

Meeting the Challenges of Pediatric Behavioral Emergencies

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Behavioral emergencies involving children present special challenges to EMS personnel. Because such emergencies often present with chaotic scenes, an initial impression of abuse or neglect may be misleading. What may appear as aggressive behavior may be a symptom of an underlying disorder or disability. Parents of children with a mental health disorder are often overwhelmed and isolated from community resources and a social support network. The family may hesitate to call 911 for help because of fear of stigmatization or misinterpretation by EMS personnel.

Meeting the challenge of pediatric behavioral emergencies in volatile situations requires a shift from common EMS response to an integrated community collaboration and adaptive “out-of-the-box” decision making. The 911 call may be from a mother or school staff member desperate for help with an “out-of-control” child. An immediate link to pediatric or mental health professionals with behavioral emergency expertise and medications may serve to deescalate the child’s psychiatric emergency and ensure continuity of care. EMS system policies, procedures, guidelines, and training frequently do not include these options.

To address the complex behavioral emergency needs of the child and family, the EMS community must understand the social impact, underlying etiologies, and community resources available to patients and their families. This article highlights a case study and the decision-making challenges faced by EMS personnel managing pediatric behavioral emergencies. The goal is to improve the prehospital care provider’s understanding of behavioral emergencies by (1) reviewing and recommending a modern EMS system policy, procedures, and prehospital management process for pediatric behavioral emergencies; (2) describing common pediatric psychiatric conditions, symptoms, and treatment; (3) discussing on-scene EMS interventions and resources; and (4) highlighting solutions for EMS dealing with behavioral emergencies.

Case Study

A mother calls 911: “I am desperate for help to control my out-of-control son.” Fire department personnel respond to the home of a seven-year-old male. When they arrive, the male child is violent, defiant, and combative: hitting, kicking, and throwing objects. The child is screaming, “I am too much trouble. My head is exploding. I want to die because living is just too hard!”

On arrival, the responder confirms that the scene is safe and obtains a very brief history from the mother and daughter. The distraught mother is frantic and pacing. She says, “Leave my son alone. Please do not transport him to the hospital. I’m scared, and I’m afraid for my son. I don’t remember if I gave him his medication. Over the past several days, he has been extremely volatile, tearful, aggressive, threatening, depressed, and withdrawn.” A frightened and tearful daughter and a neighbor are quietly huddled in the corner of the room. The mother continually changes her mind; she asks the medics to stay and help, and then she demands that they leave.

The crew immediately recognizes the emotionally charged situation and strives to keep everyone calm. The responder’s initial perception is that the mother lacks parenting skills and may be abusing her son.

History

The mother describes the child’s past “out-of-control behavior” that includes screaming, crying, throwing items, and expressing suicidal ideation. Initially, she does not reveal his diagnosis and treatment because she does not want to reveal the information in the presence of her neighbor. After the responder gains the mother’s confidence, she reports that her son has had similar episodes in the past that have included suicide

attempts resulting in hospitalization. He sees a child psychiatrist and psychologist for treatment and has been diagnosed with

- Bipolar disorder
- Attention deficit-hyperactivity disorder
- Oppositional-defiant disorder
- Obsessive-compulsive disorder
- Past psychotic episodes

Current medications

- Risperdal (risperidone)
- Depakote (divalproex sodium)
- Periactin (cyproheptadine)
- Concerta (methylphenidate)

The mother also reports persistent emotional instability on the current therapeutic plan.

Vital Signs

The airway is open and intact with good tidal volume. Respiratory rate is unlabored at 30 breaths per minute. Pulse rate, 100 per minute, strong and regular. Blood pressure cannot be obtained secondary to agitation. The Glasgow Coma Scale is 15.

Physical Exam

The physical exam reveals superficial lacerations on both arms. The remainder of the physical exam is within normal limits. The child is alert and oriented to person, place, and time. He is agitated, is confrontational, and has pressured speech. He compulsively repeats statements.

Further History

The mother reports that the police had been called to the home on numerous occasions. The first responders call the police, who consider restraints and protective custody.

