PSYCHOTIC DISORDERS—IN BRIEF:

ASSESSMENT & DIAGNOSIS

Misdiagnosis of primary psychotic disorders such as early onset schizophrenia is a concern and children often have difficulty describing psychotic symptoms.

- Some psychotic symptoms may be transient and there is a high prevalence of psychotic symptoms in child psychiatric disorders other than early onset schizophrenia.
- However, failure to recognize early onset schizophrenia may slow implementation of appropriate treatments and worsen long-term prognosis.

Assessment Recommendations:

- **Recommendation I**: Patients with risk factors for psychosis (family history, other psychiatric disorders, substance abuse, trauma, psychosocial adversity, etc.) should be identified through questioning about risk factors by primary care and specialty care providers who come into contact with the patient and monitored for the development of psychotic symptoms.
- **Recommendation II:** Assessment for psychosis should include interviews with the patients and families and should include an assessment of functional impairment in different domains.
    - Evaluation of a child or adolescent who may have psychotic symptoms should always include separate evaluations of the child and their guardian.
    - Interview should clarify the child's development, determine any changes in functioning, and explore for any past exposure to trauma.
    - Family history, including information about psychiatric hospitalizations and suicides should also be obtained.
- **Recommendation III:** Ask about changes in functioning and behavior that have occurred over the past 3 to 4 years.
    - Ask about hallucinations and delusions using language that the child understands, and encourage the child to describe experiences using his or her own words.
    - It is important to determine if the child is in control of the symptoms, which is not seen with true hallucinations.
    - It is also important to determine the frequency and severity of symptoms.
- **Recommendation IV:** Physical examination of youth suspected of having early onset schizophrenia should include a careful neurologic exam and further tests as warranted.
    - If there is a focal neurological finding or impairment of consciousness, brain imaging may be indicated.
    - If there is episodic psychosis with confusion following psychotic behaviors, an EEG should be obtained to rule out a seizure disorder.
    - Exposure to illicit substances should be assessed with at least a urine toxicology screen.
- **Recommendation V:** Blood work may include screening for thyroid abnormalities, ceruloplasmin, and urinary copper (using a penicillamine test in children) for Wilson's disease, heavy metals, and serum organic and amino acids to rule out a metabolic disorder.

- **Recommendation VI:** Genetic testing should also be considered, particularly if the youth has a dysmorphic appearance or any congenital abnormalities, given the high prevalence of reported genetic abnormalities in early onset schizophrenia.
- **Recommendation VII:** Diagnosis is made using criteria from the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM 5).
  - The **Brief Psychiatric Rating Scale for Children (BPRS-C)** and the **Prodromal Questionnaire Brief Version (PQ-B)** could be considered in screening for psychotic symptoms.

Differential Diagnosis:

- Psychosis may be present in severe major depression, during a manic/bipolar episode, as well as due to a range of other extreme psychosocial stressors and medical causes. See below.
- Inception of early onset schizophrenia prior to age 10 is extremely rare.
- Children with autism spectrum disorders solely may be extremely concrete and rigid in thinking and verbal responses, but they do not exhibit a formal thought disorder. However, it is possible for children with autism spectrum disorders to also develop a primary psychotic disorder, and the individual must demonstrate clear hallucinations or delusions.
- Language and communication deficits are common in autism spectrum disorders and can appear to be a thought disorder.

Differential Diagnosis of Early-Onset Schizophrenia	
Psychiatric	**Medical**
Psychotic disorder due to a general medical condition	Substance intoxication, both legal and illegal drugs
Bipolar disorder	Delirium
Major depressive episode with psychotic features	Brain tumor
Schizoaffective disorder	Head injury
Posttraumatic stress disorder	Seizure disorder
Obsessive-compulsive disorder	Meningitis
Pervasive developmental disorder	Porphyria
Psychosocial	Cerebrovascular accident
Abuse	AIDS
Traumatic stress	Electrolyte imbalance
Chaotic family environment	Blood glucose imbalance
	Endocrine imbalance

Comorbid/Confounding Disorders:

- **Mental Retardation**
  - At least 10% to 20% of children with primary psychotic disorders such as Early Onset Schizophrenia have IQ's in the borderline to mentally retarded range.
- **Substance Abuse and Schizophrenia**
  - In some studies, rates of comorbid substance abuse in adolescents with primary psychotic disorders are as high as 50%.
  - In adolescents, it is not uncommon for the first psychotic break to occur with comorbid substance abuse.
- **Severe Obsessive-Compulsive Disorder**
  - Children have intrusive thoughts and repetitive behaviors (fear of being contaminated may be an obsession or a paranoid delusion).
  - Patients with Obsessive-Compulsive Disorder generally recognize symptoms as unreasonable.

Red Flags for Acute Safety Issues:

- Suicidal ideation, suicidal gestures, and suicide attempts.
- Comorbid substance abuse.
- Auditory or visual hallucinations.
- Poor parental supervision and poor family support.
- Abuse (physical, sexual or emotional).

