



# CRITICAL CROSSROADS: PEDIATRIC MENTAL HEALTH CARE IN THE EMERGENCY DEPARTMENT

## A Care Pathway Resource Toolkit

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Dear Partners:

As part of the commitment by the U.S. Department of Health and Human Services (HHS) to address mental health concerns and serious mental illness as a signature priority, the Health Resources and Services Administration (HRSA) launched an agency-wide effort to identify innovative and collaborative strategies to address this public health issue in new, impactful ways. Proposals were requested from across all levels of HRSA staff for new, innovative, and collaborative approaches to make an impact on this important national health issue. This prompted a collaboration led by the HRSA Maternal and Child Health Bureau (MCHB) Emergency Medical Services for Children (EMSC) Program, in partnership with the Federal Office of Rural Health Policy (FORHP). Together, EMSC and FORHP examined the rising number of children seen in emergency departments experiencing a mental health crisis, the gaps in hospital preparedness to provide continuity of care for these patients, and the impact it is having on children and their families. As an initial effort to address the process and coordination of care, this Critical Crossroads: Improving Emergency Care for Children in Mental Health Crisis project was launched.

Critical Crossroads was conceived as a partnership to support the mission of improving emergency care for children in mental health crises, with acknowledgment of the disproportionate burden in rural areas, where services are often limited. This resulting toolkit serves as an acknowledgement of this critical need faced by the health care system and is designed to take a step forward in providing support to hospitals that share HRSA's vision of providing high-quality, effective emergency care to pediatric patients in psychiatric distress. Pediatric psychiatric emergencies constitute a large and growing segment of pediatric emergency medical care needs, and emergency medical systems play a critical role in the coordination and management of these children. Emergency departments around the country are increasingly becoming the safety net for a fragmented mental health infrastructure in which children and adolescents are among the most vulnerable populations.

Thank you to everyone who contributed to this toolkit. It is our hope that it can support the emergency medical services system further improve the coordination care for children and youth experiencing mental health crises.

Sincerely,

*Critical Crossroads Team Leads*

# 1. BACKGROUND AND SIGNIFICANCE

Approximately one in five youth experiences a mental disorder at some point during their lifetime. One in 10 youth will experience a serious emotional disorder (SED) that will significantly impact their ability to function at home, in school, or in the community (Williams, Scott & Aarons, 2017). For children aged 8–15, the estimate is 13.3 percent (NIMH 2017).



According to the Centers for Disease Control and Prevention’s National Health and Nutrition Examination Survey, approximately 13 percent of children ages 8-15 had a diagnosable psychiatric disorder in the previous year. Suicide is the second leading cause of death for adolescents 15-19 years old as well as for children 10-14 years old (CDC 2017). In addition, there has been a reported 40 percent increase in pediatric mental health emergency department (ED) visits from 2009 to 2013 (Sheridan, Spiro, Fu, Johnson, Sheridan & Oue, 2015). The risk of suicide attempt or death by suicide is highest within 30 days of discharge from an ED or inpatient psychiatric unit (SPRC 2013). Studies show that EDs are seeing an increasing number of children and adolescents in mental health crises; however, the emergency medical services system is often not equipped to manage these patients. Data from the 2013 National Pediatric Readiness Assessment, provided by the Health Resources & Services Administration (HRSA)-funded National Emergency Medical Services for Children (EMSC) Data Analysis Resource Center, found that only 47.2 percent of hospital EDs reported having a children’s mental health policy, and in rural areas, this drops to 33 percent. While over half of all EDs report having designated transfer guidelines for children with mental health issues, only 38 percent of rural and remote EDs have such guidelines.

Many children are not receiving needed comprehensive treatment for pediatric mental health visits and are often discharged from the ED without guided referrals for mental health specific follow-up care (Lynch, Witt, Ali, Teich, Mutter, Gibbons, Walsh, 2018). Connecting children and adolescents to all available mental health resources poses a challenge in rural settings where services are often limited. The ED serves as a critical place to intervene, ensure [continuity of care](#), and ultimately, help save the lives of children experiencing mental health conditions.

## 1.1 Why a Clinical Care Pathway?

A care pathway is a tool that describes and sequences how health care professionals manage specific clinical presentations, facilitating the course of care for patients and increasing the quality of services delivered. Defining characteristics of a care pathway include: explicit goals, key elements of care based on evidence and best practices, mechanisms for communication, coordination of the roles of a multidisciplinary care team, the patient and family members, and identification of appropriate resources (Chawla, Westrich, Matter, Kaltenboeck, and Dubois, 2016; Schrijvers, van Hoorn & Huiskes, 2012).



A care pathway is a tool that describes and sequences how health care professionals manage specific clinical presentations.

Care pathways have been shown to improve patient outcomes. Care pathways, such as the implementation of a standard pathway for the management of children with severe traumatic brain injury, have shown improvements in discharge outcomes and have been found to improve quality of care (Rakes L, King M, Johnston B, Chesnut R, Grant R, Vavilala M. 2016). Many children’s hospitals have published outcomes of care pathways addressing varied clinical areas, including improving anaphylaxis

care, pediatric sepsis, pediatric cardiac catheterization, and fever in infants and young children. Advantages of using a care pathway include the integration of evidence-based medicine with clinical practices, reduced wait times, reduced risk of errors, and increased continuity of patient care between different practitioners (Chawla, Westrich, Matter, Kaltenboeck, and Dubois, 2016; Schrijvers, van Hoorn & Huiskes, 2012).

## 1.2 Overview of Toolkit

This document contains literature references and tools that can be used by hospitals to support the creation of care pathways to improve the identification and management of children and adolescents who present to the ED in a mental health crisis.



This toolkit contains a template designed to help hospitals establish a customized care pathway for the identification and coordination of children presenting to EDs in mental health crisis. Special acknowledgment is made to the unique challenges that face rural communities.

This toolkit is designed for hospital EDs and does not include resources for prehospital EMS systems due to the results of a literature search and environmental scan which identified research only within the hospital emergency care setting. Many prehospital programs are being implemented across the country for individuals in behavioral health crises. This includes many successful models of crisis intervention and diversion, where care is provided on scene or direct transport to behavioral health specialty services is provided and unnecessary hospital ED visits are avoided. Community integrated health (para-medicine) models, emergency hotlines, and emergency mental health crisis teams are among these programs. In the development of an ED care pathway, hospitals may want to collaborate with prehospital

providers to gauge the capacity of prehospital intervention and diversion programs in their region. Additional research is needed to understand key components of a care pathway that can be broadly applied to incorporate these innovative prehospital programs.

This toolkit provides helpful resources for hospital EDs and serves as one piece in the larger web of addressing an aspect of care for children's mental health needs. HRSA acknowledges the broader scope of this issue, beyond the implementation of policies and procedures in emergency care, where the social determinants of health and multi-sectoral approaches must also be addressed to achieve optimal health outcomes.

The toolkit walks the user through the existing resources available that support the creation of a customized care pathway through various stages of patient management, which can be adjusted as appropriate to an individual facility and its available community resources.

These stages include:

- **Triage:** The routing of a patient to emergent care, if required, and engagement of a care team, if available.
- **Screening:** The administration of various evidence-based screening tools.
- **Ongoing assessment:** The administration of further medical assessments, as indicated.
- **Disposition:** The discharge of the patient with guided referrals for follow-up care and outpatient resources, admission to an inpatient bed, or transfer to an appropriate facility.



### Definitions

- **Mental Health Crisis (used interchangeably with behavioral health crisis in this text):** A recent paper on best practices in managing child and adolescent behavioral health emergencies defines behavioral health-related emergencies as “acute situations in which there exists imminent risk of harm to oneself (suicide risk), harm to others (risk of interpersonal violence), or a severe lack of judgment that may unintentionally endanger either the individual or others.” (Feuer, Rucker, Saggu & Adnrus, 2018, pg. 3) The specific mental health conditions mentioned in this tool are a product of the existing literature that was identified through an intervention-focused search of the PubMed and PsychInfo databases, as well as an environmental scan of existing resources by federal partners and other subject matter experts in the field, and do not reflect the entire landscape of mental health conditions.
- **Rural:** The federal government uses two major definitions of “rural,” along with many variants that are also available. One is produced by the U.S. Census Bureau and the other by the Office of Management and Budget. The Federal Office of Rural Health Policy (FORHP) uses components of each definition when determining a classification for a geographic region that can be found [at this link](#). Under this definition, all non-Metro counties as rural and for other counties an additional method of determining rurality called the Rural-Urban Commuting Area (RUCA) codes is used.
- **Care Pathway Implementers:** This toolkit broadly defines the care pathway implementers as all individuals who play a role to establish policies and protocols within the ED and could include executive leadership, medical directors, pediatric emergency care coordinators, and other professionals. These individuals can vary depending on the resources and staff of the hospital, ranging from mid-level providers to emergency physicians, social workers, or mental health teams.

## 2. METHODOLOGY

### 2.1 Formulation of Federal Steering Committee

The Critical Crossroads Federal Steering Committee was established to assure cross-department collaboration in this concerted effort to improve emergency care for children in mental health crises, with acknowledgment of the unique needs presented in rural areas. Led by the Health Resources and Services Administration's (HRSA) Maternal and Child Health Bureau's (MCHB) Emergency Medical Services for Children (EMSC) Program in collaboration with the Federal Office of Rural Health Policy (FORHP) the committee aimed to consolidate and disseminate resources that can be applied toward improved emergency care for children in mental health crises. Goals of the committee included:



- Creation and dissemination of a Critical Crossroads Clinical Pathway Toolkit composed of consolidated resources and methods organized to help hospitals establish a customized care pathway for children in mental health crises.
- Increased stakeholder engagement in improving emergency medical care for children and adolescents experiencing mental health crisis.
- Strengthened cross-department partnerships to enhance alignment and coordination in federal efforts to improve emergency care for children in mental health crisis.

The committee convened monthly as a forum for information sharing, strategic planning, and development of the Critical Crossroads toolkit. Federal partners worked together to discuss the needs of hospital EDs, identify existing best practices and expert resources, determine key opportunities and challenges to be addressed by the project, and conceptualize the tool, including the design of a literature review and key concept areas for inclusion.

A targeted search of the gray and academic literature was conducted with a focus on pediatric behavioral health interventions in the emergency care setting, which captured over 400 articles. The literature was compiled into the Critical Crossroads Evidence Table within this toolkit, which organizes pediatric mental health intervention-specific literature found through a focused search in the PubMed, Cochrane, CINAHL, and PsychInfo Databases. An environmental scan was conducted for further existing related resources, engaging the federal representatives on the committee, national organizations, and subject matter experts from the field. This yielded additional literature, programs, and tools for this toolkit.

Case stories from rural emergency care providers were included. The EMSC program spoke with seven rural emergency care providers in different states across the country to learn more about which practices are in place for the management of children in mental health crises and deepen understanding about the specific challenges facing their communities. All findings were organized and combined into this resulting Critical Crossroads Care Pathway toolkit. HRSA recognized that each hospital ED has a unique local context. As such, this toolkit is organized to help hospitals apply existing knowledge and resources in the creation of a customized care pathway to improve the standardization and quality of care delivered at their institution. This tool is designed as a helpful compendium of resources and does not claim to be the singular, comprehensive collection of all evidence on this topic.

### 3. ALGORITHM FOR DEVELOPING THE CARE PATHWAY

This section provides a template algorithm with elements to support the development of a care pathway for children in mental health crises presenting in the ED. While this algorithm can be used to develop an overall care pathway for children in mental health crisis presenting to the ED, heterogeneity among mental health conditions may indicate a need for varied pathways. This resource is not a “one-size fits all” tool but provides a template that an organization can build upon and tailor based on the specific needs of their ED, patient population, or community. This toolkit does not cover all variables that might be of interest to a community but provides a framework to address multiple critical elements of care. Hospitals should adapt the pathway and tools to their community’s culture and language needs using tools such as the [EMSC Innovation & Improvement Center’s Cultural Competency Toolkit](#). The implementer of these tools can vary depending on the resources and staff of the hospital, ranging from mid-level providers to emergency physicians, social workers, or mental health teams. This toolkit is for professionals who play a role to establish policies and protocols within the ED.

It is important to note that this algorithm is not intended to dictate care. This is a reference tool and provides a template for the development of a care pathway that has been adapted for a single hospital’s resources and treatment guidelines. Practice recommendations are based on the evidence available when the clinical standard was developed. Clinical guidelines, evidence summaries, and care pathways do not necessarily set out a universal standard of care and are not intended to be used to dictate a course of care. A significant portion of the patient population with more specialized needs will require adaptations to the algorithm. Each physician or practitioner must use his or her independent judgment in the management of any specific patient and is responsible, in consultation with the patient and/or the patient’s family, to make the ultimate judgment regarding care.

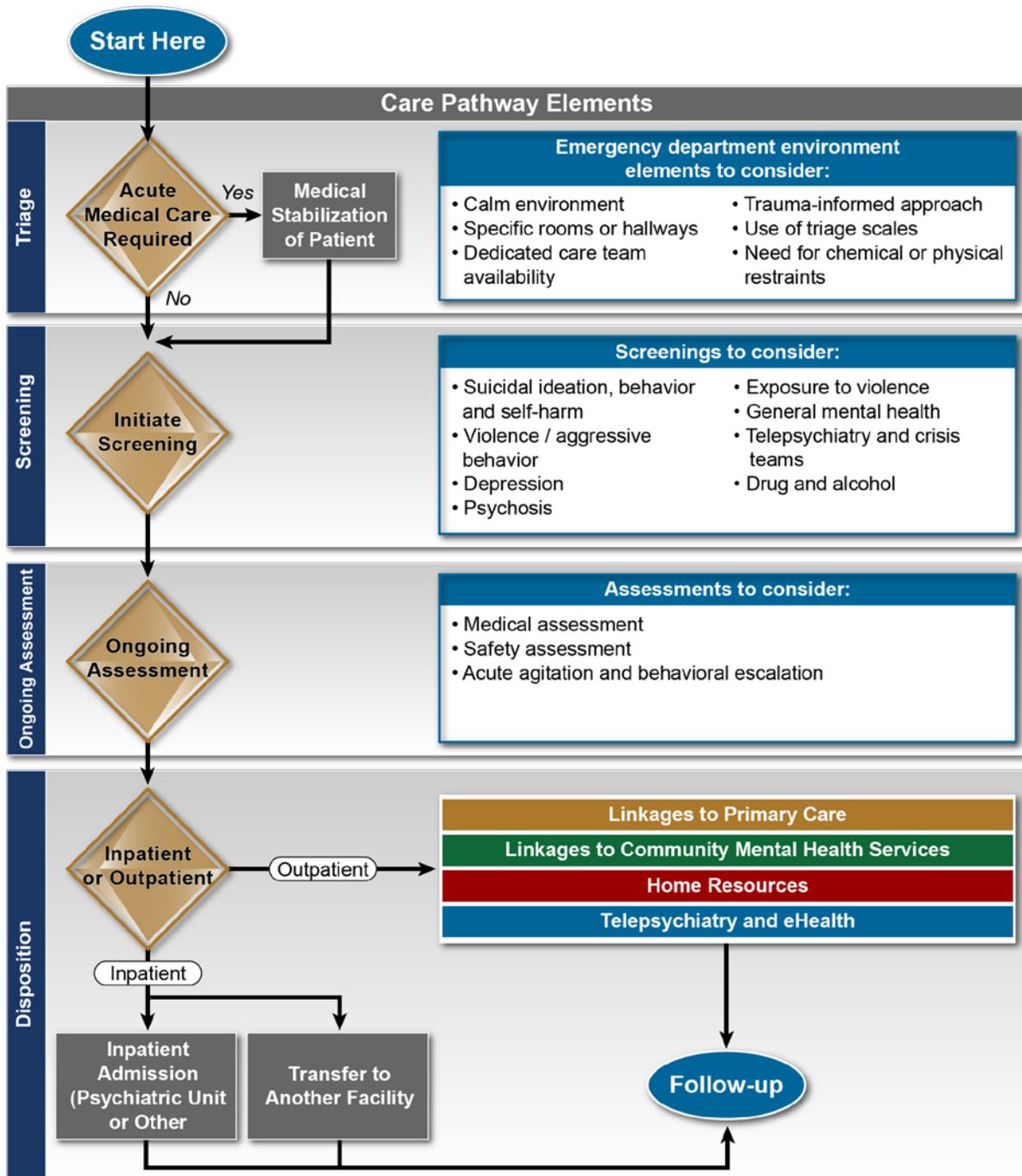
There are several existing care pathways for pediatric behavioral health emergencies. The aim of this toolkit is to provide a template and guide to help hospitals create similar pathways appropriate to their hospital’s resources and population. Existing care pathways include:

- Suicide risk screening in pediatric hospitals: Clinical pathways to address a global health crisis (Brahmbhatt, Khyati ; Kurtz, Brian P.; Afzal, Khalid I.; Giles, Lisa L.; Kowal, Elizabeth D.; Johnson, Kyle P.; Lanzillo, Elizabeth; Pao, Maryland; Plioplys, Sigita; Horowitz, Lisa M.).
- Clinical pathway for management of pediatric patients presenting with behavioral health emergencies presented in the 2018 publication “Best practices in managing child and adolescent behavioral health emergencies” (Feuer, Rocker, Saggu & Adnrus, 2018, pg. 12).
- Care process model for youths with risk for suicide and self-harm (Asarnow, Babeva & Horstmann, 2017).
- The Emergency Department Mental Health Clinical Pathway algorithm (Jabbour et al., 2016).
- The Implementation Toolkit: Emergency Department Clinical Pathway for Children and Youth with Mental Health Conditions from the Toronto Provincial Council for Maternal and Child Health (2013).
- ED pathway for the evaluation and treatment for children with behavioral health issues from the Children’s Hospital of Philadelphia (Lavelle et al, 2016).

