracy of communicating unit-based safety features.

What, then, are the risks within the physical environment of many psychiatric facilities that are considered within the usual and customary practice for maintaining national patient-safety standards? The greatest risk within the inpatient psychiatric facility is that of solid-core interior doors. According to the Joint Commission
on Accreditation of Healthcare Organizations (1998), 75% of hospital suicides are the result of hanging. Interior doors pose a hanging risk as a sheet or other material can be knotted and used over the door in a manner that will support body weight off the floor.

**Case Example 1**

Stan (not a real person), a 28-year-old male, was admitted following a fight with his significant other, who reported that Stan “went berserk”—throwing chairs, breaking down doors, and screaming that he was going to kill her. She called the police, who came and restrained Stan. He was transported by emergency medical services to the hospital where he was admitted.

The next morning he was agitated and anxious, but he denied suicidal ideation. Stan was given a provisional diagnosis of depression NOS, R/O (not otherwise specified, rule out) bipolar disorder; he was treated with Depakote and Zoloft.

In the afternoon of the second day of admission, Stan engaged in a shouting match with a peer about what channel the television in the dayroom should be on. He was confronted by staff and quietly led to seclusion for 35 min. Following this time, he was able to contract for safety, stating he would not harm himself or others. Stan remained on close observation (15-min checks). Stan was quiet for the remainder of the day. He had a good visit with his brother and verbalized futuristic plans. He took his evening meds without argument.

Stan slept until 10:30 a.m. Upon awakening, he spent a half hour in the day area, a half hour getting showered and dressed, and another half an hour at the community meeting. At 12:20, the unit aid was doing a head count and indicated that Stan was lying on his bed with his eyes open. At approximately 12:30 Stan’s roommate entered the room and saw the bathroom door half open. He thought Stan was getting ready for the next group meeting, until he noticed the belt wrapped around the door hinge. The roommate found Stan hanging from the door, feet off the floor, with a belt taut around his neck. He tried to lift Stan but was unable to do so. He ran to the nurses station and informed the staff that Stan was “trying hanging himself.” Staff raced to the room, and they called a code. Stan did not respond to interventions. He was pronounced dead at 12:43 p.m.

The facility’s investigation revealed that no one person could be held solely accountable for the event. Observations were completed within the time frame. The facility found evidence that the 15-min safety checks were done and the flow sheet was completed. The investigation revealed that the belt had been taken from the closet of another patient, one who was not on suicide precautions. Additional findings indicated that staff were provided timely in-service training on the unit’s policies and procedures and that they had been adequately trained on the provisions of special observations. Furthermore, the facility had taken steps in the prevention of hanging suicides, which are by far the most frequent form of inpatient suicides. Facilitators had removed potential hanging hazards—such as showerheads, non-breakaway bars in shower and toilet stalls, wardrobes, and exposed overhead pipes—and they had the approved hinges on the bathroom doors (Joint Commission on Accreditation of Healthcare Organizations, 1998).

**Hanging Risks**

Hanging risks on interior doors can be minimized by utilizing a single hinge (piano hinge) for the door and by removing the top 6 in. (15.24 cm) from the door to minimize hanging risk; however, this configuration will still provide a pinch point that may support body weight off the floor. Therefore, utilization of curtains, accordion doors, or pocket doors is...
preferable in the reduction of hanging risks on interior doors. See Figures 1 and 2.

Two additional areas of concern to address are attachment points that pose a hanging risk from a sitting or kneeling position and can be used as a twist attachment. The areas of greatest risk are areas where patients are provided privacy—for example, support bars (‘‘grab bars’’) in showers and bathrooms. Additionally, plumbing fixtures provide hanging risks. All of these risks can be eliminated by building safety features such as a stainless steel box around plumbing fixtures and by adding ‘‘plates’’ to grab bars that permit functionality but minimize hanging risk (see Figures 3 and 4).

A third level includes twist risks. These would most frequently utilize lower fixed items, such as sink drains, bed frames, and hard mounted doorstops. While these are considered to be slight risks, all aspects of safety and risk should be considered when assessing the relative degree of unit safety.

