

# Pediatric Chronic Rhinosinusitis in the practice

by **Maria T. Peña, MD**

**T**he AAO-HNSF published a clinical consensus statement (CCS) on pediatric chronic rhinosinusitis (PCRS) in October 2014, which was designed to promote improved patient care, reduce inappropriate variations in care, and educate and empower clinicians and patients on the optimal management of PCRS.<sup>1</sup>

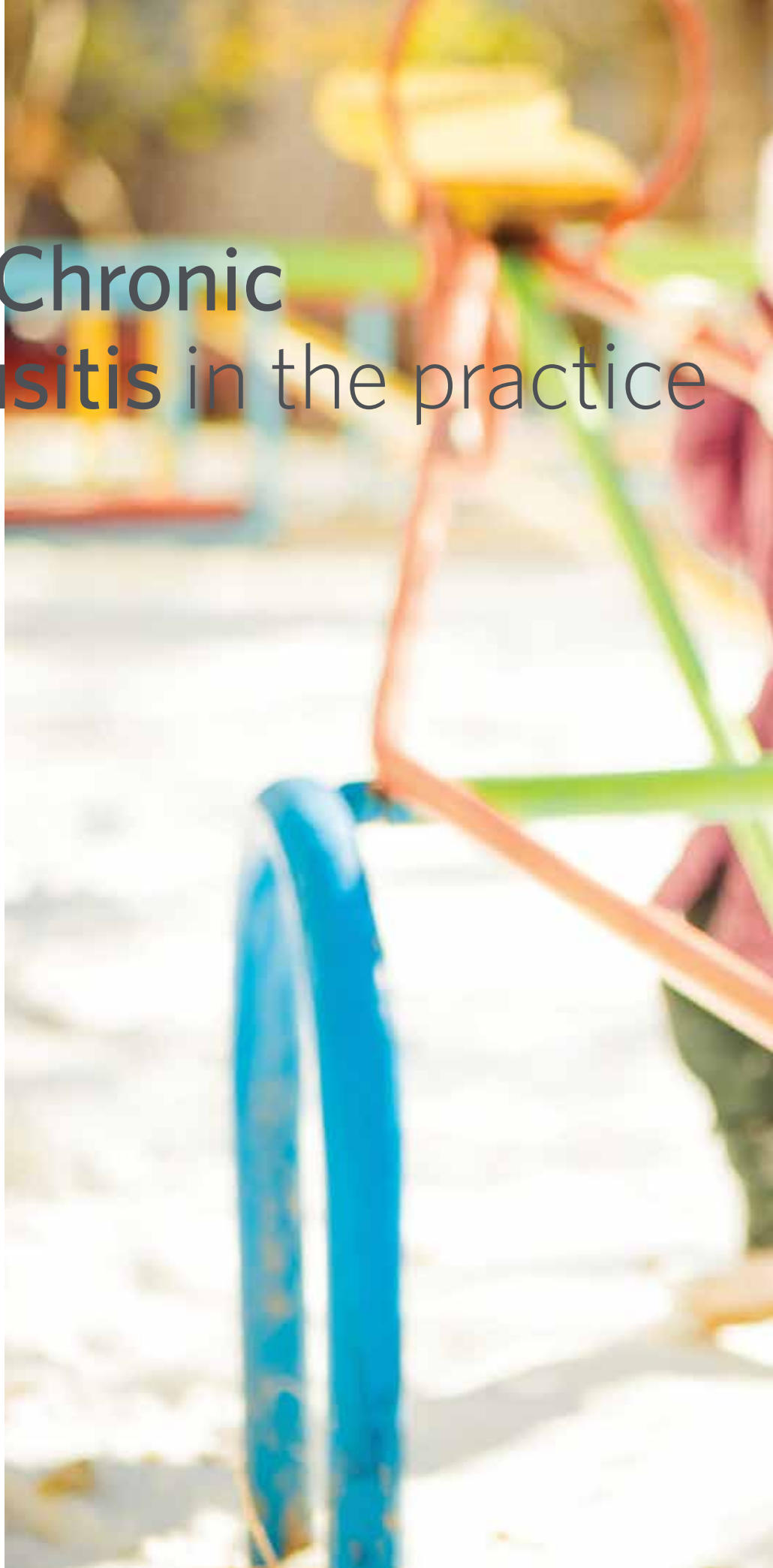
## How and why was this CCS developed?

The AAO-HNSF Guidelines Task Force reviewed and selected PCRS for CCS development as PCRS is a clinical problem frequently encountered by otolaryngologists and is associated with a significant influence on quality of life, but with limited evidence-based research to guide clinical management.<sup>2</sup> An expert panel of nine fellowship-trained pediatric otolaryngologists and rhinologists was convened by the AAO-HNSF to create the CCS using a modified Delphi survey method. The latter is a systematic approach to achieving consensus among a panel of topic experts through multiple anonymous surveys.<sup>3</sup>

Panel members completed an initial qualitative survey on clinical aspects and definition of PCRS followed by two Delphi surveys. The survey results were discussed in detail with all the members of the panel via teleconference to determine which items reached consensus. The panel narrowed the scope of the target population to patients 6 months to 18 years of age without craniofacial syndromes or relative immunodeficiency. The target audience for the statement was otolaryngologists. The findings of this consensus group are stated as opinions or suggestions, not as recommendations.

