“Medical Clearance” of Psychiatric Patients in the Emergency Department

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Abstract: Background & Aims: The past few years have seen an increase in the number of children and adolescents presenting to emergency departments with mental health complaints, including, but not limited to, depression, suicidality, and substance use-related conditions. This places many demands on the emergency physicians ranging from evaluating medical stability (also known as medical clearance) to arranging for psychiatric care, be it inpatient or outpatient. The goals of this article are to describe the current landscape of emergency care for the pediatric patient presenting with mental health issues and to highlight gaps in the current system.

Methods: We review the literature on the epidemiology of mental health emergency visits and guidelines for the medical clearance of pediatric and adolescent patients.

Results: The needs of young patients with mental health difficulties exceed the resources available in emergency care. Linkage to outpatient care is often inadequate and may be reinforcing and perpetuating the current mental health crisis witnessed country-wide in the US. Guidelines are lacking to standardize care in the ED, but there is a consensus that extensive routine laboratory testing is unnecessary.

Conclusion: Evaluation of physical stability, known as medical clearance, is a process best customized to every patient’s individual needs. However, requirements of admitting psychiatric inpatient facilities may conflict with recommendations of ancillary testing.

Keywords: Medical clearance, psychiatric patients, depression, suicidality, epidemiology, guidelines.

1. INTRODUCTION

The last two decades have seen a marked increase in the need for pediatric mental health treatment in emergency departments (ED). Currently, approximately 7% of all pediatric ED visits in the United States involve primary mental health complaints (Mapelli, Black, & Doan, 2015) and by 2011, ED visits for mental health issues had already increased from 4.4% of all visits in 2001 to 7.2% (Simon & Schoendorf, 2014).

Mental health complaints involve both suicidal and non-suicidal crises, and both these categories have seen sharp increases, i.e., a recent study found that the percentage of children’s hospital encounters for suicidality/self-harm more than doubled from 2008-2015 (Plemmons G, 2017). Emergency physicians and psychiatrists are on the frontlines of this epidemic and must be equipped to diagnose and stabilize children and adolescents with behavioral and psychiatric emergencies and develop an appropriate disposition plan (e.g., hospitalization, linkage to outpatient treatment, substance use treatments). However, despite the scope of the problem, evidence-based guidance for clinicians in emergency settings is lacking and multiple systems issues challenge in providing optimal care for patients. In this paper, we will discuss the current state of emergency department care of pediatric patients with primary mental issues, highlight-
ing challenges and future needs to improve care for this vulnerable patient population.

2. SCOPE OF MENTAL HEALTH NEEDS FOR THE CHILD AND ADOLESCENT POPULATION

While the increasing numbers of ED visits for children and adolescents that have been documented may seem alarming, it is thought to merely represent the tip of the iceberg as far as unmet needs for children and adolescents. More than 13 million children and adolescents require mental health services or substance abuse treatment. The presentation patterns and needs of the pediatric population, are different from adults, including from young adults ages 15-25 (Diggins, Kelley, Cottrell, House, & Owens, 2017): in a review of 3782 consecutive self-harm episodes, Diggins et al. found a different female to male ratio (6:1) in younger pre-adolescents compared to older teenagers, as well as different in self-harm methods, and more offering of high-intensity mental health aftercare. Even amongst pediatric patients presenting without a primary mental health complaint, screening with a structured clinical instrument revealed a 41% rate of undiagnosed/undisclosed mental illness, with the most frequent diagnoses being oppositional defiant disorder, depression, and attention-deficit hyperactivity disorder (Downey & Zun, 2018). One can easily imagine how better linkage to outpatient resources could prevent some of these issues from developing into acute visits in the future. For example, looking more closely at pediatric patients with a pre-existing diagnosis of bipolar disorder (Vande Voort et al., 2016), only half of the population followed in this study had ED visits during the follow-up period, a finding the authors attribute to potentially inadequate frequency of outpatient visits and to lacking referrals to psychotherapy.