Identifying risks is only the beginning; facilities should consider implementing risk-reduction strategies. As units increase their awareness of safety features on the unit, it is quite possible that there will be questions regarding other safety concerns. As these questions arise, there becomes an opportunity to identify and implement risk-reduction strategies. For example, one facility’s team discussed the safety features of having plastic silverware and paper plates versus hard plastic plates, which patients could break and use to harm themselves. In a one hospital program, staff questioned why there was glass in the frames of the artwork within the psychiatric hospital lobby. Initially, administrators believed that this could not be possible; however, following a review of the artwork on the unit, indeed approximately half of the artwork was framed with glass. It is important to note that safety
precautions had been taken to secure the art to the wall; however, the concept of placing safety glass or Plexiglas had escaped the unit decoration efforts. This brings up an interesting question. How often had broken glass from artwork been used in a patient’s attempt to self-harm? The answer is never. Yet, all staff believed that taking a proactive approach to identify risk was more effective than assuming that the risk did not exist, because there had been no previous incidents related to broken glass from artwork.

This example gives us a chance to consider what we are calling “creep” factors—that is, that over time, activities, processes, procedures, and even unit improvements can introduce a dangerous item to the patient care environment. Recently, a hospital staff voiced concern in the response time of security to the unit when urgent situations required immediate security. Staff had accepted that the security response time was approximately 2 min. Recent response times by security had been upward to 4 to 5 min. While this increase in response time does not seem remarkable, in the time of psychiatric emergencies or crisis, minutes are very important. Investigation into this matter began with a call to security.

The head of security agreed that a 2-min response time was critical; however, in discussing the issue with staff, it became apparent that when the response time was set at 2 min, the location of security had been much closer to the psychiatric facility. Additionally, from the point when this policy was enacted, over 5 years ago, there had been a building completed between security and the psychiatric facility. This change added three doors and an elevator, all requiring time to swipe identification badges by security officers responding to emergency situations.

The creep factor is threefold in this case. First was the move of security farther from the psychiatric facility. Second was the construction of buildings between psychiatry and security. And third and final was the need for security to swipe their identification badges through care readers for access to each building that they were required to travel through. Timed drills indicated that the average response time was 5 min, a time considered unacceptable.
by all. The result was the establishment of a security office within the psychiatric facility in an effort to minimize the time of response to psychiatric emergencies.

Identifying Accepted Residual Risk

Once the facility team has completed a thorough and complete assessment of safety features of the environment, it must account for the concept of residual risk. Residual risk are the remaining safety issues that cannot be managed within the systems safety approach implemented within the physical environment. In reality, it is not physically possible to control for all risks present within the treatment environment. Therefore, there needs to be planning inclusive of a staffing pattern that serves as a protective factor to address residual risks that exist naturally within the care environment.

For example, patients at risk for self-harm but not severe enough to require one-to-one observations should be monitored every 5 min or less to ensure that patients cannot use unit-based items to carry out self-harm. A growing conventional wisdom recognizes that persons considered to be at even moderate risk will complete an act of self-harm in 5 min or less. When staff are utilized in a manner that optimizes their number within the therapeutic milieu, it is possible to implement randomized unit sweeps occurring within 5 min, using a roving psychiatric tech. While 15-min checks remain the standard, for many psychiatric inpatients this measure should not be counted on to maintain safety in the therapeutic milieu.

Potential Weapons

This topic brings us to the presence of items that can be used as weapons against staff and other patients. There are increasing numbers of patients seeking admission to psychiatric facilities with forensic histories and backgrounds. For this reason, facilitators conducting a unit safety assessment should consider items that can be utilized as weapons. For example, wooden

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**FIGURE 4**
Grab bars standard for ADA pose a hanging risk from a sitting position. These can be “plated” to minimize risk.
drawer units can be pulled out of furniture, splintered, and used to stab. Some hospital beds have cords, which represent a hanging risk and strangulation risk if used as a weapon. Some beds have mattress stops that can be removed and used as a weapon. Finally, in a search for heavy items, one unit sweep identified front panels that could be removed and utilized to hit staff or patients with.

**Case Example 2**

Shannon (not a real patient) was in her 13th year when she experienced her second psychiatric admission. Shannon had attempted suicide twice: one time by taking an overdose of Tylenol and the second by slashing her wrists. Although she was treated in general hospitals for these attempts, she was admitted only briefly (4 days) for the second attempt.

Shannon was adopted when she was a newborn. She attained developmental milestones within normal limits, and her biological parents had no history of substance abuse or mental illness. Aside from chronic asthma, controlled with Ventolin, Shannon was in good health. She reported she had been sexually active since age 12 and denied any history of sexual, physical, or emotional abuse. Shannon’s parents divorced when she was 5, and she lived with her adoptive mother for 6 years. She then went to live with her adoptive father in New Jersey. According to her adoptive parents, Shannon had difficulty adjusting to the divorce.

Shannon reported that she and her father argued constantly, especially about school attendance. She began failing courses in the eighth grade. She went on probation after the school charged her with possession of a weapon (knife); she was court-ordered to psychotherapy as part of her probation.

