Critical decisions in emergency medicine

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Brainchild

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High Life

Synthetic drugs of abuse are more popular and widely available than ever before; in 2017, more than half of opioid-related deaths in the US were attributed to synthetic varieties. Dangerous and hard to detect, these xenobiotics can have unpredictable physiological effects. This is especially true of synthetic cannabinoids and cathinones, which can lead to a variety of potentially dangerous symptoms, ranging from tachycardia and agitation to stroke and acute coronary syndrome.

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Brainchild

Pediatric Psychiatric Emergencies

LESSON **5**


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OBJECTIVES

On completion of this lesson, you should be able to:

1. Approach and stabilize pediatric patients with psychiatric emergencies.
2. Evaluate common psychiatric diagnoses.
3. Use diagnostic adjuncts available in the emergency department.
4. Administer pharmacological treatment for pediatric psychiatric patients.
5. Discuss medicolegal issues involving pediatric patients.

FROM THE EM MODEL

19.0 Procedures and Skills Integral to the Practice of Emergency Medicine

19.4.9 Psychobehavioral

CRITICAL DECISIONS

- How should pediatric psychiatric patients be evaluated in the emergency department?
- What is the best way to differentiate a medical condition from a psychiatric disorder?
- How should suicidal pediatric patients be managed?
- When are physical or chemical restraints appropriate?
- What medicolegal issues must be considered when managing pediatric psychiatric patients?

External and internal stressors can quickly overwhelm a young person's ability to cope, a problem that can result in anxiety, depression, personality changes, aggression, or even hallucinations. Although emergency clinicians are frequently challenged to differentiate medical etiologies from underlying psychiatric disorders, this can be particularly difficult when assessing pediatric patients, whose normal moods can sometimes mimic potentially abnormal behavior.

CASE PRESENTATIONS

CASE ONE

A 9-year-old boy presents via ambulance in 4-point leather restraints after an outburst in school. The teaching staff reports that after recess — where no untoward incidents were reported — the boy began banging his head against the table, resulting in a forehead bleed. When staff attempted first aid, he attacked them, scratching one teacher in the face and bending another's finger to the point of deformity.

The child was subsequently restrained and transported the emergency department, where he is now growling and spitting at the medical staff. He has a history of attention deficit hyperactivity disorder for which he takes methylphenidate. He is tachycardic and tachypneic; his blood pressure cannot be obtained.

CASE TWO

A 16-year-old girl is sent to the emergency department after disclosing to her counselor that she has thoughts of hurting herself. She was hospitalized 2 months ago after deliberately slitting her wrists. She says she was diagnosed with depression 3 years ago after her father committed suicide. The patient also confides that she been using a razor to cut herself and has been smoking marijuana daily to cope with her feelings. She reports further "spiraling" after breaking up with her boyfriend last week. Her vital signs are within normal range, and the physical examination is unremarkable.

After a discussion with the hospital psychiatrist, the emergency physician recommends admitting the girl to the psychiatric unit. However, her mother refuses and threatens to take her home, insisting the patient's suicidal thoughts are a fabricated bid for attention.

National trends demonstrate an increase (up to 5%) in emergency department visits for pediatric mental health issues.[1,2] In spite of the nationwide demand for mental health services, there is a shortage of trained pediatric psychiatry personnel and limited accessibility to mental health and community-based services. These deficiencies have forced emergency departments to meet these critical needs.

A psychiatric emergency refers to a relatively sudden situation in which there is an impending risk of harm to oneself or others. The two most common pediatric mental health emergencies are suicidality and aggression. Even when a psychiatric consultant is available, it is vital for emergency physicians to be armed with the knowledge to appropriately screen children and adolescents with mental health complaints and differentiate true psychiatric crises from behavioral issues that can be managed on an outpatient basis.

All pediatric patients should be approached in a culturally and developmentally appropriate manner with consideration for special needs or developmental delays. Unfortunately, family and social issues can further complicate the assessment, treatment, and disposition of pediatric psychiatric patients. The CDC recommends using the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5) to help diagnose mental health disorders in children.

CRITICAL DECISION

How should pediatric psychiatric patients be evaluated in the emergency department?

Ensuring a safe environment for patients, their parents or guardians, and hospital staff is key (*Figure 1*). Patients must be screened for dangerous weapons prior to evaluation; typically, security personnel use metal detectors or physically search patients and their belongings. In most centers, psychiatric patients are asked to undress and are provided with hospital gowns and socks, and their belongings are kept in a secure location pending disposition. Dedicated rooms for mental health patients should be devoid of objects that can be used as weapons, including cutlery, medical tubes, electrical cords, and bandages.