In terms of self-harm, there continue to be increases as well, both in the community and in the ED. According to the Centers for Disease Control data, (Sally C. Curtin, April 2016), a staggering 17.0% of students in grades 9-12 seriously considered attempting suicide in the previous 12 months, 13.6% of students made a plan about how they would attempt suicide, 8.0% of students attempted suicide one or more times, and 2.7% of students made a suicide attempt that resulted in an injury, poisoning, or overdose requiring medical attention.

Suicide remains the second leading cause of death in the US in 10-14 and 15-24 year olds (Health, 2018).

3. THE RATIONALE FOR MEDICAL “CLEARANCE” OF PEDIATRIC PATIENTS WITH MENTAL HEALTH COMPLAINTS

Inpatient facilities often have a requirement for “medical clearance” of patients in order for them to be admitted from EDs. A vague and potentially misleading term, medical clearance does not guarantee a lack of future illness. It is more accurate and less confusing to say that the patient is medically stable for admission to a psychiatric facility than to say the patient is “medically cleared”. For adults, the recommendations (Chennapan et al., 2018) for patients with known psychiatric disease presenting with symptom exacerbation include medical screening consisting of a full medical and psychiatric history, a targeted physical examination, and a mental status examination. Similar guidelines for children have not been fully developed, but the best practice consensus at this point according to the American Academy of Pediatrics is targeted testing (Chun, Mace, & Katz, 2016). The caveat, as Feuer et al. (2018) point out, is that “emergency clinicians should avoid relying solely on past medical history or previous psychiatric diagnoses that might prematurely rule out medical pathologies” (Feuer, Rocker, Saggu, & Andrus, 2018).

Clinical policy published by the American College of Emergency Physicians (ACEP) (Physicians, 2017) on evaluation and management of adult patients with psychiatric complaints in the emergency department, similarly focuses on customized testing and not on a protocol-based umbrella approach. No similar formal clinical policy has been published to guide emergency department physicians in an appropriate evaluation of pediatric patients. The multi-disciplinary American Association for Emergency Psychiatry published best practices for agitated patients and stated that routine laboratory testing is not necessary, but did not specifically address pediatric patients (Wilson et al., 2017).

Emergency department clinicians generally consider a patient cleared if the psychiatric emergency is not due to an underlying medical cause and any active medical issues and injuries have
been stabilized. As such, they do not generally provide recommendations for the management of stable chronic medical illnesses such as diabetes or asthma. Screening examinations that are better performed in the patient’s medical home, such as testing for asymptomatic gonorrhea and chlamydia, are also not typically part of a medical assessment in the ED. The emergency department evaluation will not necessarily rule out nonurgent medical issues.

Many psychiatric inpatient facilities require some panel of tests before a patient can be accepted from an emergency department. These testing protocols vary by institution but are generally required before patient transfer regardless of whether the evaluating emergency physician feels ancillary testing is clinically indicated (Tucci et al., 2017). Zun and colleagues (2004) conducted a survey of psychiatrists and emergency physicians and found that psychiatrists would routinely order more ancillary tests than emergency physicians in the medical clearance of psychiatric patients (Zun, Hernandez, Thompson, & Downey, 2004). Two pediatric studies found that urine toxicology screens in the absence of abnormalities on history or physical exam did not change patient disposition (Fortu et al., 2009). The value of testing may not be relevant to emergency disposition, but may affect diagnostic impressions following admission: as many psychiatric illnesses have their onset in adolescence and early adulthood, the value of a drug screen, for instance, might be to influence a clinician’s assessment of a primary psychotic disorder, such as schizophrenia, versus a substance-induced disorder. In a series of 95 patients admitted for first-onset psychosis, positive drug screens were associated with fewer psychotic disorders and more affective symptoms upon admission (Katz, Kunyvsky, Hornik-Lurie, Raskin, & Abramowitz, 2016).

