

Child and Adolescent Emergency Psychiatry: A Review of Recent Developments

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Abstract Child and adolescent emergency psychiatry is an important but often isolated field. Borrowing from or integrating with emergency psychiatry, emergency medicine, and pediatric emergency medicine, this field has struggled to develop a robust research agenda. Despite these challenges, the past several years have seen many significant developments. Paralleling adult research, extensive medical screening and clearance for children and adolescents is now shown to be unproductive. Bullying, especially online bullying, and targeting of sexual minority youth are increasingly recognized as a risk for suicide and amenable to assessment in the emergency setting. Research continues to point to firearm access as a major risk factor for suicide despite unusual legal challenges in assessing for access. Finally, while dedicated pediatric psychiatric emergency services remain a gold standard, new alternatives are being identified to provide access to specialized expertise for other settings.

Keywords Child and adolescent behavioral emergencies · Firearms access · Bullying · Suicide screening · Medical clearance

Introduction

Behavioral emergencies in children and adolescents account for a large number and percentage of emergency presentations [1]. This volume is driven by any number of issues, not the least of which is interplay between brain development and the onset of many critical psychiatric illnesses in adolescence to early adulthood [2]. There is no specialty or subspecialty to address this population and specialized evaluation centers are uncommon; the result is that most of these emergencies are assessed and managed by any number of other specialties, primarily psychiatrists, and emergency medicine physicians with or without child and adolescent certification. The lack of professional specialization or ownership makes collection and dissemination of professional expertise challenging [3•]. (For the sake of consistency, this article will generally use the phrase “child and adolescent psychiatric emergencies” but other terms including “pediatric” and “behavioral emergencies” are essentially the same.)

Adding to this challenge, child and adolescent emergency psychiatry does not lend itself easily to systematic research. That is not to say that there are not excellent research questions ready to be asked, only that implementing a study in a population like this is especially challenging. Collecting sufficient numbers of subjects, at least at larger centers, is not a barrier, but merely crafting an informed consent process for this trifecta of at-risk categories—pediatric, psychiatric, and emergency—is challenging. Further, the heterogeneous array of interested professions leads to inconsistent terminology and definitions across papers making comparison and replication of extant research challenging [4•]. This creates a great need for expert consensus resources and makes systematic research in this field, when it occurs, all the more

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impressive. Recent attempts to review the literature have recognized and reiterated this challenge [5••].

The practice of child and adolescent emergency psychiatry is additionally hampered by frequent off-label use of medications, often making use of newer antidepressants and antipsychotics used with unclear diagnostic rationale [6, 7]. Emergency practitioners, as well as child and adolescent psychiatrists, face any number of challenges in distinguishing between primary pathology and ensuing symptoms and those which are due to the adverse effects manifesting from rampant aggressive or off-label pharmacotherapy. Emergency practitioners are less able to make reasonable inferences about potential diagnoses based on current or prior medication use; an ersatz but often useful clinical tool. This, too, is a longstanding challenge for the field [8].

What is left is the practice of evidence-informed, but often not evidence-based, decision making that takes into account the variability of presentations in child psychiatry, comfort with uncertainty and risk, and appreciation of the dynamic process that is the growing child and adolescent brain—issues very much at the heart of clinical child and adolescent psychiatry [9].

This paper will review the last several years of literature relating to child and adolescent behavioral emergencies.

Systematic Studies on Medical Clearance

There has been very little systematic research in emergency child and adolescent psychiatry over the past few years. A notable exception has been a series of studies looking at the issue of medical clearance. Medical clearance, the process by which a patient is deemed stable enough for transfer to a psychiatric emergency service or inpatient unit, is often a point of contention between emergency medicine and psychiatric or inpatient professionals with differing views on the necessity of testing and the function of clearance [10, 11].

Some may argue that the purpose of medical clearance is to exclude any potential medical cause of psychiatric symptoms. A psychiatric emergency or inpatient setting, they may argue, is a poor setting to evaluate medical etiologies. While this is conceptually appealing from the perspective of clinical psychiatrists, it is objectively incompatible with the formal role, structure, and capacity of medical emergency departments. Medical emergency departments are for the management of acute emergencies that may pose a threat to life or limb; they excel in assuring general medical stability and can do a reasonable job of identifying common, non-acute medical issues. They are a poor environment for hunting zebras. Factors leading to overuse of diagnostic testing include lack of familiarity

with the subject area in the providers, referring pediatricians or families leading to anxiety-based decision making.

New research looking at outcomes of patients brought to an urban emergency department demonstrates that, like adults, evaluation and testing that is not based on specific hypothesis generated by the history and physical examination is not useful. Screening testing—CBC, basic chemistries, routine urinalysis—that lacks a specific indication is not medically necessary in pediatric populations [12•, 13•]. Specifically indicated testing, such as workup of an unexplained change in mental status, toxicology testing in a person with a known ingestion, or therapeutic drug monitoring for medications currently taken by a patient are reasonable. This is not to say that assessment of medical complaints in children and adolescents with psychiatric symptoms should be ignored, but rather that medical clearance can easily be focused on specific clinical assessment without risk of missing acute or severe conditions that may mimic psychiatric symptoms [14•].

