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Organizational Principles to Guide and Define the Child Health Care System and/or Improve the Health of all Children

Technical Report—Pediatric and Adolescent Mental Health Emergencies in the Emergency Medical Services System

Margaret A. Dolan, MD, Joel A. Fein, MD, MPH, and THE COMMITTEE ON PEDIATRIC EMERGENCY MEDICINE

KEY WORDS
emergency department, emergency medical services, mental health care, psychiatric illness, trauma, posttraumatic stress disorder

ABBREVIATIONS
ED—emergency department
PTSD—posttraumatic stress disorder
AAP—American Academy of Pediatrics
ACEP—American College of Emergency Physicians
EMS—emergency medical services

The guidance in this report does not indicate an exclusive course of treatment or serve as a standard of medical care. Variations, taking into account individual circumstances, may be appropriate.

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abstract

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Emergency department (ED) health care professionals often care for patients with previously diagnosed psychiatric illnesses who are ill, injured, or having a behavioral crisis. In addition, ED personnel encounter children with psychiatric illnesses who may not present to the ED with overt mental health symptoms. Staff education and training regarding identification and management of pediatric mental health illness can help EDs overcome the perceived limitations of the setting that influence timely and comprehensive evaluation. In addition, ED physicians can inform and advocate for policy changes at local, state, and national levels that are needed to ensure comprehensive care of children with mental health illnesses. This report addresses the roles that the ED and ED health care professionals play in emergency mental health care of children and adolescents in the United States, which includes the stabilization and management of patients in mental health crisis, the discovery of mental illnesses and suicidal ideation in ED patients, and approaches to advocating for improved recognition and treatment of mental illnesses in children. The report also addresses special issues related to mental illness in the ED, such as minority populations, children with special health care needs, and children's mental health during and after disasters and trauma. *Pediatrics* 2011; 127:e1356–e1366

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BACKGROUND

Emergency department (ED) health care professionals often care for patients with previously diagnosed psychiatric illnesses who are ill, injured, or having a behavioral crisis. ED health care professionals also need to identify and manage patients with previously undiagnosed and/or undetected conditions such as suicidal ideation, depression, anxiety, psychosis, substance use and abuse, and posttraumatic stress disorder (PTSD). This report will address the roles that the ED and ED health care professionals play in emergency mental health care of children and adolescents in the United States. This technical report supports the 2006 joint statement from the American Academy of Pediatrics (AAP) and American College of Emergency Physicians (ACEP) titled "Pediatric Mental Health Emergencies in the Emergency Medical Services System."[1,2] Previous policy statements, clinical reports, and technical reports by the AAP that have addressed specific pediatric emergency mental health issues and formulated guidelines for model programs include, but are not limited to, "Adolescent Assault Victim

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Needs: A Review of Issues and a Model Protocol" (1996),[3] "Access to Pediatric Emergency Medical Care" (2000),[4] "Child Life Services" (2006),[5] "Care of the Adolescent Sexual Assault Victim" (2008),[6] "Achieving Quality Health Services for Adolescents" (2008),[7] "Suicide and Suicide Attempts in Adolescents" (2007),[8]"Underinsurance of Adolescents" (2008),[9] "Death of a Child in the Emergency Department" (joint statement from the AAP and ACEP in 2002[10] and a supporting technical report by the same title (2005),[11] "Patient- and Family-Centered Care and the Role of the Emergency Physician Providing Care to a Child in the Emergency Department" (2006),[12] and "Family-Centered Care and the Pediatrician's Role" (2003).[13]

PSYCHIATRIC ILLNESS AND THE ED

The current and increasing concerns regarding pediatric mental health emergencies occur within the context of the overall crisis in pediatric ED care. First, there has been an increase in the prevalence of ED visits for psychiatric illness.[14–18] This situation is complicated by a shortage of inpatient and outpatient services available for patients who need mental health care and an unfunded mandate to care for these patients in an ED setting. The 1999 Surgeon General's report on mental health[19] indicated that 21% of US children 9 to 17 years of age have a diagnosable mental or addictive disorder. The National Institute of Mental Health has reported that 10% of children in the United States currently suffer from mental illness, and more than 13 million children require mental health or substance abuse services.[20,21] The World Health Organization has estimated that by the year 2020, neuropsychiatric disorders will become 1 of the 5 most common causes of morbidity, mortality, and disability for children.[22] A study at the University of Pittsburgh found that from 1979 to 1996, the rate of psychosocial problems identified in primary care visits of 4- to 15-year-olds increased from 7% to 18%.[23] Suicide in the United States currently ranks as the fourth leading cause of death for 10- to 14-year-olds and the third leading cause of death for 15- to 19-year-olds, accounting for 11.3% of all deaths in the latter age group in 2006. More than half of adolescents 13 to 19 years of age have suicidal thoughts, nearly 250 000 adolescents attempt suicide each year, and up to 10% of children attempt suicide sometime during their lives.[24–26] Of great concern is the fact that, despite its increasing prevalence, the risk of suicidal behavior in many children and adolescents is often undetected. One study found that 83% of adolescent patients who had attempted suicide were not recognized as suicidal by their primary care physicians.[27] Rotheram-Borus et al[28] reported that fewer than 50% of adolescents seen for suicidal behavior in the ED were ever referred for treatment, and, even when they were referred, compliance with treatment was low. Another study revealed that only one-fifth of these children receive necessary treatment.[21]

Patients who need mental health care can be disturbing to the routine and flow of the ED and require more resources than many medical or trauma patients. In a 2006 study, Santiago et al[29] reported that 210 patients with a median age of 14 years and requiring psychiatric evaluation spent a median of 5.7 hours in the ED. Hospital police monitored 51.9% of these patients, and 45 patients exhibited dangerous behaviors. Among children who frequently used mental health services in the ED, approximately 50% of them were seen again within 2 months of their initial visit, which suggests that patterns of recidivism are high for psychiatric patients. Repeat patients are more likely to threaten to harm others; to have a diagnosis of adjustment, conduct, or oppositional disorder; and to be under the care of a child welfare agency. Repeat users were also significantly more likely than one-time patients to be less compliant with outpatient follow-up, be admitted to the hospital, and require more social support. These youth also have increased risk of involvement with juvenile justice; a large proportion of them have related behavioral, emotional, and cognitive disabilities and have greater difficulty remaining in residential treatment. The total proportion of children admitted to general inpatient services from the ED for mental health problems is also increasing. In Washington State, psychiatric disorders were the leading cause of adolescent hospitalization and accounted for one-third of hospital days for 5- to 19-year-olds over a 10-year period from 1994 to 2003.[30]

According to a 2004 AAP policy statement, ED overcrowding threatens access to emergency services for those who need them the most and further complicates the ability of EDs to serve the needs of patients who need mental health care and their families.[31] A 2008 report from the Centers for Disease Control and Prevention noted that ED visits increased 32% from 1996 to 2006, whereas the number of EDs decreased by 5%. Approximately one-third of EDs reported having to divert incoming patients to another ED in the previous year.[32] Boarding of patients with mental illness in the ED has many deleterious effects on the health care of those patients and others.[33] The ED is often a high-stimulation environment that is not conducive to calming agitated patients. In addition, privacy is not as easy to arrange, which leads to distraction and disruption of care for these patients and their families as well as the other ED patients.