The following chapters detail each stage of the algorithm, including Triage, Screening, Ongoing Assessment, and Disposition:

- **Triage:** The first stage, Triage, explains how each hospital may have existing procedures for patient intake and triage, depending on patient presentation and history. This information is not intended to supersede those procedures but is an acknowledgement that screenings or further care can only take place once a patient has been stabilized and is not, or is no longer, in immediate physical danger.
- **Screening:** The second stage, Screening, presents a list of existing screening tools for a variety of mental health conditions that have been field-tested and included in peer-reviewed literature to various degrees. Considerations when including screening in care pathways are also included.
- **Ongoing Assessment:** The third stage, Ongoing Assessment, includes tools and considerations for conducting further screenings of pediatric patients in mental health crises, including medical and toxicology screenings.
- **Disposition:** The final stage, Disposition, covers when the patient leaves your emergency room, either to outpatient care or to inpatient care. Elements to include in a care pathway ensure a continuity of care, including inpatient transfers, outpatient resources, and linkages to follow-up resources, as available in your community.

Figure 1. Care Pathway Stages and Elements



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## 4. TRIAGE STAGE

Figure 2. Triage Stage of the Care Pathway



Hospitals have existing procedures for patient intake and triage, depending on patient presentation and history. The first step of the care pathway must be to determine whether emergent care is required and, if so, provide appropriate medical treatment. The information in this algorithm is not intended to supersede these procedures; however, it is an acknowledgement that further care can only take place once a patient has been stabilized and is not, or is no longer, in immediate physical danger.

### 4.1 Emergency Department (ED) Environment

Along with medical stabilization, children with behavioral health-related emergencies may need specific attention or a calm environment to ensure patient and staff safety. If resources permit, a specific room



“A program, organization, or system that is trauma-informed realizes the widespread impact of trauma and understands potential paths for recovery; recognizes the signs and symptoms of trauma in clients, families, staff, and others involved with the system; and responds by fully integrating knowledge about trauma into policies, procedures, and practices, and seeks to actively resist re-traumatization.” (SAMHSA 2014 p. 9)

can be designated as a calm space separate from a busy and hectic emergency department. The development of hospital guidelines and policies to both ensure immediate safety and allow for the identification of higher-need patients could be a useful tool (Feuer, Rucker, Saggu & Adnrus, 2018, pg. 8). Incorporating aspects of trauma-informed care, such as the [guidance for a trauma-informed approach](#), defined by the Substance Abuse and Mental Health Services Administration, and components of the [National Alliance on Mental Illness’s Compassionate Care in the Emergency Room](#), can help hospitals develop this approach (2014). Another important aspect is engaging, informing and seeking information from the patient’s family using a patient-and family-centered care approach (PFCC). PFCC in the ED may entail including family members in patient flow, allowing for family presence, providing interpretation services and cultural communication, discharge planning and assessing patient and family needs

(Dudley et al., 2015).

Additionally, specific strategies for special populations, such as children with autism spectrum disorder, include a low-stimulation environment, a visual communication system, distraction techniques, and close coordination with parents and caregivers (Feuer, Rucker, Saggu & Adnrus, 2018).

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## 4.2 Triage Scales

Promising research conducted in Australia and Canada on mental health triage scales provide a decision-making guide for emergency triage nurses assessing patients for mental health. These scales include a triage code, a description of the code’s meaning, a measure of treatment acuity, and notes about typical presentation (Broadbent, Moxham & Dwyer, 2007; Downey, Zun & Burke, 2014). The Australian Emergency Mental Health Scale rated patient presentation as less urgent, gave treatment acuity recommendations more in line with ED resources, and provided clearer triage guidelines (Downey, Zun & Burke, 2014). Findings show that these triage scales have led to improvements in staff confidence and attitudes when managing patients with mental health conditions, resulting in improved outcomes for patients (Broadbent, Jarman, Berk, 2004).

## 4.3 Chemical or Physical Restraints

Restraints are methods of restricting freedom of movement, physical activity, or access to one’s body. These include verbal restraint, chemical restraint, and physical restraint (Chun, Mace, & Katz, 2016). Hospitals should have and follow clear evidence-based guidelines for when and how to employ restraints, and these guidelines should be included in the care pathway as appropriate (Baren et al., 2008; Chun, Mace, & Katz, 2016; Feuer, Rucker, Saggu & Adnrus, 2018).

Evidence on the effectiveness of restraints is limited, and there are physical risks, as well as the risk of stigma, with their use. Physical restraints require careful medical oversight and monitoring due to the potential for abuse and even death (Baren et al., 2008; Feuer, Rucker, Saggu & Adnrus, 2018). Care pathways should be clear about hospital guidelines and ethics regarding the use of restraints for children. Alternatives include:

- **Environmental:** Private, designated, and calming space with appropriate precautions and equipment;
- **Verbal:** Clear explanations and active engagement with and listening to the patient; and
- **Voluntary pharmacologic interventions:** Medications (Feuer, Rucker, Saggu & Adnrus, 2018).

## 5. SCREENING STAGE

Figure 3. Screening Stage of the Care Pathway



This section presents a list of existing screening tools for a variety of issues that have been field-tested and included in peer-reviewed literature to various degrees. This section does not include the entire breadth of existing screening tools and is limited to the results of our literature search and environmental scan. This toolkit does not recommend specific screening tools to use; EDs must determine the most appropriate set of screening tools for their needs. Additionally, the ordering of screenings and assessments may not be as linear as it is presented in Figure 1 of this tool, this may also vary by hospital or patient clinical presentation.

There are multiple screening tools currently available and being tested, and new measures are expected in the future. Due to time and resource constraints in the ED, some practitioners recommend the use of brief screening tools to first identify patients at acute risk, and then the use of a more extensive evaluation for those with positive screens (Asarnow, Babeva & Horstmann, 2017). Some of these screening tools are recommended to be completed by appropriately trained staff, such as a social worker. Additionally, giving adolescents the opportunity to complete screening instruments without their parent or caregiver present can be important to ensure the patient is able to answer freely. Furthermore, there is evidence that computer-based screeners can be useful in screening for mental health and suicide risk. Computer-based screeners can be efficient, and some populations are more willing to endorse problems with suicidality or other risk behaviors on computerized or questionnaire measures, compared to more personal direct interviews (Babeva, Hughes & Asarnow, 2016).

As any screening tool is integrated within the hospital ED care pathway, it is critical to decide and articulate within the customized algorithm what action should occur depending on the results of the screening. Examples of post-screening actions include:

- Document results in medical record.
- Appropriately alert key ED staff to the patient's disposition.
- Accelerate or decelerate course of treatment.
- Inform parent or guardian of results.
- Activate in-hospital social work services.
- Provide results to law enforcement, if legally required.

## 5.1 Suicidal Ideation, Behavior, and Self-Harm

Suicidality makes up almost half of ED referrals for child and adolescent behavioral health evaluations (Feuer, Rucker, Saggu & Adnrus, 2018). Screening non-psychiatric patients for suicide risk in a pediatric ED was found to be well received by parents and patients and minimally disrupted patient flow in some ED settings (Horowitz et al., 2010; O’Mara et al., 2012), but experts continue to debate its universal application. In a recent U.S. Preventive Services Task Force (USPSTF) review, researchers did not find sufficient evidence to address the balance of benefits and harms for suicide risk screening in adolescents but did recommend screening for major depressive disorder for adolescents aged 12 to 18 (USPSTF 2014; USPSTF 2016). Effective July 1, 2019, [The Joint Commission will require](#) screening for suicide risk of patients presenting to psychiatric hospitals and patients being evaluated or treated for behavioral health conditions as their primary reason for care in general hospitals.

Asking youth about suicide risk in the ED can help children feel known and understood by clinicians, and connect youth to needed resources (Ballard et al., 2012). Screening for suicide risk may be triggered by a variety of signs and symptoms at patient presentation, but non-suicidal self-injury (NSSI) is a predictor of suicide attempt at return visit (Ballard et al., 2015; Cloutier et al., 2010; Gipson et al., 2015). The burden of following up on false positives is a concern in a busy ED. However, a recent study on the implementation of a universal suicide screening for adults in a large safety net health care system did not find undue burden that could not be managed (Roaten, Johnson, Genzel, Khan & North, 2018). Universal screening for suicide risk can identify patients at increased suicide risk who might otherwise be missed; in one study in a pediatric emergency department, more than half of the patients who screened positive as at risk for suicide did not present at the ED for suicide-related complaints (Ballard et al., 2017). When a patient screens positive for suicide risk, a safety assessment should follow. The [ASQ’s Brief Suicide Safety Assessment Guide](#) provides an overview of what to do when a pediatric patient screens positive for suicide risk (See section 6.2 of “Ongoing Assessment”).

**Table 1. Suicidal Ideation, Behavior, and Self-Harm Screening Tools**

Screening Tool	Lift and Questions	Availability	Additional Details
<a href="#">Ask Suicide Screening Questions (ASQ)</a>	4 questions about risk factors and 3 questions about suicidal ideation.	Free: Full toolkit is available online.	Well-tested screening tool designed to assess major facets of established suicide risk factors, with three addressing suicidal ideation in a way targeted to youth with medical concerns (Ballard et al., 2017; Horowitz et al., 2012). It is recommended for pediatric patients in the ED for any visit type (Babeva, Hughes & Asarnow, 2016; Newton et al., 2017). Validated for use in adolescents in the ED setting (Feuer, Rucker, Saggu & Adnrus, 2018).
<a href="#">Suicide Assessment Five-step Evaluation and Triage (SAFE-T)</a>	3 sets of questions about risk and protective factors and suicide inquiry	Free: Full toolkit is available online.	Five-step screener that walks a professional through a comprehensive suicide assessment and triage process
Self-Assessed	3-item scale.	Free with	Assesses youths’ own expectations of

Screening Tool	Lift and Questions	Availability	Additional Details
Expectations of Suicide Risk Scale		access: Article in Journal of Depression and Anxiety.	their future risk of suicidal behavior and is a significant predictor of suicide attempts (Cyz, Horwitz & King, 2016).
<a href="#">Columbia Suicide Severity Rating Scale (C-SSRS)</a>	2-6 questions.	Free: Available online.	C-SSRS ED-6 is designed to assess the severity of suicidal ideation and is a prelude to the more comprehensive C-SSRS.  Significant predictor of a suicide attempt at return visit for adolescents (Gipson et al., 2015).  Validated for use in adolescents in the ED setting (Feuer, Rocker, Saggu & Adnrus, 2018; King, Berona, Cyz, Horwitz & Gipson, 2015).  Recommended by agencies including the U.S. Food and Drug Administration (Babeva, Hughes & Asarnow, 2016).  Included in NIH-funded PhenX Toolkit
<a href="#">Suicidal Ideation Questionnaire (SIQ) and SIQ-Junior (JR)</a>	The SIQ consists of 30 items and is appropriate for students in Grades 10-12. The SIQ-JR consists of 15 items and is designed for students in Grades 7-9.	Available for purchase.	The Junior version is intended for 14 years and younger and has utility for use with adolescents seeking emergency services that addresses multiple suicide risk factors, particularly when combined with depression and/or alcohol abuse screens (King et al., 2009).  Included in NIH-funded PhenX Toolkit
<a href="#">Reasons for Living for Adolescents (RFL-A)</a>	32 items.	Free: Available online.	Self-report inventory measuring protective factors that are deterrents to suicidal behavior  Included in NIH-funded PhenX Toolkit

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## 5.2 Violence and Aggressive Behavior

Aggressive behaviors can be triggered by medical causes, such as brain injury or pain, and by psychiatric disorders, such as psychosis and behavioral disorders (Feuer, Rocker, Saggi & Adnrus, 2018).

**Table 2. Violence and Aggressive Behavior Screening Tool**

Screening Tool	Lift and Questions	Availability	Additional Details
Brief Rating of Aggression by Children and Adolescents (BRACHA)	14 items.	Available with access: The Journal of the American Academy of Psychiatry and the Law.	Accurate and reliable instrument Scored by emergency room staff members to assess aggression risk during an upcoming psychiatric hospitalization (Barzman et al., 2012).

## 5.3 Depression

Research indicates that patients and caregivers support universal depression screening of ED patients if stigma, privacy, and provider sensitivity were kept in mind (Pailler et al., 2009). Depression in children can be different than depression in adults and age-specific screeners are important for this population. As noted above, the USPSTF recommends screening for major depressive disorder (MDD) in adolescents aged 12 to 18 years (USPSTF 2016).

**Table 3. Depression Screening Tools**

Screening Tool	Lift and Questions	Availability	Additional Details
<a href="#">Patient Health Questionnaire (PHQ-A)</a>	10 items.	Free: Available online.	Use for ages 11-17. The Patient Health Questionnaire (PHQ) is an instrument for making criteria-based diagnoses of depressive and other mental disorders commonly encountered in primary care (Kroenke, K., Spitzer, R. L., & Williams, J. B. W., 2001). The PHQ-A has been modified for adolescents as a self-administered instrument that assesses anxiety, eating, mood, and substance use disorders among adolescent primary care patients.
<a href="#">Patient Health Questionnaire (PHQ-9)</a>	10 items.	Free: Available online.	The PHQ-9 is used frequently for both adolescents and adults and has been validated as a screening tool for depression among adolescents (Richardson et al., 2010).

Screening Tool	Lift and Questions	Availability	Additional Details
<a href="#">Reynolds Adolescent Depression Scale 2nd Edition (RADS-2)</a>	30 items (5-10 minutes).	Available for purchase.	Use for ages 11-20. The RADS-2 identifies depressive symptoms in adolescents and measures the four basic dimensions of depression: dysphoric mood, anhedonia/negative affect, negative self-evaluation, and somatic complaints.
<a href="#">Beck Youth Inventories - Second Edition (BYI-2)</a>	5 inventories of 20 questions each (5 minutes per inventory).	Available for purchase.	Use for ages 7-18. The BYI-2 includes 5 self-report inventories that can be used separately and/or in combination to assess symptoms of depression, anxiety, anger, disruptive behavior, and self-concept.
<a href="#">Children’s Depression Inventory (CDI)</a>	CDI 2: 15-20 minutes.  CDI 2 Short: 5 minutes.	Available for purchase.	Use for ages 7-17. A brief self-report test that helps assess cognitive, affective, and behavioral signs of depression.
<a href="#">Behavioral Health Screening-ED System</a>	14 domains of mental health (3-5 minutes).	Available for purchase.	Use for ages 12-18. A computerized, self-administered adolescent behavioral health screening that identifies and assesses adolescents for depression, suicidal ideation, posttraumatic stress, substance use, and exposure to violence. Domains include substance misuse, depression, anxiety, suicidality, self-harm, trauma, sexuality, safety, demographics, education, family, nutrition, eating habits, independence, and access to medical care.
<a href="#">Hopelessness Scale for Children (HSC)</a>	17 questions	Free: Available online.	Use for ages 6-12 Interviewer-administered questionnaire measuring the components of hopelessness, a risk factor for depression, suicidal behavior, and suicide.  Included in NIH-funded PhenX Toolkit.

## 5.4 Psychosis

Psychosis is a symptom of many serious mental illnesses. Early detection and diagnosis are essential to treating patients, especially adolescents and young adults, with psychotic symptoms. To reduce prolonged duration of untreated psychosis, early identification and improved links are needed among primary care, emergency rooms, criminal justice and



Serious emotional disturbance for people under the age of 18 refers to a diagnosable mental, behavioral, or emotional disorder that causes serious functional impairment that substantially interferes with or limits functioning in family, school or community activities  
(<http://www.samhsa.gov/disorders>)

psychiatric services (Bhui K, Ullrich S, Coid JW., 2014). To learn more about this topic, reference the National Institute of Mental Health (NIMH) [Recovery After an Initial Schizophrenia Episode \(RAISE\)](#) project.

**Table 4. Psychosis Screening Tool**

Screening Tool	Lift and Questions	Availability	Additional Details
<a href="#">Psychosis Risk Screening with the Prodromal Questionnaire – Brief version (PQ-B)</a>	21 items (approximately 50 minutes to complete).	Free: Available online.	PQ-B is designed to identify patients aged 12+ who may be experiencing symptoms of psychosis. It is not diagnostic but intended to identify patients in need of further assessment. Based on the score, follow up with the patient later or encourage evaluation and treatment by a behavioral health provider. This is not an ED-specific tool.

## 5.5 Violence

Both the exposure to and direct experience of violence in childhood are traumatic experiences with profound implications for mental health. Violence includes sexual abuse, physical abuse, exposure to intimate partner violence, and community violence in schools, neighborhoods, and places of worship. In 2012, a National Task Force on Children Exposed to Violence recommended that all children who are exposed to violence be identified, screened, and assessed to ensure rapid engagement in trauma-informed care (Office of Juvenile Justice and Delinquency Prevention, 2012).

**Table 5. Violence Screening Tools**

Screening Tool	Lift and Questions	Availability	Additional Details
<a href="#">Juvenile Victimization Questionnaire Screening Reduced Item Version</a>	12 items.	Free: Available online.	The Juvenile Victimization Questionnaire, 2nd Revision (JVQ-R2) is an inventory of youth victimization, which covers five general areas: conventional crime, maltreatment, peer and sibling victimization, sexual victimization, and witnessing and other exposures to violence.
<a href="#">Traumatic Events Screening Instrument for Children and Parents</a>	24 items.	Free: Available online.	Assesses a child's experience of a variety of potential traumatic events.
<a href="#">UCLA PTSD Reaction Index</a>	Screeener and lengthy trauma profile.	Available for purchase.	Provides a structure for making a comprehensive evaluation of trauma history and an assessment of the full range of DSM-5 posttraumatic stress symptoms among school-age children and adolescents.

Screening Tool	Lift and Questions	Availability	Additional Details
<a href="#">Trauma Symptom Checklist for Children</a>	12 items (5 minutes).	Available for purchase.	Use for ages 8-16. Evaluates acute and chronic posttraumatic symptomatology.