4. RECOMMENDATIONS FOR EVALUATION OF PATIENTS

Psychiatric facilities certainly do sometimes admit patients who have not been medically evaluated in an emergency department. While there is little published guidance on what constitutes an appropriate evaluation, there is even less evidence to guide which patients require such an evaluation. One retrospective study found that in the absence of altered mental status, medical complaint, ingestion, trauma or rape, patients could safely be directly admitted to psychiatric facilities without an emergency department evaluation (Santillanes, 2014). Multiple reviews have found a low prevalence of clinically significant laboratory test results in patients routinely tested during ED visits (Conigliaro, Benabbas, Schnitzer, Janairo & Sinert, 2018). Yet, an analysis of nationwide data found laboratory tests were ordered in almost 80% of patients admitted to psychiatric facilities (Yun et al., 2018), reflecting the demands of inpatient psychiatric facilities. Often clinicians ordering these tests are unaware of their costs. Cost issues dictate some restraints, as most labs are ordered as part of a panel (Donofrio, Horeczko, Kaji, Santillanes, & Claudius, 2015), and billed expenses far outweigh assumed cost to the institution; emergency physicians and psychiatrists disagree in their assessments of the costs (Medford-Davis, Moukaddam, Matorin, Shah, & Tucci, 2018).

We recommend that evaluation in the ED for patients with psychiatric complaints should consist of a thorough history, mental status examination, and physical examination, including a neurologic examination. Urine drug testing is not necessary on a routine basis, though its value is seen differently by psychiatrists versus emergency physicians; one analysis found that provider-initiated testing rather than protocol-driven routine screening could significantly lower costs in the evaluation of pediatric patients with psychiatric complaints (Donofrio et al., 2014). A major reason for an emergency department medical evaluation is to determine that the symptoms are truly due to a psychiatric illness. Abnormal vital signs may indicate serious medical pathology. Although patients may be tachycardic due to agitation or anxiety, these are diagnoses of exclusion, after an evaluation for more serious causes. Patients who are disoriented or who have waxing and waning mental status should be presumed to have a medical cause for their symptoms. Visual hallucinations, new onset psychosis, and sudden, drastic changes in behavior are concerning and require investigation to rule out non-psychiatric medical conditions. Many serious and time-sensitive conditions such as head trauma, hypoglycemia, a post-ictal state, thyrotoxicosis, infectious encephalitis, anti-NMDA receptor encephalitis, brain tumors, intoxications, and withdrawal syndromes can present with agitation or other psychiatric symptoms. A thoughtful history and physical examination
should uncover signs of a serious underlying medical illness if one exists. Ancillary testing and subspecialty consultation may be required if an organic etiology for the symptoms is suspected after physician evaluation.

Patients with primary psychiatric complaints should also be evaluated for evidence of self-harm, including traumatic injuries and ingestions. Any medical complaints or active medical issues should be evaluated and stabilized prior to transfer to a psychiatric facility.

Based on the available literature, it seems reasonable to order tests based on the history and physical examination, rather than to require a panel of tests. Pregnancy testing in adolescent females is indicated as the presence of pregnancy will impact the choice of psychiatric medications, and some have recommended that it be done routinely for all female adolescents seen in the ED (Goyal et al., 2013). If the physician has a concern for toxic ingestion, an electrocardiogram and appropriate laboratory testing is indicated.

5. ASSESSMENT FOR CHILD ABUSE AND NEGLECT

Child abuse and neglect is any act or failure to act, on the part of a parent or caretaker which results in harm, risk of harm, or threat of harm to a child. It is quite common, with one study finding that 1 in 8 US children are confirmed to be maltreated by the age of 18 years (Wildeman et al., 2014). Known risk factors for abuse and neglect include young age which also carries an increased risk of fatality, intellectual or physical disability of the child (e.g. visual or hearing impairment), and behavioral or emotional disturbance of the child (US Department of Health & Human Services, 2017).

Abuse is directly linked to the medical stability examinations in several areas, as abused children often have poorer health outcomes and potentially acquire more transmitted diseases (Ferrara et al., 2016). The first is the need to collect samples within an appropriate time window for forensic examinations in cases of assault. The second is to test for sexually transmitted diseases, especially in cases where abuse is thought to be associated with human trafficking. Lastly, health care professionals who have reason to suspect child abuse or neglect are mandated to report it to child protective services and/or police.