A serene setting, preferably separate from the hectic environment of the main emergency department, is ideal; patients who are exposed to as little stimulus as possible are more likely to cooperate with treatment. These rooms should be easily accessible to medical and security staff, and high-risk patients must be constantly observed by sitters or continuous video monitoring. "Panic buttons" have been introduced by many hospitals to help with safety as situations warrant.

Clinicians should attempt to gain rapport with the patient, interacting in a developmentally appropriate manner and explaining the evaluation process (unless the child is uncooperative). A parent or guardian can be an invaluable resource in calming a pediatric psychiatric patient; however, they may also be a trigger. Read the room carefully and observe the interaction between children and their caregivers.

The evaluation of pediatric psychiatric patients involves obtaining a medical history, performing a physical examination, and conducting a brief but comprehensive interview of the child and their parents or guardians. Psychiatric evaluations of children and adolescents tend to take longer than those of adults, as the process typically involves additional interviews with collateral contacts.

Speaking with parents or guardians provides an opportunity to collect valuable information about a child's history, behavioral changes, potential risk factors, and any treatments that have been tried in the past. These discussions can help clarify whether the patient may be a risk to themselves or others, if there are any available resources in the community that can be used in the patient's care, and whether

the parent or guardian is willing and able to supervise the child and follow-up with recommendations.

A complete physical examination includes a mental status assessment and thorough neurologic exam. Routine lab tests have shown limited utility and are not recommended unless there is suspicion for a specific medical illness; however, some mental health facilities require lab work prior to accepting transferred patients.

CRITICAL DECISION

What is the best way to differentiate a medical condition from a psychiatric disorder?

All patients presenting with mental health complaints should be medically evaluated for possible underlying or comorbid pathologies. Clues to the possibility of an organic (medical) etiology include abnormal vital signs or physical examination findings, a history of substance abuse, and an acute change in baseline neurologic or psychiatric status. A broad range of medical illnesses can manifest psychiatric symptoms, including endocrine, neurologic, systemic, toxicologic, and metabolic conditions. Furthermore, it can be difficult to differentiate between manipulative behaviors and true psychiatric disorders when managing these cases. Pediatric patients often present with dissociative disorders, which occur most commonly in girls; sexual abuse as a common original trauma.

Psychosis

Psychosis is characterized by delusions, hallucinations, and disorganized thoughts and speech. Although it is a common manifestation of schizophrenia, psychosis can be present in other psychiatric conditions, including depression and bipolar disorder. It is also a symptom of a broad range of medical conditions, so a thorough history must be obtained to rule out life-threatening causes like hypoglycemia, hypoxia, central nervous system abnormalities, infection, endocrine and metabolic disease, lupus, medication toxicity, and drug overdose.

Acute-onset psychosis is more likely have a medical etiology than a psychiatric origin, but the presence of subacute or chronic symptoms (known psychiatric diagnosis) or a family history of mental illness should raise suspicion for the latter. Managing an acute psychotic episode due to psychiatric illness involves the administration of antipsychotic medication. In cases of chronic psychosis, inpatient management is warranted if the patient is suicidal, homicidal, or unable to sustain activities of daily living.

