Executive Summary: Evaluation and Management of Children and Adolescents With Acute Mental Health or Behavioral Problems. Part I: Common Clinical Challenges of Patients With Mental Health and/or Behavioral Emergencies

Thomas H. Chun, MD, MPH, FAAP, Sharon E. Mace, MD, FAAP, FACEP, Emily R. Katz, MD, FAAP
AMERICAN ACADEMY OF PEDIATRICS, COMMITTEE ON PEDIATRIC EMERGENCY MEDICINE, AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, PEDIATRIC EMERGENCY MEDICINE COMMITTEE

EXECUTIVE SUMMARY

The number of children and adolescents seen in emergency departments (EDs) and primary care settings for mental health problems has skyrocketed in recent years, with up to 23% of patients in both settings having diagnosable mental health conditions.1–4 Even when a mental health problem is not the focus of an ED or primary care visit, mental health conditions, both known and occult, may challenge the treating clinician and complicate the patient’s care.4

Although the American Academy of Pediatrics has published a policy statement on mental health competencies and a Mental Health Toolkit for pediatric primary care providers, no such guidelines or resources exist for clinicians who care for pediatric mental health emergencies.5,6 Many ED and primary care physicians report a paucity of training and lack of confidence in caring for pediatric psychiatry patients. The 2 clinical reports (www.pediatrics.org/cgi/doi/10.1542/peds.2016-1570 and www.pediatrics.org/cgi/doi/10.1542/peds.2016-1573) support the 2006 joint policy statement of the American Academy of Pediatrics and the American College of Emergency Physicians on pediatric mental health emergencies,7 with the goal of addressing the knowledge gaps in this area. Although written primarily from the perspective of ED clinicians, they are intended for all clinicians who care for children and adolescents with acute mental health and behavioral problems.

The clinical reports are organized around the common clinical challenges pediatric caregivers face, both when a child or adolescent presents with a psychiatric chief complaint or emergency (part I) and also when a mental
health condition may be an unclear or complicating factor in a non-mental health clinical presentation (part II). Part II of the clinical reports (www.pediatrics.org/cgi/doi/10.1542/peds.2016-1570) includes discussions of somatic symptom and related disorders, adverse effects of psychiatric medications including neuropsychiatric malignant syndrome and serotonin syndrome, caring for children with special needs such as autism and developmental disorders, and mental health screening. This executive summary is an overview of part I of the clinical reports. The full text of the below topics can be accessed online at (www.pediatrics.org/cgi/doi/10.1542/peds.2016-1570). Key considerations are shown in the following sections.

1. ED Medical Clearance of Pediatric Psychiatric Patients

- Definition

1. Medical clearance is the process of excluding potential medical conditions causing or exacerbating the patient’s psychiatric symptoms as well as evaluating the patient for medical diseases or injuries for which acute diagnostic or therapeutic interventions in the ED may be indicated.8,9

2. Some favor the term “medically stable,” because the goal of the ED visit is not to exclude all possible medical etiologies but rather to rule out acute medical conditions.10

3. For patients with unexplained vital sign abnormalities, a concerning history, or physical examination findings or with new onset or acute changes in their neurologic or psychiatric symptoms, a careful evaluation for potential underlying medical conditions may be important.11

- Laboratory Testing

1. Despite the large number of medical conditions (see Table 1 at [www.pediatrics.org/cgi/doi/10.1542/peds.2016-1570]) that can present with mental health symptoms, there is a growing body of both pediatric and adult literature that casts doubt on the utility of routinely obtaining laboratory or radiologic testing for these patients.12-19 This literature supports the position of the American College of Emergency Physicians for focused medical assessments and judicious testing of these ED patients.11

2. Mental health consultants often request pregnancy (females), toxicology, and sexually transmitted infection testing for adolescent patients. Whether to obtain these or other medical tests or evaluations can usually be decided with a direct conversation between the ED and mental health clinicians.

