Chapter 19
Patient Safety in Behavioral Health

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"Mistakes are a fact of life. It is the response to error that counts."

Nikki Giovanni

Introduction

Behavioral health patients pose unique and complex safety challenges in the modern healthcare environment. They may enter the hospital setting with a psychiatric diagnosis in addition to medical comorbidities and/or co-occurring addictive disorders. Therefore, it is imperative that healthcare organizations have well-established policies and procedures to assess safety risks, provide targeted interventions, communicate across disciplines/departments, and include all necessary stakeholders in the process.

Overall, a culture of good teamwork should be fostered by the organization that places high value on respect, communication, role responsibility, and defined steps to escalate patient safety concerns. In addition, an organization should undertake a comprehensive risk analysis of potential safety pitfalls.

There are two basic analytic approaches that may be used to design safe systems for behavioral health patients. The first is a proactive approach involving

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multidisciplinary teamwork to examine the process of care from referral to discharge and then considering the possibilities for error at each step. The second is the "causal method," which involves learning from mistakes through a Root Cause Analysis (RCA) [1]. Of course, a cause is not something found but rather constructed from available evidence. Such causes of failure typically emerge from multiple sources [2]. These causes may range from direct to indirect, or from a true root cause to merely an opportunity for improvement. However, all causes should be appropriately addressed once identified through this process.

In this chapter, the causal method will be used by employing a "fishbone model" diagram in the following two cases to analyze systems breakdowns relating to (1) communication (2) staffing (3) education (4) medications (5) environment (6) patient (7) provider (8) treatment team (9) unit/hospital, and (10) Electronic Health Record (EHR).

Case Studies

Case Study 1: Aggressive Behavior Leading to Restraints and Patient/Staff Injury

Clinical Summary

Albert is a 34-year-old male with a past psychiatric history of paranoid schizophrenia brought into the psychiatric Emergency Room (ER) in full body restraint (FBR) by Emergency Medical Transport accompanied by the police for menacing and aggressive behavior in a local park. The Registered Nurse (RN) knew Albert from prior admissions and simply triaged him as, "found agitated in park." Since he was not acting aggressive at the time, he was released from the FBR and police left the ER. At that time, Albert promised that he would sit quietly, so he was not given any medications and was left alone in a cubicle around the corner from the nursing station. After about 45 min, he again became agitated and began to spit at staff. He was seen by the physician-in-charge and was administered Haldol 5 mg and Ativan 2 mg, both intramuscular, while simultaneously being placed in four-point mechanical restraint for safety. During placement of the restraint, the patient kicked one Patient Care Technician (PCT) who fell to the floor, and bit another PCT. The PCTs left the ER to receive further evaluation. Albert continued to yell loudly at anyone passing by and violently attempted to remove the restraint. Thirty minutes later, he was given another dose of Haldol 5 mg and Ativan 2 mg by a second physician because staff were fearful of another violent outburst. He soon fell sleep and woke up 5 h later. The PCTs recorded all of these events on a "Q15 observation form." At that time, Albert asked to be released from the restraint. About an hour later, he complained to the RN of severe pain in the right wrist. An x-ray of the right wrist showed a fracture.
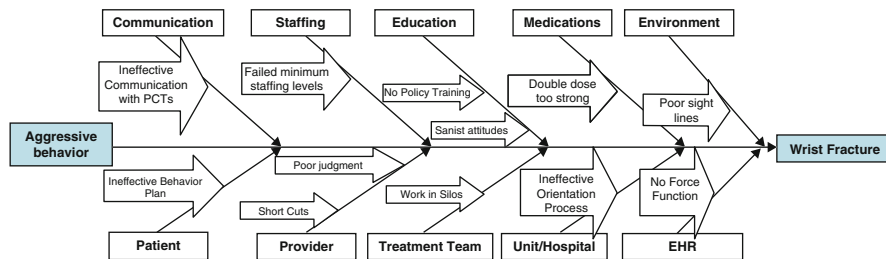
Fig. 19.1 Case 1—Aggressive behavior leading to restraints and patient/staff injury

Root Cause Analysis

The root cause analysis of the case revealed the following contributory factors that led to the adverse outcome of two staff members being injured and the patient sustaining an unintended injury to the wrist (Fig. 19.1).