Children and adolescents who are victims of child maltreatment are at increased risk of a variety of mental health problems, including externalizing disorders often manifested by problem behaviors including high risk activity, and internalizing disorders including trauma and anxiety-related symptoms, and depression with an increased risk of attempted suicide, and even psychosis (Berthelot et al., 2015; Gilbert et al., 2015). Knowing that child maltreatment and mental health problems often co-exist, all adolescents presenting with mental health emergencies should be screened for neglect and physical, sexual, and emotional and psychological abuse. Recognizing that time constraints may not allow a full assessment of all adolescents, emergency physicians should still consider the ED visit as a window of opportunity that may change a child’s life.

6. PSYCHIATRIC TREATMENT OF YOUTH WITH CO-EXISTING MEDICAL AND PSYCHIATRIC ILLNESSES

While most children and adolescents presenting to the emergency department with psychiatric complaints do not have serious active medical issues, a subset of patients requiring admission for psychiatric illness have co-existing medical issues such as diabetes mellitus or a need for assistance with activities of daily living. These patients do not require admission to a medical ward but do require daily treatment or assistance. Outlook for patients with dual conditions is less than positive: in a population-based cohort study, mental health difficulties with ED visits represented a poor prognostic factor for adulthood quality of life and mortality rates (Shulman, Luo & Shah, 2018). These patients are frequently challenging to place in psychiatric inpatient facilities, which may not feel comfortable overseeing treatment of medical issues (Tucci et al., 2017). However, these patients do not meet criteria for admission to medical wards either and would not receive the appropriate level of psychiatric treatment if admitted to a medical team, given lack of therapeutic activities, group therapy, and school-based curricula that inpatient psychiatric units provide.

Children and adolescents with intellectual disabilities and autism also present a challenge in
placement when inpatient psychiatric treatment is required as many psychiatric inpatient facilities do not accept patients with these conditions (Lunsky et al., 2017). A recent systematic review found that there is an increased prevalence of autism in the population with psychosis compared to the general population (Kincaid, Doris, Shannon, & Mulholland, 2017). These patients with co-existing autism or intellectual disability and psychosis or other serious psychiatric illness do sometimes require inpatient treatment and the difficulty with placement is problematic. Medical wards and emergency departments are generally unable to provide appropriate levels of psychiatric treatment. Furthermore, the constant stimuli, lack of routine, and sleep disturbance for patients boarding in the emergency department are likely to be particularly harmful to patients with autism and intellectual disabilities. Thus, families and emergency departments are left in difficult situations when patients cannot be transferred to inpatient facilities, but are not safe to be discharged to their usual living situation.

CONCLUSION

Pediatric patients with behavioral and mental health emergencies commonly present to the emergency department (Sheridan et al., 2016). This is largely due to a fragmented system of mental health resources with shortages in available services. While many would argue that emergency departments are not the ideal environment for patients with isolated behavioral and mental health emergencies and that these patients are better served in dedicated psychiatric facilities, these facilities are not readily available to the patients who need emergency services. In a study of one thousand paramedic calls for mental health crises, most patients had to be taken to a medical ED even though the disposition was going to be a psychiatric facility, because of a lack of inpatient beds (Mackey & Qiu, 2018). Emergency departments serve as the safety net for this vulnerable population but lack the ability to serve their needs effectively. This is especially true among youth. For adults, receiving a mental health diagnosis in the ED is associated with a decreased risk of recurring self-harm within the month after the index incident, but the same is not applicable to youth (receiving Medicaid) who have self-harmed (Bridge, Olfson, Fontanella, & Marcus, 2018). This finding is probably best explained by the fact that young patients who self-harm do not receive appropriate mental health care.

Even if system changes occur to provide comprehensive mental health services and prevent many psychiatric crises, there will always be patients with psychiatric complaints presenting to emergency departments. Thus, best practice guidelines for the evaluation and management of pediatric patients with psychiatric emergencies, going beyond not ordering routine laboratory testing, could be very useful in guiding care of these patients. We call on groups such as the American College of Emergency Physicians, the American Academy of Pediatrics, the American Academy for Emergency Psychiatry, and the American Academy of Child and Adolescent Psychiatry to develop evidence-based clinical policies. Lastly, the shortage of child psychiatrists in the US has been a limiting factor in providing treatment for children and adolescents who need it. However, many other layers of care including social work, counseling, and psychotherapy, are in desperate need as well and would greatly improve the care for youngsters with mental health problems.

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REFERENCES