2. Suicidal Ideation and Suicide Attempts

- Epidemiology

1. Suicide is one of the leading causes of death in adolescents,20 and suicide attempts are one of the most common ED mental health presentations.21,22 Epidemiologic studies in teenagers have found that 16% reported seriously considering suicide and 7.8% have attempted suicide in the past year.23

2. More females consider and attempt suicide, although males are far more likely to die of suicide because of their frequent use of more lethal means (eg, firearms, hanging).23 Native Americans have the highest suicide rates among ethnic groups.21

- Risk factors: previous suicide attempt(s); mood (eg, depression, bipolar disorder, mood swings, irritable mood, etc), impulsivity, or disruptive behavior disorders; substance abuse; recent psychiatric hospitalization; family history of suicide; interpersonal violence (eg, physical or sexual abuse, bullying, antisocial behavior); homelessness or runaway behavior; self-identification as lesbian, gay, bisexual, or transgender; hopelessness; history of aggressive or impulsive behavior; cultural/religious beliefs; recent loss or stress (eg, relational, social, work, financial, etc) of the patient or family; physical illness; recent high-profile suicides; access to lethal methods; social isolation; and barriers or unwillingness to seek mental health care.24-29

- Assessment

1. Suicidal ideation and attempts are often precipitated by psychosocial stressors.29 As such, evaluating the pediatric patient for suicide risk includes inquiring about his or her current psychosocial situation, interviewing both the patient and his or her caregivers (eg, family members, school or mental health personnel), and assessing for the aforementioned suicide risk factors.

2. The ED management of patients with suicidal ideation and attempts includes an evaluation of their current mental health state. Children and adolescents frequently misjudge the lethality of their actions. A potential pitfall is to equate the lethality of a suicide attempt with the patient’s suicide intent. A patient whose suicide attempt had low medical lethality may, in fact, have a significant wish to harm himself or herself or to die.30-32

3. The ED workup of patients presenting for suicidal ideation or attempt includes evaluation for signs of self-injury (which
can be concealed under clothing) or occult toxidromes as well as questions about suicidal intent, suicide plans, and other self-injurious behaviors.

- Disposition: The decision for inpatient versus outpatient management depends on many factors, including a careful assessment of suicide risk, and may include consultation with a mental health clinician. Outpatient management may be considered for low-risk patients (those with a low risk of future self-harm, adequate supervision, mental health follow-up, and safety planning; eg, the patient can identify his or her warning signs or triggers for recurrent suicidal ideation and have appropriate coping strategies if he or she becomes suicidal again, such as healthy activities and social support, and means restrictions, that is, limiting access to mechanisms for self-harm, such as firearms, other weapons, medications, etc). Contracting for safety/suicide prevention agreements are controversial and remain unproven.

- Involuntary hospitalization: Under certain circumstances, physicians may insist on admission to a psychiatric unit over the objections of patients and/or their parents/guardians, when clinically indicated. Every state has laws governing involuntary admission for inpatient psychiatric hospitalization. These laws vary from state to state, as do laws regarding confidentiality and an adolescent’s right to seek mental health or substance abuse treatment without parental consent. As such, it may be beneficial for ED clinicians to familiarize themselves with their state’s relevant laws, statutes, and involuntary commitment procedures. For more information on related state laws, contact the American Academy of Pediatrics’ Division of State Government Affairs at stgov@aap.org.

3. Restraint of the Agitated Patient

- Agitated behavior is the final common pathway for a wide number of medical and psychiatric conditions and, in some cases, a combination of the two. Determining the underlying cause of the agitation often guides treatment choices.

  - The 4 guiding principles of working with agitated patients are as follows:
    1. prioritizing the safety of the patient and the treating staff;
    2. assisting the patient in managing his or her emotions and regaining control of his or her behavior;
    3. utilizing age-appropriate and the least-restrictive methods possible; and
    4. recognizing that coercive interventions may exacerbate the agitation.

- Monitoring and evaluation of restrained patients (see Table 6 at [www.pediatrics.org/cgi/doi/10.1542/peds.2016-1570]) may include the following:
  1. in-person evaluation by a licensed independent practitioner within 1 hour of placement of restraints;
  2. review and renewal of restraint orders on a frequent basis (1–8 hours, depending the patient’s age); and
  3. frequent assessment of vital signs, injury attributable to restraint, nutrition and hydration status, peripheral circulation, hygiene and elimination status, physical and psychological status, and readiness to discontinue restraint.

- Verbal restraint/de-escalation
  1. A calming (eg, quiet room, soft/decreased lighting, elimination of triggers of agitation) and safe (eg, removal or securing of objects that can be used as weapons, padded walls) physical environment may help de-escalate a patient.
  2. Common verbal restraint (see Table 2 at [www.pediatrics.org/cgi/doi/10.1542/peds.2016-1570]) strategies include the following:
    a. respecting personal space;
    b. minimizing behavior and/or interventions the patient may find provocative;
    c. using clear, concise language and expectations;
    d. active listening, especially regarding the patient’s goals; and
    e. offering clear, realistic choices without “bargaining.”