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The pediatrics section of the 2007 Institute of Medicine report on emergency services described the burgeoning problem of pediatric mental health problems in the saturated emergency medical services (EMS) system.[34] The report cited studies that have demonstrated inadequate or nonexistent screening and evaluation for children with mental health complaints, inadequate training and comfort levels for ED physicians and nurses in caring for pediatric patients with mental health complaints, suboptimal ED environment for mental health patients in crisis, and extended ED wait times for patients who need mental health care and require admission because of lack of psychiatric inpatient resources. According to the Institute of Medicine report, not only is ED use increasing, but younger patients are being seen, and depression, bipolar disorder, and anxiety are now being identified in children of elementary school age. EDs are increasingly used as the safety net for diagnosing and managing psychiatric illness in these children. The pediatric ED at Yale noted an increase of 59% in psychiatric illness-related visits between 1995 and 1999; the most common complaints were behavioral changes, ingestions, suicide attempts, and violence.[35] The Cincinnati Children's Hospital ED reported an annual increase in visits by psychiatric patients from 800 in 1995 to more than 2000 in 2004.[36] In their 1999 study of pediatric EMS usage, Sapien et al[37] found that 15% of pediatric EMS responses were for suicide, assault, or alcohol and drug intoxication, which emphasizes the need for first responders to have an informed approach to these problems. The actual number of psychiatric emergencies may be underestimated, because many children and adolescents who present with trauma may have made a suicide attempt, and vague somatic complaints may actually represent depression, PTSD, suicidal ideation, or abuse.

BARRIERS TO MENTAL HEALTH SERVICES IN THE EMS SYSTEM

Hoyle and White[38] outlined the barriers to adequate pediatric mental health services in the EMS system. These barriers can be categorized as (1) a lack of information relating to pediatric psychiatric illness, (2) limitations of the ED setting that influence timely and comprehensive evaluation, (3) need for education and training of ED staff regarding identification and management of pediatric psychiatric illness, and (4) a lack of access to and effectiveness of inpatient and outpatient mental health services.

Lack of Information Relating to Pediatric Psychiatric Illness

In a 2002 report, Horwitz et al noted, "Federal agencies' planning documents devote considerable attention to the need to understand the identification and treatment of children's behavioral and emotional issues within primary medical settings. Nevertheless, a paucity of evidence exists to demonstrate that such attention has resulted in aggressive programs of research in this area."[39] They found that adults received 15 times more research attention than did children and adolescents. Some epidemiologic data regarding psychiatric problems are available from national database sources including the National Hospital Discharge Survey, the National Hospital Ambulatory Medical Care Survey, and the National Electronic Injury Surveillance System. However, because children's psychiatric issues were largely unrecognized during the development of these databases, information regarding children and adolescents is obtained most often by extrapolation or inference. The National Hospital Discharge Survey and National Hospital Ambulatory Medical Care Survey use broad age groupings (younger than 15 and 15 through 44 years) that obfuscate the data pertinent to children and do not always subcategorize psychiatric illness or ED visits. Olson et al[40] used National Electronic Injury Surveillance System data from 10 hospitals over a 3-month period in 2000 to categorize presentations to the ED and found that psychiatric or violence-related complaints represented a relatively high proportion of pediatric ED visits.

Limitations of the ED Setting That Influence Timely and Comprehensive Evaluation

ED health care professionals recognize the difficulties in providing care to all children with psychiatric emergencies and note a lack of psychiatric specialists and inpatient and outpatient facilities and an increase in referrals from schools, primary care physicians, and mental health therapists who cannot admit patients directly from their offices.[34] These limitations, coupled with a mandate to care for all patients who present to the ED, create a difficult obligation for ED practitioners to fulfill. The Emergency Medical Treatment and Active Labor Act (EMTALA), enacted in 1985 with the purpose of protecting the rights of indigent patients seeking emergency care, requires Medicare-participating hospitals to provide a medical screening examination for all patients who present for care to the ED, regardless of the patient's ability to pay.[41] Subsequent revisions have clarified the responsibility of hospitals, EDs, and their physicians to act on this medical screening examination if the patient is determined to have an acute medical or psychiatric condition, such as suicidal ideation, by providing all ancillary services routinely available to the ED, such as a physician consultation, inpatient care, and mental health services, in a nondiscriminatory and consistent manner. This revi-

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sion guarantees that hospital EDs are essentially the only place in our current health care system in which all patients with acute psychiatric illness can be guaranteed thorough evaluation.[42–44] A comprehensive emergency psychiatric examination may take several hours, and often there is no private or quiet area within the ED to facilitate effective consultations. In addition, the ED is not the optimal setting for assessing and managing patient and family anxiety, because they are crowded, noisy, and full of distressing sights and sounds that may even exacerbate some patients' symptoms or behavior. Given the declining numbers of available consultants, the formal psychiatric evaluation often begins hours after initial medical stabilization. Regulatory agencies have recognized the importance of standardized approaches toward high-risk psychiatric patients in the ED. Since January 1, 2007, the Joint Commission has required accredited organizations to conduct suicide risk assessment for any patient with a primary diagnosis or primary complaint of an emotional or behavioral disorder.[42]

Need for Education and Training of ED Staff Regarding Identification and Management of Pediatric Psychiatric Illness

Education about the causes, signs and symptoms, and optimal management of pediatric mental illness is essential for pediatric, family practice, and emergency medicine practitioners, including residents and pediatric emergency medicine fellows as well as those who practice in community hospitals. This education includes the use of appropriate mental health screening tools, appropriate discharge instructions, and mental health follow-up for depressed patients and patients who have considered or attempted suicide. However, residency program education may be insufficient in many of these areas.[45,46]

Lack of Access to Inpatient and Outpatient Mental Health Services

Nationally, the number of adult and pediatric beds in state mental health facilities plummeted 32% between 1992 and 1998 and has since dropped significantly below 60 000, and fewer than half are allocated for acute care.[47] Media reports have highlighted the fact that these inpatient cost reductions have not been offset by outpatient expenditures, and as a consequence, the ED has more frequently become a location for nonurgent mental health complaints.[48–50] They cite the combination of fewer inpatient psychiatric beds and insufficient outpatient services, which leaves EDs to hold pediatric psychiatric patients or admit them to a medical unit with little hope of being reimbursed for that admission. This process can be resource-intensive, because these patients sometimes must be restrained and/or constantly monitored.