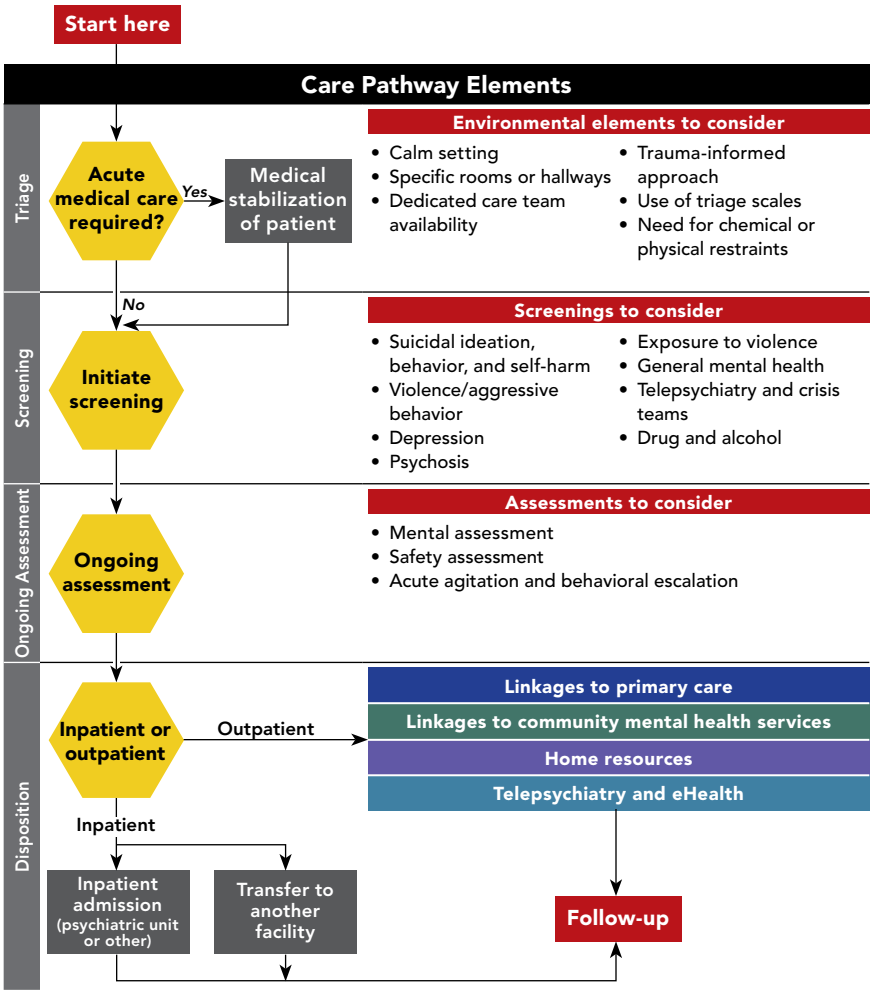
CRITICAL DECISION

How should suicidal pediatric patients be managed?

Suicide is one of the leading causes of death in the adolescent population.[3] In the emergency setting, the main objectives when managing a suicidal child are to keep the patient safe, recognize and manage any possible medical complications, and decide upon a suitable disposition. The physical examination may reveal signs of self-injury, such as cuts or ligature marks, and the presence of altered mental status warrants a toxicology screening, including ethanol measurements. An organic etiology should also be ruled out.

The greatest risk factor for suicide in an adolescent is a previous attempt. Other risk factors include a recent psychiatric admission, dysphoric mood, hopelessness, impulsive behavior, substance abuse, access to lethal means, recent stressors (eg, personal, relational, etc), homosexual or transgender identity, and a family history of suicide. A thorough medical history includes an inquiry about these risk factors, as well as further discussion about the reason

FIGURE 1. Assessing Pediatric Psychiatric Emergencies



ADAPTED FROM THE US DEPARTMENT OF HEALTH AND HUMAN SERVICES

for current suicidal thoughts and any plan of carrying out a suicide attempt.

The age and cognitive ability of the patient influences the concept of suicide. Younger children, for example, may not understand the finality of death, and some patients may not necessarily want to die but express suicidal ideation due to overwhelming sadness or hopelessness.

The emergency physician must work with mental health clinicians to arrange a disposition that is beneficial to the patient. When managing these cases, it is imperative to avoid dismissing the need for a psychiatry consultation if the patient or parent denies or downplays thoughts of suicide. Criteria for inpatient psychiatry management include a persistent desire to die, severe hopelessness, a failure to establish safety plans, a poor support system with unreliable monitoring and follow-up, and a suicide attempt using a highly lethal means.

Low-risk children and adolescents who have appropriate supervision at home and adequate access to mental health care may be managed on an outpatient basis. Although safety contracts are sometimes employed, their usefulness is debatable. If the patient is to be discharged home, a discussion must be had with caregivers regarding restricting their means to self-harm (eg, limiting access to potentially dangerous instruments like knives, firearms, and medications).

CRITICAL DECISION

When are physical or chemical restraints appropriate?

Agitation or violent behavior may be the result of a medical, toxicological, or psychiatric condition — or a combination of any. It is important to ascertain the etiology of each patient's symptoms to inform the management strategy. Manifestations of agitation may range from restlessness or verbal assaults to the destruction of property, self-harm, or physical violence. Identified triggers amenable to intervention (eg, the presence of a specific family member) should be addressed. The goals of managing an agitated child include ensuring the safety of everyone involved, helping the patient manage their emotions, averting physical or chemical restraints whenever possible, and avoiding interventions that might increase agitation.[4]

When an acutely agitated patient is at risk of harming themselves or others, the use of restraints may be necessary. Verbal restraints and de-escalation should be attempted first: Patients should be approached in a reassuring, nonhostile manner, and the physician should stay more than an arm's length away to avoid harm and appear less threatening. While giving patients some autonomy helps with cooperation, it is necessary to set limits in a firm but respectful tone and avoid bargaining.

TABLE 1. Pediatric Chemical Restraint Medications

Medication	Initial Dose
Haloperidol	0.05–0.15 mg/kg Teen: 2–5mg
Lorazepam	0.05–0.1 mg/kg Teen: 2–4 mg
Midazolam	0.05–0.15 mg/kg Teen: 2–4mg
Olanzapine	<12 years: 2.5 mg Teen: 5–10 mg
Diphenhydramine	1.25 mg/kg Teen: 50 mg
Risperidone (oral)	<12 years: 0.5 mg Teen: 1 mg
Ziprasidone	<12 years: 5 mg Teen: 10–20 mg
Aripiprazole	<12 years: 1–2 mg Teen: 2–5 mg

Chemical Restraints

If this fails, the next step typically involves the use of medications (chemical restraints), including antipsychotic agents, benzodiazepines, or a combination of both (*Table 1*). Patients already taking any of these medications should be given their usual or an increased dose of the same drug. All cooperative patients should be given the option to take the medication orally.