On the 3rd day of her admission, Shannon began to argue with a peer on the unit. The argument was broken up by staff, and both patients agreed to go to their rooms. Approximately 30 min later, both patients emerged from their rooms. They were in the common area when a confrontation again broke out. Shannon and her peer were fighting when her peer fell to the floor, the victim of a stab wound. The patient was taken to the emergency department and treated for her wounds.

The facility’s investigation revealed that Shannon had removed a louver from an exhaust vent in the shower. This louver was extremely sharp on one end and was used as a weapon in the fight. After the unit’s review of the event, all exhaust vents were covered with wire mesh to prevent the removal of louvers for potential use as weapons. See figures 5, 6, and 7.

**Safety Rounds**

To identify changes occurring over time within the treatment environment, safety rounds should be implemented in psychiatric facilities to identify and reduce risk. Even when utilizing recommended safety devices, facilities must test these and consider potential risk factors for all items introduced into the patient care environment. For example, the specially designed hanger (Figure 8) that will not support body weight could be a risk if a patient were to push staff into this hanger given its placement on the wall.

Unit members should be aware that while manual beds present less risk owing to fewer wires, there is still a crush factor that must be considered (Figure 9). Figure 10 demonstrates the patient’s ability to self-harm using the bed as a crush tool.

Units should be monitored for items that can be broken down into parts used as weapons; for example, commonly used linen containers can be broken down into several parts as potential weapons (Figure 11).

Finally, items should be considered in combination. In Figure 12, the hospital bed
has been anchored to the floor to prevent its being used as a barricade; however, when used with the nightstand and chair, barricading the door is possible (Figure 13).

**Monitoring the Physical Environment**

Safety rounds should occur frequently, at least weekly, to set the stage for safety on the unit. Each safety round should be conducted with the intention of testing everything within the treatment environment. On a daily basis, there are a variety of changes that occur within the treatment environment. Psychiatric staff, nursing staff, and housekeeping may introduce new items into the therapeutic environment daily, and any number of potentially dangerous items can find their way onto a secure unit without staff’s considering their potential safety risk.

Psychiatric facility staff should at all times maintain an acute awareness of the cleaning solutions being used on the unit. Many facilitators have argued that they use only nontoxic cleaning agents. However, daily staff safety rounds and monthly administrative safety rounds have proven effective in identifying a variety of toxic substances and dangerous items that have been introduced to the treatment environment by housekeeping maintenance and direct care staff for specific purposes. Common toxic cleaning and maintenance solutions include, but are not limited to, acetate, butyl alcohol, paint thinner, and floor- and carpet-cleaning solutions.

The bottom line is that human nature seeks a product that will work for the task at hand. Regardless of patient safety issues, staff at all levels will rationalize the need to keep identified risk items on the unit for specific purposes. Staff frequently forget the presence of the item within the care environment. Routine safety checks teach staff why it is important to keep track of risk items within the patient care environment. If staff are routinely involved in safety checks, there is a stronger likelihood that they will learn to prevent risk through monitoring the care environment as a matter of routine.

Unit safety rounds should increase to awareness of potential weapons that are on the unit. Items of risk range from tools that are carried to the unit by maintenance staff, items on cleaning carts, and implements used by physicians and nursing staff. For example, a stethoscope left in a patient’s room can quickly become a mechanism...
for strangulation of staff or another patient. Mop and broom handles can be used as weapons, specifically by an individual trained in martial arts. Broken or unsafe furniture, cabinets, and heavy carts used for moving materials from unit to unit all pose safety risks.

**Annual Safety Audits: Including Outside Perspectives**

It is a good idea to include a new, different, or fresh set of eyes when examining the physical environment. Persons frequently become desensitized to their physical working environments. Through the views of outsiders, items considered to be safe can be identified as being unsafe either alone or in conjunction with other items. An example of this is a facility’s patient who combined items found within the room (as shown here) to barricade the door. This facility went to great lengths in discussing having a special doorframe developed that could be disassembled by using four safety screws. Another facility’s approach was to place a small circular saw on each unit. This saw was preset to cut through all but one eighth of an inch of the door to facilitate quick entrance into the room in the case of an emergency. Yet, a third facility took the idea of the cut door and built doors that are breakaway, split with only two quarter-inch wood dowels (about 0.64 cm) behind the veneer of the door.

Historically, interactions between mental health facilities have been limited. As time progresses, facilities are becoming open to sharing aggregate data and common concerns to improve the safety of the patient. Collaborative interactions and benchmark data to establish quality indicators are all positive steps toward the development of safer patient–consumer facilities.