- Chemical restraint
  1. The most commonly used medications for agitation are antihistamines, benzodiazepines, and antipsychotics.
  2. Choice of medication(s) usually depends on many factors, including the severity and underlying cause of the agitated behavior; collaboration between ED, psychiatric, and pharmacy colleagues; and which medication(s), if any, the patient is currently taking (see Tables 3 and 4 at [www.pediatrics.org/cgi/doi/10.1542/peds.2016-1570]).
    a. Diphenhydramine may be used for mild agitation.
    b. Benzodiazepines are common first-line drugs for medical causes of agitation.
    c. Either benzodiazepines or antipsychotics may be used...
3. Monitoring and precautions

a. For patients receiving chemical restraint, consider the same monitoring and reassessment precautions as for physical restraint.37,38

b. Antipsychotics may cause QTc prolongation and dysrhythmias, especially in patients with underlying cardiac conditions and/or who are taking other QTc-prolonging medication.45–47

Many medications commonly used in pediatrics (see Table 5 at [www.pediatrics.org/cgi/doi/10.1542/peds.2016-1570]) can affect QTc duration. If there are significant concerns for dysrhythmia, cardiac monitoring may be considered for patients receiving antipsychotics.

c. Antipsychotics can exacerbate symptoms in patients with anticholinergic or sympathomimetic toxidromes or delirium.

• Physical restraint

1. Physical restraints have resulted in the death of psychiatric patients and have disproportionately affected children.48,49

2. Federal, regulatory, and accreditation agencies all have guidelines and regulations regarding physical restraint.37,38

3. Guidelines for when physical restraint may be indicated include the following11,50–54:

   a. an imminent risk of harm to self or others;
   b. significant risk of disrupting treatment; and
   c. less restrictive means have failed.

4. For the application of restraints, when possible:

   a. apply restraints with ≥5 providers, one for each extremity and one for the patient’s head;
   b. use leather or other age-appropriate restraints; and
   c. secure restraints to the bed frame.

5. To maximize safety during physical restraint, experts suggest, when possible38:

   a. staff training of alternatives to and proper application of restraints;
   b. continuous patient monitoring;
   c. utilize the supine position, with free cervical range of motion and elevation of the head of the bed, to reduce aspiration risk;
   d. utilize the prone position only if other measures have failed or are not possible; if the prone position is used, monitoring for airway obstruction and excessive pressure on the back and neck of the patient may be helpful, because death has been associated with these factors and prone restraint; experts suggest discontinuing prone positioning as soon as possible38;
   e. minimize covering of the patient’s face or head, to reduce aspiration risk;
   f. minimize use of high vests, waist restraints, or beds with unprotected side rails to reduce the risk of respiratory compromise and falls;
   g. minimize restraint of medically compromised or unstable patients; and
   h. in cases of agitation attributable to suspected illicit stimulant use, chemical restraint may be preferable, because a rapid increase in serum potassium secondary to rhabdomyolysis may result in cardiac arrest.

4. Coordination With the Medical Home

• Coordinating mental health care with the medical home (ie, patient-centered care, coordinated and integrated by the patient’s personal physician) offers several benefits.55,56

1. Coordinating with the medical home decreases redundant care for high-risk or high-utilization patients.

2. The medical home may be a unique opportunity to address mental health care without stigma.55

3. For patients without a medical home, identifying and promptly referring them to a personal physician may be beneficial.

4. Children and adolescents with mental health problems and those taking psychiatric medications are at increased risk of medical problems, including asthma, ear infections, headaches or migraines, seizures, and obesity/metabolic syndrome.