1. Communication: The RN failed to verbally communicate Albert's prior aggressive behavior in the park to the PCTs. The PCTs had only occasionally observed him sitting quietly alone in the cubicle for a short time and did not consider him to be a threat to others. In general, it is beneficial for ER staff to share as much information as possible about newly arrived patients. This is because behavior may change from minute to minute depending on the patient's alternating moods. The shared knowledge of recent patient actions better prepares all staff to anticipate potential mood swings.
2. Staffing: The RN also failed to complete a comprehensive evaluation as required by policy. Instead, there was only the brief note describing the reason Albert was brought into the ER. The RN indicated that there was not sufficient time to fully complete the evaluation because the supervisor had not scheduled the minimum number of staff necessary for that shift. Due to the time constraint, the RN decided to skip Albert's full evaluation and spend time writing about other admissions. The full evaluation includes a standardized rating scale that would have resulted in a score that fell within the "high risk" range for aggression based on age, gender, diagnosis, involuntary admission status, and past psychiatric history including incidents of violence.
3. Education: The situation worsened when the restraints were misapplied by staff. The experienced PCTs in ER had recently been hastily replaced by two "agency" PCTs. Neither of the replacements had received behavioral health orientation training and did not know how to apply four-point mechanical restraints. Consequently, they applied the apparatus too tightly. Beyond that, the RN did not inform the PCTs about the 2-h limit and thus the restraints were not removed in a timely manner. Lastly, the PCTs failed to recognize the dangers associated with Albert's violent attempts to free himself. Based on subsequent staff interviews, it appeared they developed a "sanist" prejudice against Albert

because of his violent behavior. This attitude led them to ignore his obvious helplessness while in the restraints and caused him to suffer in a cruel and unusual manner. This type of reaction, if pervasive in the organization, would create a vulnerability to an individual tort claim, class action lawsuit, and/or federal investigation. Altogether, this lack of education led to his wrist fracture and put the hospital at risk for monetary damages and operating sanctions.

4. Medications: The double dose of STAT intramuscular medications rendered Albert incapable of fully appreciating the injury to his wrist. He was not able to recognize the damaging effects of his self-destructive movements in attempting to disengage the overly tight restraints or timely alert the staff to his injury.

5. Environment: Albert grew more agitated as time began to pass but the staff could not readily observe this behavior change because of poor sight lines into the cubicle. Consequently, no one on the team was in a position to anticipate his potentially dangerous behavior and prepare an adequate response strategy. As a result, the two PCTs sustained potentially serious occupational injuries and were no longer able to function as part of the ER treatment team.

6. Patient: Albert and the staff also missed out on opportunities to avert this adverse outcome through the "safe behavior plan." When he first arrived in the ER, there was no specific mention of how escalating behavior was to be identified and what countermeasures would be used by staff. Instead, there was only Albert's promise not to be violent if allowed to be freed from the FBR. There was no opportunity for Albert to describe how he might be calmed if the agitation began to manifest itself again. Perhaps he would have been more comfortable simply receiving the intramuscular medications. Furthermore, his active participation in the safe behavior plan might have provided some motivation for him to comply with the de-escalating efforts of the team.

7. Providers: Overall, the RN demonstrated poor judgment in the triage process. Instead of completing each task according to established procedures, shortcuts were taken to work around time constraints. The progress note was substituted for a comprehensive evaluation. Albert's promise "to behave" was substituted for a formal safe behavior plan. The handoff communication was omitted. Altogether, this attitude that shortcuts are permissible becomes a dangerous precedent in the workplace. Likewise, the second physician should have reassessed the patient instead of simply reordering medication based on escalating staff fears.

8. Treatment Team: There was an almost total lack of teamwork. Staff performed their own duties in silos. There was a lack of communication except during the emergency use of restraints. The team members did not offer important information or request it from one another. No one reviewed prior documentation. When staff compartmentalize their duties, it detracts from the team concept and increases the risk for adverse outcomes during transition periods.

9. Unit/Hospital: The hospital leadership was aware that PCTs routinely rotated to assignments without appropriate orientation but lacked an effective plan to ensure such targeted training. In general, there should be a system in place to assure all staff are appropriately oriented to the hospital and unit prior to assignment.

