

# CT Children's CLASP Guideline

## Suspected Pediatric Acute-onset Neuropsychiatric Syndrome (PANS)

### INTRODUCTION

According to the American Academy of Pediatrics' (AAP) 2024 clinical report, Pediatric Acute-Onset Neuropsychiatric Syndrome (PANS) is a sudden onset of severe behavioral and neuropsychiatric symptoms in children. PANS encompasses pediatric autoimmune neuropsychiatric disorders associated with streptococcal infections (PANDAS), which is now considered to be part of a larger spectrum of infection-induced acute-onset neuropsychiatric symptoms.

PANS is considered to be a diagnosis of exclusion, and is not listed in the DSM-V. The AAP recognizes that while this diagnosis is frightening and life-altering for families, the diagnosis and management remains challenging due to the lack of disease-specific biomarkers, convincing evidence for pathogenic causes, or placebo-controlled clinical trials. It is theorized that PANS *may* be triggered, in some cases, by a recent infection and/or autoimmunity issues, but etiology is likely to be multifactorial. No single microbe has been consistently linked to PANS.

Due to insufficient evidence and possible risk of harm, the AAP does *not* support universal Group A streptococcal (GAS) testing (by culture, PCR, antigen, or serology) during evaluation for PANS/PANDAS, or the subsequent antibiotic treatment of children who are positive, without the presence of acute clinical signs and symptoms suggestive of GAS infection. GAS carriage is very common in children, and there is no evidence that asymptomatic carriage of GAS triggers PANS/PANDAS or that treatment of GAS colonization is beneficial for these conditions.

First-line management focuses on appropriate symptomatic care - psychiatric and behavioral interventions are evidence-based (see **When and How to Refer**). Acute symptomatic GAS pharyngitis in a patient with PANS/PANDAS should be treated. The AAP does not support prophylactic antibiotics, prolonged antibiotic usage, or other treatment modalities.

### INITIAL EVALUATION AND MANAGEMENT

#### TARGETED HISTORY:

- Look for signs of functional impairment
- According to the AAP, consider PANS if children present with the following:
  - Unusually abrupt and dramatic onset of obsessive-compulsive disorder (OCD) or severely restricted food intake;
  - Concurrent, abrupt onset of additional severe neuropsychiatric symptoms from at least 2 of the following 7 categories:
    - Anxiety
    - Emotional lability and/or depression
    - Irritability, aggression, and/or severe oppositional behaviors
    - Developmental regression
    - Sensory or motor abnormalities, including heightened sensitivity to sensory stimuli, hallucinations, dysgraphia, and complex motor and/or vocal tics
    - Somatic signs and symptoms, including sleep disturbances, enuresis, or urinary frequency that are not better explained by a known neurologic or medical disorder
- Consider other diagnoses: obsessive compulsive disorder (OCD), manic-depressive illness, avoidant/restrictive food intake disorder (ARFID), Sydenham chorea/acute rheumatic fever, systemic lupus erythematosus, Tourette disorder, toxic ingestion, etc.

**TARGETED EXAM:**

- Assess for involuntary movements, including posturing
- Assess for pharyngitis

**INITIAL MANAGEMENT:**

- Symptomatic care with psychiatric and behavioral interventions is evidence-based and can be discussed with families
- In the presence of acute pharyngitis/suspected GAS infection: obtain a Rapid Strep Test (PCR or antigen assay) in addition to a throat culture (a negative culture reliably rules out streptococcal infection)
  - Antistreptococcal serologic testing (anti-streptolysin O and anti-DNAase B levels) are NOT recommended due to poor sensitivity and specificity
  - If the throat culture is positive, GAS should be treated with an appropriate antibiotic for an appropriate duration of time (e.g. amoxicillin 50 mg/kg/day PO divided once or twice daily for 10 days)
  - If the culture is negative (even if Rapid Strep Test is positive), a GAS infection is not present and antibiotics are not indicated (or should be discontinued).
  - The use of prophylactic antibiotics, prolonged antibiotic use, or follow-up testing, are not supported by the AAP.
- Per the AAP, there is insufficient evidence to support the use of other medications.

**WHEN TO REFER**

**Refer to the appropriate subspecialist based on the presenting symptoms:**

**RED FLAGS:**

- If suicidal ideation (**RED FLAG**): refer to the Emergency Room immediately.
- If there are any significant psychiatric concerns: refer to Behavioral Health Urgent Care Center ([Behavioral Health Urgent Care Flyer \(English/Spanish\)](#))

**If there is OCD and/or other behavioral symptoms causing impairment:**

- Refer to a behavioral health provider that specializes in Cognitive Behavioral Therapy (CBT)
  - If 6 years of age and older, providers may refer their patients to Hartford Healthcare Institute of Living (IOL) for intensive CBT: [Treatment Options | instituteofliving.org | Institute of Living | Hartford HealthCare | CT](#)
  - Further mental health resources available here: [Co-Management Guidelines | Connecticut Children's](#)

**If there are functionally disabling tics and/or a new motor deficit:**

- Refer to Pediatric Neurology via CT Children's One Call Access Center  
**Phone:** 833.733.7669 **Fax:** 833.226.2329

**If there are ≥3 documented streptococcal infections within a 12-month period:**

- Refer to Infectious Diseases via CT Children's One Call Access Center
- **Phone:** 833.733.7669 **Fax:** 833.226.2329

	<p><b><u>If there are signs concerning for a systemic inflammatory disorder (e.g., systemic lupus erythematosus, CNS vasculitis):</u></b></p> <ul style="list-style-type: none"> <li>• Refer to Rheumatology</li> <li>• Note: referral to Rheumatology is <i>not</i> indicated in the evaluation and management of PANS unless there is concern for systemic inflammatory disorder</li> </ul> <p>For more information on how to place referrals to Connecticut Children’s, click <a href="#">here</a>.</p>
<p><b>WHAT TO EXPECT</b></p>	<p><b>What to expect from Connecticut Children’s visit:</b></p> <ul style="list-style-type: none"> <li>• Comprehensive history and physical</li> <li>• Review of systems</li> <li>• Targeted treatment of behavioral symptoms as indicated</li> <li>▪ Patient and family education on the diagnosis and management of the behavioral symptoms.</li> </ul>