POTENTIAL SOLUTIONS TO THE CRISIS IN MENTAL HEALTH CARE

Solutions to the mental health care crisis are not easily found within other, nonmedical systems, which are equally unprepared to handle children with acute psychiatric illness. A nationwide survey of juvenile detention centers, the results of which were presented at a Senate hearing in July 2004, revealed that 15 000 children with psychiatric disorders were improperly incarcerated the previous year because no mental health services were available.[48] Many community health centers that traditionally provide mental health care have lost their state funding and often turn away patients or place them on long waiting lists. Schools, therefore, frequently function as the de facto mental health system for children and adolescents; 70% to 80% of schoolchildren who need mental health services receive that care in the school setting.[51–53] School counselors are primarily funded by state and local funds, but school districts also use funds from federal programs such as the Safe and Drug-Free Schools grants that are authorized by the Elementary and Secondary Education Act, otherwise known as the No Child Left Behind Act (Pub L No. 107-110 [2002]). However, it is important to remember that this program, like other legislative mandates, depends on the vagaries of federal funding and budget cuts. Primary care physician offices are another point of contact for children and youth at which there is high potential for identifying and managing mental illness, but even when children are seen in the general medical setting, identification and management of mental illness are still challenging.[54–57] To address these issues, the AAP Task Force on Mental Health has developed algorithms to help pediatricians identify, manage, and develop safety plans for children and adolescents and offers strategies for diverting patients from the ED and referring more directly to mental health resources when available.[51] However, primary care physicians cannot do this alone. For this approach to be successful there needs to be an increase in the flow of pediatric trainees into child psychiatry training programs and a concomitant increase in payments for child psychiatric services to these program graduates. Telepsychiatry, first piloted in Britain, also offers a potential solution to the lack of mental health care providers in rural and remote areas.[58,59]

Stabilization and Management of Patients in Psychiatric Crisis

Patients who arrive with a psychiatric emergency require a rapid, thoughtful response by the ED team to assess the degree of stress and safety of the patient, provide medical stabilization,

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and use specific interventions to alleviate symptoms and increase safety for the patient and ED staff and other patients. During these evaluations, ED health care professionals maintain a delicate balance between maintaining patient confidentiality and engaging the external support systems that already exist for these patients. In many states, adolescents can seek and receive care for mental health issues and drug/alcohol use without parental involvement, and EDs must maintain confidentiality except if the child is at risk of harming himself or herself or others. However, the ED must also recognize the primary support role of the family and caregivers, as well as the child's primary care providers, in all phases of pediatric mental illness. In this light, ED health care professionals must encourage, but not coerce, the adolescent to allow family involvement whenever possible.

Of paramount importance is for EDs to have the capacity to provide such care within an overall system of mental health care. The most important element is establishing an effective relationship with a specialized mental health team. Team composition and availability may vary but should be predefined. When consultations are requested, the degree of urgency and the expected response time should be communicated clearly. Additional dialogue should take place after consultation to ensure that there is agreement with a treatment plan and to facilitate expeditious and appropriate disposition. Acute drug ingestions present a specific challenge in this regard and require ED health care professionals to blend the usual resuscitation protocols with psychosocial management by medical staff, social workers, psychiatrists, and security personnel. Preexisting relationships with psychiatric inpatient facilities promote efficient disposition. It is also helpful to have familiarity with child protection laws and to establish relationships with local law enforcement and child welfare and social service agencies. School nurses, often the liaisons among family, health care professionals, and school personnel, can also be included, with appropriate consent, to help inform as well as facilitate management plans after the ED visit.[60] Adequate and appropriate physical space should be available for children and families in crisis; a private room with monitoring equipment that is out of the patient's reach is considered optimal. Patients should be within the sight of ED staff; screening for suicide risk or potential self-harm should occur, and one-to-one supervision should be provided as needed. If a patient requires medical admission or must wait in the ED for transfer to another facility, guidelines should be available for staff and faculty members in handling inpatient psychiatric patients and their family members.

On occasion, children and adolescents with psychiatric illness will require physical or chemical restraint to protect them or others from harm. The AAP and ACEP offer guidelines or policies related to patient restraint and reaffirm the need for frequent safety checks, vital-sign monitoring, evaluation of limb neurovascular status, and assistance with nutritional and bathroom needs.[61,62] It is more common for EDs to use anxiolysis and mild sedation to avoid the need for physical restraint. The decision to use physical restraints should be made by an attending physician but may be initiated by nursing staff in extenuating circumstances. Even with proper restraint, mental or cardiopulmonary status may deteriorate unexpectedly; therefore, patients in restraints should be monitored continuously with time-limited orders. The Joint Commission carefully monitors the institutional policies around implementation and documentation of patient restraint and emphasizes that it must be used as a last resort and that the treatment is for the patient's benefit.[63,64]

The Role of the ED in Discovering Mental Illness in Children

As mentioned above, in 2007, the Joint Commission recommended a suicide risk assessment for any patient with a primary diagnosis or primary complaint of an emotional or behavioral disorder.[42] Some suicide-assessment instruments, such as the Suicidal Behavior Interview and the Suicide Intent Scale, are not options for EDs, because they are designed to be administered by trained mental health specialists or require complicated computations by clinicians.[65,66] Although there is no standard or optimal instrument that screens for suicidality, high sensitivity and rapid administration are 2 highly valued characteristics. One tool with such characteristics is the Suicidal Ideation Questionnaire (SIQ), a 30-item instrument originally designed for 10th- through 12th-grade students.[67] A 15-item instrument (SIQ-JR) is also available for students in grades 7 through 9 and has been standardized for older students as well.[68] These tools may take longer than desired in an ED setting but have strong psychometric validity and reliability. Shorter tools that are more appropriate for the ED setting have also been developed. Horowitz et al[69] demonstrated good content validity of the Risk of Suicide Questionnaire (RSQ), a brief screening tool for screening for suicidal ideation in the ED that assesses major facets for suicide risk, present and past suicidal ideation, previous self-destructive behavior, and current stressors. Folse et al[70] piloted a 2-question version of this screening tool in the pediatric emergency setting, and almost 30% of the adolescents screened positive for suicidal

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ideation within the previous week. The authors recommended that clinicians ask the questions: "Are you here because you tried to hurt yourself," and "In the past week have you thought about killing yourself" as an initial assessment for adolescents coming to the ED for medical care, regardless of the presenting symptoms.