10. Medical Record: The RN was allowed to bypass the evaluation because there was no forcing function in the Electronic Health Record (EHR) that required its completion. In addition, the prior medical records were available in the EHR but there was no standard practice in place for staff review. In this case, it would have been helpful to have the EHR require the RN to complete a task rather than simply ignore it.

These root causes overlap to some extent and as such should not merely be approached in an isolated manner. It is beneficial to also consider any common threads that might exist among the identified factors. This concept will be explored later in the chapter under the heading of "Risk Reduction Strategies."

Case Study 2: Multiple Factors Leading to a Psychotic Inpatient Committing Suicide

Clinical Summary

Beauregard is a 23-year-old male college graduate with a past psychiatric history of recurrent major depression with psychosis and no known history of substance abuse. He was last admitted to inpatient psychiatry a year ago for a suicide attempt in which his mother found him unconscious in the garage after inhaling exhaust fumes. On this occasion, he was brought in to the ER by EMS, after his mother called 911 for help. She reported that Beauregard called her at work to say that he was leaving New Jersey and going to Pennsylvania because the neighbors were tormenting him with fireworks. His mother begged EMS to take her son to the hospital because there was no one in Pennsylvania to care for him. Beauregard was evaluated and admitted to the inpatient psychiatry unit for increased paranoia, suspiciousness, anxiousness, restlessness, and depressed mood. His prior medical records were on paper and not available to inpatient physicians through their new EHR. An initial treatment plan was made by the team while Beauregard waited outside the conference room even though he had actively participated in the treatment planning during his prior stays. Due to his increased agitation, he was placed on routine observation and started only on antidepressant medication. The following day, Beauregard took his medications and participated in all assigned activities but was unable to see the social worker who was attending a mandated, all day in-service training program. He tried to contact his mother but was unable to do so. His mother called the unit to tell them that she had no transportation that evening but would visit Beauregard the next day. That message was taken by the unit clerk but no one informed the patient. She also asked to speak to the physician-in-charge who was too busy at the time and never returned her call. Shortly after visiting hours ended, another patient saw Beauregard hanging by his knotted bed sheets from the loopable door hinge (that was to be replaced but awaiting hospital funding). An emergency code was initiated but Beauregard could not be resuscitated and was pronounced dead.
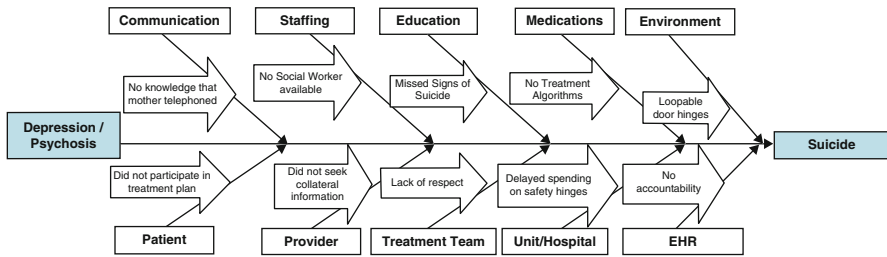
Fig. 19.2 Case 2—Multiple factors leading to psychotic inpatient committing suicide

Root Cause Analysis

The root cause analysis of the case revealed the following contributory factors (Fig. 19.2):

1. Communication: Despite his mother contacting the unit, Beauregard was never told of the telephone call. Perhaps this knowledge would have decreased his anxiety about her absence during visiting hours. In fact, there was no standard work in place to communicate outside information to patients. When creating communication protocols, it is necessary to include all stakeholders so that everyone has the information needed to support the treatment process.

2. Staffing: There was no back-up plan in place to fill the gap when the social worker was off the unit attending a training session. This could have been mitigated by rotating other staff onto the unit or planning the all-day training as two half-day sessions.

3. Education: When questioned about why the mother's telephone message was never shared with Beauregard, the clerk answered that she did not think it was as important as other duties. This demonstrated a lack of knowledge about the vital role that family members can play in the recovery effort. Also, staff's lack of understanding about the patient's agitation points to a gap in their clinical training. There is a need to provide ongoing education about the signs of impending suicide. If that type of training had been available, the staff may have made a better assessment about the potential for suicide in this case.