Many institutions would be well served to by developing internal protocols on what labs, if any, should be obtained beyond those specifically indicated from the emergency setting. When a child or adolescent is admitted and likely to be started on many classes of medications, baseline laboratory studies may be needed before starting the medication. Having laboratory studies done—or at least appropriate tubes drawn and held—in the emergency department can reduce the need for repeated sticks, which can be especially challenging in children and adolescents. Additionally, the time saved by avoiding a delay waiting for such laboratory studies can be critical to inpatient services in the current era of managed care.

New Books on Child and Adolescent Emergency Psychiatry

Also of note to the field of child and adolescent emergency psychiatry has been the introduction of two books on the topic. It has been approximately 25 years since the most recent texts on child and adolescent emergency psychiatry were released and the two prior works are notably dated: one emphasizes the importance of a male therapist to enforce gender norms on boys with feminine behaviors and the other endorses intensive psychodynamic therapy for mothers as a preferred intervention for children with autism [15, 16]. Suffice it to say that, however limited the evidence base may be to date, we have progressed substantially since these were published.

The new works include a series of well-crafted case stories highlighting both common and unusual presentations taking the reader through the process of assessment and decision making. While not a textbook as such, the

writing is compelling and the clinical discussion addresses both the evidence base and the process of working in a field where the evidence base is thin [17•]. A more comprehensive effort systematically looks at clinical assessment and management of common and serious behavioral emergencies [18•].

Screening and Evaluation for Suicide and Other Mental Health Issues in the Medical Emergency Department

Suicide is leading cause of death in adolescents and young adults and medical emergency departments are a critical juncture for screening and assessment, even when the presenting emergency is not expressly linked to suicide [19, 20]. Recent research suggests that use of as few as four questions can sensitively and specifically screen pediatric emergency patients for suicide risk [21•]. Positive response to 1 or more questions identified 97 % of the youth at risk and negative answers to all four questions correctly identified 87 % of those not at risk. The measure has been validated in both medical-surgical and psychiatric emergency settings, is specific to children and adolescents, and may be particularly useful in screening youth with acute or chronic medical issues (see Table 1).

There has been longstanding stigma and misconceptions about asking about suicide—concerns that asking the question may plant the idea. This has long since been disproven but may, ironically, still be a factor in Institutional Review Boards' assessment of risk of research, especially in pediatric populations [22•]. New objective data reaffirm the safety of asking about suicide in pediatric settings and, equally importantly, have indicated that pediatric patients themselves are broadly comfortable and appreciative of being asked about suicide even as a screening question [23].

Interestingly, in another study, notification of youth about of in-person follow-up to screening questions did impact responses to screening questions about suicide and violence. Adolescents reported significantly higher levels of suicidal ideation if they know there will be in-person follow-up; the authors hypothesized that this may be due to the youths' desire to prompt further assessment and support for their family. Alternatively, one wonders if an adolescent who

knows there will be limited or no follow-up experiences this as a reinforcement of hopelessness and helplessness [24].

Building on evidence and theoretical models that suggest that being a victim of violence is associated with any number of risks, a new study has found significant benefit to intensive screening and psychosocial interventions following violent and accidental injury of adolescents. Traumatic physical injury is often associated with substance use disorders, aggression towards others, and mental health issues including depression and post-traumatic stress disorder. When acutely injured youth are subjected to close assessment and intervention, subsequent psychiatric symptoms, substance use, and weapon use are decreased [25•]. While carrying a firearm may seem like an odd outcome to be concerned with, there is considerable evidence supporting that narrow social networks account for significant amounts of violent crime and new victims are often future aggressors [26, 27].

Firearms Screening Access

Screening pediatric patients and their families for firearms access has become highly controversial in the wake of Florida's Firearm Owners' Privacy Protection Act, colloquially known as the "Docs and Glocks" law, which creates disciplinary risks for Florida physicians who ask patients or their families about firearm access [28]. This law was triggered after a pediatrician asked a patient's family about firearm access as part of routine screening [29]. While prior courts had considered this law a violation of physician freedom of speech, the most recent ruling has upheld the law thus effectively placing Florida physicians inquiring about firearms access in jeopardy [30]. Additionally, concerning is that most emergency department staff in one study did not assess firearm access except when there is an explicit plan involving firearms [31•].

Past research has already indicated quite clearly that youth, even those who have had firearms safety training, will pick up, handle, and attempt to fire found firearms [32]. Similarly, parents may not remove firearms—or even introduce firearms to a home after removal—despite specific counseling and the presence of suicidal adolescents in the home [33]. It is worth noting that a careful review of the literature has yet to reveal any evidence that access to pediatricians in general or the screening for firearms access in particular are in any way a risk factor for suicide or violence. Despite the resistance, reduced access is a critical intervention in reducing suicide and homicide risk [34, 35, 36•].