Case Review and Discussion

The complexities of a changing situation create a challenging environment for prehospital care providers. Unlike those who respond to a traditional medical call, fire EMS responders responding to this type of call operate at a disadvantage. Emergency responders frequently are not aware of a child's medical and psychiatric history or factors that may have precipitated a crisis. The various psychiatric conditions that underlie these behaviors are often not apparent to responders. Fire EMS responders often lack training and access to patient information. Responders may not be able to discern which behaviors are voluntary vs. those that are out of the patient's control. Additional considerations that might be overlooked in the chaos of the situation are injuries that the sister and mother may have sustained during the child's crisis (i.e., reverse child abuse).

The fact that the caregiver may not have provided the prescribed psychiatric medications may have further complicated the scene. The prehospital standards of practice for a given local EMS authority rarely address the option of calling the child's mental health professional or giving the child a dose of his medication.

The treatment option of Risperdal could produce a rapid improvement (within 30 minutes) in the child's mental state and behavior. In contrast, the use of restraints and transportation to an ED or psychiatric facility could exacerbate the crisis.

In the absence of an accurate understanding of the patient's psychiatric condition, fire responders depend on medical control for evaluation and guidance. Local EMS policy may direct that EMS providers consult with on-line medical control or the police. It is unlikely that the EMS base physician, usually an ED physician, would have the experience or comfort level to assess the situation and give psychiatric treatment recommendations. Unfortunately, access to psychiatric advice as well as the authorization to act on that advice is rare in EMS.

In behavioral emergencies, the presence of EMS personnel may actually escalate the situation. Behavioral emergencies challenge interpersonal skills, diagnostic abilities, and treatment options available within the EMS scope of practice. To increase understanding of behavioral emergencies, the following section provides descriptions of behavioral emergencies and the common underlying disorders.

Behavioral Emergencies: An Overview

Pediatric behavioral emergencies occur when the presenting problem includes some disorder of thought or behavior sufficiently disturbing or dangerous to the child or others. Psychiatric emergencies are a subset of behavioral emergencies. True psychiatric emergencies in children are rare; they (1) do not always stem from mental illness, (2) are more likely to stem from situational problems, and (3) may be caused by other medical problems or injury. Stressful situations may precipitate behavioral emergencies, situations such as chronic abuse or neglect, normal emotional upheaval of adolescence, unplanned pregnancy, a sudden traumatic event, or an emotional upheaval that may not necessarily involve an emotional disorder.

Behavioral changes may result from a physical (not a psychiatric or medical) etiology. According to the Paramedic Teaching Resource for Instructors in Pre-hospital Pediatrics (TRIPP) curriculum, numerous medical conditions—diabetes, hypoglycemia, brain injury, meningitis, encephalitis, seizure disorders, hypoxia, and toxic ingestions—can manifest with signs and symptoms that suggest psychiatric illness. These symptoms include altered mental status, hallucinations, delusions, incoherent speech, and aggressive or aberrant behavior. These altered moods and behaviors are similar to those typical of children with mental illness. Additionally, toxic exposures during pregnancy (e.g., intrauterine drug exposure) may result in a whole host of psychiatric symptoms, including emotional lability.

On the other hand, psychiatric disorders may present as medical problems. Examples include anxiety disorder with a panic attack that presents with hyperventilation, tachycardia, diaphoresis, and chest pain—suggesting a cardiac problem. Children with emotional or behavioral conditions may present with high anxiety levels and may have difficulties coping. A child with a history of mental illness may present with situational or physical problems unrelated to the psychiatric history.

Additionally, although many behavioral emergencies are precipitated by purely psychiatric or medical decompensation, they may also be exacerbated by social and cultural factors, such as family dynamics or instability in the home, in the local community, and in living conditions. Indeed, psychiatric and environmental factors can play off each other to precipitate a crisis or to exacerbate an ongoing crisis.

Major psychiatric disorders that may predispose to behavioral emergencies in children include mood disorders (e.g., depression, bipolar disorder); thought disorders (e.g., schizophrenia); developmental disorders (e.g., autism); anxiety disorders (e.g., posttraumatic stress disorder); and other disorders such as attention deficit hyperactivity disorder and reactive attachment disorder.

Bipolar Disorder

Also called manic-depressive illness, bipolar disorder is often misdiagnosed and undertreated in children.