### 5.6 Drug and Alcohol Use Disorder Screening

Parents and adolescents feel that screening for alcohol and drug misuse is important (O’Mara et al., 2012). There is some evidence that the combination of intoxication, psychological distress, and low self-esteem is indicative of a higher risk for suicidal ideation and attempt (Babeva, Hughes & Asarnow, 2016; Puuskari, Aalto-Setala, Komulainen, & Marttunen, 2018). Some screening tools have been highlighted in the chart and further information can be found in [A Systematic Review of Instruments to Identify Mental Health and Substance Use Problems Among Children in the Emergency Department](#) (Newton, A. S., Soleimani, A., Kirkland, S. W., & Gokiert, R. J. 2017). Additionally, an ED may include the Screening, Brief Intervention, and Referral to Treatment (SBIRT) model in its practice. SBIRT is an evidence-based practice where a health care professional screens for problematic use, abuse, and dependence on alcohol and illicit drugs and provides a brief intervention and a referral to treatment. More information can be found at the [SAMHSA-HRSA Center for Integrated Health Solutions](#).

**Table 6. Drug and Alcohol Use Disorder Screening Tools**

Screening Tool	Lift and Questions	Availability	Additional Details
<a href="#">Alcohol Screening and Brief Intervention for Youth: A Practitioner’s Guide from the National Institute on Alcohol Abuse and Alcoholism (NIAAA)</a>	2 questions.	Free: Available online.	Use for ages 9-18. Designed to help health care professionals quickly identify youth at risk for alcohol-related problems.
<a href="#">Alcohol Use Disorders Identification Test (AUDIT-C)</a>	3 items.	Free: Available online.	Identifies persons who are hazardous drinkers or have active alcohol use disorders.
<a href="#">CRAFFT screen</a>	6 items (5 minutes).	Free: Available online.	Use for ages 12-18. Determines if further discussion about substance use is warranted and is recommended by the American Academy of Pediatrics’ Committee on Substance Abuse with adolescents.
Emergency Department Distress Response Screener (ED-DRS)	11 items (2-4 minutes).	Available online with access to the journal.	Use for ages 12 and up. Screens for the frequency of alcohol and drug abuse, traumatic exposure, and behavioral symptoms. The pilot showed promise for identifying mental health concerns (Nager et al., 2017).

Screening Tool	Lift and Questions	Availability	Additional Details
DSM-IV Two-Item Instrument	<2 minutes.	Free: Available online.	Assesses the possibility of alcohol use disorders among pediatric patients (Newton et al., 2017) using two items: alcohol abuse (drinking in hazardous situations) and alcohol dependence.
Adolescent Drinking Index	5 minutes, 24 questions.	Available for purchase.	Use for ages 12-17; intended for adolescents in school, adolescents under psychological evaluation, and adolescents in substance misuse programs.
<a href="#">Tobacco Use Screening and Intervention: Ask, Advise, Assess, Assist, Arrange (5As)</a>	3-5 minutes.	Free: Available online.	Identifies adolescents who use tobacco products, including e-cigarettes, provides brief counseling, and connects them to treatment. Recommended by the American Academy of Pediatrics Section on Tobacco Control.

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## 5.7 General Mental Health

Patients and caregivers generally feel that mental health screening in the ED is acceptable, and most doctors and nurses felt that the screening did not interrupt patient care (Williams et al., 2011).

**Table 7. General Mental Health Screening Tools**

Screening Tool	Lift and Questions	Availability	Additional Details
<a href="#">HEADS-ED Rapid Screening Tool</a>  (Home, education, activities/peers, drugs/alcohol, suicidality, emotions/behavior, discharge resources.)	7 elements rated on a 3-point scale.	Free: Available online.	Use for ages 6-18.  Brief mental health screening tool that helps physicians to obtain a psychosocial history to aid in making decisions regarding patient disposition (e.g., admission, discharge, or requesting specialized mental health consultation).  It can help guide the assessment and referral process for the clinical needs of pediatric patients (Cappelli et al., 2017) and has shown promising results for use in ED decision-making for pediatric patients with mental health concerns (Cappelli et al., 2012)  Recommended for use in ED admission for pediatric patients visiting for mental health care (Newton et al., 2017).
<a href="#">Pediatric Symptom Checklist</a>	35 items.	Available for purchase.	Use for ages 11 and up.  Psychosocial screen designed to facilitate the recognition of cognitive, emotional, and behavioral problems.  The checklist has both a parent-completed section and a youth self-report. Using this checklist resulted in a cumulative increase in specialty behavioral health visit rates (Hacker et al., 2015).
<a href="#">Behavioral Health Screening-Emergency Department (BHS-ED)</a>	3-5 minutes.	Available for purchase.	Ages 12 and up.  Computerized, self-administered adolescent behavioral health screening tool that leads to small, but significant, increases in the identification of psychiatric problems (Fein et al., 2010). The assessment covers 14 domains of mental health, including substance misuse, depression, anxiety, suicidality, self-harm, trauma, sexuality, safety, demographics, education, family, nutrition, eating habits, independence, and access to medical care.

Screening Tool	Lift and Questions	Availability	Additional Details
<a href="#">Screen for Child Anxiety Related Emotional Disorders (SCARED-P and SCARED-C)</a>	41 items rated on a 3-point Likert-type scale.	Free: Available online.	Purpose of the instrument is to screen for signs of anxiety disorders in children. Version one includes questions to parents about their child, and version two asks the same questions to the child directly.

### 5.8 Other Screenings

Your hospital may have other screenings for mental health issues that you want to include in your care pathway. Your hospital can seek information about the specific issues related to the management of these conditions through the [AAP](#) or [AACAP](#) websites.

These may include screenings for:

- Agitation.
- Developmental delay and other developmental issues that can impact care.
- Autism spectrum disorder.
- Sexual abuse/child abuse/human trafficking.
- Attention-Deficit/Hyperactivity Disorder.
- Post-partum depression (Emerson et al., 2014).

### 5.9 Privacy and Screenings

The [HHS Office for Civil Rights \(OCR\)](#) explains how the Health Insurance Portability and Accountability Act of 1996 (HIPAA) rules designed to protect the privacy of all forms of an individuals’ identifiable health information, whether electronic, written, or oral, and to ensure that health information is available when needed for treatment and other appropriate purposes. The following two webpages are intended to be one-stop resources for health care professionals and consumers, containing guidance and other materials on how HIPAA applies to mental health and substance use disorder information [for Professionals](#) and [for Consumers](#). Providers and hospitals are aware of their responsibilities under HIPAA, but consideration should be given to how pertinent information about a child’s mental health status should be shared with parents and caregivers.

### 5.10 Resources to Support Pre- and Post-Screening Actions

#### 5.10.1 Crisis Support and Mobile Crisis Teams

There are several models of care that involve engaging professionals outside of the ED when specialized care for behavioral health is needed (Suicide Prevention Resource Center, 2014c). This can include referrals to telehealth and crisis hotlines or helplines, but it can also include agreements with outside entities to conduct screening and disposition directly out of the ED. One promising model is to conduct an initial mental health screening in the ED and then, when needed, call in a Pediatric Expedited Transfer (PET) for further mental health evaluation and disposition. Another model is Mobile Response

and Stabilization Services (MRSS) where a face-to-face intervention from a team of professionals takes place at the site of the crisis, such as a child’s home or school (Manley, Schober, Simons & Zabel, 2018). Different examples of pediatric mental health teams and providers, such as the PET, are detailed in the chart in the following section.

### 5.10.2 Team-Based Provider Approach

There is evidence that mental health care provided by physicians-only may be insufficient to meet the needs of children in a mental health crisis or post-crisis (Cappelli et al., 2012; Newton et al., 2015). A survey of expert pediatric ED clinicians emphasized the importance of specialist staffing for mental health personnel (Rhodes et al., 2012). A designated team can improve organization and flow, can lead to significant reductions in return ED visits, and can reduce the length of ED stays (Hamm et al., 2010; Newton et al., 2017). The Child Mental Health Initiative (CMHI) from the Substance Abuse and Mental Health Services Administration (SAMHSA) shows that a team-based approach works best when embedded in a “systems of care” framework where coordinated services and supports are designed to help youth with SED (Center for Mental Health Services, 2016).

Table 8 below shows examples of pediatric mental health team members, roles, and outcomes from the literature. These interdisciplinary teams include psychiatrists, psychologists, social workers, nurses and others with a focus on child and adolescent behavioral and mental health. It is important to clarify within the customized care pathway the unique role(s) played by distinct providers within and beyond the hospital.

**Table 8. Pediatric Mental Health Team Members, Roles, and Outcomes**

Team	Members, Role and Outcome
Rapid Response Team (RRT)	<p><b>Members:</b> One psychiatrist, one psychiatric nurse, and other health professionals (for example, a social worker, an educational specialist, or an art therapist).</p> <p><b>Role:</b> Assess patient and family members for suicidal youth within 72 hours of the ED visit and provided appropriate treatment and outpatient and community resources.</p> <p><b>Outcome:</b> No statistically different outcomes compared to a control group, but costs to the hospital and society were lower (Latimer, Garipey &amp; Greenfield, 2014).</p>
Child Guidance Model	<p><b>Members:</b> Master's level psychiatric social worker and a board-certified child psychiatrist.</p> <p><b>Role:</b> Onsite psychiatric social worker, under the supervision of a child psychiatrist, evaluates all children with mental health needs and all children with visits for mental disorders were referred to the child guidance team.</p> <p><b>Outcome:</b> Reduced length of stay and ED costs (Mahajan et al., 2007).</p>

Team	Members, Role and Outcome
Child and Adolescent Rapid Emergency Stabilization (CARES)	<p><b>Members:</b> Interdisciplinary clinical team.</p> <p><b>Role:</b> Provision of ongoing psychiatric assessment and intensive acute therapeutic support at a crisis stabilization unit for children and adolescents.</p> <p><b>Outcome:</b> Significant decrease in length of stay for psychiatric patients seen in the pediatric ED (Rogers et al., 2015).</p>
Pediatric Emergency Department (PED) Psychiatric Team	<p><b>Members:</b> Child psychiatrist and a pediatric mental health social worker.</p> <p><b>Role:</b> Social worker followed up with children for up to 1 month on an outpatient basis while they transitioned to appropriate outpatient mental health providers.</p> <p><b>Outcome:</b> Decrease in length of stay for PED patients (Sheridan et al., 2016).</p>
Dedicated Mental Health Team in the ER	<p><b>Members:</b> Mental health evaluator and a pediatric mental health specialist (PMHS).</p> <p><b>Role:</b> Dedicated mental health (MH) team based in the ED.</p> <p><b>Outcome:</b> Lower length of stay and improved faculty satisfaction, as well as decreased use of physical restraints and security physical interventions (Uspal et al., 2016).</p>

**5.10.3 Telepsychiatry to Immediately Connect with a Specialist**



For EDs with limited mental health staffing resources, telepsychiatry may be an option. Programs such as the [South Carolina Department of Mental Health](#) allow EDs to provide risk assessments and recommendations for initial treatment and follow-up care without having to hire additional staff.

Telehealth is defined as the use of electronic information and telecommunication technologies to support and promote long-distance clinical health care, patient and professional health-related education, public health, and health administration. Tele-mental health can enable a practitioner trained in childhood mental and behavioral health to provide remote consultation and assessment to a patient right in the patient’s community. Teleconsultation for mental health concerns provides an opportunity for practitioners to bring specialty care to resource-limited and geographically-isolated communities. It is an innovative approach to extend the reach of specialists trained in childhood mental, behavioral, and developmental disorders, and to help fill the gaps in care. A 2013 review showed that tele-mental health is effective for diagnosis and assessment across many populations (adult, child, geriatric, and ethnic) and for disorders in many settings (emergency, primary care, home health) and has been comparable to in-person care (Hilty, D. M., Ferrer, D. C., Parish, M. B., Johnston, B., Callahan, E. J., & Yellowlees, P. M. 2013).

With proper upfront consultation through telepsychiatry, a site can reduce the number of emergency holds by providing crisis services and follow-up care for pediatric patients.

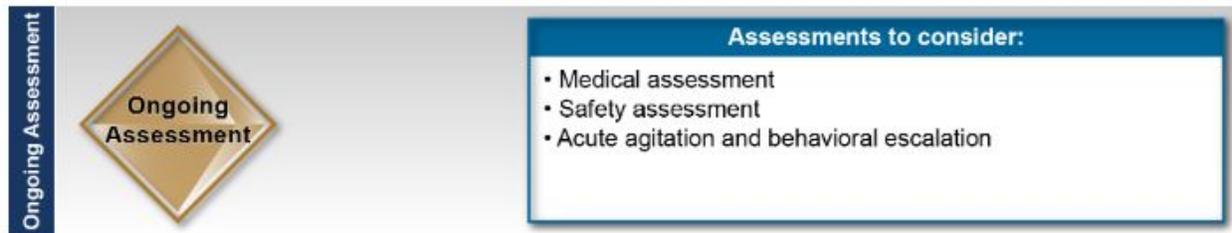
The [National Consortium of Telehealth Resource Centers](#) is a network of Telehealth Resource Centers that have been established to provide assistance, education, and information to organizations and individuals who are actively providing, or interested in providing, health care at a distance. Their website can be used to help connect providers with potential telehealth resources in their service area. Additionally, HRSA recently funded the Evidence-Based Tele-Behavioral Health Network Program (EB-THNP). The two-fold purpose of this program is to use telehealth networks to increase access to behavioral health care services in rural and frontier communities and to conduct evaluations of those efforts to establish an evidence-base for assessing the effectiveness of tele-behavioral health care for patients, providers, and payer.

#### 5.10.4 Free Crisis Support Resource

The National Suicide Prevention Lifeline is a national network of local crisis centers that provides free and confidential emotional support to people in suicidal crises or emotional distress 24 hours a day, 7 days a week. The Lifeline, funded by SAMHSA, is comprised of a national network of over 150 local crisis centers, combining custom local care and resources with national standards and best practices. If a patient is suicidal or in emotional distress and local resources are not readily available, please call the Lifeline at 1-800-273-TALK (8255) for guidance. Chat crisis support is also available on the Lifeline's [website](#).

## 6. ONGOING ASSESSMENT STAGE

Figure 4. Ongoing Assessment Stage of the Care Pathway



Ongoing assessment includes tools and considerations for conducting further workup on pediatric patients in mental health crises, including medical and toxicology screenings. Safety assessments should also be considered after a positive screen. Depending on the hospital, this stage may occur at the same time as screening or precede it. By developing the customized care pathway, hospitals determine the order that these screenings, assessments and subsequent actions will occur in their facility to achieve optimal clinical management of pediatric mental health crises.

The purpose of laboratory and medical assessments is to rule out or discover medical illness or injuries that may be an underlying cause of or contributing to a mental or behavioral health complaint. These assessments cover a wide range of disorders, including neurologic disease, metabolic, endocrine, and electrolyte disturbances, respiratory issues, and medication issues, including drugs of abuse (Chun, Mace, & Katz, 2016; Feuer, Rocker, Saggu & Adnrus, 2018). Having resources to guide ongoing assessment, such as a summary of differential diagnoses based on categories of behavioral emergencies such as depression, anxiety, suicidality, aggression, and severe disorganization, can help guide treatment options (Feuer, Rocker, Saggu & Adnrus, 2018).

### 6.1 Medical Assessment

Generally, clinical medical assessments for psychiatric patients in the emergency department (ED) are supported in the literature (Chun, Mace, & Katz, 2016). Associated laboratory testing in the pediatric ED includes patient electrolytes, urine drug screen, blood count, blood ethanol level, thyroid studies, and salicylate/acetaminophen levels (Sheridan et al., 2015). A review of more than 1,000 records for pediatric patients found that the results of medical screenings caused few disposition and management changes, and that routine screening laboratory tests increase the length of stay by almost two hours (Donofrio et al., 2014). A chart review of routine-driven urine toxicology screens for medical clearance in pediatric psychiatric patients did not influence management and potentially increased both ED cost and length of stay (Fortu et al., 2009). Basic criteria associated with pediatric patients that prompts the need for additional laboratory and medical screening includes altered mental status, ingestion, hanging, traumatic injury, unrelated medical complaint, and rape/sexual assault (Santillanes, Donofrio, Lam & Claudius, 2014). However, there may be limited utility to employing screening laboratory studies for pediatric behavioral health patients. Urine toxicology screens do not change management or disposition within the ED; workups should be based on concerns from the history and exam rather than in general (Feuer, Rocker, Saggu & Adnrus, 2018).

## 6.2 Safety Assessment

Many of the screenings presented are brief and intended to quickly determine whether a patient is at risk for suicide or other immediate harm. In its care pathway, an ED should have a clear next step after a positive screen and should include a deeper safety assessment. The [ASQ's Brief Suicide Safety Assessment Guide](#) provides an overview of what to do when a pediatric patient screens positive for suicide risk.

## 6.3 Pediatric Acute Agitation and Behavioral Escalation

Acute agitation in children and adolescents in the ED carries significant risk to patients and staff. It requires skillful management, including both nonpharmacologic and pharmacologic strategies. Effective management of agitation requires understanding and addressing the multifactorial cause of the agitation. Careful observation and multidisciplinary collaboration is important (Gerson, R., Malas, N., & Mroczkowski, M. M. 2018). See information surrounding the development of [Consensus Guidelines for Pediatric Agitation in the Emergency Department](#).