It has been suggested to think of physician counseling on firearms as a cultural competency [37•]. This author and his colleagues have found that firearms safety discussions are best approached as a cross-cultural issues and

Table 1 Screening questions for suicide

1. In the past few weeks have you felt that you or your family would be better off if you were dead?
2. In the past few weeks have you wished you were dead?
3. In the past few weeks have you been having thoughts of killing yourself?
4. Have you ever tried to kill yourself?

Source Adapted from [21]

motivational interviewing can be a critical tool. Patients and their families rarely have identified firearm ownership as their emergency or crisis and physicians often know little about firearms and less about gun culture. Changing clinical expectations from removal based on provider expertise to establishing an open dialog about harm reduction may be helpful [38].

Bullying

Several recent studies have looked at the relationship between bullying, cyberbullying, and suicide risk. Being a victim of bullying more than doubles the risk of suicidal thoughts and attempts in children and adolescents; this effect is even stronger with cyberbullying [39]. Sexual orientation and gender identity are often triggers for bullying and are specifically associated with elevated risks of numerous suicide-related behaviors including medically serious suicide attempts in adolescents [40, 41]. Ethnic and racial minority status may exacerbate these risks [42]. It is worth noting that both bullying victimization and perpetration are associated with increased risk of suicide and other mental health concerns [43].

Reassuringly, simple questions are available that are valid and effective for exploring bullying in emergency settings. It has been suggested that emergency providers should have a low threshold for screening for bullying in the emergency department, given the high prevalence of perpetration and victimization and correlation with suicide risk; focused screening based on elevated risk determined from clinical assessment seems to be more prudent than broad screening for most emergency settings (see Table 2) [44].

While there are some bullying-specific interventions, the psychiatrist's first priority should be to identify and manage specific, treatable diagnoses such as Major Depressive Disorder. Bullying often occurs in school settings and between school peers; supporting parents in effectively communicating concerns about bullying to school

leadership is vital. Linkage to an educational advocate may be helpful as well. Bullying through online communications, by cell phone, social media and similar channels—so-called “cyberbullying”—is increasingly common and may accompany in-person bullying. Age appropriate guidance for parents, children and adolescents is available from many organizations including the National Center for Missing and Exploited Children at www.netismartz.org.

New Service Designs

Psychiatric emergency services—particularly those with pediatric expertise are arguably the optimal setting for evaluation of behavioral emergencies in children and adolescents [45]. These programs require extensive clinical expertise, commitment from institutional leadership, access to inpatient and outpatient services, and a population density and catchment area suitable for sustained operations. As noted before, many regions rely on general emergency or pediatric emergency departments for such care. One study found that a rapid response team of behavioral experts who supported a pediatric emergency department was both clinically effective and was able to provide substantial cost savings to the institution [46]. Urgent psychiatric consults to medical and pediatric EDs are another recently studied option and have had similar positive results [47]. Rapid psychiatric consults to Family-based crisis intervention for suicide attempts in children and adolescents has also been found to be a safe and effective alternative to inpatient admission for certain youth [48].

Telepsychiatry is being widely embraced for adults and has the potential to meaningfully impact child and adolescent emergency psychiatric care. Emergency telepsychiatry has been found to be safe, effective, and cost controlling in numerous studies [49, 50]. While research focusing on emergency telepsychiatry for adolescents and children is limited, many studies have identified other telepsychiatry interventions as effective tools to provide access to routine psychiatric care for youth in underserved areas [51–54]. The application to emergency child and adolescent psychiatry seems self-evident.

Of course, it seems reasonable to assume that better access to psychiatric and behavioral health care in the community could prevent unnecessary emergency department visits either through early treatment or mere accessibility. New models of integrated care, that is, embedding high quality behavioral health services in pediatric settings, are showing significant promise in improving access and outcomes [55–57].

Table 2 Exploratory questions for bullying

| | |
|----------------|--------------------------------------|
| For the bully | 1. How often do you bully others? |
| | 2. How long have you bullied others? |
| | 3. Where do you bully others? |
| | 4. How do you bully others? |
| For the victim | 1. How often are you bullied? |
| | 2. How long have you been bullied? |
| | 3. Where are you bullied? |
| | 4. How are you bullied? |

Source Adapted from [44]

Conclusion

Child and adolescent emergency psychiatry is an exhilarating, challenging, and rewarding field. The past several years have seen significant improvements in many areas but, overall, it remains an immature field in comparison to pediatric emergency medicine or emergency psychiatry. Improved public and scientific attention towards bullying and firearms have been paralleled with significant research findings supporting improved and efficient assessment in emergency settings. New service designs including rapid response teams and telepsychiatry show promise in improving access, and integrated care may have the potential to allow child and adolescent emergency psychiatry to focus on true emergencies rather than the potpourri of true emergencies and presentations largely attributable to access to care issues.

Compliance with Ethics Guidelines

Conflicts of Interest Dr. Rozel has nothing to disclose.

Human and Animal Rights and Informed Consent This article does not contain any studies with human or animal subjects performed by any of the authors.

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