Patients may exhibit "externalizing" symptoms that initially have been identified by a caregiver, teacher, health care professional, or even criminal justice personnel. However, many children with psychiatric illness do not present to the ED with overt psychiatric symptoms. It is also clear that many patients with psychiatric disorders exhibit somatic symptoms, such as headache and abdominal pain; some chronic medical illnesses, such as asthma and diabetes, can be exacerbated by stress and anxiety.[71,72] Scott et al[73] found a 30% rate of moderate or severe depression in 13- to 19-year-olds in the pediatric ED. Similarly, Rutman et al[74] found that 37% of the adolescents in a pediatric ED research study were above the threshold for depression on the Center for Epidemiologic Studies Depression Scale.

The US Preventive Services Task Force recommends screening of adolescents 12 to 18 years of age for major depressive disorder when systems are in place to ensure accurate diagnosis, psychotherapy, and follow-up.[75] Because the ED may be the only point of contact for children with undiagnosed psychiatric illness, it is imperative to have adequate resources in this setting to link patients who "screen positive" with inpatient or outpatient services. In addition, it is necessary to have efficient, culturally sensitive, and developmentally appropriate screening tools that promote the accurate detection of suicidal ideation, depression, and other psychiatric illnesses. Some investigators have adapted full-length, adult scales for use with younger populations, but they require 20 to 40 minutes to administer.[76] Some EDs have developed their own mental health screening tools to help in the evaluation of child and adolescent patients. Adolescents at the Children's Hospital of Philadelphia use computers to complete the self-administered Behavioral Health Screen for Emergency Departments, which provides their physicians and nurses with information about their risk for depression, suicidal ideation, PTSD symptoms, and substance abuse.[77,78]

Similar developments have occurred in the real-time assessment of traumatic stress in pediatric ED patients. Just like adults, children's previous adverse experiences can influence their response to acute illness and their ED visit. When children experience sustained stress attributable to traumatic experiences, neurohormones, such as cortisol, are increased. These elevated neurohormones can lead to permanent changes in their developing brain structures, such as the amygdala and hypothalamus.[79] Unrecognized and untreated, acute stress symptoms can cause lifelong behavioral and mental health problems attributable to changes in neurodevelopment and function.[80–86] Children with a history of a traumatic experience, be it from unintentional injury, violence, or sexual or physical abuse, can be expected to have more acute stress symptoms in the immediate aftermath of a specific event.[87] Shemesh et al[88] identified PTSD in 29% of the patients in a small convenience sample of pediatric patients who presented to a pediatric ED. All patients but 6 identified at least 1 previous salient traumatic event; most of the events were not immediately related to the reason for the ED presentation. Knowledge of trauma symptoms significantly altered the ED clinical management in 16% of the cases.[88] Winston and colleagues[89] have developed brief screening tools for acutely injured children and their families and have achieved some success in providing these families with practical print and Web-based management tools. Although these data suggest that early identification and management of psychological trauma and its consequences are feasible in the pediatric ED, further efforts are required to incorporate these techniques into the routine systems and processes in the ED.[90] Parents and caregivers also need education from appropriate personnel on what to expect, how to parent a traumatized child, how to know when additional help is needed, and where to find it. Information such as this can be found at sites for the National Child Traumatic Stress Network (www.nctsnet.org) and the Center for Pediatric Traumatic Stress at the Children's Hospital of Philadelphia (www.healthcaretoolbox.org).

SPECIAL ISSUES RELATED TO MENTAL ILLNESS IN THE ED

Minority Populations

Children from minority populations have less access to mental health services and are less likely to receive needed care.[91] Likely because of the complexity and cultural interpretation of psychiatric illness, the lack of proper translation when needed, even by trained interpreters, may contribute to difficulty in receiving information and following through with mental health referrals.[92] According to Rand's 2001 *Mental Health Care for Youth*,[93] 31% of white children who needed mental health services received them, compared with 22% of black and 14% of Hispanic children. In addition, the same study found that people from minority populations in treatment often receive a poorer quality of mental health care and are underrepresented

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in mental health research. After adjusting for other demographic factors and parent characteristics, Hispanic children with mental health problems had greater odds of having no care or unmet need compared with white children. This finding is particularly concerning given the increased suicidal ideation, depression, anxiety symptoms, and school dropout rates among Hispanic compared with white adolescents. Cultural factors, particularly around the stigma of mental illness, were noted to be important for Hispanic people. Financial factors also play a role in these disparities; although they differ according to state, these differences are more likely the result of varied state policies and health care market characteristics rather than differences in racial or ethnic makeup.[94]

Children With Special Health Care Needs

It is well known that children with special health care needs frequently have coexisting psychiatric morbidity.[95–97] For example, children with asthma and allergies are especially prone to having anxiety disorders.[98] Obesity is also associated with problems such as depression, especially in Hispanic and black children.[99] The Emergency Information Form (EIF), developed jointly by the AAP and ACEP (www.aap.org/advocacy/blankform.pdf), allows providers to include psychiatric and behavioral diagnoses for children with special health care needs and also includes information about their health care professionals, medications, and significant medical history.

Children's Mental Health During and After Disasters and Trauma

The ED is the initial source of physical care for child victims of disasters (natural or man-made) or trauma (unintentional or intentional). Many studies have demonstrated the development of depression and PTSD in child survivors of trauma and disaster.[100–104] Unrecognized and untreated, acute and posttraumatic stress symptoms can cause lifelong behavioral and mental health problems as a result of changes in brain neurodevelopment and function. These alterations in function create a lifetime risk of subsequent poor school performance, depression, suicidal ideation or attempts, aggression, and risk-taking behaviors. Current research is ongoing to identify these at-risk children as early as possible and to develop validated interventions to cope with the stress and avoid later psychiatric morbidity. An AAP-funded Agency for Healthcare Research and Quality resource, "Pediatric Terrorism and Disaster Preparedness: A Resource for Pediatricians," includes information on children's mental health in disasters (www.ahrq.gov/research/pedprep/resource.htm).