**Programmatic Safety: Leadership**

In addressing program safety, leadership comprises three primary areas: experience, availability, and understanding the patient safety plan.
Experience

Not only does experience speak to the administration of the facility, but it also includes experiences of facility line staff, managers, support staff, and consumer volunteers. True leadership develops an open process and utilizes information to improve programming that is inclusive of all interactions, thus providing a supportive environment for patients. In such an environment, leadership is not based on developing policy and implementing rules. Leadership is the willingness to examine the reasoning behind rule development and that for removal of the rule when doing so is in advocacy of the patient. More important, when leaders see the environment as being interactive with patient–consumer care, safety has the opportunity to become an active ingredient in the therapeutic environment.

Availability

Availability of staff means more than staff-to-patient ratio. Availability has to do with program development and implementation. For example, staff frequently detest participating in programming. Given the opportunity, staff will remain focused on tasks within the nursing station. One of the more innovative programs has moved toward closing nursing stations. In this example, the former areas dedicated to nursing stations have become storage and resource areas. Documentation occurs with wireless laptop computers, with staff consistently circulating in the patient care area.

Another form of availability within the area of patient–consumer care is utilizing recovering consumers as unit volunteers. Through peer interaction, volunteers often become an effective means for reducing impulse self-harm behaviors. Additionally, this interaction serves the important role of peer modeling. Patients and consumers of care frequently report being able to relate to the consumer volunteers. They are seen as persons who have been able to work through similar issues and who are less threatening and more understanding to their needs. Patients feel secure in trusting volunteers and comfortable in sharing information with them.

FIGURE 9
Be certain handles have been placed in a manner to minimize patient use to cause injury via crush points.

FIGURE 10
Bed frames should be checked to assure safety stops are in place to minimize crush risk to patients.
**Understanding the Safety Plan**

Understanding the safety plan is a key element of change. As stated, education about the reasoning behind the safety plan and the staff’s involvement in developing the facility’s safety plan are key to the development of effective safety initiatives. Once the safety plan is established, frequent review and critical assessment facilitate keeping the plan alive in the eyes of the staff and not simply regressing to a policy that exists in the administrator’s office.

Critical review of incidents that fall within the scope of the safety plan should include mandatory attendance of the facility’s medical director, nursing directors and nursing staff, quality officer, and risk manager. Formal debriefings should explicitly separate facts, feelings, and planning processes to provide successful adaptation of the unit to identified safety issues. Finally, the debriefing should include communication to all staff persons across the continuum of care in a nonblaming or nonpunitive manner.

**Proactive Risk–Quality Approach**

**Aligning Policy, Practice, and Process**

For the purposes of implementation, development of policies without efforts to involve direct care staff may result in communication disconnects that diminish the effectiveness of safety programming, essentially developing an estrangement between knowing and doing. To enhance performance and application of programmatic safety, direct care staff should be involved in all areas of planning. All staff should feel comfortable interjecting at any stage of the safety program, stating whether a practice is usual or not.

Once the initial safety plan is developed, it should be presented to all staff for feedback and
potential areas of refinement. The goal is to develop a plan of action that mirrors current practice, as well as refines the practice of staff. In most cases, staff are eager to improve care. Most are willing to offer potential solutions if they believe that their suggestions will be incorporated into the overall safety plan. The result is a clearly articulated approach to inpatient psychiatric safety programming that incorporates staff input and is thus more likely to be applied as developed.

**Aggregating Risk Populations**

Patient placement within the facility should be given consideration when admitting high-risk patients. Some may argue that all patients seeking admission are at risk for self-harm. While this is true to a greater or lesser degree per individual, there are some patients that have histories of self-harm, indicating the need for caution. Placing high-risk patients near staffing travel patterns provides greater degrees of visibility. Previous schools of thought indicated placing known risk groups near the nursing station. This may not be the best practice. After all, what are nursing staff doing in the nursing station? They are documenting, checking off orders, preparing medications. They are busy and unable to focus on the high-risk patient population. Thus, placing patients at risk near the nursing station provides a false sense of security.

When feasible, facilities should adopt electronic medical records. This technology provides mobility while preserving confidential patient information. Laptop computers, notepads, and personal digit assistants (PDAs) are also efficient in preventing errors; for example, medication errors are minimized through bar code technology, ensuring that the right patient receives the right medication at the right time. The process of aggregating at-risk patients suggests consideration of patient mix on the unit to staffing patterns. Proving a mixture of diagnoses and levels of acuity in various areas of the unit assist in equitable distribution of the workload. Additionally, aggregating
populations provides distance among agitated patients, who may be at risk for altercations between each other or with staff. All too often, patient placement is based on room availability rather than therapeutic reasons. In general, consideration should be given to the patient mix for any area of the psychiatric facility.

