PSNet
PATIENT SAFETY NETWORK

Suicide Risk in the Hospital

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The Case

A 37-year-old woman with a past medical history of depression, anxiety, and posttraumatic stress disorder presented to the emergency department (ED) after a suicide attempt. She overdosed on 3–4 tablets each of alprazolam (a sedative) and gabapentin (a pain medication) and then cut both of her forearms with a kitchen knife. Upon presentation to the ED, the patient endorsed active suicidality. She had no previous suicide attempts. Her physical examination was significant for a tearful, depressed affect and superficial lacerations to the bilateral forearms, including a 3 cm laceration on the left forearm.

The patient's left forearm laceration was sutured and bandaged with gauze padding. The patient was observed for a period of several hours postingestion, and she was evaluated by a psychiatrist who placed an involuntary legal hold due to high risk of self-harm. She was then transferred to the inpatient psychiatric unit. On arriving to the unit, the patient asked to use the bathroom. She then unwrapped the gauze bandage from her wrist, wrapped it around her neck and over the shower bar in the bathroom, and attempted to hang herself.

Fortunately, a staff member heard a noise from the bathroom, immediately entered, and cut the gauze before the patient was seriously injured. The patient was transferred back to the ED, where she was found to have superficial abrasions to her neck but an otherwise normal physical exam. A CT scan of the head and cervical spine was obtained, which was normal. She was ultimately readmitted to the inpatient psychiatric unit for further treatment of her depression and suicidality.

The Commentary

Commentary by Peter D. Mills, PhD, MS

Suicide is the 10th leading cause of death in the United States, resulting in the deaths of more than 42,500 people in 2014.(1) The Centers for Disease Control and Prevention estimates that in 2013, 9.3 million adults had some form of suicidal ideation, 2.7 million formulated a plan, and 1.3 million attempted suicide.(2) In addition, 494,169 people were treated for self-harm in emergency departments.(2) The American

Psychiatric Association reported in 2003 that approximately 1500 completed suicides take place in inpatient hospital units in the US each year and, despite focused efforts, one-third of these occur while the patient is being observed with 15-minute checks.(3) In a recent international meta-analysis, Walsh and colleagues (4) found a pooled estimate of 147 suicides per 100,000 inpatient years (95% CI: 138-156) and the estimated number of admissions per suicide to be 676 (95% CI: 604-755). Risk factors for inpatient suicide include affective disorders, depressive symptoms, schizophrenia, previous self-harm, and recently being admitted to the unit.(5-7) In addition, factors such as acute anxiety and sleeplessness, comorbid substance abuse, chronic illness, pain, and psychosocial stressors (e.g., job loss, divorce, or separation from children) may increase suicide risk.(6)

In this case, the patient has several risk factors including affective disorder, depressive symptoms, and most importantly, a recent serious suicide attempt. Patients who are not well known to the inpatient staff and have this cluster of symptoms should be placed on one-to-one observation until a thorough evaluation can be completed and the patient's mood stabilized. In a recent study of adverse events occurring on mental health units in the Veterans Health Administration (VHA), we found that the primary root causes for suicide attempts on mental health units included poor communication of risk, problems with the observation protocols, need for more standardized assessment and treatment protocols, and need for staff training.(8) In this case, it is not clear if the patient was on one-to-one observation, but we do know that the patient was allowed to use the bathroom alone. Patients under observation in emergency departments and mental health units are sometimes allowed to use the bathroom unattended, giving them an opportunity for self-harm.(9) It is critical to develop a protocol for one-to-one observation and train staff in its use. It can be socially uncomfortable for staff to observe patients in the bathroom, so this aspect of the observation should be practiced and strategies developed to overcome the barriers to providing this observation.

The next breakdown in the case was allowing the patient to be on her own without a clinical evaluation on the unit. The patient was evaluated in the emergency room and considered at high risk. It is not clear if this information was transferred to the unit staff when handing off the patient. Loss of critical information during patient transfers is a common root cause of suicide attempts and deaths throughout the hospital.(10) Clinical evaluations of risk should be standardized and performed as soon as possible when the patient arrives on the unit. This is a high-risk time because the patient is likely to be agitated, in a new environment, and possibly still reacting to the effects of substances taken prior to admission. It is a difficult time for the staff as well because they do not yet know this patient, what she is capable of doing, and what her specific patterns are. Assessing the patient's level of distress and suicidality as well as her overall mental and physical status, mental health history (including previous suicidal behaviors), and psychosocial stressors is crucial. Only then can a determination be made about the level of observation that is appropriate. It is helpful to use a standard template for the initial evaluation on the unit so that all important questions are asked.

Finally, there are problems with the safety of the environment of care on this unit. In this case, the patient was able to attempt to hang herself from an anchor point in the bathroom. From our studies of suicide attempts and deaths in mental health units, we know that hanging is the most common method of suicide attempts, as well as the most lethal.(11) We also know that private areas such as bedrooms and bathrooms are the most common areas on the unit for self-harm.(12) Removing all anchor points from patient bathrooms and bedrooms on mental health units is therefore essential for preventing suicide

attempts. This can be accomplished using an environmental checklist such as the one that has been used in the VHA since 2007.(13,14)

We have found that using a standard checklist for environmental rounds allows the team to identify and abate hazards, such as anchor points, sharp edges, possible weapons, elopement opportunities, areas to hide hazardous materials, lanyards for hanging, and blind spots where a patient could hide and assault staff. In the VHA, we use the checklist to review all mental health units in our system every 6 months. It is helpful to form a team of reviewers that includes staff who are not usually on the unit and to change the members on the review team in order to have fresh input on what constitutes a hazard. Since implementing the checklist in 2007, the rate of suicide on inpatient mental health in VHA units has been reduced, from 4.2 per 100,000 admissions to 0.74 per 100,000 admissions in 2015.(13)

Take-Home Points

- Place high-risk patients on one-to-one observation and develop training for staff conducting one-to-one observation that includes a protocol for observation while using the bathroom.
- Conduct a thorough evaluation and risk assessment (using a template) before allowing patients to be unsupervised on the unit.
- Remove all anchor points for hanging in private areas such as bedrooms and bathrooms.
- Use a standard checklist to review the mental health unit for environmental hazards every 6 months.

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