RESEARCH AND ADVOCACY AGENDA FOR MENTAL HEALTH EMERGENCIES IN THE ED

The President's New Freedom Commission on Mental Health was convened in 2002 to study the mental health service delivery system and make recommendations to enable adults and children with emotional disturbance "live, work, and learn and participate fully in their communities." The 2003 report of the commission addressed awareness, disparities, early screening, the use of technology, and the need for research in this area. Specifically, research that focuses on the identification and management of pediatric mental health emergencies is critical for establishing best practices for screening of undiagnosed psychiatric illness, formal psychiatric evaluation in the ED setting, and engagement into community care. The development of a mental health interest group in the Pediatric Emergency Care Applied Research Network provides an ideal vehicle through which to conduct much-needed large-scale studies that elucidate and evaluate identification, identification, engagement, and treatment methodologies for the emergency setting.[105] Support of funding for local and regional fatality-review teams can also promote surveillance and understanding of factors related to suicide in children and adolescents.[106] Pediatricians can also petition legislators and policy makers to increase reimbursement for mental health services for children and adolescents at all levels, including funding for Medicaid, school-based and community-center services, inpatient services, and mental health providers who provide Medicaid services. This petitioning includes encouraging private insurers to promote need-based coverage rather than fixed limits for mental health and to increase reimbursements to hospitals and consultants who provide pediatric mental health services. A recent joint statement from the American Academy of Pediatrics and the American Academy of Child and Adolescent Psychiatry outlined recommendations to insurers that could decrease the impediments to providing mental health care in the primary care setting.[107] In October 2008, Congress passed the Paul Wellstone and Pete Domenici Mental Health Parity and Addiction Equity Act of 2008 (Pub L No. 110-343).[108] The new law, which went into effect January 1, 2010, requires equity between mental health and substance abuse benefits and medical and surgical benefits in employer-sponsored group health insurance plans for companies with more than 50 employees. The law also requires equity in all financial requirements, including deductibles, copayments, coinsurance, out-of-pocket expenses, and all treatment limitations, including frequency of treatment, number of visits, days of coverage, or other similar limits. The federal legis-

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lation will not override state laws that require additional coverage and subjects the definition of mental health conditions to state law.

SUMMARY

Pediatric psychiatric emergencies constitute a large and growing segment of pediatric emergency medical care, and EDs play a critical role in the evaluation and management of these child and adolescent patients. The ED has increasingly become the safety net for a fragmented mental health infrastructure in which the needs of children and adolescents, among the most vulnerable populations, have been insufficiently addressed. Inpatient bed shortages, private and public insurance changes, and shortages of pediatric-trained mental health specialists create particular challenges in this effort. Ideally, these challenges can be addressed through a reinvigorated outpatient infrastructure that supports pediatric mental health care, advance planning for crises on a local level using community resources, and the establishment of a stronger mental health support and education network for primary care physicians. Using a skilled, culturally sensitive, multidisciplinary approach, EDs can safely and effectively manage child and adolescent patients. In addition, EDs can play a significant role in identifying and referring patients with previously undiagnosed and undetected conditions such as suicidal ideation, depression, substance abuse, and PTSD.

The 3-pronged approach of education, research, and advocacy are crucial for improving the accurate and timely ED management of childhood psychiatric illness. Education of medical students, residents, fellows, faculty members, and nurses can focus on not only rapid diagnosis and medical management but also the internal social supports and available external resources for their local service area. Researchers need to develop easy and rapid pediatric screening tools and test strategies that enlist the family and primary care physicians as partners in the effort to provide basic psychiatric care and appropriately access the mental health system. Finally, because this issue permeates almost all aspects of pediatric medicine, it is clear that pediatricians need to advocate for fairness and parity with respect to the provision and reimbursement for mental health care for children.

LEAD AUTHORS

Margaret A. Dolan, MD
Joel A. Fein, MD, MPH

COMMITTEE ON PEDIATRIC EMERGENCY MEDICINE, 2010–2011

Kathy N. Shaw, MD, MSCE, Chairperson
Alice D. Ackerman, MD, MBA
Thomas H. Chun, MD, MPH
Gregory P. Conners, MD, MPH, MBA
Nanette C. Dudley, MD
Joel A. Fein, MD, MPH
Susan M. Fuchs, MD
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Joseph L. Wright, MD, MPH

LIAISONS

Kim Bullock, MD – *American Academy of Family Physicians*
Toni K. Gross, MD, MPH – *National Association of EMS Physicians*
Tamar Magarik Haro – *AAP Department of Federal Government Affairs*
Jaclyn Haymon, MPA, RN – *EMSC National Resource Center*
David Heppel, MD – *Maternal and Child Health Bureau*
Mark A. Hostetler, MD, MPH – *American College of Emergency Physicians*
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Lou E. Romig, MD – *National Association of Emergency Medical Technicians*
Sally K Snow, RN, BSN, CPEN – *Emergency Nurses Association*
David W. Tuggle, MD – *American College of Surgeons*
Tina Turgel, BSN, RN-C – *Maternal and Child Health Bureau*
Tasmeen Weik, DrPH, NREMT-P – *Maternal and Child Health Bureau*
Joseph L. Wright, MD, MPH – *EMSC National Resource Center*

FORMER COMMITTEE MEMBERS

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Patricia J. O'Malley, MD
Robert E. Sapien, MD
Joan E. Shook, MD
Paul E. Sirbaugh, DO
Milton Tenenbein, MD
Loren G. Yamamoto, MD, MPH, MBA

FORMER LIAISONS

Jane Ball, RN, DrPH – *EMSC National Resource Center*
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Dan Kavanaugh, MSW – *Maternal and Child Health Bureau/EMSC Program*
Tommy Loyacono – *National Association of Emergency Medical Technicians*
Sharon E. Mace, MD – *American College of Emergency Physicians*
Cindy Pellegrini – *AAP Department of Federal Government Affairs*
Susan Eads Role, JD, MSLS – *EMSC National Resource Center*
Ghazala Sharieff, MD – *American College of Emergency Physicians*

STAFF

Sue Tellez

REFERENCES

1. American College of Emergency Physicians. Pediatric mental health emergencies in the emergency medical services system. *Ann Emerg Med*. 2006;48(4):484–486
2. American Academy of Pediatrics, Committee on Pediatric Emergency Medicine; American College of Emergency Physicians, Pediatric Emergency Medicine Committee. Pediatric mental health emergencies in the emergency medical services system. *Pediatrics*. 2006;118(4):1764–1767
3. American Academy of Pediatrics, Task Force on Adolescent Assault Victim Needs. Adolescent assault victim needs: a review

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of issues and a model protocol. *Pediatrics*. 1996;98(5):991–1001