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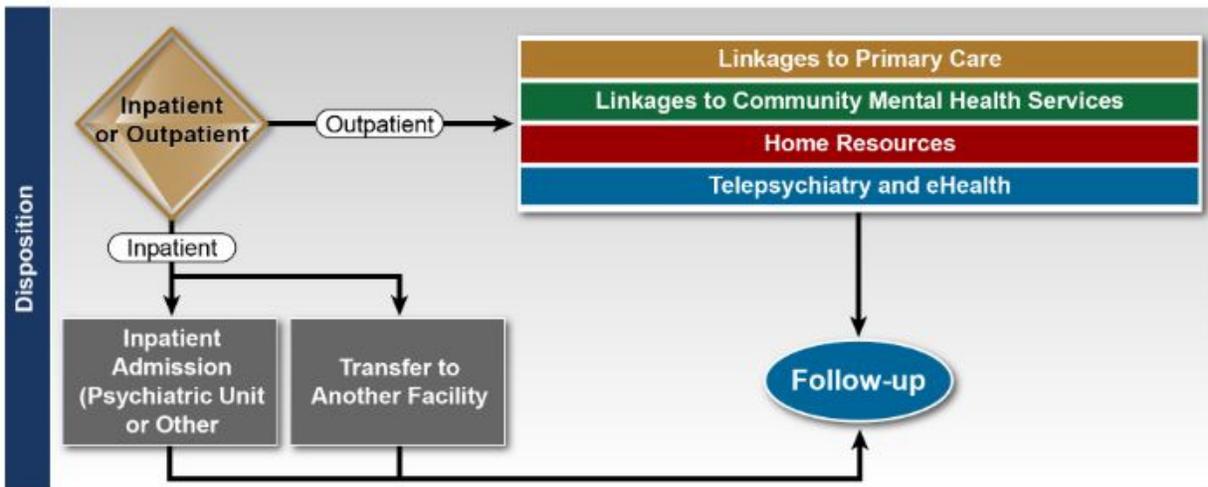
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## 7. DISPOSITION STAGE

Figure 5. Disposition Stage of the Care Pathway



This final stage covers when the patient leaves the hospital emergency department (ED), either to outpatient care or to inpatient care. Essential disposition elements include inpatient transfers, outpatient resources, and linkages to follow-up resources available in the community.

### 7.1 Inpatient Admission

If inpatient admission is an option, hospitals can use the customized care pathway to establish protocols for circumstances that would trigger transfer from the ED or they can articulate who has the authority to make this decision. In some cases, hospitals may consider the use of involuntary psychiatric holds. A study of involuntary psychiatric holds of preadolescent children found that most holds in this population are overturned and warns against the potential for harm and lack of obvious benefit (Santillanes, Kearl, Lam & Claudius, 2017). Laws on involuntary holds vary between states and clear criteria should be used to determine the need for a hold (Chun, Katz & Duffy, 2013).

#### 7.1.1 Transfer within a Facility

Hospitals may or may not have inpatient pediatric mental health beds, or alternative beds for the pediatric patients with mental health crises. Having an onsite inpatient pediatric psychiatric unit appears to result in a higher rate of admissions, although the length of stay for these patients is higher at pediatric EDs without inpatient units (Sheridan et al., 2017). When there are not pediatric mental health beds available, children and adolescents needing intensive psychiatric treatment are often boarded in pediatric medical units and emergency rooms while awaiting placement. Children and adolescents with developmental disabilities and/or severe suicidal ideation are at higher risk for prolonged boarding, necessitating additional resources and care (Wharff, Ginnis, Ross & Blood, 2011).

#### 7.1.2 Transfer to Another Facility

If there are no available beds in the facility and a patient requires inpatient treatment, the patient should be transferred to an appropriate facility. Hospitals should collaborate with local pre-hospital

agencies and interfacility transport providers in order to understand their programs and training, and how that can impact the children served. There are several resources for developing pediatric transfer guidelines, ensuring safe transport, and developing interfacility agreements. Transfer guidelines should include guidance on medical clearance, parental consent under the Emergency Medical Treatment and Active Labor Act, what to do if a patient meets involuntary admission criteria and must be transferred across state lines, and special considerations needed for agitated patients. For more information:

- [Interfacility Transport Toolkit for the Pediatric Patient](#)
- [Psych Patient Transport: 5 Tips to Make It Safe for Providers and Patients](#)

## 7.2 Outpatient Discharge

There are several levels of outpatient care, ranging from crisis hotlines to suicide-specific outpatient care to emergency respite care to day care and partial hospitalization (Suicide Prevention Resource Center, 2014c). There are a variety of resources that can be provided when a pediatric patient is discharged, either to a form of outpatient care or to the care of their family. For pediatric suicide-related ED visits, ED-based discharge planning interventions increased the number of attended post-ED treatment sessions, increased adherence with service referrals, and reduced risk of suicide and suicide-related hospitalizations (Newton et al., 2010). The customized care pathway should include specific elements of discharge planning to help normalize the delivery of these interventions.

### 7.2.1 Linkages to Primary Care: The Medical Home

Effectively communicating with and integrating the patient’s primary care provider is an important aspect of continuity of care for the patient. Experts strongly endorse the benefits of a “medical home,” which is patient-centered care that is coordinated and integrated by the patient’s personal physician, especially for high-risk and/or high-utilization patients (Chun, Mace, & Katz, 2016; Fong et al., 2016). The Health Resources and Services Administration (HRSA)-funded [National Center for Medical Home Implementation](#) has produced a [Primary Care Referral and Feedback Form](#) which may serve as a helpful tool to facilitate this linkage. The American Academy of Pediatrics supports the integration of mental health treatment within the medical home and the U.S. Department of Health and Human Services’ Agency for Healthcare and Research Quality has published a resource for [Integrating Mental Health Treatment Into the Patient Centered Medical Home](#).

It is important to note that nearly half of adolescents lack a medical home, and those with mental health problems are even less likely to have one (Adams SH, Newacheck PW, Park MJ, Brindis CD, Irwin CE Jr 2013). Whenever possible, best practices include consulting primary care pediatricians regarding level-of-care determination, follow-up planning, and referrals (Chun, Mace, & Katz, 2016; Fong et al., 2016).

### 7.2.2 Linkages to Community Mental Health Services

Patients can be discharged with referrals to community mental health services. Many hospitals have social workers or other staff with lists of community-based services that can be provided to the patient. However, there are numerous barriers to accessing community mental health services, such as therapist turnover, lack of services in areas such as the [HRSA-designated shortage areas](#), limited health insurance coverage, and limited availability of hours (Chun, Mace, & Katz, 2016; Fong et al., 2016).

To help patients find behavioral health services in your area, use SAMHSA’s [Behavioral Health Treatment Services Locator](#). The Locator provides 24-hour free and confidential treatment referrals and information about mental and/or substance use disorders, prevention, and recovery in English and Spanish; 1-800-662-HELP (4357), TTY: 1-800-487-4889.

Hospitals can consider other resources in the community beyond regular outpatient care, including crisis services, hotlines, mobile crisis, and home-based services. Additionally, it is important to collaborate with schools or faith-based organizations, as they can be the referent and have the capacity to support continuity of care. An increasing number of schools also have school – based mental health services.

Referrals to culturally competent resources in the community can help improve outcomes. One example is the [Qungasvik Toolbox](#), a toolbox for promoting youth sobriety and reasons for living in Yup’ik/Cup’ik communities (Allen, Rasmus, Fok, Charles, Henry & Qungasvik Team, 2018; Duarte-Velez, Torres-Davila, Spirito, Polanco, and Bernal, 2016).

**7.2.3 Home Resources**

Sending patients home with patient education resources such as brochures is a common practice. As part of the discharge of a child or adolescent patient to parent or caregiver care, providers should assess the family’s well-being and capacity to be supportive, access recommended or prescribed services for treatment, and ensure follow through. Tools like the [Family Advocacy and Support Tool \(FAST\)](#) and [other methods of assessing parent strengths and family connections](#) could be useful in discharge planning.

Two resources, highlighted below, have evidence of effectiveness and could be included in a care pathway for youth at risk for suicide and suicidal ideation. One of the most important ED interventions for a suicidal patient is ensuring the patient does not have access to means of lethality. For teens, that includes access to prescription and over-the-counter medications, access to a car, and access to firearms.

**Lethal Means Restriction (LMR) Counseling**

This is an evidence-based suicide prevention strategy that helps families restrict access to dangerous items and provide a safe environmental for adolescents at risk for suicidal behavior (Suicide Prevention Resource Center, 2014a). However, one study found that there is a low rate of LMR counseling for at-risk youth (Rogers et al., 2014).

For more information, consider the following resources:

- Suicide Prevention Resource Center: [Counseling on Access to Lethal Means \(CALM\)](#)
- Zero Suicide: [Centerstone Clinical and Administrative Policies and Procedures: Securing Weapons for Suicidal/Homicidal Clients](#)

**Patient or Clinician-Administered Safety Planning**

Completing a collaborative safety plan is a recommended practice, along with carrying out steps to reduce access to lethal means (Chun, Mace, & Katz, 2016; National Action Alliance for Suicide Prevention, 2018). A safety plan is a list of coping strategies and sources of support, written by the patient in collaboration with their care team and family members, as appropriate (Suicide Prevention Resource Center, 2014a).

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For more information, consider the following resources:

- Emergency Medicine Network: [Emergency Department Safety Assessment and Follow-up Evaluation \(ED-SAFE\)](#) includes a collection of provider tools, the Patient Safety Screener to be administered by ED nursing staff, and the Patient Safety Secondary Screener to assess if referral to mental health treatment is warranted. It also includes patient handouts for self-care, how to stay safe, and a personal safety plan.
- [MY3](#): A mobile application that features a support system, safety plan, and other resources.
- Zero Suicide: [Safety Planning Intervention for Suicidal Individuals](#) provides people who are experiencing suicidal ideation with a specific set of concrete strategies to use to decrease the risk of suicidal behavior.
- Act, Support, and Protect (ASAP): [Family Intervention for Suicide Prevention/SAFETY-Acute](#) uses a developmentally-informed safety planning process that is designed for children.

## 7.2.4 Telepsychiatry and eHealth

Telepsychiatry and eHealth is a growing field and can link youth and families to resources in areas where in-person resources may be unavailable. Examples include crisis centers and helpline information, often distributed at discharge in the form of wallet cards or handouts. Promising practices include making crisis services available across multiple mediums, including phone hotlines, for youth suicide awareness and prevention efforts (Crosby Bundinger et al., 2014; Suicide Prevention Resource Center, 2014c). Online supports, such as apps for follow-up scheduling and support groups, are potential opportunities for expansion of access to resources. The [National Consortium of Telehealth Resource Centers](#), an affiliation of the 14 HRSA-funded Telehealth Resource Centers, houses many useful resources for families, including a tool to locate telehealth providers, fact sheets, checklists, templates, and other guides to telehealth providers for a variety of practice areas.

The National Suicide Prevention Lifeline is a national network of local crisis centers that provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week. Families and youth can access this support service by calling at 1-800-273-TALK (8255) or chatting with a provider at [www.suicidepreventionlifeline.org](http://www.suicidepreventionlifeline.org). Free, printable wallet cards for families are available on the SAMHSA [website](#).

## 7.2.5 Follow-Up

As noted above, there are numerous barriers to accessing community mental health services (Chun, Mace, & Katz, 2016; Fong et al., 2016); this can result in poor outcomes. Even with connections to an outpatient clinician, many youth presenting in a psychiatric crisis have a repeat visit to an ED within six months (Frosch, dos Reis & Maloney, 2011). While patients often do follow up with care plans or outpatient care after discharge, there are others who are less compliant with follow-up plans (Sobolewski et al., 2013). One study explored the use of prompts to help increase mental health outpatient follow-up and did not find evidence that they are effective alone: the majority (83 percent) of adolescents were compliant with the discharge plan without follow-up prompts, 14 percent did not comply even after prompts, and only 3 percent attended outpatient care after prompts (Hopper et al., 2011). More intensive interventions may be needed to reach those who do not continue with follow-up care after discharge. Family-based cognitive behavioral therapy sessions designed to increase motivation for follow-up treatment and safety, supplemented by care linkage telephone contacts after

ED discharge, do lead to increased attendance at outpatient treatment, and higher rates of psychotherapy, medication, and treatment visits (Asarnow et al., 2011).

### 7.2.5.1 Suicide-Specific Follow-Up

Suicide-specific coping strategies are often part of discharge for youth at risk for suicide-related events, but pediatric patients have low confidence in their ability to use these coping strategies (Czyz et al., 2016). Young people discharged to the community after deliberate self-harm often do not receive adequate emergency health assessments or follow-up outpatient care (Bridge et al., 2012). More intensive interventions, such as the TeenScreen-ED intervention, may be necessary for this patient population. In this intervention, a social worker screens for the need for mental health resources, directs teens and parents to community mental health resources, addresses their concerns or misconceptions about mental health treatment, makes a referral and follow up to services, and provides telephone reminders, among other services (Grupp-Phelan, McGuire, Husky & Olfson, 2012).

Many patients who are referred to follow-up mental health treatment never attend any follow-up treatment sessions, and if they do pursue follow-up mental health treatment, they often receive low and insufficient doses of treatment. Linkage to needed outpatient mental health treatment from the ED can be substantially improved with the inclusion of enhanced mental health interventions in the ED, such as the Family Intervention for Suicide Prevention (Asarnow et al., 2011; Rotheram-Borus, Piacentini, Cantewll, Belin & Song, 2000) or Therapeutic Assessment (Ougrin, Ng & Low, 2008). A recent journal article summarized the challenges and opportunities for youth suicide prevention in the ED, and identified the following interventions as promising (Asarnow, Babeva & Horstmann, 2017):

- [Family Intervention for Suicide Prevention Plan](#) to strengthen skills for dealing with suicide and self-harm and connect to the family.
- Therapeutic assessments to mitigate risk, improve care, inform triage, and discharge decisions.
- TeenScreen-ED to enhance motivation and address treatment barriers.
- Teen Options for Change (TOC), a motivational enhancement intervention.

The SAMHSA-funded Suicide Prevention Resource Center recommends that providers should have standards for safe care transitions, potentially including warm hand-offs, where an ED staff member facilitates a phone call between the patient and the referred outpatient provider, rapid referral, where the ED staff member schedules an outpatient appointment prior to discharge, and caring contacts, such as follow-up phone calls, emails, postcards, and text message (Suicide Prevention Resource Center, 2014b). These standards can be established and clarified within this section of the care pathway.

## 8. CASE STORIES

The following section presents the case stories shared by seven rural emergency care providers in different states across the country. The stories are shared to explore more deeply the unique challenges faced by rural hospital emergency departments, and to share innovative methods for the management of children in mental health crisis in the face of those restraints.

### 8.1 Emergency Department in the Rural Pacific Northwest

One emergency department in the Pacific Northwest sees approximately 4,500 pediatric patients each year, with one or two behavioral health pediatric patients weekly. While the hospital previously had an inpatient behavioral health unit for adults and pediatrics, it was closed more than a decade ago. There are limited facilities beyond the hospital equipped to treat children in mental health crises. The closest acute facility is three hours away, and sub-acute facilities are 8 to 9 hours away and vary in terms of which ages of children they will accept. There are currently no standing interfacility transfer agreements, and the only specific policy for pediatric mental health is one allowing parent or guardian consent to hold a minor for treatment rather than waiting for a court order. Parents and caregivers have expressed frustration with the lack of resources and length of time it takes to receive services.



In the emergency department, both adult and pediatric patients are assessed by a licensed social worker between 10am and 10pm. The Licensed Clinical Social Worker (LCSW) will conduct an initial intake interview, screen for safety, and conduct a more in-depth suicide screen if needed. Every patient age eight or older receives the Columbia-Suicide Severity Assessment (C-SSA) and patients younger than eight will receive the C-SSA if they present with a behavioral issue. Outside of these hours this role is filled by a registered nurse assigned to mental health. A psychiatrist is available onsite to provide assessments for 4 hours each day.

The hospital has used telepsychiatry to help children and youth receive appropriate care more quickly. Children 8 years and older with a behavioral health crisis can receive an assessment from an offsite psychiatrist, which can facilitate the disposition of the patient via transfer or discharge. Prior to employing telepsychiatry, the hospital shared, “If someone came in Friday afternoon, they’d sit until Monday.” The hospital reports absorbing the biggest burden of the cost of this service but is able to point to a decreasing length of stay as a metric of success.

### 8.2 Emergency Department in Rural New England

An emergency department in rural New England has a variety of resources in place to treat children in mental health crises. This facility sees approximately 6,000 children aged 18 years and younger annually. They describe treating many adolescents with suicidal ideation and/or suicide attempts, often sent to the ED by their mental health provider, primary care provider, and/or school staff. Other issues include younger children with aggressive behavior, a fair number of adolescents and young adults with depression and anxiety but without active suicidal ideation, and a growing population of patients with a substance use disorder. While patients with suspected psychosis are also seen, this is much less common than the other complaints.

The ED has established a psychiatric crisis team with child psychology fellows on call. During daytime hours, social workers evaluate patients in the emergency department and develop a treatment plan in

consultation with staff. After hours, psychiatric residents are available for this role. In recent months, this emergency department has started conducting screening for suicidality for all incoming patients. The three-question Columbia-Suicide Severity Rating Scale (C-SSRS) is used, along with a pediatric abuse screen if deemed necessary.

The hospital shared a significant challenge in the management of patients who come to the ED to request medication or medication changes. The ED does not have sufficient medical histories for these patients for providers to make these changes or issue medication. Patients “may drive several hours to come to the facility and they have expectations of what is going to happen, they expect a medication regimen to be changed.” Furthermore, it is a challenge for patients and caregivers to schedule a follow-up appointment with an appropriate behavioral health provider in the community. Another challenge is that the hospital does not have inpatient psychiatric services or a substance abuse team. The provider explained that they “need more inpatient treatment, better access, and more mental health providers.”

### 8.3 Emergency Department in the Rural Midwest

An emergency department in a small, rural hospital in a Midwestern state discussed their limited resources to support pediatric patients undergoing a behavioral health emergency. This emergency department sees approximately 2,500 patients of all ages per year and is staffed 24/7 with mid-level providers. There are currently no written policies or any designated staff for responding to pediatric patients in a mental health crisis.