Characteristics

- Extreme swings in mood
- Rapid cycling, with many mood changes in short intervals in children
- Oppositional and defiant behavior
- Anger and aggressive behavior

Mood Stabilizers Used To Treat Bipolar Disorder

- Cibalith-S, Eskalith, Lithane, Lithobid (lithium carbonate)
- Tegretol (carbamazepine)
- Depacote (divalproex)
- Lamictal (lamotrigine)
- Other anticonvulsants on an off-label basis [e.g., drugs such as Risperdal (risperidone), Zyprexa (olanzapine), Seroquel (quetiapine), Abilify (aripiprazole), and Geodon (ziprasidone) that are not FDA approved for children but are nonetheless prescribed for them]
- New generation antipsychotics: Abilify (aripiprazole) and Zyprexa (olanzapine)

Possible Side Effects of These Medications

- Excessive sweating
- Fatigue
- Nausea
- Headache
- Liver problems (e.g., inflammation or elevated liver functioning)
- Death caused by overdose

Autism Spectrum Disorders (ASDs)

Two ASDs are autism and Asperger's syndrome, complex developmental disorders that become evident in the first three years of life.

Characteristics of Autism

- Impaired verbal and nonverbal communication
- Impaired social interactions
- Restricted and repetitive behaviors

Characteristics of Asperger's

- Impaired social interactions
- Restricted, repetitive patterns of behavior, interests, and activities
- Impaired subtleties and social aspects of language

There is no single, established treatment for autism. Instead, treatment is tailored to a child's individual behaviors and needs. Children learn to function within the confines of their disability. Medications such as antidepressants, stimulants, and antipsychotics are used to manage the symptoms of associated disorders, which include attention deficit, hyperactivity, obsessions, compulsions, tics, irritability, seizures, and depression.

Attention Deficity Hyperactivity Disorder (ADHD)

Subtypes of ADHD

- Hyperactive
- Inattentive
- Mixed (inattentive-hyperactive)

Characteristics of ADHD

- Language impairment
- Restricted activities and interests
- Social impairment

ADHD Medications

- Stimulants like Ritalin (methylphenidate) or nonstimulants like Strattera (atomoxetine), both often used in conjunction with medications below
- Catapres (clonidine)
- Dysyrel (trazadone)
- Risperdal (risperidone)

Nervousness and insomnia are the most common adverse reactions of stimulants.

Schizophrenia

Schizophrenia is a type of psychosis that usually begins in late adolescence or early adulthood.

Characteristics of Schizophrenia

- Hallucinations
- Delusions
- Violent behavior
- Flat affect
- Disorganized speech and behavior

Drugs Used To Treat Schizophrenia

- Conventional antipsychotics
- Thorazine (chlorpromazine)
- Haldol (haloperidol)
- Serenil (mesoridazine)
- New generation antipsychotics
- Geodin (ziprasidone)
- Abilify (aripiprazole)
- Atypical antipsychotics
- Risperidone (risperdol), no sedation or muscular side effects
- Seroquel (quetiapine), sedation, least likely to produce muscular side effects
- Zyprexa (olanzapine), weight gain
- Clozapine (clozapine), most effective, most side effects

Side Effects

- Weight gain
- Tremor
- Flattened emotion
- Muscle spasm
- Fatigue
- Rigidity
- Restlessness
- Tardive dyskinesia

(Tardive dyskinesia, a neurological syndrome caused by the long-term use of neuroleptic drugs, is characterized by repetitive, involuntary, purposeless movements.)

Depression

Characteristics

- Major depressive episodes
- Depressed mood lasting all day, nearly every day
- Diminished interest in pleasure and daily activities
- Significant weight change
- Insomnia or hypersomnia
- Psychomotor agitation or retardation
- Feelings of worthlessness or excessive guilt
- Diminished ability to think; indecisiveness
- Recurrent thoughts of death