## What was the criterion for consensus?

The criterion for consensus is summarized









in the table below<sup>1,4,5</sup> and was established a priori with reference to previous CCSs.<sup>4,5</sup>

<b>Strong consensus</b>	Statements achieving a mean score of 8.0 or higher with no outliers*
<b>Consensus</b>	Statements achieving a mean score of 7.0 or higher and having no more than 1 outlier*
<b>Near consensus</b>	Statements achieving a mean score or 6.50 or higher and having no more than 2 outliers*
<b>No consensus</b>	Statements that did not meet the criteria of consensus or near consensus

\*Outliers were defined as any rating two or more Likert points from the mean.<sup>1,4,5</sup>

### How was PCRS defined?

The consensus definition of PCRS is the presence of two or more of the following symptoms: purulent rhinorrhea, nasal obstruction, facial pressure/pain or cough for at least 90 days of continuous duration, and either endoscopic signs of mucosal edema, purulent drainage, or nasal polyposis and/or CT scan changes consistent with mucosal changes in the ostiomeatal complex and/or sinuses.<sup>1</sup>

### What is maximal medical management for PCRS?

Extended courses of antibiotics have been recommended for PCRS compared with acute uncomplicated pediatric sinusitis, but the optimal duration of therapy remains unclear. The consensus panel agreed that 20 consecutive days of antibiotic management may produce a better response than 10 days of antibiotic therapy. In patients who do not respond initially, culture directed antibiotic therapy may improve outcomes.

The panel also agreed that daily nasal saline irrigations<sup>6</sup> and intranasal steroid use with or without antibiotic<sup>7</sup> are useful adjunctive therapies for PCRS. Nasal saline is effective at clearing the mucus and the nasal steroid spray is effective in relieving the congestion and rhinitis. Since the literature currently does not support a significant relationship between PCRS and gastroesophageal reflux (GERD), there was no consensus regarding the impact of GERD on the pathophysiology of PCRS.

## Celebrate Kids ENT Health Month

Visit [www.entnet.org/KidsENT](http://www.entnet.org/KidsENT) and access materials prepared for you and your practice to observe Kids ENT Health

Month in February. There are drafted Facebook posts, graphics, tweets, and other resources for you to use as you connect with your community and raise awareness about pediatric ear, nose, and throat disorders.

National health statistics reveal that ear, nose, and throat ailments remain among the primary reasons children visit a physician, with ear infections ranking as the number one reason for an appointment. Kids ENT Health Month is an opportunity for you to take a lead in supporting healthy kids. ■



There was consensus that empiric therapy for GERD is not beneficial.

### What is the role of adenoidectomy in the management of PCRS?

Adenoidectomy has been shown to decrease the load of nasopharyngeal pathogens associated with PCRS.<sup>8,9</sup> Additionally, adenoidectomy is clinically effective in the treatment of children with PCRS based on a meta analysis of eight PCRS studies.<sup>10</sup> Given this evidence, there was consensus that adenoidectomy is an appropriate initial surgical intervention in children with CRS from 6 to 12 years of age and strong consensus for patients younger than six.

The panel also agreed that adenoidectomy can have a beneficial therapeutic effect independent of endoscopic sinus surgery (ESS). The ability of the adenoid to serve as a bacterial reservoir for the development of PCRS is not related to the size of the adenoid, so lateral plain films

are not recommended to evaluate the adenoid in PCRS. Tonsillectomy without adenoidectomy is not useful in the treatment of PCRS.

### What other surgical therapies may be considered after medical management, adenoidectomy, or both have failed?

Endoscopic Sinus Surgery (ESS) has been shown to be a safe and effective therapy for PCRS in patients who have failed maximal medical management<sup>11,12</sup> and patients undergoing ESS have more severe disease compared to those managed with antibiotics or adenoidectomy.<sup>11</sup> Due to this and other supporting evidence, there was consensus that ESS is effective for managing PCRS and is best performed when medical therapy, adenoidectomy, or both, have not been successful.

There was strong consensus that image-guided ESS was helpful for cases where anatomical landmarks may be distorted due

to extensive nasal polyps or previous sinusal surgery and that a CT scan of the paranasal sinuses is indicated prior to ESS. There was not convincing evidence that clinically relevant long-term facial growth is impaired after ESS.

Balloon catheter sinuplasty (BCS), performed endoscopically with a balloon over a guide-wire, recently has been developed and used for PCRS management and was reviewed by the panel. No consensus could be reached about the efficacy of BCS for PCRS with the current evidence.

In contrast to post-ESS treatment paradigm of CRS in adults, post-operative debridement after ESS for PCRS is not essential for treatment success in children. There was no consensus for turbinoplasty as there have been no clinical studies evaluating its benefit in PCRS. ↻

↻ **READ MORE ONLINE**  
References available

**CALL FOR PAPERS  
2015 DEADLINES**

**AAO-HNSF 2015 SEPTEMBER 27-30 DALLAS, TX**

Visit [www.entnet.org/annual\\_meeting](http://www.entnet.org/annual_meeting) to submit your abstract.

<b>INSTRUCTION COURSE</b> Submissions Closed Notifications Sent: <b>March 2015</b>	<b>MINISEMINAR</b> Submissions Closed Notifications Sent: <b>March 2015</b>	<b>SCIENTIFIC ORAL &amp; POSTER</b> Submission Opens: <b>January 19, 2015</b> Submission Closes: <b>February 16, 2015</b> Notifications Sent: <b>April 2015</b>
--	---	--

 **AMERICAN ACADEMY OF  
OTOLARYNGOLOGY—  
HEAD AND NECK SURGERY  
FOUNDATION**

**Empowering otolaryngologist—head and neck surgeons to deliver the best patient care**

1650 Diagonal Road, Alexandria, Virginia 22314-2857 U.S.A.  
1-703-836-4444 1-703-683-5100 fax [www.entnet.org](http://www.entnet.org)