4. Medications: The patient was not started on anti-psychotics which would have reduced the potential of his command auditory hallucinations. It would have been helpful if appropriate treatment guidelines were used by the team.

5. Environment: In the Behavioral Health environment, it is imperative to minimize suicide risk by conducting an analysis of the potential environmental hazards. High on that list should be an assessment of door handles, hinges, and other loopable hardware. Likewise, close attention should be paid to sheets, blankets, towels, belts, and other items that may be fitted around the neck.

6. Patient: Beauregard was not invited to participate in the development of his treatment plan. He was aware of his role in the planning process but did not

proactively assert to have his voice heard by the team. While it is ultimately the team's responsibility to invite the patient into the process, the patient has the right to demand inclusion. This type of proactive participation is encouraged in the Wellness and Recovery literature [3].

7. Provider: The physician did not return the telephone call to seek out collateral information from Beauregard's mother. The information about his recent high risk behaviors would have fostered a better understanding of the seriousness of his condition.

8. Treatment Team: The treatment team should have included the patient in the planning process, especially because he was right outside the room at the time of discussion. This shows a lack of respect for the patient and his role as a team member.

9. Unit/Hospital: The administration was aware of the dangers associated with the current door hinge but decided to delay the purchase due to the costs. This type of purchase, especially identified through a proactive environmental risk analysis, should be prioritized or an alternate interim solution should be put in place.

10. Medical records: Although the staff were told to contact medical records for old paper charts, in practice no one ever called because there was no accountability built into the system. In such cases, it can be useful to add an attestation checkbox in the EHR that team members must check to affirm that they have received and reviewed the record.

Discussion

The cases described above highlight some of the typical harm risks encountered in behavioral health settings. In a recently published handbook, the American Psychiatric Association (APA) Committee on Patient Safety identified and categorized six types of safety risks commonly associated with this population. These can be described using the SAFE MD mnemonic and include **S**uicide, **A**ggressive Behavior, **F**alls, **E**lopement, **M**edical Comorbidity and **D**rug Errors [1]. Suicide and any serious adverse outcome relating to the other safety risks rise to the level of a sentinel event which The Joint Commission (TJC) defines as "any unanticipated event in a healthcare setting resulting in death or serious physical or psychological injury to a patient or patients, not related to the natural course of the patient's illness." [4] TJC standard LD.04.04.05 requires each accredited organization to define sentinel event for its own purposes in establishing mechanisms to identify, report, and manage these events. At a minimum, an organization's definition must include any occurrence that meets any of the following criteria: (1) Any unanticipated death or major permanent loss of function, not related to the natural course of the individual's illness or underlying condition; (2) Suicide of any individual served receiving care, treatment, or services in a staffed around-the-clock setting or within 72 h of discharge; (3) Abduction of any individual served receiving care, treatment, or services, and (4) Rape.
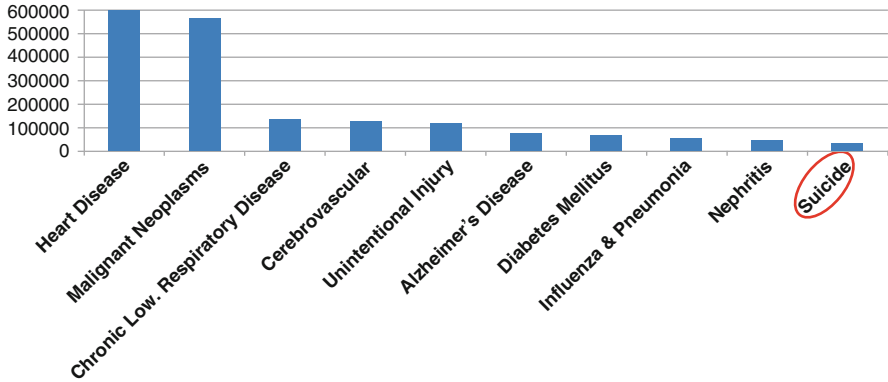
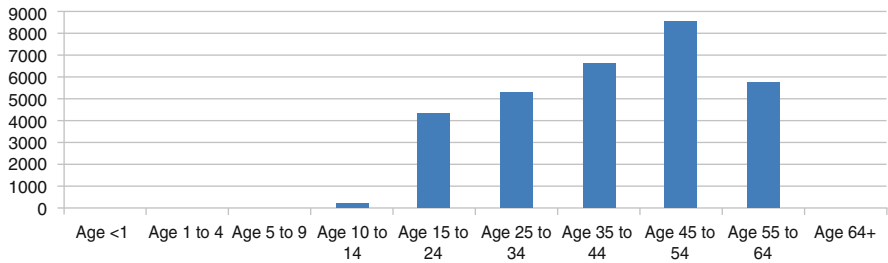**Fig. 19.3** US top ten death causes (2009)