Because of the reduction of hospital beds in the area, funds have been transferred to community mental health centers to assist in paying for services provided in the community. Mental health centers contract with county government and are the local authority for public mental health care. The facility relies primarily on a single mental health center for screening and services. This center assesses the patient’s needs, identifies facilities in the state for continued care, and arranges transportation. Due to the limited volume of mental health care facilities in the state, patients can wait in the emergency room for 6 to 10 hours. The hospital reports a need for psychiatric care, psychiatric facilities, and psychiatric nurses and doctors beyond the resources available within the state. The hospital works to optimize all available resources by maintaining a strong relationship with the county mental health facility. The hospital has also benefited from a strong relationship with police officers designated as school resource officers who are able to provide supports to youth as they navigate difficult experiences.

### 8.4 Emergency Department of a Regional Hospital in the Rural Midwest

This regional hospital ED managed a total of 83 pediatric psychiatric encounters in 2016 and 117 in 2017. The most common encounters were suicidal ideation, aggressive behavior, and homicidal ideation. The emergency department does have policies in place for the screening and referral of these patients, relying on the services of an assessment agency regulated by the state health department. After a full medical screening rules out a physical condition, the agency sends a social worker, or a social worker and nurse, to conduct the screening assessment, identify follow-up support services, and if needed, arrange transportation to a psychiatric facility. As patients wait for care, three safe rooms are available that do not have anything on the wall, have magnetic locks in case someone becomes volatile, and are staffed by either an ED tech (paramedic) or a nurse. There are limited inpatient pediatric patient beds in the region and sometimes patients wait in the emergency department for 2 to 3 days before being transferred. The closest pediatric psychiatric facility is two and a half to three hours away.

For stable pediatric patients, the ED relies on a transportation service made up of retired police officers. Higher risk pediatric patients are transported by ambulance; however, most communities only have two to three ambulances on duty. Children covered by public insurance face challenges due to current policies, which only cover expenses for services delivered at the closest hospitals. Emergency Medical Service agencies also struggle with transport, since they may not get reimbursed for transporting pediatric patients.

Not seeing a child for a secondary visit presents a challenge for discharge planning. For example, many pediatric psychiatric issues have a home origin. When a child is transported through personal auto, providers cannot do a root cause analysis; there is a piece of the puzzle that is never seen. Pediatric psychiatric mental health encounters have low frequency but require many resources when they do happen.

The emergency department reports enthusiasm for continuing pediatric education opportunities.

### 8.5 Emergency Department in a Regional Hospital in the Southwest

One emergency department in the rural Southwest offers a robust approach to receiving and evaluating pediatric patients in mental health crises. This facility sees approximately 500 pediatric (defined as ages 0-14) patients per month with 10 of these patients, on average, presenting in a mental health crisis and 70 percent of these patients present with suicidal ideation. All ED providers are licensed to provide psychiatric services as generalists. The hospital has one room in the ED that is used as an exam room to conduct assessments.



A full mental health assessment is standard protocol on every patient who presents to the ED, regardless of chief complaint, and training is provided to all clinicians. They utilize an in-house behavioral intervention response team for patients whose condition is escalating to provide a reduction to self-harm without use of restraints. They use the SBIRT (Screening, Brief Intervention, and Referral to Treatment) for suspected substance abuse and the PHQ9 (Patient Health Questionnaire) if response to PHQ2 is positive. While the facility does provide outpatient services for mental health issues with licensed social workers, medication management, and intervention, as well as telepsychiatry services, these services are only available Monday through Friday from 9:00am to 5:00pm.

The facility has no pediatric inpatient psychiatric beds, and there are no facilities with pediatric inpatient beds within a 3-hour radius. Anecdotally, the average wait time in the ED for bed placement is 24 hours and if this wait reaches 48 hours, the facility looks beyond state borders for placement. Despite the inpatient bed challenges, the facility does have an interfacility transfer policy and has not encountered any challenges, besides distance, with out-of-state interactions.

The main challenges voiced were lack of inpatient psychiatric unit at their facility for any patient and a need for the community to provide respite care for children with autism.

### 8.6 Urgent Care Facility in a Western State

This facility is an urgent care facility with no inpatient beds, where the closest receiving hospital is 100 miles away. The facility reported seeing about 700 patients per month (8,400 per year), of which about 40 percent are pediatric patients (about 280 a month). Of the pediatric patients seen, about 5 percent

present with mental health issues, just slightly lower than the percentage of adults who do (8 percent). Local ambulance services will not transport a psychiatric patient to a receiving facility unless the patient has an accompanying physical injury or medical diagnosis to justify the transport. As a result, the facility must often try to find volunteers to transport patients. The staff spoke about the many pediatric patients that are foster children whose guardians cannot provide the needed transport due to their living situations. They are usually taking care of several other foster children in the same home and cannot afford to leave them unattended to make the 100-mile transport.

The facility utilizes a rotating staff without any formal training on mental health or behavioral health presentations. When a patient does present in mental health or behavioral health crisis, the primary concern of the provider tends to be how long it will take to find a bed for the patient. The facility cannot board any patient for any amount of time due to limited space in the facility. The staff uses a standard screening tool for depression on all patients (PHQ 2/9) and a stepped triage tool based on perceived risk. This site has 24/7 access to consultations with a board-certified emergency provider that can also assist with intake and in-bed placement. There are only two mental health service providers in the community (population of approximately 5,000 people), which only provide care on an outpatient basis, by appointment, Monday through Friday.



The contact also shared a story about a 12-year-old suicidal patient who had recently presented to the facility. There were no available beds and so the child waited in the facility for about 6 hours. Staff, working with the local authorities, attempted to find a safe place for the patient. The facility even contacted a local youth detention facility to see if they would be able to provide a temporary safe bed for the patient to keep him/her from self-harming. It took hours for them to find a receiving inpatient facility, which was over 4 hours away, and realized that the ambulance service would not be able to transport the child. Eventually, an off-duty police officer agreed to transport the patient by making an 8-hour round trip to get the patient to a place where treatment was available.

## 8.7 Emergency Department in the Rural Northwest

This 8-bed emergency department is composed of mostly mid-level providers that utilize emergency physicians on an on-call basis. This hospital also has a mental health team available on an on-call basis, but during limited hours. The ED physicians in this state are trained as designated examiners, which includes a mental health training for adults and adolescents. The hospital established policies and guidelines for staff to follow while caring for patients with behavioral health issues and has multiple care pathway algorithms in place for the care of patients presenting with mental health crisis, however, none of these are specific to pediatrics. The hospital staff uses a variety of screening techniques, such as the SAD (Sex, Age, Depression) persons score adapted for children, and completes a medical screen, which includes a risk and safety assessment. Oftentimes, pediatric patients in mental health crisis can be boarded for long periods of time, waiting for placement in an inpatient facility. Often times, the hospital must transfer patients long distances and across state lines to an accepting facility. The state also utilizes the pediatric suicide prevention hotline, which incorporates texting, a favored mechanism of contact by many pediatrics and adolescents.

While this hospital has guidelines and procedures in place, the provider found it paramount to highlight the challenges facing rural community emergency departments. He pointed out that small hospitals have a challenge with a limited workforce. Oftentimes, staffing is very variable, especially for specialties such as behavioral/mental health, and the providers in this community are primarily mid-level providers.

He also discussed the resource limitations that the community faces. While this hospital does have a multidisciplinary psych team and a social worker that it can call, these specialists are only available during limited hours. In addition, there is a lack of mental health resources available in the community, which poses a challenge toward providing adequate referrals for follow-up care. The provider also discussed the need for a regionalized approach to mental health care and emphasized the utility of a tool that would help hospitals create a care pathway for pediatric mental health patients in the ED, while discussing its limitations among external challenges.

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## **APPENDIX 1. FEDERAL STEERING COMMITTEE AND PANEL REVIEWERS**

### **1.1 Federal Steering Committee**

#### **U.S. Department of Health and Human Services**

*Health Resources and Services Administration*

*Administration for Children and Families*

*Centers for Disease Control and Prevention*

*Indian Health Service*

*National Institutes of Health*

*Office of the Assistant Secretary for Planning and Evaluation*

*Office of the Assistant Secretary for Preparedness and Response*

*Substance Abuse and Mental Health Services Administration*

#### **U.S. Department of Transportation**

*National Highway Traffic Safety Administration*

#### **U.S. Department of Justice**

*Office of Juvenile Justice and Delinquency Prevention*

### **1.2 Panel Reviewers**

#### **Joan Asarnow, PhD, ABPP**

Professor of Psychiatry and Biobehavioral Sciences; Director of the UCLA Youth Stress and Mood Program; Director at the Center for Trauma-Informed Adolescent Suicide, Self-Harm, and Substance Abuse Treatment and Prevention

#### **Jeff Bridge, PhD**

Professor of Pediatrics, Psychiatry, and Behavioral Health, The Ohio State University College of Medicine; Director at the Center for Suicide Prevention and Research, Research Institute at Nationwide Children's Hospital

#### **Thomas Chun, MD, MPH, FAAP**

Professor with the Departments of Emergency Medicine and Pediatrics; Associate Director of Clinical Research, Department of Emergency Medicine; Assistant Dean of the Office of Admissions, The Alpert Medical School of Brown University; Attending Physician in the Emergency Department, Hasbro Children's Hospital

#### **Susan Duffy, MD, MPH**

Professor of Emergency Medicine and Pediatrics, Alpert Medical School of Brown University; Director of Pediatric Special Projects, Department of Emergency Medicine; Attending Physician in Pediatric Emergency Medicine, Hasbro Children's Hospital

**Kathleen Donise, MD**

Director, Lifespan Pediatric Behavioral Health Emergency Services | Director, Hasbro Psychiatric Emergency Services, Assistant Professor, Clinician Educator, Department of Psychiatry and Human Behavior, Warren Alpert Medical School at Brown University

**Vera Feuer, MD**

Pediatric Emergency Psychiatry; Assistant Professor at the Cohen Children's Medical Center; Psychiatry and Emergency Medicine; Hofstra-NSLIJ School of Medicine: American Academy of Child and Adolescent Psychiatry

**Ken Gramyk, MD, FACEP**

President at Lake Pend Oreille Emergency Medicine

**Jacqueline Grupp-Phelan MD, MPH**

Professor of Emergency Medicine and Pediatrics; Chief Pediatric Emergency Medicine; Vice Chair, Dept of Emergency Medicine; UCSF Benioff Children's Hospital

**Hilary Hewes, MD**

Associate Professor of Pediatrics, Division of Pediatric Emergency Medicine, University of Utah School of Medicine; Co-principal Investigator at the National EMSC Data Analysis Resource Center

**John Hoyle, MD FACEP, FAAP**

Professor with the Departments of Emergency Medicine and Pediatrics and Adolescent Medicine, Western Michigan University Homer Stryker M.D. School of Medicine

**Charles Macias, MD, MPH**

Executive Director of National Emergency Medical Services for Children Innovation and Improvement Center; Chief Clinical Systems Integration Officer at Texas Children's Hospital

**Rachel Stanley, MD, MHSA**

Division Chief of Emergency Medicine; Associate Professor of Pediatrics, The Ohio State University, Nationwide Children's Hospital

## APPENDIX 2. EVIDENCE TABLES

**Table 9. Review of Relevant Evidence: Search Strategies and Databases Reviewed**

Search Strategies	Document Strategies Used
Search Terms	Search strategies for PubMed included the following: ("Mental Health"[Mesh] OR "Behavioral Medicine"[Mesh] OR "Suicide"[Mesh] OR "Suicide, Attempted"[Mesh]) AND ("Emergencies"[Mesh] AND (infant [Mesh] OR child [Mesh] OR adolescent [Mesh])) Additional databases such as Cochrane, CINAHL, PsycINFO were also searched using the following terms: pediatric mental health emergency; Cochrane Evidence; Mental Health; Cochrane Pre-hospital and Emergency Care; MENTAL HEALTH; pediatric mental health emergencies.
Years Searched	2008-2018
Language	English
Age of Subjects	Birth through 18 years
Search Engines	PubMed, Cochrane, CINAHL, PsycINFO
Titles and Abstracts Reviewed	409 (31 titles pulled for review from NIH Librarian's search and hand searching of references)
Number of Articles Selected for Evidence Table	62
The systematic evidence evaluation has been supported by the EMS for Children Innovation and Improvement Center/Texas Children's Hospital Evidence Based Outcomes Center with evidence table creation by Betsy Lewis MSN, RN, CNL.	

**Table 10. Evidence Found with Searches Included in the Evidence Table**

Found (Yes/No)	Summary of Evidence – All Questions	Number of Articles
Yes	Systematic reviews.	5
Yes	Randomized controlled trials.	4
Yes	Nonrandomized studies.	69

**Table 11. Studies Related to Suicide**

Author/Year	Type of Study	Outcome	Summary
Allen et al., 2018	Observational	Effectiveness of high-intensity intervention ( <i>Qungasvik</i> ) versus lower intensity <i>Qungasvik</i> in Alaska Natives.	"The primary finding identified impact of the <i>Qungasvik</i> intervention on outcomes protective from suicide risk among rural Yup'ik Alaska Native youth. A more intensive version of the <i>Qungasvik</i> intervention, defined as a higher dose implementation, produced a significantly greater intervention impact in contrast to a lower dose...This finding provides support for <i>Qungasvik</i> as a promising approach to prevention of suicide risk in these rural Yup'ik communities and

Author/Year	Type of Study	Outcome	Summary
			additionally suggests that on average, youth begin to benefit from the intervention following attendance in approximately seven activities.”
Asarnow et al., 2015	Observational-Prospective	Effectiveness of SAFETY (cognitive-behavioral family intervention) program.	“At the 3-month post-treatment assessment, there were statistically significant improvements on measures of suicidal behavior, hopelessness, youth and parent depression, and youth social adjustments...Treatment satisfaction was high.”
Asarnow et al., 2017	Randomized Controlled Trial	Effectiveness of SAFETY (cognitive-behavioral family intervention) program.	By the 3-month follow-up point, there was a significantly higher probability of survival without a suicide attempt among youths in the SAFETY treatment (p=1.00), compared to youths in the treatment as usual group (p=0.67). The SAFETY group also had a significantly higher probability of survival without a suicide attempt over the full 6 to 12-month observation period, with results driven by the early part of the observation window.
Ballard et al., 2012	Observational-Qualitative	Pediatric patients’ opinions regarding suicide screening.	“149 (96%) of 156 patients supported the idea that nurses should ask youth about suicide in the ED. The 5 most frequently endorsed themes were as follows: (1) identification of youth at risk (31/156, 20%), (2) a desire to feel known and understood by clinicians (31/156, 20%), (3) connection of youth with help and resources (28/156, 18%), (4) prevention of suicidal behavior (25/156, 16%), and (5) lack of other individuals to speak with about these issues (19/156, 12%).”
Ballard et al., 2017	Observational – Retrospective cohort study	Ask Suicide-Screening Questions (ASQ) screening sensitivity and specificity.	“Fifty-three percent of the patients who screened positive (237/448) did not present to the ED with suicide-related complaints... The ASQ demonstrated a sensitivity of 93% and specificity of 43% to predict return ED visits with suicide-related presenting complaints within 6 months of the index visit.”
Ballard et al., 2013	Observational – Retrospective cohort study	Predictive value of the Risk of Suicide Questionnaire (RSQ) suicide screening items in psychiatric hospitalization.	“A positive response to 1 or more of the questions was significantly associated with increased odds of psychiatric hospitalization in the older age group (adjusted odds ratio, 3.82; 95% confidence interval, 2.24-6.54) and with repeated visits to the ED in the younger age group (adjusted odds ratio, 3.55; 95% confidence interval, 1.68-7.50).”
Brent et al., 2009	Observational-Prospective	Suicide events.	“...124 youths received a specialized psychotherapy for suicide attempting adolescents (n=17), a medication algorithm (n=14), or the combination (n=93). The participants were followed up 6 months after intake with respect to rate, timing, and predictors of a suicidal event

Author/Year	Type of Study	Outcome	Summary
			(attempt or acute suicidal ideation necessitating emergency referral)...In this open trial, the 6-month morbid risks for suicidal events and for reattempts were lower than those in other comparable samples, suggesting that this intervention should be studied further.”
Cloutier et al., 2010	Observational-Retrospective cohort study	Relationship between non-suicidal self-injury (NSSI) and suicide attempts.	“Half of the adolescents presenting to the emergency crisis services had self-harmed within the previous 24 h, with most of these (91%) classified as NSSI only. The percentage of youth with a suicide attempt was 5% and the co-occurrence of these two behaviors was 4%. Group differences in depressive symptoms, suicidal ideation and impulsivity were identified, with the co-occurring NSSI and suicide attempt group presenting with the highest level of psychopathology.”
Crosby Budinger et al., 2014	Observational-Prospective	Awareness, utilization, and attitudes toward local and national crisis hotlines.	“Youth reported low rates of awareness and utilization, yet expressed a strong interest in phone hotlines...Youth reported stigma, but that help-seeking could be positively influenced by peers and adults in their support system. Implications include making crisis services available across several mediums and the importance in engaging trusted others in youth suicide awareness campaigns and prevention efforts.”
Cyz et al., 2016	Observational-Prospective	Youth self-efficacy to use suicide-specific coping strategies.	“More severe baseline psychopathology was associated with lower self-efficacy. Males endorsed higher self-efficacy for coping behaviors not requiring external support. Lower coping self-efficacy for some of the key strategies, and lower confidence that these strategies will be helpful, differentiated those with and without follow-up suicide attempts and ED visits. The generally low-to-moderate confidence in youths’ ability to engage in coping behaviors to manage suicidal crises, and its association with follow-up suicidal crises, is concerning because many of these strategies are commonly included as part of discharge recommendations or safety planning.”
Cyz et al., 2016	Observational-Retrospective	Predictive validity and clinical utility of the Self-Assessed Expectations of Suicide Risk Scale.	“Youths’ ratings indicative of lower confidence in maintaining safety uniquely predicted follow-up attempts and provided incremental validity over and above the clinician-administered assessment and improved its accuracy, suggesting their potential for augmenting suicide risk formulation.”
Diamond et al.,	Randomized	Effectiveness of	“Using intent to treat, patients in ABFT