Drugs Used to Treat Depression

- Selective serotonin reuptake inhibitors (SSRIs): Prozac (fluoxetine); Paxil (paroxetine); Luvox (fluvoxamine); Zoloft (sertraline), Celexa (citalopram), Lexapro (escitalopram oxalate)
- Tricyclic antidepressants: Tofranil (imipramine); Anafranil (clomipramine)
- Monoamine oxidase inhibitors (MAOIs): Anipryl (selegiline)
- Heterocyclic antidepressants: Serzone (nefazodone); Wellbutrin (bupropion HCL)
- New generation antidepressants: Remeron (mirtazapine); Cymbalta (duloxetine hydrochloride)
- Miscellaneous: Effexor (venlafaxine)

Side Effects

Serotonin Syndrome - effect of SSRIs

- Hypertensive state (a dangerous, potentially fatal side effect of drugs used to enhance serotonin)
- Euphoria
- Drowsiness
- Sustained rapid eye movement

Changes in the understanding of many psychiatric illnesses and in their management options promote a sense of uncertainty for families. Each child responds differently to psychiatric medications. Unlike children who have more acute conditions, children with chronic psychiatric conditions may not return to “baseline” or “just get better” following a crisis.

Handling a Behavioral Emergency: Scene Response

Although an understanding of specific disorders and medications is important, responders should not try to diagnose psychiatric disorders in the field. On-scene definitive diagnosis and treatment of patients is not part of fire responder policies. Fire responders should conduct an assessment and manage patients using relevant EMS policies and accepted interventions.

Safety is the most important issue at the scene, as the case scenario illustrates. When evaluating a psychiatric patient for danger to self or others, the provider should gather information from the history and initial physical exam or survey. In a situation in which the patient is in the act of attempting or has attempted or is threatening suicide, evaluation is difficult.

Scene Size-Up

- Ensure personal safety.
- Perform initial assessment.
- Suspect life-threatening emergencies.
- Assess and manage ABCs.
- Assess posturing, hand gestures, and signs of aggression.
- Observe the patient's awareness, orientation, cognitive abilities, and affect.
- Consider the patient's and family's emotional state.
- Control the scene.

Focused History and Physical Exam

- Identify yourself.
- Obtain the patient's history; listen to the child and family members.
- Act assured and comfortable; maintain eye contact.
- Do not threaten; remain calm and speak slowly.
- Do not fear silence.
- Avoid separating young children from their parents.
- Encourage children to help with their own care.
- Prevent children from seeing violence or medical procedures that will increase their distress.
- Keep a safe and proper distance; limit physical touch.
- Avoid judgmental statements.
- Respond honestly; keep explanations brief and simple.
- Reassure children by carrying out all interventions gently.
- Do not discourage children from crying or showing emotion.
- Do not leave children alone; allow them to keep a favorite toy or blanket.
- Dim the lights; remove nonfamily members.
- Introduce the person who will assume care of the children if you need to be separated from them.

Psychiatric Medications

- Determine presence and type; note count, prescribed amount, dose, and prescription date.
- Evaluate medication compliance.
- Identify the treating mental health professional.

Special Considerations: Suicide

- Assess potentially suicidal patients.

- Document observations about the scene that may be valuable to mental health professionals.
- Document any notes, plans, or statements made by the patient.
- Treat traumatic or medical complaints.

Questions To Assist in Identifying Potential Violence and Suicide

- Is the room or apartment in a high-rise where the patient may have attempted or thought about jumping out of a window?
- Are there any noticeable empty pill bottles?
- Are there any knives, ropes, guns, or other objects present that may have just been used to attempt suicide?
- Is the patient bleeding from any site, especially from the wrists?
- Are there any rope marks around the patient's neck?
- Are there any scars at the wrists, neck, or head that suggest the patient may have made a suicide attempt or tried to hurt himself in the past?
- Has your assessment included whether the patient presents a danger to himself?
- Have you assessed for injury to other family members?

Suicide Treatment and General Management

- Ensure scene safety and BSI precautions.
- Provide a supportive and calm environment.
- Treat any existing medical conditions.
- Do not allow the suicidal patient to be alone.
- Do not confront or argue with the patient.
- Provide realistic reassurance.
- Respond to the patient simply and directly.
- Transport the patient to an appropriate receiving facility.

(Note: The above sections, beginning with "Scene Size-Up," were adapted from a training presentation by Bryan Bledsoe, Robert Porter, and Richard Cherry.)