4. American Academy of Pediatrics, Committee on Pediatric Emergency Medicine. Access to pediatric emergency medical care. *Pediatrics*. 2000;105(3 pt 1):647–649
5. American Academy of Pediatrics, Child Life Council and Committee on Hospital Care. Child life services. *Pediatrics*. 2006;118(4):1757–1763
6. Kaufman M; American Academy of Pediatrics, Committee on Adolescence. Care of the adolescent sexual assault victim. *Pediatrics*. 2008;122(2):462–470
7. American Academy of Pediatrics, Committee on Adolescence. Achieving quality health services for adolescents. *Pediatrics*. 2008;121(6):1263–1270
8. Shain BN; American Academy of Pediatrics, Committee on Adolescence. Suicide and suicide attempts in adolescents. *Pediatrics*. 2007;120(3):669–676
9. American Academy of Pediatrics, Committee on Adolescence, Committee on Child Health Financing. Underinsurance of adolescents: recommendations for improved coverage of preventive, reproductive, and behavioral health care services. *Pediatrics*. 2009;123(1):191–196
10. American Academy of Pediatrics, Committee on Pediatric Emergency Medicine; Pediatric Emergency Medicine Committee, American College of Emergency Physicians. Death of a child in the emergency department: joint statement by the American Academy of Pediatrics and the American College of Emergency Physicians. *Pediatrics*. 2002;110(4):839–840
11. Knapp J, Mulligan-Smith D; American Academy of Pediatrics, Committee on Pediatric Emergency Medicine. Death of a child in the emergency department. *Pediatrics*. 2005;115(5):1432–1437
12. American Academy of Pediatrics, Committee on Pediatric Emergency Medicine; American College of Emergency Physicians, Pediatric Emergency Medicine Committee. Patient- and family-centered care and the role of the emergency physician providing care to a child in the emergency department. *Pediatrics*. 2006;118(5):2242–2244
13. American Academy of Pediatrics, Committee on Hospital Care. Family-centered care and the pediatrician's role. *Pediatrics*. 2003;112(3 pt 1):691–696
14. Sills MR, Bland SD. Summary statistics for pediatric psychiatric visits to US emergency departments, 1993–1999. *Pediatrics*. 2002;110(4). Available at: www.pediatrics.org/cgi/content/full/110/4/e40
15. Goldstein AB, Silverman MA, Phillips S, Lichenstein R. Mental health visits in a pediatric emergency department and their relationship to the school calendar. *Pediatr Emerg Care*. 2005;21(10):653–657
16. Larkin GL, Claassen CA, Emond JA, Pelletier AJ, Camargo CA. Trends in U.S. emergency department visits for mental health conditions, 1992 to 2001. *Psychiatr Serv*. 2005;56(6):671–677
17. Grupp-Phelan J, Harman JS, Kelleher KJ. Trends in mental health and chronic condition visits by children presenting for care at U.S. emergency departments. *Public Health Rep*. 2007;122(1):55–61
18. Mahajan P, Alpern ER, Grupp-Phelan J, et al; Pediatric Emergency Care Applied Research Network (PECARN). Epidemiology of psychiatric-related visits to emergency departments in a multicenter collaborative research pediatric network. *Pediatr Emerg Care*. 2009;25(11):715–720
19. Substance Abuse and Mental Health Services Administration, National Institute of Mental Health, Department of Health and Human Services. *Mental Health: A Report of the Surgeon General—Executive Summary*. Rockville, MD: US Department of Health and Human Services; 1999
20. US Department of Health and Human Services. *Report of the Surgeon General's Conference on Children's Mental Health: A National Action Agenda*. Washington, DC: US Department of Health and Human Services; 1999
21. National Institute of Mental Health. *Brief Notes on the Mental Health of Children and Adolescents*. Bethesda, MD: National Institute of Mental Health; 1999
22. Murray CJL, Lopez AD. *The Global Burden of Disease: A Comprehensive Assessment of Mortality and Disability From Diseases, Injuries, and Risk Factors in 1990 and Projected to 2020*. Cambridge, MA: Harvard School of Public Health, on behalf of the World Health Organization and the World Bank, Distributed by Harvard University Press; 1996
23. Gardner W, Kelleher KJ, Wasserman R, et al. Primary care treatment of pediatric psychosocial problems: a study from Pediatric Research in Office Settings and Ambulatory Sentinel Practice Network. *Pediatrics*. 2000;106(4). Available at: www.pediatrics.org/cgi/content/full/106/4/e44
24. Meehan P, Lamb J, Saltzman L, O'Carroll P. Attempted suicide among young adults: progress toward a meaningful estimate of prevalence. *Am J Psychiatry*. 1992;149(1):41–44
25. Pfeffer CR, Lipkins R, Plutchik R, Mizruchi M. Normal children at risk for suicidal behavior: a two-year follow up. *J Am Acad Child Adolesc Psychiatry*. 1988;27(1):34–41
26. American Academy of Child and Adolescent Psychiatry. Summary of the practice parameters for the assessment and treatment of children and adolescents with suicidal behavior. *J Am Acad Child Adolesc Psychiatry*. 2001;40(4):495–499
27. Clark D. Suicidal behavior in childhood and adolescence: recent studies and clinical implications. *Psychiatr Ann*. 1993;23(5):271–283
28. Rotheram-Borus M, Piacentini J, Van Rossem R, et al. Enhancing treatment adherence with a specialized emergency room program for adolescent suicide attempters. *J Am Acad Child Adolesc Psychiatry*. 1996;35(5):654–663
29. Santiago L, Tunik M, Foltin G, Mojica M. Children requiring psychiatric consultation in the pediatric emergency department: epidemiology, resource utilization, and complications. *Pediatr Emerg Care*. 2006;22(2):85–89
30. Washington State Emergency Medical Services for Children. *Hospital Emergency Departments and Children/Adolescents With Mental Health Concerns in Washington State. Final Report*. Seattle, WA: Department of Health and Human Services, Health Resources and Services Administration Emergency Medical Services for Children; 2001
31. American Academy of Pediatrics, Committee on Pediatric Emergency Medicine. Overcrowding crisis in our nation's emergency departments: is our safety net unraveling? *Pediatrics*. 2004;114(3):878–888
32. Shappert S, Rechtsteiner E. Ambulatory medical care utilization estimates for 2006. *Natl Health Stat Report*. 2008;(8):1–29
33. Mansbach JM, Wharff E, Austin SB, Ginnis K, Woods ER. Which psychiatric patients board on the medical service? *Pediatrics*. 2003;111(6 pt 1). Available at: www.pediatrics.org/cgi/content/full/111/6/e693
34. Institute of Medicine. *Emergency Care for Children: Growing Pains*. Washington, DC: National Academies Press; 2007
35. Santucci K, Sather J, Douglas M. Psychiatry-related visits to the pediatric emergency department: a growing epidemic? [abstract]. *Pediatr Res*. 2000;47(4 suppl 2):117A