TREATMENT OF PSYCHOTIC DISORDERS

- Clinicians should be aware of the limited research base in treatment of early-onset psychotic syndromes.
- Most youth will need multiple interventions to address symptoms and comorbidities.
- Treatment should include interventions for biopsychosocial stressors and developmental sequelae associated with the illness.
- Youth may need comprehensive community programs, medications, psychotherapy, case management, family support, vocational and rehabilitative assistance, specialized educational programs, inpatient treatment, and/or residential treatment.

Initial Management Recommendations:

- **Recommendation I**: Clinicians should educate and counsel families and patients about psychotic disorders and options for the management of the disorder.
- **Recommendation II**: Clinicians should develop a treatment plan with patients and families and set specific treatment goals in key areas of functioning including home, peer, and school settings.
- **Recommendation III**: Establish links with community mental health resources, which may include patients and families who have dealt with psychotic disorders.
- **Recommendation IV:** Establishment of a safety plan, which includes restricting access to lethal means, engaging a concerned third-party, and an emergency communication

mechanism.

Treatment Recommendations:

- **Recommendation I**: In cases of transient, brief, symptoms that do not interfere with functionality, consider a period of active support and monitoring before starting other evidence- based treatment**.**
- **Recommendation II**: If a Primary Care (PC) clinician identifies an adolescent with moderate or severe symptoms or complicating factors such as co-existing substance abuse, consultation with a mental health specialist should be considered.
- **Recommendation III**: If referral to a child psychiatrist is not available, consider initiation of medication and follow-up tests after a thorough physical exam.
    - Baseline and follow-up laboratory tests, including renal and liver function tests, complete blood cell counts, fasting lipids, fasting glucose, Hemoglobin A1C, and medication levels, and electrocardiograms may be indicated for specific agents.
- **Recommendation IV:** Primary care (PC) clinicians should actively support children and adolescents who are referred to mental health by sharing care with mental health agencies/professionals when possible.

Working with Mental Health Liaisons:

- Appropriate roles and responsibilities for ongoing management by the PC clinician and mental health clinicians should be explicitly communicated and agreed upon.
- The patient and family should be consulted and approve the roles of the PC clinician and mental health professionals.

Recommendation - Collaborative Care

- Primary Care clinicians should actively support children and adolescents who are referred to mental health for pscyhotic symptoms. Consider sharing care with mental health professionals if possible.

- **The free Psych TLC** service is available for:
    - Consultation on psychiatric medication related issues including:
        - Advice on diagnosis and initial management for your patient
        - Titration of psychiatric medications
        - Side effects of psychiatric medications
        - Combination of psychiatric medications with other medications
        - Referral and services consultation regarding children with mental health issues

    - A licensed mental health professional (MHP) and a child and adolescent psychiatrist (CAP) are available via telephone to provide consultation and support to PCPs from 8am-5pm, M-F. Simply call **(844) 547-5688 or (501) 320-7270** to contact the Psych TLC Call Center. One of our expert MHPs will obtain basic information from your about the child and then set up a convenient time for Peter S. Jensen, MD, or another child & adolescent psychiatrist to call you back, usually within 30 minutes to 2 hours.

Atypical Antipsychotics: Optimal Dosing/Titration Strategies for Children and Adolescents

Atypical Antipsychotics	Starting Daily-Dose	Titration Dose, q3-4 day (~Min. days to antipsychotic dose)	Usual Daily Dose Range in Aggression**		Usual Daily Dose Range in Psychosis	
			CHILD	ADOLESCENT	CHILD	ADOLESCENT
Aripiprazole	2.5-5 mg	2.5-5 mg (7-10 days)	2.5-15 mg	5-15 mg	5-15 mg	5-30 mg
Clozapine***	6.25-25 mg	1-2x starting dose (18-30 days)	150-300 mg	200-600 mg	150-300 mg	200-600 mg**
Olanzapine	2.5 mg for children 2.5-5 mg for adolescents	2.5 mg (10-15 days)	NDA	NDA	7.5-12.5 mg	12.5-20 mg
Quetiapine	12.5 mg for children 25 mg for adolescents	25-50 mg to 150 mg then 50-100 mg (18-30 days)	NDA	NDA	NDA	300-600 mg
Risperidone	0.25 mg for children 0.50 mg for adolescents	0.5-1 mg (10-15 days)	1.5-2 mg	2-4 mg	3-4 mg	3-6 mg
Ziprasidone	20 mg	20 mg for children 20-40 for adolescents (18-30 days)	NDA	NDA	NDA	NDA; (In adults, 160-180 mg)

NDA = no data available.
*There is little information to guide dosing strategies for aggression. However, for aggressive children treated with risperidone, doses are about half that of the usual antipsychotic dose.
**In treatment resistant schizophrenic adults, a serum clozapine level (of the parent compound) greater than 350mg/dl is generally required for efficacy.

***Please Note: Clozapine should NOT be prescribed by primary care clinicians without psychiatrist input and oversight