Keep in mind the respective adverse effects of these medications: first-generation antipsychotics (haloperidol) and second-generation antipsychotics (olanzapine, risperidone, and ziprasidone) can cause cardiac arrhythmias, hypoventilation, CNS depression, and extrapyramidal symptoms. Neuroleptic malignant syndrome. a rare adverse effect of antipsychotic agents, is characterized by fever and muscle rigidity. Benzodiazepines can cause respiratory depression, and paradoxical reactions can occur between benzodiazepines and antihistamines.

Physical Restraints

Physical restraints can result in both physical and psychological harm. Such tools are only indicated in cases of severe disruptiveness with an impending risk of harm — and only after other, less-restrictive de-escalation measures have failed. The Joint Commission and the Centers for Medicare and Medicaid Services have both developed guidelines and regulations regarding the use of physical restraints.[5,6] Notable safety considerations include involving enough personnel to immobilize the patient, using safe restraint material, securing

Pearls

- A parent or guardian can be an invaluable resource for calming a pediatric psychiatric patient; however, they may also be a trigger. Read the room carefully, and observe the interaction between the patient and guardian.
- Pediatric patients often present with dissociative disorders, which occur most commonly in girls who have suffered sexual abuse.
- Work to gain rapport with the child or adolescent, interacting in a developmentally appropriate manner while explaining the evaluation process.

CASE RESOLUTIONS

CASE ONE

The restrained boy received a dose of midazolam; within 30 minutes, he was calm. The restraints were promptly removed, and he was placed under continuous observation. Head CT was negative for any acute intracranial process, and his blood work was clinically insignificant.

The patient said that he began banging his head after "a voice" told him he was "stupid and bad." He further explained that the school staff's attempt to administer first aid had angered and frustrated him.

The patient had not previously shared anything about hearing voices with his family, who expressed great concern. He was admitted to the inpatient psychiatric unit for further treatment and assessment.

CASE TWO

The teenage girl was determined to be at a particularly high risk of self-harm based on her previous suicide attempt and family history. Concerned about the patient's welfare and her mother's refusal to allow inpatient treatment, the emergency physician reported the case to Child Protective Services.

After several long conversations with the emergency clinician and case worker, the mother acquiesced. The girl was admitted to the psychiatry unit, where she received a comprehensive evaluation and long-term treatment plan.

restraints to the bed frame to avoid falls, and reducing the risk of aspiration by placing the patient in a supine position. Pillows should be avoided to avoid the risk of suffocation. The medical team should include at least five members, including a designated leader who can explain the process to the patient in clear language. It is crucial to continuously monitor patients in chemical or physical restraints for the development of possible side effects.

CRITICAL DECISION

What medicolegal issues must be considered when managing pediatric psychiatric patients?

Consent to treat should be obtained prior to the initial evaluation. Unless the patient has a life-threatening condition requiring medical stabilization, waived consent is not applicable. Consent is typically obtained from a parent or guardian; however, some states do allow children to provide consent for mental health treatment without the involvement of a legal custodian. In some instances, a patient may meet the criteria for psychiatric hospitalization despite the objection of their patients or guardians. The laws on involuntary hospitalization vary from state to state, thus familiarity with state laws is prudent.

Attention should be paid to the interaction between the patient and their parents or guardians, and a report must be made to the appropriate authorities whenever child abuse or neglect is suspected or witnessed. Furthermore, if a parent or guardian refuses treatment for a child who is in imminent danger, Child Protective Services must be consulted. As mandated reporters, it is important that physicians understand how to recognize child abuse and make comprehensive, accurate reports in a timely manner. Similarly, if it is determined that a patient poses a danger to another individual, the clinician is obligated to warn the intended victim against violence.

Pitfalls

- Dismissing the need for psychiatry consultation if the patient denies or downplays thoughts of suicide.
- Neglecting to consider organic causes of mental status changes.
- Failing to attempt low-risk de-escalation measures before implementing chemical or physical restraints.

Summary

The rate of emergency department cases for pediatric mental health complaints has significantly increased, and the evaluation of these patients can be taxing. Nevertheless, it is imperative for emergency physicians to be adept in conducting basic interviews and pursuing the best level of care. The acute evaluation of pediatric psychiatric patients incorporates triage and medical clearance, observance of safety measures, a thorough medical history, involvement of the family and caregivers, a mental health consultation, and disposition planning. It is crucial that final treatment plans include input and approval from members of the hospital's psychiatry team prior to discharge.

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