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36. Cincinnati Children's Hospital Medical. *Health News Release*. November 26, 2001. Available at: www.cincinnatichildrens.org/about/news/release/2001/11-college-hill.htm. Accessed March 30, 2011
37. Sapien R, Fullerton L, Olson L, Broxterman K, Sklar D. Disturbing trends: the epidemiology of pediatric emergency medical services use. *Acad Emerg Med*. 1999;6(3):232–238
38. Hoyle JD Jr, White LJ; Emergency Medical Services for Children; Health Resources Services Administration, Maternal and Child Health Bureau, National Association of EMS Physicians. Treatment of pediatric and adolescent mental health emergencies in the United States: current practices, models, barriers and potential solutions. *Prehosp Emerg Care*. 2003;7(1):66–73
39. Horwitz SM, Kelleher K, Boyce T, et al. Barriers to health care research for children and youth with psychosocial problems. *JAMA*. 2002;288(12):1508–1512
40. Olson L, Melese-d'Hospital I, Cook L, et al. Mental health problems of children presenting to emergency departments. Presented at: Third National Congress on Childhood Emergencies; April 15–17, 2002; Dallas, TX
41. Linzer JF. EMTALA: a clearer road in the future? *Clin Pediatr Emerg Med* 2003;4(4):249–255
42. The Joint Commission. *Patient Safety Goals: Behavioral Health Care*. Available at: www.jointcommission.org/behavioral_health_care_2011_national_patient_safety_goals/. Accessed March 30, 2011
43. Krug SE. Access and use of emergency services: inappropriate use versus unmet need. *Clin Pediatr Emerg Med*. 1999;1(1):35–44
44. Richardson L, Hwang U. Access to care: a review of the emergency medicine literature. *Acad Emerg Med*. 2001;8(11):1030–1036
45. Garbrick L, Levitt M, Barrett M, Graham L. Agreement between emergency physicians regarding admission decisions. *Acad Emerg Med*. 1996;3(11):1027–1030
46. Santucci KA, Sather J, Baker MD. Emergency medicine training programs' educational requirements in the management of psychiatric emergencies: current perspective. *Pediatr Emerg Care*. 2003;19(3):154–156
47. Weiss E. Mental health care emergency looms, N. Va officials warn. *Washington Post*. 2004:B01. Available at: www.washingtonpost.com/wp-dyn/articles/A55515-2004Nov16.html. Accessed March 25, 2011
48. Dembner A. Acutely mentally ill children face delay of care, study finds. *Boston Globe*. 2003
49. Jenkins CL. Shortages hinder aid to disabled: regions' agencies cite lack of staffing, funds. *Washington Post*. 2004:PW03
50. Pear R. Many youths reported held awaiting mental help. *New York Times*. 2004:A18. Available at: www.nytimes.com/2004/07/08/politics/08mental.html?pagewanted=all. Accessed March 25, 2011
51. Brener ND, Martindale J, Weist MD. Mental health and social services: results from the School Health Policies and Programs Study 2000. *J Sch Health*. 2001;71(7):305–312
52. National Assembly on School Based Care. *Creating Access to Care for Children and Youth: SBHC Census 1998–1999*.
53. Rones M, Hoagwood K. School-based mental health services: a research review. *Clin Child Fam Psychol Rev*. 2000;3(4):223–241
54. Borowsky IW, Mozayeny S, Ireland M. Brief psychosocial screening at health supervision and acute care visits. *Pediatrics*. 2003;112(1 pt 1):129–133
55. Costello EJ, Shugart MA. Above and below the threshold: severity of psychiatric symptoms and functional impairment in a pediatric sample. *Pediatrics*. 1992;90(3):359–368
56. Lavigne JV, Binns HJ, Christoffel KK, et al. Behavioral and emotional problems among preschool children in pediatric primary care: prevalence and pediatricians' recognition. *Pediatrics*. 1993;91(3):649–655
57. Wells K, Stewart A, Hays R, et al. The functioning and well-being of depressed patients. results from the Medical Outcomes Study. *JAMA*. 1989;262(7):914–919
58. Monnier J, Knapp RG, Frueh BC. Recent advances in telepsychiatry: an updated review. *Psychiatr Serv*. 2003;54(12):1604–1609
59. Norman S. The use of telemedicine in psychiatry. *J Psychiatr Ment Health Nurs*. 2006;13(6):771–777
60. American Academy of Pediatrics, Council on School Health. Role of the school nurse in providing school health services. *Pediatrics*. 2008;121(5):1052–1056
61. American Academy of Pediatrics, Committee on Pediatric Emergency Medicine. The use of physical restraint interventions for children and adolescents in the acute care setting. *Pediatrics*. 1997;99(3):497–498
62. American College of Emergency Physicians. Use of patient restraint. *Ann Emerg Med*. 1996;28(3):384
63. Joint Commission on Accreditation of Healthcare Organizations. Standards for restraint and seclusion. *Jt Comm Perspect*. 1996;16(1):RS1–RS8
64. Fein J, Daugherty R. Restraint techniques and issues. In: King C, Henretig FM *The Textbook of Pediatric Emergency Procedures*. 2nd ed. Baltimore, MD: Lippincott, Williams & Wilkins; 2005:15–22
65. Beck A, Schuyler D, Herman I. Development of suicidal intent scales. In: Beck A, Resnik H, Lettieri D*The Prediction of Suicide*. Bowie, MD: Charles Press; 1974:45–56
66. White G Jr, Murdock R, Richardson G, Ellis G, Schmidt L. Development of a tool to assess suicide risk factors in urban adolescents. *Adolescence*. 1990;25(99):655–666
67. Reynolds W. *Suicidal Ideations Questionnaire: Professional Manual*. Odessa, FL: Psychological Assessment Resources; 1988
68. Siemen J, Warrington C, Mangano E. Comparison of the Millon Adolescent Personality Inventory and the Suicide Ideation Questionnaire–Junior with an adolescent inpatient sample. *Psychol Rep*. 1994;75(2):947–950
69. Horowitz LM, Wang PS, Koocher GP, et al. Detecting suicide risk in a pediatric emergency department: development of a brief screening tool. *Pediatrics*. 2001;107(5):1133–1137
70. Folse V, Eich K, Hall A, Ruppmann J. Detecting suicide risk in adolescents and adults in an emergency department: a pilot study. *J Psychosoc Nurs Ment Health Serv*. 2006;44(3):22–29
71. Matthews KA, Salomon K, Brady SS, Allen MT. Cardiovascular reactivity to stress predicts future blood pressure in adolescence. *Psychosom Med*. 2003;65(3):410–415
72. Middlebrooks JS, Audage NC. *The Effects of Childhood Stress on Health Across the Lifespan*. Atlanta, GA: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control; 2008
73. Scott E, Luxmore B, Alexander H, Fenn R, Christopher N. Screening for adolescent depression in a pediatric emergency department. *Acad Emerg Med*. 2006;13(5):537–542
74. Rutman M, Shenassa E, Becker B. Brief screening for adolescent depressive symptoms in the emergency department. *Acad Emerg Med*. 2008;15(1):17–22
75. US Preventive Services Task Force. Screening and treatment for major de-

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pressive disorder in children and adolescents: US Preventive Services Task Force recommendation statement [published correction appears in *Pediatrics*. 2009; 123(6):1611]. *Pediatrics*. 2009;123(4): 1223–1228