Fig. 19.4 Number of US suicides by age category (2009)

Suicide

According to the most recently published Centers for Disease Control and Prevention (CDC) reports, suicide ranks as the tenth leading cause of death in the USA and within the top four leading causes of death for persons from age 10 to 54 (Figs. 19.3 and 19.4) [5].

Among suicides, approximately six percent (6 %) are committed during an inpatient stay [6]. Inpatient suicide was the most common sentinel event reported to TJC over a 10-year period (1995–2005). Inpatient suicides are viewed as the most avoidable and preventable because they occur in close proximity to trained clinical staff. Early in the admission is a clear high-risk period, but risk declines more slowly for patients with schizophrenia. Other risk factors include absence of support and presence of family conflict. The greatest *clinical* root cause of inpatient suicide is a failure to perform a comprehensive and timely risk assessment [7]. In one study, risk was not adequately assessed in about 60 % of suicides, or else the risk level was not accorded appropriate precautions [8]. For all inpatients, the assessment should
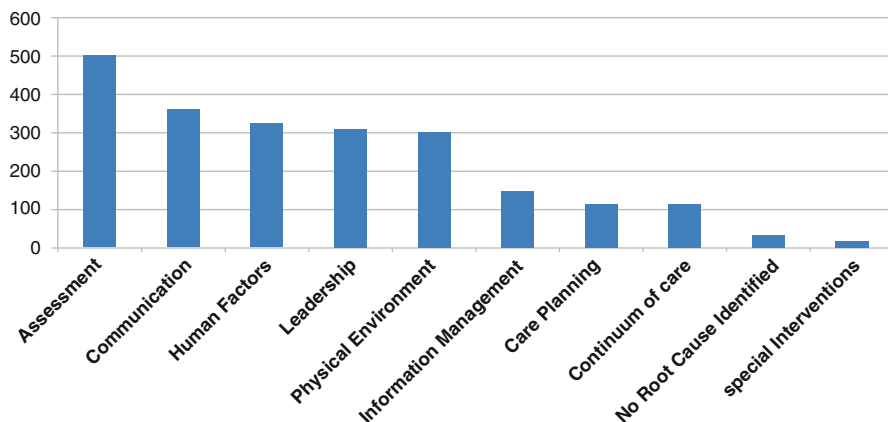
Fig. 19.5 Top ten root causes relating to suicide

begin upon admission with the use of a standardized tool that ideally produces a rating of the suicide risk. This rating is often expressed in terms of a "score" that can be used in conjunction with an assessment of the patient's thoughts, plans, means, and ability to complete the suicidal act. For those at risk of suicide, the assessment should be repeated following any traumatic occurrence during the stay and upon discharge. The risk of suicide is higher during the period immediately following discharge from inpatient psychiatric care than at any other time in a service user's life [9]. TJC considers suicide as a sentinel event when occurring to an individual receiving care, treatment or services in a staffed around-the-clock setting or within 72 h of discharge. The root causes of suicides reported to TJC are displayed in Fig. 19.5 [10].

In the case of Beauragard, many of these factors existed. There was a poor assessment by the provider who did not recognize the presence of command auditory hallucinations. Concurrently, there was a clear breakdown in communication among team members and in failing to inform the patient about the contact from his mother. In addition, the physical environment risk could have been mitigated with proactive action by hospital leadership.