Author/Year	Type of Study	Outcome	Summary
2010	Controlled Trial	Attachment-Based Family Therapy (ABFT) versus Enhanced Usual Care (EUC) for reducing suicidal ideation and depressive symptoms in adolescents.	demonstrated significantly greater rates of change on self-reported suicidal ideation at post-treatment evaluation, and benefits were maintained at follow-up, with a strong overall effect size (ES=0.97)...Significantly more patients in ABFT met criteria for clinical recovery on suicidal ideation post-treatment (87%; 95% confidence interval [CI]= 74.6-99.6) than patients in EUC (51.7%; 95% CI=32.4-54.32). Benefits were maintained at follow-up (ABFT, 70%; 95% CI=52.6-87.4; EUC 34.6%; 95% CI=15.6-54.2; odds ratio=4.41)... Retention in ABFT was higher than in EUC (mean= 9.7 versus 2.9)".
Duarte-Vélez et al., 2016	Observational	Effectiveness of a socio-cognitive behavioral treatment for Puerto Rican adolescents with suicidal behaviors.	"Participants were very satisfied with treatment and reported relevant clinical benefits. The retention rate was 73% (8 out of 11). For those who completed the treatment protocol, the goal of reducing further suicide risk was achieved; 2 showed reliable clinical changes in suicidal ideation, while 6 maintained low levels during treatment. All treatment completers had either a partial or total remission of their pretreatment diagnosis and half had reliable improvements in at least 1 risk factor."
Esposito-Smythers et al., 2011	Randomized Controlled Trial	Effectiveness of an integrated outpatient cognitive behavioral intervention for co-occurring alcohol or other drug use disorder (AOD) and suicidality (I-CBT) or enhanced treatment as usual (E-TAU).	"I-CBT for adolescents with co-occurring AOD and suicidality is associated with significant improvement in both substance use and suicidal behavior, as well as markedly decreased use of additional health services including inpatient psychiatric hospitalizations and emergency department visits."
Gipson et al., 2015	Observational	Predictive validity of the Columbia-Suicide Severity Rating Scale (C-SSRS).	"Lifetime history of NSSI predicted both return PE visits and a suicide attempt at return visit. The C-SSRS intensity scale score was a significant predictor of a suicide attempt at return visit for both the full sample of adolescents and the subsample who reported suicidal ideation at their index visit...The C-SSRS intensity scale and NSSI had predictive validity for suicide attempts at return visit."
Godoy Garraza et al., 2015	Observational	Effectiveness of the Garrett Lee Smith Memorial Suicide Prevention Program (GLS).	"Counties implementing GLS program activities had significantly lower suicide attempt rates among youths 16 to 23 years of age in the year following implementation of the GLS program than did similar counties that did not implement GLS program activities (4.9 fewer attempts per

Author/Year	Type of Study	Outcome	Summary
			1000 youths [95% CI, 1.8-8.0 fewer attempts per 1000 youths]; P=0.003). More than 79,000 suicide attempts may have been averted during the period studied following implementation of the GLS program. There was no significant difference in suicide attempt rates among individuals older than 23 years during that same period. There was no evidence of longer-term differences in suicide attempt rates.”
Hopper et al., 2012	Observational-Prospective	Validity of the Risk of Suicide Questionnaire (RSQ) screening tool.	“The prevalence of suicidal ideation in asymptomatic patients presenting to this paediatric ED is very low. Using this selection method, the RSQ could not be validated, but would be unlikely to be suitable for screening this low-risk population with a high false positive rate.”
Horowitz et al., 2010	Observational	Feasibility and acceptability of suicide screening (Risk of Suicide Questionnaire-Revised [RSQ-R] and the Suicidal Ideation Questionnaire [SIQ]) in pediatric emergency departments (ED).	“For patients entering the ED for nonpsychiatric reasons (n=106), 5.7% (n=6) reported previous suicidal behavior, and 5.7% (n=6) reported clinically significant suicidal ideation. There were no significant differences for mean length of stay in the ED for nonpsychiatric patients with positive triggers and those who screened negative (means, 382 [SD, 198] and 393 [SD, 166] minutes respectively; P=0.80). Ninety-six percent of participants agreed that suicide screening should occur in the ED.”
Horowitz et al., 2012	Observational-Prospective, cross-sectional	Sensitivity, specificity and predictive values of the Ask Suicide-Screening Questions (ASQ).	“This model had a sensitivity of 96.9% (95% CI, 91.3-99.4), specificity of 87.6% (95% CI, 84.0-90.5), and negative predictive values of 99.7% (95% CI, 98.299.9) for medical/surgical patients and 96.9% (95% CI, 89.3-99.6) for psychiatric patients...the Ask Suicide-Screening Questions (ASQ), with high sensitivity and negative predictive value, can identify the risk for suicide in patients presenting to pediatric emergency departments.”
Kataoka et al., 2007	Observational	Mental health service use following students’ contact with a large urban school district’s suicide prevention program.	“More than two thirds of students received school or community mental health services following contact with the suicide prevention program. Depressive symptoms, but not past year suicide attempt, predicted community mental health service use. Latino students had lower rates of community mental health service use than non-Latinos. School-based service use did not differ by student characteristics including race/ethnicity”
King et al., 2009	Observational – Cross-sectional, convenience	Validity and utility of an adolescent suicide risk screen (Suicidal Ideation	“Sixteen percent (n=48) of adolescents screened positive for elevated suicide risk. Within this group, 98% reported severe suicide ideation or a

Author/Year	Type of Study	Outcome	Summary
		Questionnaire-Junior [SIQ-JR], Alcohol Use Disorders Identification Test-3 [AUDIT-3], Reynolds Adolescent Depression Scale-2 [RADS-2], Beck Hopelessness Scale [BHS], and Problem Oriented Screening Instrument for Teenagers [POSIT]).	recent suicide attempt (46% attempt and ideation, 10% attempt only, 42% ideation only) and 27% reported alcohol abuse and depression. Nineteen percent of adolescents who screened positive presented for nonpsychiatric reasons. One-third of adolescents with positive screens were not receiving any mental health or substance use treatment...The suicide risk screen showed evidence of concurrent validity. It also demonstrated utility in identifying 1) adolescents at elevated risk for suicide who presented to the ED with unrelated medical concerns and 2) a subgroup of adolescents who may be at highly elevated risk for suicide due to the combination of depression, alcohol abuse, suicidality, and impulsivity."
Mitchell et al., 2014	Observational	Thoughts of self-harm and/or suicide after exposure to websites which encourage self-harm or suicide.	"One percent (95% CI: 0.5%-1.5%) of youth reported visiting a website that encouraged self-harm or suicide. Youth who visited such websites were seven times more likely to say they had thought about killing themselves; and 11 times more likely to think about hurting themselves, even after adjusting for several known risk factors for thoughts of self-harm and thoughts of suicide."
McCauley et al., 2018	RCT	Suicide attempts (see self-harm table).	DBT associated with significantly lower rates of suicide attempts, compared to individual and group supportive therapy that offered a comparable treatment dose to DBT, at 6-month post-treatment assessment.
Newton et al., 2010	Systematic review	Psychosocial interventions for pediatric suicide-related ED visits.	"An ED-based discharge planning intervention increased the number of attended post-ED treatment sessions (mean difference=2.6 sessions; 95% CI 0.05 to 5.15 sessions). Of the 6 studies of postdischarge delivery interventions, 1 found increased adherence with service referral in patients who received community nurse home visits compared with simple placement referral at discharge (RR=1.28; 95% CI 1.06 to 1.56). The 3 ED transition intervention studies reported (1) reduced risk of subsequent suicide after brief ED intervention and postdischarge contact (RR=0.10; 95% CI 0.03 to 0.41); (2) reduced suicide-related hospitalizations when ED visits were followed up with interim, psychiatric care (RR=0.41; 95% CI 0.28 to 0.60); and (3) increased likelihood or treatment completion when psychiatric evaluation in the ED was followed by attendance of outpatient sessions with a parent (odds ratio=2.78; 95% CI 1.20 to 6.67)."

Author/Year	Type of Study	Outcome	Summary
O'Mara et al., 2012	Observational	Adolescent and parent attitudes toward screening adolescents for suicide risk and other mental health problems in the ED.	"Overall, parents and adolescents reported positive attitudes toward screening for suicide risk and other mental health problems in the ED, with the majority responding that it should be a routine part of ED care. Suicide risk and drug and alcohol misuse were rated as more important to screen for than any of the other mental health problems by both parents and adolescents."
Pestian et al., 2015	Observational-Prospective, controlled trial	Accuracy of natural language processing (NLP) at identifying suicidal subjects.	"...one may conclude that word count is a strong classifier of suicidal subjects, but subsequent acoustic analysis shows that pause length, prosody, vowel spacing, and other voice characteristics are significant features for classification, independent of word count...Some controls were misclassified as suicidal...The findings here support NLP as a strong adjunct to existing methods of determining a potentially suicidal individual."
Rogers et al., 2014	Observational-Retrospective	Use of Lethal Means Restriction (LMR) counseling.	"Of the 298 patients...Behavior/out of control was the most common chief complaint (43%)...Thirty-four percent of patients had suicidal ideation, 22% had a suicide plan, 32% had documented suicidal behavior, and 25% of the patients reported having access to lethal means. However, only 4% of the total patient population received any LMR counseling, and only 15% of those with access to lethal means had received LMR counseling."
Suicide Prevention Resource Center, 2015	Technical Report	Process for developing an ED treatment guide for adults at risk for suicide.	The ED Guide is designed to help emergency department (ED) providers make decisions about the care and discharge of patients with suicide risk. Its main goal is to improve patient outcomes after discharge.
Trigylidas et al., 2016	Observational-Retrospective	Psychosocial correlates contributing to suicide.	"Among all subjects, 25.5% had history of mental illness and 19.0% had history of substance abuse. 60.0% had no report of mental illness or substance abuse. Subjects with both mental illness and substance abuse were more likely to have school concerns (OR=4.1 (p<0.001)), previous suicide attempts (OR=4.2 (p<0.001)) and a family history of suicide (OR=3.2 (p<0.001)) compared with subjects without those characteristics."

**Table 12. References for Studies Related to Suicide**

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**Table 13. Studies Related to the Mental Health Team**

Author/Year	Type of Study	Outcome	Summary
Hacker et al., 2015	Observational	Impact of a pediatric behavioral health screening (Pediatric Symptom Checklist) and colocation model on utilization of behavioral health care.	“In the 30 months after implementation of pediatric behavioral health screening and colocation, there was a 20.4% cumulative increase in specialty behavioral health visit rates (trend of 0.013% per month, $p=0.049$ ) and a 67.7% cumulative increase in behavioral health primary care visit rates (trend of 0.019% per month, $p<0.001$ ) compared with the expected rates predicted by the 18-month preintervention trend. In addition, behavioral health emergency department visit rates increased 245% compared with the expected rate (trend 0.01% per month, $p=0.002$ ).”
Latimer et al., 2014	Observational-Prospective, controlled trial	Cost-effectiveness of a rapid response team (RRT).	“As previously reported, there was no statistically or clinically significant difference in either functioning or suicidality between the groups. Costs of the RRT were lower by \$1886, thus-\$1886 (95% CI – \$4238 to \$466), from the perspective of the treating hospital, and by \$991, thus – \$991 (95% CI-%5580 to \$3598), from the perspective of society. If decision makers are not willing to pay for any improvement in functioning or suicidality, the RRT has a 95% probability of being cost-effective from the perspective of the treating hospital. From the point of view of society, the probability of the intervention being cost-effective is about 70% for functioning and 63% for suicidality.”
Mahajan et al., 2007	Observational-Retrospective	Impact of the child guidance model on the emergency department (ED) length of stay (LOS) and ED costs on children with visits for mental disorders (VMD).	“The average LOS of VMD visits was longer than that of the 500 non-VMD visits (236.04 minutes $\pm$ 162.82 vs. 134.69 minutes $\pm$ 95.19; mean difference, 101.34 minutes; $P=0.001$ ). The LOS was significantly reduced after the model was implemented (259.49 minutes $\pm$ 171.12 vs. 216.39 $\pm$ 152.95 minutes, $P=0.00$ ). The lost revenue due to extended VMD LOS was calculated as opportunity costs of \$201,173.30, whereas the cost savings during the study period due to reduced LOS after the model was implemented was \$10,651.”
Rogers et al., 2015	Observational-Retrospective	The Child & Adolescent Rapid Emergency Stabilization (CARES) program’s influence on LOS and costs for psychiatric patients in the pediatric ED.	“Pre-CARES had a mean LOS of 19.7 hours (SD, 32.6), whereas post-CARES had 10.8 hours (SD, 19.9) ( $P<0.0001$ )...Post-CARES, compared with pre-CARES, the average charge per patient decreased by \$905 ( $P>0.0001$ ), average payment decreased by \$111 ( $P<0.06$ ), and average total cost decreased by \$569 or 38.7% ( $P<0.0001$ ). The total cost savings the year after CARES opened

Author/Year	Type of Study	Outcome	Summary
			was \$1,019,168.55.”
Sheridan et al., 2016	Observational – Retrospective	LOS and hospitalization rates among pediatric mental health patients after implementation of a pediatric emergency department psychiatric team.	“There was a significant decrease in mean PED LOS of 27% (95% confidence interval [CI] 0-46%; p=0.05) from pre- to postintervention period. The decrease in the proportion of patients admitted/transferred to an inpatient psychiatric facility in the postintervention year was statistically significant (odds ratio 0.35; 95% CI 0.17-0.71; p<0.01).”
Uspal et al., 2016	Observational- Retrospective	Emergency department (ED) length of stay (LOS) and quality of care of patients with psychiatric complaints after implementation of a mental health team.	“After process implementation there was a statistically significant decrease in mean ED LOS (332 minutes vs. 244 minutes, p<0.001)... Significant decreases were seen in median ED LOS (225 minutes vs. 204 minutes, p=0.001), security physical interventions (2.0% vs. 0.4%, p=0.004), and restraint use (1.7% vs. 0.1%, p<0.001). No significant change was observed in admission rate, 72-hour return rate, or patient elopement/agitation events. Staff surveys showed improved perception of patient satisfaction, process efficacy, and patient safety.”

**Table 14. References for Studies Related to Mental Health Teams**

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**Table 15. Studies Related to Physician Care**

Author/Year	Type of Study	Outcome	Summary
Cappelli et al., 2012	Observational-Retrospective	Clinical data that pediatric emergentologists recorded and how they were used in the mental health (MH) care of patients.	“This study revealed that the pediatric emergentologists’ charting of MH patients is inconsistent and incomplete. Although recorded clinical data predicted psychiatric consultation and disposition for these patients, missing data were evident in a significant number of records. The results of the study point to a need to develop a more uniform approach to the collection and recording of clinical data for MH patients.”
Newton et al., 2015	Observational-Retrospective	Time to emergency department (ED) return for mental health care.	“Contrary to what we hypothesized, mental health care provided by a physician (mostly general practitioners in our sample) after an ED visit did not provide a child with care that lengthened time to ED return, but rather, reduced the child’s time to ED return...This finding suggests that mental health care provided to children in a post-crisis state by physicians is not sufficient to meet their needs.”

**Table 16. References for Studies Related to Physician Care**

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**Table 17. Studies Related to Self-Harm**

Author/Year	Type of Study	Outcome	Summary
Ballard et al., 2015	Observational-Retrospective	Emergency department (ED) outcomes, including death in the ED, inpatient admission, and visit costs.	“Visits due to self-harm, assault and undetermined injuries were more likely to result in death during the ED visit compared with visits due to unintentional injuries. Self-harm and undetermined intent were also associated with greater odds of inpatient admission as well as 90% and 60% higher ED visit costs, respectively...Pediatric EDs may provide a window of opportunity for better case identification and intervention with children experiencing violence and injury.”
Bridge et al., 2012	Observational-Retrospective, longitudinal, cohort study	Quality of the emergency mental health management of young people who are discharged to the community after an act of deliberate self-harm.	“A substantial proportion of young Medicaid beneficiaries who present to EDs with deliberate self-harm are discharged to the community and do not receive emergency mental health assessments or follow-up outpatient mental health care.”
McCauley et al., 2018	RCT	Overall self-harm, nonsuicidal self-injury.	DBT associated with significantly lower rates of nonsuicidal self-injurious behavior, and overall self-harm compared to individual and group supportive therapy that offered a comparable treatment dose to DBT, at 6-month post-treatment assessment. At 12-month follow-up, youths in DBT were significantly more likely to be self-harm free, relative to comparison group.
Mehlum et al., 2014, 2017,	RCT	Self-harm.	DBT was superior to enhanced Usual Care in reducing the frequency of self-harm both at end of treatment period and over a 52-week follow-up,
Mehlum et al., 2016	Observational-Prospective review of data from an RCT	Posttreatment clinical outcomes for <a href="#">Dialectical Behavioral Therapy for Adolescents</a> (DBT-A) versus enhanced usual care	“Over the 52-week follow-up period, DBT-A remained superior to EUC in reducing the frequency of self-harm. For other outcomes such as suicidal ideation, hopelessness, and depressive or borderline symptoms and for the global level of functioning, inter-group differences apparent at the 19-week assessment were no longer observed, mainly due to participants in the EUC group having

Author/Year	Type of Study	Outcome	Summary
		(EUC).	significantly improved on these dimensions over the follow-up year, whereas DBT-A participants remained unchanged.”
Ougrin et al., 2012	Systematic Review (14 RCTs)	Efficacy of specific therapeutic interventions (TI) in reducing self-harm in adolescents with self-harm related presentation (≥50% of sample required to present with self-harm).	“Developmental Group Psychotherapy versus treatment as usual was associated with a reduction in repeated self-harm, however, this was not replicated in subsequent studies. Multisystemic Therapy (MST) versus psychiatric hospitalization was associated with a reduction of suicidal attempts in a sample of adolescents with a range of psychiatric emergencies.”
Ougrin et al., 2015	Systematic Review and Meta-Analysis (19 RCTs)	Efficacy of specific therapeutic interventions (TI) in reducing self-harm in adolescents with self-harm related presentation (≥50% of sample required to present with self-harm).	“The proportion of the adolescents who self-harmed over the follow-up period was lower in the intervention groups (28%) than in controls (33%) (test for overall effect $z \frac{1}{4} 2.31$ ; $p \frac{1}{4} .02$ ). ..”largest effect sizes were dialectical behavior therapy (DBT), cognitive-behavioral therapy (CBT), and mentalization-based therapy (MBT). There were no independent replications of efficacy of any TI.” The effect of TI was not statistically significant when either Suicide Attempts or NSSI were the primary outcomes. The effect of TIs was at a trend level for NSSI outcomes, suggesting that the overall effect of Tis in the primary analysis was primarily due to the benefits of Tis in reducing nonsuicidal self-harm.

