Schizophrenia is a chronic and debilitating mental illness that often first presents during adolescence and rarely in childhood. As a pediatric provider, you may be at the front lines in seeing a patient who discloses concerning psychiatric symptoms, such as hallucinations, for the first time. However, reports of hallucinations by children in clinical populations are relatively common, and most of the time do not portend a true psychotic illness. The causes for reports of hallucinations range from normative childhood experience and active imagination to mood and anxiety disorders, substance use, cognitive or developmental issues, trauma and adversity, and organic illness.

What signs or symptoms do you need to look out for, and what questions do you ask in order to help clarify which patients are at risk for serious mental illness?

When do you need to refer for rapid mental health assessment and treatment?

## Spotlight on Psychosis

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## Hallucinations: By the Numbers

- **10-20%** = percent of children in clinical population that report hallucinations when asked
- **66%** = percent of those children who have no DSM 5 psychiatric diagnosis
- **1%** = worldwide prevalence of schizophrenia
- **15-30** = peak age (years) of onset of schizophrenia
- **1:10,000** = incidence of schizophrenia before age 13
- **96%** = percent of cases of schizophrenia that start after age 15
- **2.5 million** = number of children prescribed antipsychotic medication each year
Assessing Hallucinations

In assessing youth who present with hallucinations, delusional thoughts, or disorganized thinking or behavior, it can be helpful to keep in mind a few common themes, including premorbid functioning and background, as well as recent level of functioning.

Common **premorbid** abnormalities include:

- Social withdrawal
- Isolation or solitary play
- Disruptive behavior
- Poor attention
- Neurologic “soft signs”
- Speech and language problems
- Academic difficulties
- Cognitive delays/Low IQ

These signs are all unspecific, and they can increase susceptibility to other disorders including bipolar disorder, autism, conduct disorders, substance use, etc. Predicting which patients will go on to develop schizophrenia remains a challenge.

**Predictive Factors** include:

- Family history of schizophrenia (increases to 10% incidence for 1st degree relative)
- Recent decline in function
- Suspicious or paranoid thoughts
- Poor social interactions
- Substance use/abuse

Exposures to in-utero toxins or infections, complications at birth, and history of adverse experiences or trauma can also increase the risk for true psychosis.

As a pediatrician, it is important to refer high-risk youth for prompt mental health evaluation and treatment of psychosis, as well to be able to monitor those patients at lower risk for development of other mental health problems. DC MAP is here to help in both cases. The following table outlines some factors about the presentation that can help distinguish patients to be more concerned about.

<table>
<thead>
<tr>
<th>Better</th>
<th>Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute</td>
<td>Insidious</td>
</tr>
<tr>
<td>Short Duration</td>
<td>Long duration</td>
</tr>
<tr>
<td>No psych history</td>
<td>Psychiatric hx</td>
</tr>
<tr>
<td>Mood symptoms</td>
<td>Blunt affect</td>
</tr>
<tr>
<td>High premorbid func</td>
<td>Low IQ</td>
</tr>
<tr>
<td>Older age onset</td>
<td>Young age</td>
</tr>
<tr>
<td></td>
<td>Negative symptoms</td>
</tr>
<tr>
<td></td>
<td>Aggression</td>
</tr>
</tbody>
</table>

Sample questions to ask:

- “Does your mind ever play tricks on you?”
- “Has there ever been a time when you heard sounds or voices when you were alone? What did you hear?”
- “Do you ever feel confused, or like your thoughts don’t make sense?”
- “Have you seen things that no one else can see? Is it just at night when you’re going to sleep or in the daytime too?”
- “What did you think it was? Was it your imagination or was it real?” Did you think it was real when you (heard/saw, etc) it?”
- Was it something you were already thinking about or remembering? Or was it something you didn’t agree with?
- What did you do when you (heard/saw) it?
- Do you ever feel like someone is watching you, or someone is out to get you?
As a pediatrician, it is unlikely that you will be caring for children and adolescents with true psychotic disorders on your own, and these youth should be linked in with psychiatric services for medication management, as well as psychotherapeutic supports to assist with recovery and restoration of functioning. You may be called upon to help rule out medical causes of psychotic symptoms or bridge patients transitioning between different levels of psychiatric specialty care.

**Medical Conditions that may mimic Schizophrenia or other psychotic disorders:**
The list of potential medical illnesses that can produce symptoms of hallucinations or thought disorders are exhaustive. It is not necessary to pan-screen for every possible medical cause, but a targeted laboratory and imaging workup should be obtained when there are clinical signs or symptoms of other illnesses or syndromes. If there is gross deterioration, cognitive decline, focal neurologic symptoms, or delirium, this evaluation should be more exhaustive. You will determine which tests are necessary based on a careful history and physical exam.

<table>
<thead>
<tr>
<th>Laboratory and Other Tests to Consider in Medical Rule-Out of Psychosis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Routine</strong></td>
</tr>
<tr>
<td><strong>Consider</strong></td>
</tr>
<tr>
<td><strong>If indicated</strong></td>
</tr>
</tbody>
</table>

**Monitoring of Patients on Antipsychotic Medication:**
Antipsychotic medications can be very effective treatments for schizophrenia and related conditions, but if used long term can increase risk for both movement side effects and metabolic syndrome. The following schedule of blood monitoring is recommended by the ADA and APA in order to screen for development of metabolic side effects:

| Medical history* | X | | | | | |
| Weight (BMI) | X | X | X | X | X | X |
| Waist circumference | X | | | | | |
| Blood pressure | X | | | | | |
| Fasting glucose/hemoglobin A1c | X | | | | X |
| Fasting lipids | X | | | | X |

*Personal and family history of obesity, diabetes, hypertension, and cardiovascular disease.

**The AIMS Scale (Abnormal Involuntary Movements)**
You should also be familiar with monitoring for common motor side effects that can be caused by long-term use of antipsychotics. These are called Extrapyramidal Side Effects (EPS) and include akathisia (restlessness), parkinsonism (tremors and stiffness), dystonia (muscle contraction), and tardive dyskinesia (repetitive movements). It is recommended to observe for these at least every 6 months, and a helpful structured tool is the AIMS exam. You can find instructions and a link to the full scale below, and it takes only 1-2 minutes to perform in the office.

Using DC MAP Services:

• Free!!
• Call about any issue pertaining to mental health
• Child insurance status or home state does not matter
• Enrollment strongly encouraged (though not required):
  - Practice Enrollment Form: https://cri-datacap.org/surveys/?s=XCj2q9Xbxk
  - Provider Enrollment Form: https://cri-datacap.org/surveys/?s=2TUbz7XwG6
• Provide basic information about your question/patient and we will connect you with the appropriate team member
• We will follow up with providers and families after consultations (survey links and/or calls) to determine if services were attained, assess satisfaction with consultation, and make changes as needed

Hours: Monday – Friday 9am-5pm (excluding major Federal holidays)

Please note this is a provider-to-provider consultation service and not intended to be used by families.

For questions or to learn more contact info@dcmap.org

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