Aggressive Behavior

Aggression in psychiatric settings is a complex workplace problem. Patient factors found to be related to violence include being a young male with a diagnosis of schizophrenia particularly with neurological impairment, having a history of violence, and being involuntarily admitted to the hospital [11]. Research examining staff factors found that the incidence of violence was higher on wards where staff
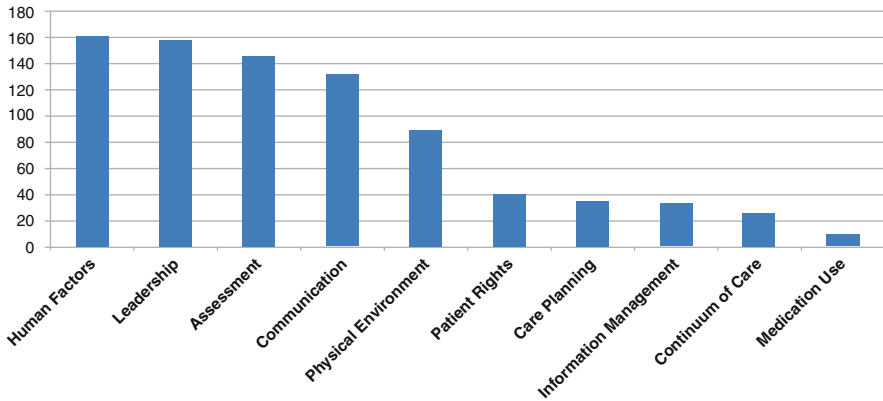
Fig. 19.6 Top ten root causes relating to aggression

members were uncertain of their roles or where larger proportions of shifts were worked by substitute nursing staff [11]. Similar to assessing suicide risk, the treatment team should use a combination of standardized rating tools, observations, and interviews in order to identify the likelihood of aggression on the unit. TJC tracks the aggression events of assault, rape, and homicide under a category named Criminal Events. The root causes of aggression reported to TJC are displayed in Fig. 19.6 [10].

Beyond the obvious direct harms associated with aggression, there is also indirect risk of injury when attempting to manage this behavior, such as injuries resulting from attempts to subdue an aggressor. In addition, patients are at risk for self-injury if held in seclusion.

In the case of Albert, human factors played a major role in the injuries that occurred to staff and the patient. The RN should have completed the risk assessment instead of taking shortcuts. The PCTs should have completed the observation forms to better monitor Albert's condition. Also, the second physician should have checked the prior medication administration record before ordering a second dose.

Falls

While the two cases above focused on suicide and aggression, there is a need to mitigate the other risks identified through SAFE MD. For example, falls may occur while patients are on behavioral health units or while experiencing altered mental status elsewhere in the hospital. There are many fall assessment tools available but the preferable ones will include the following risk factors: mental state impairment, gait and mobility, elimination problems, medications, and, fall history [12]. One study showed that behavioral health patients were more likely to fall if
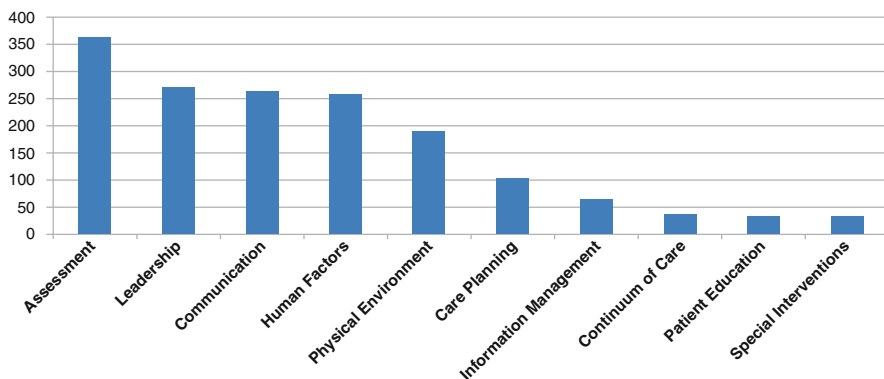
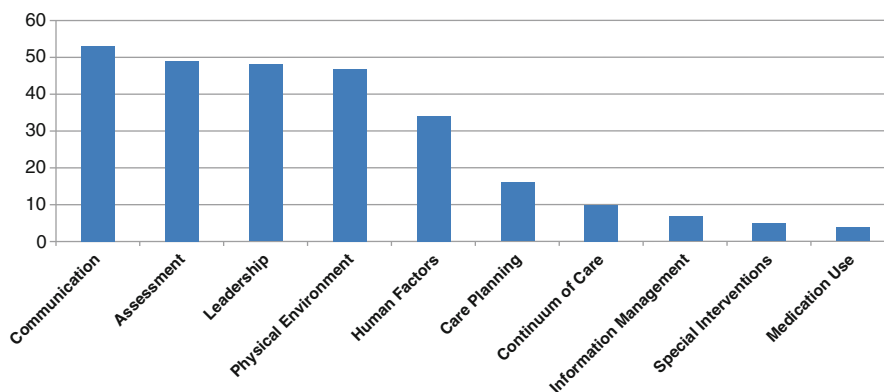**Fig. 19.7**   Top ten root causes relating to falls