**Table 18. References for Studies Related to Self-Harm**

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**Table 19. Studies Related to Sexual Abuse**

Author/Year	Type of Study	Outcome	Summary
Fong et al., 2015	Observational – Prospective	Caregiver perceptions about mental health services (MHS) after child sexual abuse.	“Caregivers who had not linked to services also expressed concerns about MHS being re-traumatizing and stigmatizing. Interventions to increase MHS linkage should focus on improving communication with caregivers about the specific benefits of MGS for their children and proactively addressing caregiver concerns about MHS.”

**Table 20. References for Studies Related to Sexual Abuse**

References
Fong, H. F., Bennett, C. E., Mondestin, V., Scribano, P. V., Mollen, C., & Wood, J. N. (2016). Caregiver perceptions about mental health services after child sexual abuse. <i>Child Abuse &amp; Neglect</i> , 51, 284-294. 10.1016/j.chiabu.2015.09.009 [doi]

**Table 21. Studies Related to Nursing Care**

Author/Year	Type of Study	Outcome	Summary
Montreuil et al., 2015	Observational- Qualitative	Perceptions of children (and their parents) with suicide-associated risk factors in helpful nursing care.	“Offering nursing care that is family-centered, health-promoting, personalized, and strengths-based was reported by child and parent participants as being helpful. Two of the main protective factors for suicide often cited in the adult-related literature are social connectedness and the relationship with mental health care professionals. The findings from this study suggest that these protective factors also could play a significant role in the care of children receiving mental health care and their parents.”

**Table 22. References for Studies Related to Nursing Care**

References
Montreuil, M., Butler, K. J., Stachura, M., & Pugnaire Gros, C. (2015). Exploring helpful nursing care in pediatric mental

**References**

health settings: The perceptions of children with suicide risk factors and their parents. *Issues in Mental Health Nursing*, 36(11), 849-859. 10.3109/01612840.2015.1075235 [doi]

**Table 23. Studies Related to the Inpatient Psychiatric Unit**

Author/Year	Type of Study	Outcome	Summary
Sheridan et al., 2017	Observational-Retrospective	Length of stay (LOS) at the pediatric emergency department (PED) with an associated inpatient child psychiatric unit (PAPED) versus one that does not (NOPED).	“The PAPED has a significantly higher rate of admission 41.3% versus 18.8% (P<0.0001). The LOS was significantly longer at the NOPED compared with the PAPED with a visit of 15.6 versus 6.3, respectively (P<0.0001). When LOS was stratified for disposition, patients requiring admission from the NOPED has a significantly longer LOS of 33.4 compared with an emergency department LOS of 8.1 at the PAPED (P<0.0001).”

**Table 24. References for Studies Related to the Inpatient Psychiatric Unit**

References
Sheridan, D. C., Johnson, K. P., Fu, R., Spiro, D. M., & Hansen, M. L. (2017). Impact of an inpatient psychiatric unit on pediatric emergency mental health care. <i>Pediatric Emergency Care</i> , 33(1), 1-4. 10.1097/PEC.0000000000000716 [doi]

**Table 25. Studies Related to Management Strategies**

Author/Year	Type of Study	Outcome	Summary
Caffy et al., 2017	Observational-Retrospective	Length of stay (LOS) and 6-month readmission after implementation of a Collaborative Behavioral Model for patients with a psychiatric complaint.	“There was no statistical difference in median LOS for patients who received a psychiatric consultation versus nonpsychiatric visits (204 vs 200 minutes; P=0.35). The 6-month PED readmission rate for psychiatric visits was significantly less than that in the control group (18% vs 32%; P=0.003).”
Hamm et al., 2010	Systematic review	Effectiveness of emergency department (ED) based management interventions for mental health presentations.	“Pediatric studies supported the use of specialized care models to reduce hospitalization (OR, 0.45; 95% CI, 0.33-0.60), return ED visits (OR, 0.60; 95% CI, 0.28-1.25), and length of ED stay (MD, -43.1 minutes; 95% CI, -63.088 to -23.11 minutes)...Pediatric studies have demonstrated that the use of specialized care models for mental health care can reduce hospitalization, return ED visits, and length of ED stay.”
Newton et al., 2017	Systematic review	Effectiveness of emergency department (ED)-based management strategies for pediatric mental health presentations.	“There is low to very low overall evidence quality that: (1) use of screening laboratory tests to medically clear mental health patients increases length of ED stay and costs, but does not increase the risk of clinical management or disposition change if not conducted; and (2) specialized models

Author/Year	Type of Study	Outcome	Summary
			of ED care reduce lengths of ED stay, security man-hours and restraint orders. One mental health assessment tool of promising quality, the home, education, activities, and peers, drugs and alcohol, suicidality, emotions and behavior, discharge resources (HEADS-ED), has had good accuracy in predicting admission to inpatient psychiatry.”
Rhodes et al., 2012	Observational-Prospective	Key candidate process indicators (quality of care measures) and structural measures (organizational resources and attributes) important for ED management of pediatric suicide-related behaviors.	“Candidate process indicators identified as both most relevant to patient care (>87% agreed or strongly agreed) and most variable across hospitals (>78% agreed or strongly agreed) were wait time for medical assessment; referral to crisis intervention worker/program; mental health, psychosocial, or risk assessment requested; any inpatient admission; psychiatric inpatient admission; postdischarge treatment plan; wait time for first follow-up appointment; follow-up obtained; and type of follow-up obtained. Key hospital and regional structural measure (>87% agreed or strongly agreed) were specialist staffing and type of specialist staffing in or available to the ED; regional policies, protocols, or procedures; and inpatient psychiatric services.”
Sheridan et al., 2015	Observational-Retrospective	Objective was to evaluate trends in ED care for children with mental health complaints at a single pediatric tertiary care hospital that does not have an associated inpatient psychiatric facility and must transfer all patients who need psychiatric admission to other centers in the greater metropolitan area.	During the study period there were 732 PED encounters that met the inclusion criteria representing 646 unique patients. Of those encounters, 12% were patients with repeat visits for a mental health issue (Table 1). The average age was 13.8 years and 53% were male. The most common means of arrival was by private car (55.7%) followed by ambulance (36.8%), police escort (4.8%), unknown (1.3%), walk-in (0.8%), bus (0.5%) and fixed wing airplane (0.1%). The overall annual census in 2013 for our PED was approximately 14,000 patients.

**Table 26. References for Studies Related to Management Strategies**

References
Caffy, K., Jones, T. L., & Gilmore, B. G. (2017). A collaborative behavioral model for psychiatric visits in a pediatric emergency department. <i>Pediatric Emergency Care</i> , 10.1097/PEC.0000000000001189 [doi]
Hamm, M. P., Osmond, M., Curran, J., Scott, S., Ali, S., Hartling, L., . . . Newton, A. S. (2010). A systematic review of crisis interventions used in the emergency department: Recommendations for pediatric care and research. <i>Pediatric Emergency Care</i> , 26(12), 952-962. 10.1097/PEC.0b013e3181fe9211 [doi]
Newton, A. S., Hartling, L., Soleimani, A., Kirkland, S., Dyson, M. P., & Cappelli, M. (2017). A systematic review of

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management strategies for children's mental health care in the emergency department: Update on evidence and recommendations for clinical practice and research. <i>Emergency Medicine Journal: EMJ</i> , 34(6), 376-384. 10.1136/emered-2016-205939 [doi]
Rhodes, A. E., Bethell, J., Newton, A. S., Antony, J., Tonmyr, L., Bhanji, F., . . . Pediatric Emergency Research Canada (PERC). (2012). Developing measures of quality for the emergency department management of pediatric suicide-related behaviors. <i>Pediatric Emergency Care</i> , 28(11), 1124-1128. 10.1097/PEC.0b013e3182712981 [doi]
Sheridan, D. C., Spiro, D. M., Fu, R., Johnson, K.P., Sheridan, J.S., Oue, A.A., Wensi, W., Van Nes, R., & Hansen, M. L. (2015). Mental health utilization in a pediatric emergency department. <i>Pediatric Emergency Care</i> , 31(8), 555-559 10.1097/PEC.0000000000000343[doi]

**Table 27. Studies Related to Bullying**

Author/Year	Type of Study	Outcome	Summary
Alavi et al., 2017	Observational-Retrospective	Suicidal ideation.	“77% of the adolescents had experienced bullying, while 68.9% had suicide ideation at presentation. While controlling for age, gender, grade, psychiatric diagnosis, and abuse, a history of bullying was the most significant predictor of suicidal ideation. Individuals in this study who reported cyber bullying were 11.5 times more likely to have suicidal ideation documented on presentation, while individuals reporting verbal bullying were 8.4 times more likely.”
Kodish et al., 2016	Observational	Suicide risk based on the Behavioral Health Screen (BHS).	“All types of bullying were associated with suicide risk, but verbal bullying was uniquely associated with suicide attempt. Depression significantly moderated the relationship between each type of bullying and suicide risk.”
Stanley et al., 2016	Observational-Retrospective review of prospectively collected data	Risk of suicide.	“Sixty patients (11.5%) reported recent bullying victimization, and of these, 33 (55.0%) screened positive for suicide risk on the Ask Suicide-Screening Questions or the previously validated Suicidal Ideation Questionnaire. After controlling for demographic and clinical variables, including a history of depression and drug use, the odds of screening positive for suicide risk were significantly greater in patients who reported recent bullying victimization (adjusted odds ratio, 3.19’ 95% confidence interval, 1.66-6.11).”
Waseem et al., 2014	Observational-Qualitative	Children’s perspectives of bullying.	“Bullying was identified by children as including physical, verbal, and emotional actions. Several themes emerged. First, a power imbalance between a bully and victim may render an individual vulnerable to bullying. Being difference and weak also increases the risk of being bullied. Second, bullying is wrong, and the bully should be punished. Third, children should learn how to handle bullying situations and develop resilience

Author/Year	Type of Study	Outcome	Summary
			against bullying. Finally, adults need to be more proactive to prevent or stop bullying.”

**Table 28. References for Studies Related to Bullying**

References			
Alavi, N., Reshetukha, T., Prost, E., Antoniak, K., Patel, C., Sajid, S., & Groll, D. (2017). Relationship between bullying and suicidal behaviour in youth presenting to the emergency department. <i>Journal of the Canadian Academy of Child and Adolescent Psychiatry = Journal De l'Academie Canadienne De Psychiatrie De l'Enfant Et De l'Adolescent</i> , 26(2), 70-77.			
Kodish, T., Herres, J., Shearer, A., Atte, T., Fein, J., & Diamond, G. (2016). Bullying, depression, and suicide risk in a pediatric primary care sample. <i>Crisis</i> , 37(3), 241-246. 10.1027/0227-5910/a000378 [doi]			
Stanley, I. H., Horowitz, L. M., Bridge, J. A., Wharff, E. A., Pao, M., & Teach, S. J. (2016). Bullying and suicide risk among pediatric emergency department patients. <i>Pediatric Emergency Care</i> , 32(6), 347-351. 10.1097/PEC.0000000000000537 [doi]			
Waseem, M., Boutin-Foster, C., Robbins, L., Gonzalez, R., Vargas, S., & Peterson, J. C. (2014). Perspectives on bullying among children who present to the emergency department with behavioral misconduct: A qualitative study. <i>Pediatric Emergency Care</i> , 30(11), 793-797. 10.1097/PEC.0000000000000261 [doi]			

**Table 29. Studies Related to Postpartum Depression Screenings**

Author/Year	Type of Study	Outcome	Summary
Emerson et al., 2014	Observational-Prospective	Prevalence and risk factors for postpartum depression (PPD).	“There are not clear demographic identifiers of these at-risk mothers, making universal screening an advisable approach. Capture of at-risk mothers during PED visits may accelerate connection with mental health resources. Anxiety seems to be a significant contributor. Mothers with PPD often characterize their infants to have a “fussy” temperament.”

**Table 30. References for Studies Related to Postpartum Depression Screening**

References			
Emerson, B. L., Bradley, E. R., Riera, A., Mayes, L., & Bechtel, K. (2014). Postpartum depression screening in the pediatric emergency department. <i>Pediatric Emergency Care</i> , 30(11), 788-792. 10.1097/PEC.0000000000000260 [doi]			

**Table 31. Studies Related to Mental Health and Behavior Screenings**

Author/Year	Type of Study	Outcome	Summary
Barzman et al., 2012	Observational-Prospective	Inter-rater reliability of the Brief Rating of Aggression by Children and Adolescents (BRACHA) screening tool.	“Inter-rater reliability for individual items ranged from good to almost perfect, with Kendall’s W exceeding 0.75 for either of 14 BRACHA items. The ICC (2, 1) for the total BRACHA 0.9 score was 0.9099, with both conventional and Bayesian methods (95% credible interval 0.8530-0.9533), suggesting an excellent level of overall agreement. The BRACHA appears to be an accurate, highly

Author/Year	Type of Study	Outcome	Summary
			reliable instrument for assessing the risk of aggression by children and adolescents who are about to undergo psychiatric hospitalization.”
Cappelli et al., 2012	Observational-Prospective	Reliability and validity of the home, education, activities/peers, drugs/alcohol, suicidality, emotions/behavior, discharge resources (HEADS-ED) rapid screening tool.	“Interrater reliability was 0.785 (P<0.001). Correlations were computed for each HEADS-ED category and items from the CANS MH [Child and Adolescent Needs and Strengths-Mental Health tool] and the CDI [Children’s Depression Inventory]. Correlations ranged from r=0.17, P<0.05 to r=0.89, P<0.000. The HEADS-ED also predicted psychiatric consult and admission to inpatient psychiatry (sensitivity of 82% and a specificity of 87%; area under the receiver operator characteristic curve of 0.82, P<0.01).”
Cappelli et al., 2017	Observational-Prospective	Clinical use of HEADS-ED tool for patients presenting to the pediatric emergency department (PED) for mental health care.	“Results support the HEADS-ED’s use by PED physicians to help guide the assessment and referral process and for discussing the clinical needs of patients among health care providers using a common action-oriented language.”
Chalmers et al., 2014	Observational	Development of culturally appropriate guidelines for Australian Aboriginal or Torres Strait Islander adolescents experiencing a mental health crisis or developing a mental illness.	“Aboriginal and Torres Strait Islander Youth mental health experts were able to reach consensus about what the appropriate communication strategies for providing mental health first aid to an Aboriginal and Torres Strait Islander adolescents.”
Fein et al., 2010	Observational	Feasibility, adoption rate, and identification rate of the web-based Behavioral Health Screening-Emergency Department (BHS-ED) system.	“...857 (64.6%) completed the screening and 470 (35.4%) refused. During implementation, identification of adolescents with psychiatric problems increased significantly (4.2% vs. 2.5%; odds ratio [OR], 1.70; 95% confidence interval [CI], 1.38-2.10), as did ED assessments by a social worker or psychiatrist (2.5% vs 1.7%; OR, 1.47; 95% CI, 1.13-1.90). Of the 857 patients who were screened with the BHS-ED, 90 (10.5%) were identified as having psychiatric problems (OR, 4.58; 95% CI, 3.53-5.94), and 71 (8.3%) were assessed (OR, 5.12; 95% CI, 3.80-6.88).”
Hacker et al., 2015	Observational	Impact of a pediatric behavioral health screening (Pediatric Symptom Checklist) and colocation model on utilization of behavioral	“In the 30 months after implementation of pediatric behavioral health screening and colocation, there was a 20.4% cumulative increase in specialty behavioral health visit rates (trend of 0.013% per month, p=0.049) and a 67.7% cumulative increase in behavioral health primary

Author/Year	Type of Study	Outcome	Summary
		health care.	care visit rates (trend of 0.019% per month, $p < 0.001$ ) compared with the expected rates predicted by the 18-month preintervention trend. In addition, behavioral health emergency department visit rates increased 245% compared with the expected rate (trend 0.01% per month, $p = 0.002$ ).
Kennedy et al., 2009	Observational-Prospective	Demographic and clinical characteristics of children and youth presenting to the emergency department (ED) for mental health concerns.	“The clinician ratings indicated that 93.1% of the sample had at least 1 risk behavior or clinical symptom in the moderate/severe range...Significant differences were found in presentations by sex and age as follows: (1) female youths (12-17 years) were more likely than male youth to report clinically significant depressive symptoms and to present with suicidal ideation/gesture and self-injury. (2) Male youths (12-17 years) were more likely to present with aggression to people/objects than female youth. (3) Male children younger than 12 years were more likely to present with high activity level than female children. Self-report measures (depression, anxiety, and behavior) correlated with corresponding clinician ratings.”
MacWilliams et al., 2017	Observational-Prospective	Barriers and facilitators to the implementation of the HEADS-ED screening tool.	“The following themes spanning 12 domains were identified as reflective of participants’ beliefs about the barriers and facilitators to implementing the HEADS-ED tool: knowledge, skills, beliefs about capabilities, social professional role and identity, optimism, beliefs about consequences, reinforcement, environmental context and resources, social influences, emotion, behavioral regulation and memory, and attention and decision process.”
Nager et al., 2017	Observational-Retrospective	Accuracy of the Emergency Department Distress Response Screener (ED-DRS).	“The ED-DRS was able to identify among an adolescent and young adult population evidence of alcohol/drug abuse, TE [traumatic exposure], and maladaptive BS. The ED may be an ideal setting that could regularly implement mental health screening to provide early intervention and treatment.”
Newton et al., 2017	Systematic Review	Psychometric properties, accuracy, and performance metrics of instruments used in the ED to identify pediatric mental health and substance use problems.	“From available evidence, we recommend that ED clinicians use 1) the HEADS-ED to rule in ED admission among pediatric patients with visits for mental health care, 2) the ASQ to rule out suicide risk among pediatric patients with any visit type, and 3) the DSM-IV two-item instrument to rule in/rule out alcohol use disorders among pediatric patients currently using alcohol.”