LEAD AUTHORS
Thomas H. Chun, MD, MPH, FAAP
Sharon E. Mace, MD, FAAP, FACEP
Emily R. Katz, MD, FAAP
AMERICAN ACADEMY OF PEDIATRICS, COMMITTEE ON PEDIATRIC EMERGENCY MEDICINE, 2015-2016
Joan E. Shook, MD, MBA, FAAP, Chairperson
James M. Callahan, MD, FAAP
Thomas H. Chun, MD, MPH, FAAP
Gregory P. Connors, MD, MPH, MBA, FAAP
Edward E. Conway Jr, MD, MS, FAAP
Nanette C. Dudley, MD, FAAP
Tony K. Gross, MD, MPH, FAAP
Natalie E. Lane, MD, FAAP
Charles G. Mancias, MD, MPH, FAAP
Nathan L. Timm, MD, FAAP

REFERENCES


9. Riba M, Hale M. Medical clearance: fact or fiction in the hospital

LIAISONS
Kim Bullock, MD — American Academy of Family Physicians
Elizabeth Edgerton, MD, MPH, FAAP — Maternal and Child Health Bureau
Tamar Maganik Haro — AAP Department of Federal Affairs
Madeline Joseph, MD, FACEP, FAAP — American College of Emergency Physicians
Angela Mickalide, PhD, MCHES — EMSC National Resource Center
Brian R. Moore, MD, FAAP — National Association of EMS Physicians
Katherine E. Remick, MD, FAAP — National Association of Emergency Medical Technicians
Sally K. Snow, RN, BSN, CPEN, FAEN — Emergency Nurses Association
David W. Tuggle, MD, FAAP — American College of Surgeons
Cynthia Wright-Johnson, MSN, RNC — National Association of State EMS Officials

FINANCIAL DISCLOSURE: The authors have indicated they do not have a financial relationship relevant to this article to disclose.

FUNDING: No external funding.

POTENTIAL CONFLICT OF INTEREST: The authors have indicated they have no potential conflicts of interest to disclose.

ABBREVIATION
ED: emergency department

AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, PEDIATRIC EMERGENCY MEDICINE COMMITTEE, 2013–2014
Lee S. Benjamin, MD, FACEP, Chairperson
Isabel A. Barata, MD, FACEP, FAAP
Kiyetta Alade, MD
Joseph Arms, MD
Jahn T. Avarrello, MD, FACEP
Steven Baldwin, MD
Kathleen Brown, MD, FACEP
Richard M. Cantor, MD, FACEP
Ariel Cohen, MD
Ann Marie Dietrich, MD, FACEP
Paul J. Eakin, MD
Marianne Gausche-Hill, MD, FACEP, FAAP
Michael Gerardi, MD, FACEP, FAAP
Charles J. Graham, MD, FACEP
Pamela I. Holderness, MD, FACEP
Jeffrey Hom, MD, FACEP
Doug K. Holtzman, MD, FACEP
Michael R. Jett, MD, FACEP
Sue Tellez

FORMER MEMBERS AND LIAISONS, 2013-2015
Alice D. Ackerman, MD, MBA, FAAP
Lee Benjamin, MD, FACEP, FAAP - American College of Physicians
Susan M. Fuchs, MD, FAAP
Marc H. Gorelick, MD, MSCE, FAAP
Paul Sirbaugh, DO, MBA, FAAP - National Association of Emergency Medical Technicians
Joseph L. Wright, MD, MPH, FAAP

E5


Executive Summary: Evaluation and Management of Children and Adolescents With Acute Mental Health or Behavioral Problems. Part I: Common Clinical Challenges of Patients With Mental Health and/or Behavioral Emergencies

Thomas H. Chun, Sharon E. Mace, Emily R. Katz, AMERICAN ACADEMY OF PEDIATRICS, COMMITTEE ON PEDIATRIC EMERGENCY MEDICINE, AMERICAN COLLEGE OF EMERGENCY PHYSICIANS and PEDIATRIC EMERGENCY MEDICINE COMMITTEE

*Pediatrics* 2016;138;
DOI: 10.1542/peds.2016-1571 originally published online August 22, 2016;
Executive Summary: Evaluation and Management of Children and Adolescents With Acute Mental Health or Behavioral Problems. Part I: Common Clinical Challenges of Patients With Mental Health and/or Behavioral Emergencies

Thomas H. Chun, Sharon E. Mace, Emily R. Katz, AMERICAN ACADEMY OF PEDIATRICS, COMMITTEE ON PEDIATRIC EMERGENCY MEDICINE, AMERICAN COLLEGE OF EMERGENCY PHYSICIANS and PEDIATRIC EMERGENCY MEDICINE COMMITTEE

*Pediatrics* 2016;138;
DOI: 10.1542/peds.2016-1571 originally published online August 22, 2016;

The online version of this article, along with updated information and services, is located on the World Wide Web at:
http://pediatrics.aappublications.org/content/138/3/e20161571