**Considering Multiple-Crisis Events**

Most facilities have implemented rapid-response teams, specifically trained to manage acute outbursts, acts of self-harm, elopement, and the like. Most teams are highly skilled and highly trained, with each member knowing and anticipating the actions of other team members in difficult situations. But what happens when more than one event occurs at the same time on the same unit? Is your staff trained and prepared to address multiple events occurring at the same time?

What is the plan if, for example, you have a highly agitated psychotic patient striking out against staff, and as the crisis team responds, another patient slips through the locked unit doors, bounds onto the elevator, and is seconds away from successful elopement? Do rapid-response team members know what to do in this case? Would the team split into two groups? Would they count on unit staff to race after the elopement risk? If the staff members are chasing the elopement risk, who is watching the patients remaining on the unit?

**Building on Best Practices**

It is wise to seek best practices and to think of the ways that these can be applied to facilities. Examining the literature serves as the foundation for taking action based on the utilization of scales to determine patient risk for violence and alcohol withdrawal, as well as the application of clinical practice guidelines and algorithms to guide practices on the unit.

Facilitators should conduct a literature review in order to familiarize their staffs with the most recent practices in patient safety. They should also utilize listservs, such as that of the Joint Commission on Accreditation of Healthcare Organizations (http://www.jcaho.org), to keep abreast of changes and updates to clinical practice areas.

It is important to communicate the reasoning behind patient safety decisions, with the basis of decisions being rooted in evidence. An important benefit to this is the opening of channels of communication. Staff, when given the opportunity to conduct literature reviews, can provide an important feedback loop. Current information provides greater protection against known risk factors, a basis for decision making and program implementation, and an important method for opening channels of communication within a facility.

Once the communication is flowing well within a facility, external comparison should be sought. Participation in benchmarking processes is one method to answer the question “How are we doing?” It is important to benchmark with similar facilities, those with similar census, patient mix, and staffing patterns. This provides an clear picture to how effective safety interventions have been. Facilitators should focus on key areas of patient safety, such as falls per 1,000 patient days, episodes of restraint and seclusion, patient elopement, and incidents of violence.

An additional measure of effectiveness is to compare a facility’s standards against national standards, benchmarks for the aforementioned areas. The Substance Abuse Mental Health Services Administration provides examples of benchmarks, serving as local, state, or national measures of restraint, seclusion, and falls. Most are presented in a format that controls for factors within the facility that would lead to errors in reporting of events. For example, the restraint and seclusion data are presented as
a ratio, such as that of episodes per 1,000 hr. This ratio controls for variation in census. Additionally, this information is presented in the most appropriate statistical format—for example, measuring median restraint episodes, thus controlling for outliers that may skew the data.

Finally, collaboration with other like facilities provides an opportunity that goes beyond the numbers of quality and risk factors. Collaboration in the truest sense provides an opportunity for staff from one facility to visit another and to look at unit safety practices with fresh eyes. This is important because items that pose safety risk have the tendency to find their way into the care environment. The application of fresh eyes addresses this "creep factor"—that is, the return of unsafe fixtures such as chords, sharp objects, and fall-risk items.

**Conclusion**

While the debate continues on the utilization of actuarial scaling tools as opposed to current practice of clinical prediction within the context of clinical practice, the emergence of an increasingly acute population is driving the need to demonstrate better methodologies for assessing, reassessing, and tracking patterns of violence, self-harm, and harm to others in the arena of inpatient psychiatric treatment. As clinical evidence grows, this issue will become a standard-of-care issue. Eventually, risk assessment will be a standard component of clinical psychiatric practice. It is our hope that this article gives readers a new perspective with which to view their treatment environments, leading them to conclusions regarding the safety of the environment previously overlooked.

A combined risk management and quality improvement approach provides the ability to identify, define, monitor, and measure risk factors and programmatic deficits. The goal becomes to build treatment programming in a manner that incorporates best practices of patient safety not only into the program but also into the treatment environment. The role of physicians, nurses, social workers, support staff, and facility engineers are becoming clear. What is needed is an interdisciplinary, interactive approach to program safety incorporating the views of consumers and families as our knowledge of patient safety continues to grow and evolve into subtle changes that have the potential to determine the fate of patients seeking the safe haven of inpatient psychiatric care.

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