Fig. 19.8   Top ten root causes relating to elopement

prescribed sedatives and/or hypnotics, experienced altered mental status, or elimination problems [13]. The root causes of falls reported to TJC are displayed in Fig. 19.7 [10].

Elopement

Elopement is always a concern when persons are unwillingly detained through civil commitment and sometimes even when housed on a voluntary status. In order to minimize elopement risk, a healthcare organization should create an environment conducive to ongoing observation of potential elopers. In addition, there should be procedures in place for searching for successful elopers and returning them to the unit if found. The root causes of elopements reported to TJC are displayed in Fig. 19.8 [10].
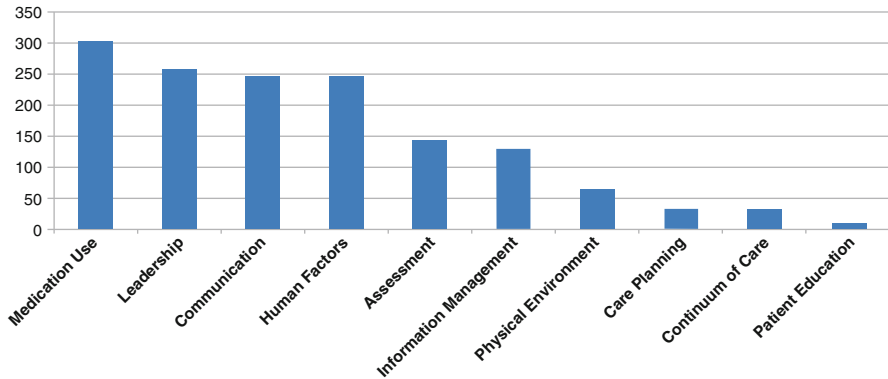
Fig. 19.9 Top ten root causes relating to medication error

Medical Comorbidity

It has long been acknowledged that behavioral health patients as a group were more likely than nonbehavioral health patients to have a co-occurring medical illness. For example, one recent study showed that persons with schizophrenia were more likely to have a greater number of conditions spanning several disease categories including cardiovascular, pulmonary, neurological, and endocrine disease [14]. These comorbidities pose greater prescribing challenges and increase the likelihood of adverse drug interactions.

Drugs

The prevalence of unintended and untoward drug–drug interactions is increasing in concert with both the increasing number of pharmaceuticals available and the number of patients on multiple medications. The risk of poly-pharmacy is found to be greater for patients who are on psychiatric medications such as antidepressants [15]. Therefore, prescribers should consider how medications may interact on the basis of their pharmacodynamics and pharmacokinetics along with the intended therapeutic use. The root causes of drug errors reported to TJC are displayed in Fig. 19.9 [10]:

Other Considerations

From a legal perspective, behavioral health patients may be admitted on a voluntary or involuntary basis, known as civil commitment. The general standard for involuntary civil commitment is whether or not the person poses a danger to self or others. An individual's "dangerousness" is clinically evaluated by one or more psychiatrists, but accurately predicting future harmful acts is far from an exact

science [16]. It is the element of dangerousness that heightens the need for safety planning from prudent care management to legal obligation for this population. These legal standards have evolved through the power of the US Constitution, which provides 8th Amendment protection from Cruel and Unusual Punishment and gives Congress the 13th Amendment right to enact laws aimed to prevent harms stemming from discrimination. While not a specific protected class, behavioral health patients may be subjected to "sanism," which has been defined as, "the irrational prejudice that causes, and is reflected in, prevailing social attitudes toward persons with mental disabilities" [17]. These rights are generally protected by using "least restrictive alternatives" such as limiting the use of restraints and seclusion that might otherwise cause undue physical and/or psychological injury. This safety principle can be extended by the use of "safe behavior plans" in which patients contract to behave in a certain manner or else be subject to a consequence of a mutually agreed upon staff intervention. This approach can only be utilized if the patient exhibits the competence to complete a safe behavior plan. If the patient does not have such competence upon admission, then competence should be periodically reassessed throughout the stay.