76. Reynolds W. Development of a semistructured clinical interview for suicidal behaviors in adolescents. *Psychol Assess*. 1990; 2(4):382–390
77. Fein JA, Pailler M, Diamond G, Wintersteen M, Tien A, Hayes K, Barg F. Self-administered, Computerized Assessment of Adolescent Mental Illness in the Pediatric ED. *Archives of Pediatric and Adolescent Medicine*. 2010;164(12):1112–1117
78. Pailler M, Fein JA. Computerized behavioral health screening in the emergency department. *Pediatr Ann*. 2009;38(3): 156–160
79. National Scientific Council on the Developing Child. Excessive stress disrupts the architecture of the developing brain. Available at: www.developingchild.net/reports.shtml. Accessed May 25, 2009
80. Brick ND. The neurological basis for the theory of recovered memory. Available at: http://ritualabuse.us/research/memory-fms/the-neurological-basis-for-the-theory-of-recovered-memory/. Accessed March 25, 2011
81. Carrion VG, Weems CF, Reiss AL. Stress predicts brain changes in children: a pilot longitudinal study on youth stress, posttraumatic stress disorder, and the hippocampus. *Pediatrics*. 2007;119(3): 509–516
82. Foy D. Introduction and description of the disorder. In: Foy DW, ed *Treating PTSD: Cognitive-Behavioral Strategies*. New York, NY: Guilford; 1992:1–12
83. Meichenbaum D. *A Clinical Handbook/Practical Therapist Manual for Assessing and Treating Adults With Post-Traumatic Stress Disorder (PTSD)*. Waterloo, Ontario, Canada: Institute Press; 1994
84. Terr L. Childhood traumas: an outline and review. *Am J Psychiatry*. 1991;148(1): 10–20
85. van der Kolk B. The body keeps the score: memory and the evolving psychobiology of post traumatic stress. *Harv Rev Psychiatry*. 1994;1(5):253–265
86. Winston FK, Kassam-Adams N, Vivarelli-O'Neill C, et al. Acute stress disorder symptoms in children and their parents after pediatric traffic injury. *Pediatrics*. 2002; 109(6). Available at: www.pediatrics.org/cgi/content/full/109/6/e90
87. Kassam-Adams N, Fein J. Posttraumatic stress disorder and injury. *Clin Pediatr Emerg Med*. 2003;4(4):148–155
88. Shemesh E, Keshavarz R, Leichtling NK, et al. Pediatric emergency department assessment of psychological trauma and posttraumatic stress. *Psychiatr Serv*. 2003;54(9):1277–1281
89. Winston FK, Kassam-Adams N, Garcia-Espana F, Ittenbach R, Cnaan A. Screening for risk of persistent posttraumatic stress in injured children and their parents. *JAMA*. 2003;290(5):643–649
90. Zatzick D, Roy-Byrne P. Developing high-quality interventions for posttraumatic stress disorder in the acute care medical setting. *Semin Clin Neuropsychiatry*. 2003; 8(3):158–167
91. Kataoka S, Zhang L, Wells K. Unmet needs for mental health care among US children: variation by ethnicity and insurance status. *Am J Psychiatry*. 2002;159(9): 1548–1555
92. Marcos L. Effects of interpreters on the evaluation of psychopathology in non-English-speaking patients. *Am J Psychiatry*. 1979;136(2):171–174
93. Sturm, Roland, Ringel JS, Stein BD, Kapur K. *Mental Health Care for Youth: Who Gets It? How Much Does It Cost? Who Pays? Where Does the Money Go?*. Santa Monica, CA: RAND Corporation, 2001. Available at: www.rand.org/pubs/research_briefs/RB4541. Accessed March 31, 2011
94. Sturm R, Ringel JS, Andreyeva T. Geographic disparities in children's mental health care. *Pediatrics*. 2003;112(4). Available at: www.pediatrics.org/cgi/content/full/112/4/e308
95. Canty-Mitchell J, Austin JK, Jaffee K, Qi RA, Swigonski N. Behavioral and mental health problems in low-income children with special health care needs. *Arch Psychiatr Nurs*. 2004;18(3):79–87
96. Ganz ML, Tendulkar SA. Mental health care services for children with special health care needs and their family members: prevalence and correlates of unmet needs [published correction appears in *Pediatrics*. 2006;118(4):1806–1807]. *Pediatrics*. 2006;117(6):2138–2148
97. Stuber M, Shemesh E, Saxe G. Posttraumatic stress responses in children with life-threatening illnesses. *Child Adolesc Psychiatr Clin N Am*. 2003;12(2):195–209
98. Chavira D, Garland A, Daley S, Hough R. The impact of medical comorbidity on mental health and functional health outcomes among children with anxiety disorders. *J Dev Behav Pediatr*. 2008;29(5):394–402
99. BeLue R, Francis LA, Colaco B. Mental health problems and overweight in a nationally representative sample of adolescents: effects of race and ethnicity. *Pediatrics*. 2009;123(2):697–702
100. Brown EJ, Goodman RF. Childhood traumatic grief: an exploration of the construct in children bereaved on September 11. *J Clin Child Adolesc Psychol*. 2005;34(2): 248–259
101. Goenjian AK, Molina L, Steinberg AM, et al. Posttraumatic stress and depressive reactions among Nicaraguan adolescents after Hurricane Mitch. *Am J Psychiatry*. 2001; 158(5):788–794
102. Goenjian AK, Walling D, Steinberg AM, Karayan I, Najarian LM, Pynoos R. A prospective study of posttraumatic stress and depressive reactions among treated and untreated adolescents 5 years after a catastrophic disaster. *Am J Psychiatry*. 2005; 162(12):2302–2308
103. Pfefferbaum B, North C, Doughty D, et al. Trauma, grief and depression in Nairobi children after the 1998 bombing of the American embassy. *Death* Stud. 2006; 30(6):561–577
104. Zatzick D, Grossman D, Russo J, et al. Predicting posttraumatic stress symptoms longitudinally in a representative sample of hospitalized injured adolescents. *J Am Acad Child Adolesc Psychiatry*. 2006; 45(10):1188–1195
105. Dayan P, Chamberlain J, Dean JM, Maio RF, Kuppermann N. The pediatric emergency care applied research network: progress and update. *Clin Pediatr Emerg Med* 2006: 7:128–135
106. Azrael D, Hemenway D, Miller M, Barber C, Schackner R. Youth suicide: insights from 5 years of Arizona child fatality review team data. *Suicide Life-threat Behav*. 2004; 34(1):36–43
107. American Academy of Child and Adolescent Psychiatry, Task Force on Mental Health. Improving mental health services in primary care: reducing administrative and financial barriers to access and collaboration [published correction appears in *Pediatrics*. 2009;123(6):1611]. *Pediatrics*. 2009;123(4):1248–1251
108. Paul Wellstone and Pete Dominici Mental Health Parity and Addiction Equity Act, Pub L No. 110-3432008

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