Medical and Legal Issues: Abuse, Violence, Consent, and Restraints

The medical and legal aspects of emergency medical care become more complicated when the patient is undergoing a behavioral emergency. Gaining the patient's confidence is critical. A patient who is mentally unstable may resist a provider's attempts to render care. If providers are not sure whether a life-threatening emergency exists, they should request assistance from law enforcement. In many jurisdictions, restraint(s) must be ordered by a physician, court, or law enforcement officer. Restraints may be used to protect the responder or others from bodily harm or to prevent the patient from causing injury to himself.

Although abuse or neglect must always be considered, it is important not to make assumptions. If providers have a concern about possible abuse, neglect, or reverse abuse, they should notify law enforcement officers. Providers are legally obligated to call child protective authorities or police if they suspect abuse.

Addressing the Needs of the Family and Child in Crisis

EMS can assist and advocate for the child and the family during a behavioral emergency. The family of a child with behavioral emergencies lives in fear of restraints, hospitalizations, and false accusations. Understanding the emotional fatigue, physical exhaustion, and chronic life disruptions of families in crisis is integral to addressing their needs. Families of children with psychiatric or severe behavioral disorders often have

competing fears: the fear of a violent outburst by the child toward the family vs. the fear of the violence that may occur if the child needs to be restrained by the police or EMS providers. These families often do not want to tell others-including other family members, friends, or neighbors-of their child's psychiatric or behavioral disorder. Isolation, secrecy, fear, and stigma are a major fact of life for families raising children with mental health needs. Families may have limited financial, social, and emotional resources that have been stretched beyond their capabilities. These factors may contribute to the crisis at hand.

Children with psychiatric conditions, such as bipolar disorder, may not maintain normal social boundaries and may not respond to traditional behavioral methods or discipline. Cultural differences take on an even larger role in behavioral emergencies. Providers should not judge or subjectively interpret the patient's actions. When possible, and with the agreement and assistance of the family, responders should make appropriate contact with the child's mental health provider, who may greatly assist the responder, the child, and the family.

Case Study Continued

The responders call the psychiatrist and receive information on the medications. They sit with their young patient, develop a rapport, and communicate with him. The child's behavior improves and stabilizes. The rapid mood cycles lessen, and restraints are not needed. The police leave the scene.

Implications for the Future

EMS personnel should be prepared to address the needs of the pediatric population with psychiatric or behavioral crises. To be prepared for such emergencies, EMS responders should be familiar with mental health resources, have access to appropriate personnel and consultants, and have a basic knowledge of psychiatric conditions.

To address the challenges that behavioral emergencies present, Alameda County Emergency Medical Services Agency in California is conducting a unique "Behavioral Emergency" training campaign targeted at fire responders. The training includes the participation of a family who has experienced a pediatric behavioral crisis. The curriculum focuses on initial assessment, relevant EMS policies, accepted interventions, and on-scene decision making. Attendees share personal and professional experiences to address the gaps in field policy. A family "eyewitness" highlights the social and emotional issues.

Emergency Medical Services for Children (EMSC) and fire departments should fully integrate pediatric behavioral emergency prevention, planning, training, and response. Few training opportunities related to the specific needs of children with psychiatric disorders, behavioral disorders, or developmental disabilities exist for EMS responders. This limited exposure may put the children with such problems and the responders at risk. If first responders receive proper training and plans to assist children predisposed to behavioral emergencies, they will be more competent in providing care during behavioral emergencies.

EMS policies should be expanded to allow first responders to work with the mental health community and to function as resources for families in crisis. Protocols should allow first responders to obtain direction and orders from a base facility or from a recognized mental health provider so that the responders can approach patients and families in crisis as caregivers as well as rescuers.

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RESOURCES FOR FAMILIES AND RESPONDERS

American Academy of Child & Adolescent Psychiatry
www.aacap.org

American Academy of Pediatrics
www.aap.org

Depression and Bipolar Support Alliance
www.dbsalliance.org

Child and Adolescent Bipolar Foundation (CABPF)
www.bpkids.org

National Alliance for Mental Illness (NAMI)
www.nami.org

National Emergency Medical Services for Children
www.ems-c.org

National Organization on Disability
www.nod.org

Nick Traina Foundation
www.NickTrainaFoundation.org

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