Risk Reduction Strategies

Once a root cause has been agreed upon, a corresponding corrective action plan should be put in place. This plan should reduce the risk of the occurrence repeating itself in the future. The following are some risk reduction strategies that may apply to a wide range of root causes.

Establish Team Roles and Responsibilities

A well-delineated team structure assists all staff to work together. It is helpful to define the team membership, size, coordination of duties, and leadership lines. Often, it is just assumed that staff will perform their individual responsibilities and blend seamlessly together in the process. However, without clearly coordinated roles they are more likely to operate within the narrow silos of their clinical expertise. This lack of coordination could cause patients' needs to go unidentified or unattended thereby increasing safety risks.

Establish Work Standards for Communicating Clinical Information

One method of sharing such information is through an interdisciplinary SBAR (Situation—Background—Assessment—Recommendation/Request) handoff among

staff. This is a technique for communicating critical information that requires immediate attention and action concerning a patient's condition. SBAR provides a description of what is happening now, the clinical context, a general assessment of any problems, and an approach to correcting any problems. The SBAR is ideally given multiple times during the day in a short, huddle style. In addition to the SBAR technique, staff should be made aware of how to expeditiously escalate concerns when there is a change in patient behavior.

Establish Clear Guidelines for Escalating Safety Concerns

Once the roles and work standards are in place, it is important for team members to have a mutually supportive method to escalate any perceived emerging safety issues. Sometimes staff are reluctant to challenge team leaders in fear of offending egos, overstepping professional boundaries, and/or retaliation. These fears must be put aside when they have an overriding safety concern. It becomes possible to allay such concerns if there is an organizational commitment to creating a culture whereby staff can respectfully advocate for the patient in a firm and assertive manner.

Conduct Ongoing Environmental Risk Audits

Assemble a multidisciplinary team to periodically assess environmental risks. There are audit tools available such as the United States Department of Veteran Affairs National Center for Patient Safety's "Mental Health Environment of Care Checklist" [18]. This checklist was primarily designed to reduce the risk of suicide but is also useful for identifying objects that might be used in aggression toward others.

Promote Culture of Respect and Sensitivity to Potential Sanist Attitudes

It is a fundamental principle that all persons deserve to be treated with dignity and respect. However, due to many largely unspoken myths about the underlying etiology of mental disability, staff may unwittingly dismiss important warning signs. For example, an increased volume of speech may be perceived as a sign of escalating aggression when in fact the patient is experiencing physical distress and simply lacks the cognition skills to identify and articulate the pain sensation. Beyond this, staff sometimes "blame" behavioral health patients for aggressive actions and feel justified in punishing them by using excessive force in return. This is not meant to minimize the importance of staff safety when it is necessary to resort to self defense. However, no force should be applied to satisfy angry motives or exceed

the minimum amount of force required to maintain the safety of all persons in the behavioral health environment.

Utilize Safe Behavior Plans

The use of safe behavior plans presumes that there is mutual respect between patient and staff to be able to honor their agreements. Furthermore, these plans reinforce that the behavioral health patient has choices and is willing to accept the agreed upon consequences if not adhering to the contract. Overall, it is a formidable tool for promoting self-determination, self-esteem, and status as an important decision-maker in treatment.

Conclusion

The Behavioral Health patient poses unique safety risks as illustrated by the two case studies. The lessons learned from these cases include:

- Complete individualized risk assessments as a basis to formulate a clinical evaluation of potential for harm.
- Make sure all staff have received appropriate competency training.
- Use risk reduction strategies that balance safety concerns and individual liberty rights.
- Foster a culture that centers around respect, communication, and teamwork.
- Promote awareness of the insidious dangers of sanism.

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