Author/Year	Type of Study	Outcome	Summary
Pailler et al., 2009	Observational-Prospective	Patients' and parents'/caregivers' beliefs.	"Patients and caregivers supported the idea of depression screening in the ED, generally viewing screening as a reflection of care and concern. Respondents reported apprehension about stigma, privacy, and provider sensitivity. Introducing the screening concept early in the visit and as part of routine care was believed to reduce stigma."
Ramsawh et al., 2012	Observational-Prospective	Clinical characteristics and health care use associated with anxiety disorders in a pediatric ED (Screen for Child Anxiety Related Emotional Disorders, parent [SCARED-P] and child [SCARED-C]).	"The SCARED-P and SCARED-C screens identified probable anxiety disorder(s) in 26% to 33% of adolescent participants, respectively. Correlates of positive SCARED-C screens were female sex, asthma, presenting complaint involving headache or migraine, and school absenteeism due to physical problems."
Williams et al., 2011	Observational-Prospective	Acceptability of mental health screening and providers' perceptions.	"Most parents (82%) and children (75%) felt the screening was acceptable. Parent reports of pediatric mental health problems were not associated with lower acceptability scores...Parents who reported pediatric mental health problems were more likely to find the screening helpful (odds ratio, 1.84 [95% confidence interval, 1.15-2.93])...Nearly all doctors (99%) and nurses (97%) reported that the screening did not make it difficult for them to care for the patient."
Wright et al., 2016	Observational-Prospective	Impact of positive depression screens on health care utilization and costs.	"Of the 4010 adolescents who completed depression screening, 3707 (92.4%) screened negative (PHQ-2 <2 or PHQ-9 <10), 186 (3.9%) screened positive for mild depression (PHQ-9 10-14), and 95 (2.4%) screened positive for moderate to severe depression (PHQ-9 ≥15). In the 12 months after screening, screen-positive adolescents were more likely than screen-negative adolescents to receive any emergency department visit or inpatient hospitalization, and they had significantly higher utilization of outpatient medical (mean ± SD, 8.3±1.5 vs 3.5 ± 5.1) and mental health (3.8 ± 9.3 vs 0.7 ± 3.5) visits. Total health care system costs for screen-positive adolescents (\$5083 ± \$10,489) were more than twice as high as those of screen-negative adolescents (\$2357 ± \$7621)."

**Table 32. References for Studies Related to Mental Health and Behavioral Screenings**

References
Barzman, D., Mossman, D., Sonnier, L., & Sorter, M. (2012). Brief rating of aggression by children and adolescents (BRACHA): A reliability study. <i>The Journal of the American Academy of Psychiatry and the Law</i> , 40(3), 374-382. 40/3/374 [pii]
Cappelli, M., Gray, C., Zemek, R., Cloutier, P., Kennedy, A., Glennie, E., . . . Lyons, J. S. (2012). The HEADS-ED: A rapid mental health screening tool for pediatric patients in the emergency department. <i>Pediatrics</i> , 130(2), e321-7. 10.1542/peds.2011-3798 [doi]
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Fein, J. A., Pailler, M. E., Barg, F. K., Wintersteen, M. B., Hayes, K., Tien, A. Y., & Diamond, G. S. (2010). Feasibility and effects of a web-based adolescent psychiatric assessment administered by clinical staff in the pediatric emergency department. <i>Archives of Pediatrics &amp; Adolescent Medicine</i> , 164(12), 1112-1117. 10.1001/archpediatrics.2010.213 [doi]
Hacker, K. A., Penfold, R. B., Arsenault, L. N., Zhang, F., Soumerai, S. B., & Wissow, L. S. (2015). Effect of pediatric behavioral health screening and colocated services on ambulatory and inpatient utilization. <i>Psychiatric Services (Washington, D.C.)</i> , 66(11), 1141-1148. 10.1176/appi.ps.201400315 [doi]
Kennedy, A., Cloutier, P., Glennie, J. E., & Gray, C. (2009). Establishing best practice in pediatric emergency mental health: A prospective study examining clinical characteristics. <i>Pediatric Emergency Care</i> , 25(6), 380-386. 10.1097/PEC.0b013e3181a79223 [doi]
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Nager, A. L., Pham, P. K., Grajower, D. N., & Gold, J. I. (2017). Mental health screening among adolescents and young adults in the emergency department. <i>Pediatric Emergency Care</i> , 33(1), 5-9. 10.1097/PEC.0000000000000529 [doi]
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Pailler, M. E., Cronholm, P. F., Barg, F. K., Wintersteen, M. B., Diamond, G. S., & Fein, J. A. (2009). Patients' and caregivers' beliefs about depression screening and referral in the emergency department. <i>Pediatric Emergency Care</i> , 25(11), 721-727. 10.1097/PEC.0b013e3181bec8f2 [doi]
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Wright, D. R., Katon, W. J., Ludman, E., McCauley, E., Oliver, M., Lindenbaum, J., & Richardson, L. P. (2016). Association of adolescent depressive symptoms with health care utilization and payer-incurred expenditures. <i>Academic Pediatrics</i> , 16(1), 82-89. 10.1016/j.acap.2015.08.013 [doi]

**Table 33. Studies Related to Posttraumatic Stress Disorder (PTSD)**

Author/Year	Type of Study	Outcome	Summary
McLean et al., 2015	Observational-Secondary Analysis of data from an RCT	Effectiveness of prolonged exposure therapy (PE-A) versus client-centered therapy (CCT) for PTSD.	“As expected, outcomes 3-months post-treatment were superior in PE-A compared to CCT across all three measures...In addition, the slopes of improvement were faster in PE-A than in CCT for all three measures...”
Olsson et al., 2008	Observational	Identification of PTSD symptoms through the combined use of the Child Trauma Screening Questionnaire (CTSQ) and heart rate (HR).	“A combination of the CTSQ plus HR (CTSQ-HR) was better than the CTSQ alone or HR alone at identifying children likely to develop PTSD symptoms. These findings suggest that the CTSQ-HR screen may increase identification of children who are likely to develop PTSD symptoms, enabling development of targeted prevention programs.”
Schandorph Løkkegaard et al., 2017	Observational	Reliability and validity of a Danish adaptation of “Darryl,” a cartoon-based measure of DSM-IV symptoms of PTSD in a sample of Danish children and adolescents.	“The study revealed that Darryl has good internal consistency for the overall scale and adequate reliability for each DSM-IV symptom cluster. Scores from Darryl were significantly correlated with the Clinician Administered PTSD Scale for Children and Adolescents (CAPS-CA) scores and receiver operating characteristic (ROC) analysis showed that it could significantly predict the presence of a PTSD diagnosis according to the CAPS-CA.”

**Table 34. References of Studies Related to PTSD**

References
McLean, C. P., Yeh, R., Rosenfield, D., & Foa, E. B. (2015). Changes in negative cognitions mediate PTSD symptom reductions during client-centered therapy and prolonged exposure for adolescents. <i>Behaviour Research and Therapy</i> , 68, 64-69. doi:10.1016/j.brat.2015.03.008 [doi]
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**Table 35. Studies Related to Emergency Admission**

Author/Year	Type of Study	Outcome	Summary
Kyriakopoulos et al., 2015	Observational-Retrospective	Length of stay (LOS), Mean Children’s Global Assessment Scale Score (CGAS), and satisfaction.	“In conclusion, our naturalistic study examining the first UK sample of children routinely admitted as emergencies in a national mental health unit, has demonstrated that EA [emergency mental health admissions] are an appropriate, clinically indicated and safe alternative to PA [planned admissions], associated with a higher degree of

			parental satisfaction. It also challenges the beliefs around the necessity of pre-admission assessments for children in need of inpatient treatment for safety reasons.”
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**Table 36. References for Studies Related to Emergency Admission**

<b>References</b>
Kyriakopoulos, M., Ougrin, D., Fraser, C., Thomas, G., & McMahon, R. (2015). Emergency mental health admissions for children: A naturalistic study. <i>Clinical Child Psychology and Psychiatry</i> , 20(1), 8-19. 10.1177/1359104513493430 [doi]

**Table 37. Studies Related to Medical Clearance**

Author/Year	Type of Study	Outcome	Summary
Donofrio et al., 2014	Observational-Retrospective	Management or disposition changes.	“Of 871 visits with laboratory tests performed, abnormal laboratory tests were associated with 7 disposition changes (0.8%) and 50 management changes (5.7%) not associated with a disposition change...Patients who had any screening test performed had a longer length of stay than patients without testing (117 minutes longer; 95% confidence interval 109.7 to 124.4 minutes). In charts reviewed according to chief complaint, no patient was found to have an organic cause of their symptoms according to only screening tests.”
Fortu et al., 2009	Observational-Retrospective	Use and results of urine toxicology screens (UTS).	“Routine-driven UTS in uncomplicated pediatric psychiatric patients being evaluated in the ED offered little additional information, did not influence management, and potentially increased both ED cost and time.”
Santillanes et al., 2014	Observational-Retrospective	Utility and charges associated with emergency department (ED) medical clearance.	“Few patients brought to the ED on an involuntary hold required a medical screen. Use of basic criteria in the prehospital setting to determine who required a medical screen (altered mental status, ingestion, hanging, traumatic injury, unrelated medical complaint, rape) could have led to significant savings.”

**Table 38. References for Studies Related to Medical Clearance**

<b>References</b>
Donofrio, J. J., Santillanes, G., McCammack, B. D., Lam, C. N., Menchine, M. D., Kaji, A. H., & Claudius, I. A. (2014). Clinical utility of screening laboratory tests in pediatric psychiatric patients presenting to the emergency department for medical clearance. <i>Annals of Emergency Medicine</i> , 63(6), 666-75.e3. 10.1016/j.annemergmed.2013.10.011 [doi]
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**Table 39. Studies Related to Follow-Up Care**

Author/Year	Type of Study	Outcome	Summary
Asarnow et al., 2011	Randomized controlled trial	Rates of outpatient mental health treatment after discharge.	“Intervention patients were significantly more likely than usual care patients to attend outpatient treatment (92% versus 76%; p=0.004). The intervention group also had significantly higher rates of psychotherapy (76% versus 49%; p=0.001), combined psychotherapy and medication (58% versus 37%; p=0.003), and psychotherapy visits (mean 5.3 versus 3.1; p=0.003). Neither the emergency department intervention nor community outpatient treatment (in exploratory analyses) was significantly associated with improve clinical or functioning outcomes.”
Frosch et al., 2011	Observational-Retrospective	Connections to outpatient mental health care before and between an initial and subsequent pediatric psychiatric emergency department visit.	“Behavior problems were the presenting complaint for more than 50% of youths at both the index and second visits. Sixty-five percent of youths reported a connection to an outpatient mental health provider at both visits; 9% did not identify a provider at either visit. Eight percent of the youths who reported a connection to community care at their first visit reported no such connection at their second visit...Continued use of the emergency department despite a connection with outpatient mental health care raises questions about the views of families and providers about the need for emergency services.”
Grupp-Phelan et al., 2012	Randomized controlled trial	Feasibility, acceptability, and effectiveness of the TeenScreen-ED.	“As compared with the standard referral group (15.4%), the intervention group (63.6%) was significantly more likely to attend a mental health appointment during the follow-up period (Fisher exact test, P=0.03)...this pilot study suggests that the TeenScreen-Ed intervention is likely to improve linkage to outpatient medical health services for adolescents identified in the ED as being at risk for suicide.”
Hopper et al., 2011	Observational-Prospective	Patient attendance at referral sites.	“Eight-three percent (95% CI 5% to 90%) were compliant with the discharge plan without prompting from the ED staff. Fourteen percent (95% CI 8% to 22%) did not comply after being called by ED staff, and only 3% (95% CI 1% to 7%) were persuaded to attend their outpatient care after being prompted by ED staff. Routine follow-up calls for adolescent mental health patients after ED care are not warranted in all settings.”
Sobolewski et	Observational-	Successful follow-up	“Most (66%) successfully followed up with a

Author/Year	Type of Study	Outcome	Summary
al., 2013	Prospective	with a mental health provider and return to the emergency department (ED) for mental health concern within 2 months following the initial visit.	mental health provider. Mental health follow-up was more likely in those with an existing psychiatric diagnosis (OR: 3.03 [95% CI: 1.02-9.05]). The majority of those that returned to the ED within 2 months of their initial evaluation for mental health reasons were admitted [92% (19/21)]. The odds of an ED return visit were increased by a prior inpatient psychiatric admission (OR: 5.23 [95% CI: 1.80-15.16]), and a suicide attempt immediately prior to the initial ED visit (OR: 4.87 [95% CI: 1.04-22.69])...Future ED based interventions should focus on adolescents who attempt suicide and those with a history of prior inpatient admission.”

**Table 40. References for Studies Related to Follow-Up Care**

References
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**Table 41. Studies Related to Telepsychiatry**

Author/Year	Type of Study	Outcome	Summary
Jones et al., 2015	Observational-Prospective	Feasibility of translating cognitive behavioral therapy (CBT) for anxious youth to rural community settings via telepsychiatry training	“Although youth treated by these clinicians showed a significant decrease in anxiety symptoms, possible response bias and the lack of a comparison group mandate further studies before generalizing our findings. Nevertheless, training local therapists in anxiety-focused CBT for children via a group supervision based telepsychiatry model appears to be a feasible and well-received approach to knowledge translation to rural settings.”

Volpe et al., 2014	Observational-Prospective	Delivery of psychiatric consultation services using videoconferencing technology to health and mental health workers in the Nunavut territory of Canada.	“The study found a number of factors that facilitated or hindered the process and content of a consultation-based telepsychiatry program and its effect on building capacity among frontline staff. Four main themes emerged related to the delivery of psychiatric services via televideo: gaining access, ensuring culturally appropriate services, providing relevant continuing education, and offering stable and confidential technology.”
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**Table 42. References for Studies Related to Telepsychiatry**

References
Jones, E., Manassis, K., Arnold, P., Ickowicz, A., Mendlowitz, S., Nowrouzi, B., . . . Schmidt, F. (2015). Translating cognitive behavioral therapy for anxious youth to rural community settings via tele-psychiatry. <i>Community Mental Health Journal</i> , 51(7), 852-856. 10.1007/s10597-015-9882-4 [doi]
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**Table 43. Studies Related to Crosscutting**

Author/Year	Type of Study	Outcome	Summary
American Academy of Pediatrics/Staff/2006	Policy Statement	The American Academy of Pediatrics (AAP) and the American College of Emergency Physicians support advocacy for increased mental health resources, including improved pediatric mental health tools for the emergency department, increased mental health insurance coverage, and adequate reimbursement at all levels; acknowledgment of the importance of the child’s medical home; and promotion of education and research for mental health emergencies.	The American Academy of Pediatrics and the American College of Emergency Physicians support advocacy for increased mental health resources, including improved pediatric mental health tools for the emergency department, increased mental health insurance coverage, and adequate reimbursement at all levels; acknowledgment of the importance of the child’s medical home; and promotion of education and research for mental health emergencies.
Chun et al., 2016	Clinical guidelines	<i>This clinical report supports the 2006 joint policy statement of the AAP and American College of Emergency Physicians (ACEP) on pediatric mental health emergencies, with the goal of addressing the knowledge gaps in this area. The report is written primarily from the perspective of emergency department (ED) clinicians, but it is intended for all clinicians who care for</i>	The current body of literature supports focused medical assessments for ED psychiatric patients, in which laboratory and radiographic testing is obtained based on a patient’s history and physical examination.

Author/Year	Type of Study	Outcome	Summary
		<i>children and adolescents with acute mental health and behavioral problems.</i>	
Committee on Pediatric Emergency Medicine, 2012	Policy Statement	In rural America, pediatricians can play a key role in the development, implementation, and ongoing supervision of emergency medical services for children (EMSC).	Call to action and guidance on what projects need focus by rural pediatric advocates to improve quality of EMSC in rural America.
Cooper et al., 2007	Issue Brief	Ten policy action recommendations related to training, increased insurance coverage, referral mechanisms, family engagement, and adopting best practices.	This report reviews current practices for children, youth, and families visiting hospital emergency rooms for mental health conditions and makes recommendations for policy actions to improve care and encourage more community-based services.
Committee on Pediatric Emergency Medicine, 2007	Technical Report	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 crises, 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	The 3-pronged approach of education, research, and advocacy are crucial for improving the accurate and timely ED management of childhood psychiatric illness.

Author/Year	Type of Study	Outcome	Summary
		mental health during and after disasters and trauma.	
The Provincial Council for Maternal and Child Health (PCMCH), 2013	Implementation Toolkit	Develop an evidence-informed clinical pathway with decision support tools to guide and support the care of children and youth presenting to EDs with MH/A problems to ensure seamless transition to follow-up services with relevant community MH/A agencies.	The development of an ED clinical pathway for CY mental health will enhance the capacity of the health system to provide integrated services for people with mental illness by developing protocols that ensure anyone discharged from an emergency department has a stabilization plan and, if necessary, receives timely follow-up resulting in reduced unnecessary use of costly emergency services.
The Provincial Council for Maternal and Child Health (PCMCH), 2017	Briefing Note	Updates on efficacy testing of ED clinical pathway cited above.	Recommendation that ED clinical pathway implementation be scaled up outside pilot province based on outcomes.

**Table 44. References for Studies Related to Crosscutting**

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## APPENDIX 3. WORKS CITED

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