

# Upper Airway Obstruction/ Obstructive Sleep Apnea



## 1,625

Children treated with  
complex obstructive  
sleep apnea



Since opening in 2013,  
patients have traveled  
from 32 states and 7  
countries



Cincinnati Children's is  
ranked #2 in Pulmonology  
and Lung Surgery and #3  
in the nation among Honor  
Roll hospitals.

The Complex Obstructive Sleep Apnea Center at Cincinnati Children's provides a comprehensive, multidisciplinary approach to caring for children with complex obstructive sleep apnea. We have specific expertise in treating obstructive sleep apnea in children with craniofacial abnormalities and Down syndrome.

## HOW WE'RE DIFFERENT

At Cincinnati Children's, specialists come together from different disciplines and include otolaryngologists, pulmonologists who specialize in sleep, radiologists, plastic surgeons, geneticists and developmental pediatricians from the Thomas Center for Down Syndrome. Our expert team has performed hundreds of soft tissue and craniofacial surgeries. Specialists collaborate in a single location to provide comprehensive care for each child, attending a weekly meeting to review each child's case and develop and discuss the care plan.

The Complex Obstructive Sleep Apnea Center focuses on all children with sleep apnea after tonsil surgery as well as infants with sleep apnea. We also have expertise in caring for children with craniofacial anomalies who are prone to sleep disordered breathing. Anatomically, these patients are predisposed to upper airway obstruction and obstruction during sleep. Most children with Down Syndrome will develop sleep apnea in their lifetime, with 60 percent developing sleep apnea by age three. Long-term consequences of not treating a child's sleep disordered breathing include behavior problems, cognitive delays and developmental delays.

## CONDITIONS TREATED

We diagnose and care for children with upper airway obstruction and sleep apnea for otherwise healthy children as well as those with underlying conditions such as:

- Craniofacial anomalies
- Cleft palate
- Pierre Robin Sequence
- Achondroplasia
- Micrognathia
- Laryngomalacia
- Down syndrome
- Infants with complex airway issues and sleep abnormalities
- Obese children with obstructive sleep apnea
- Skeletal dysplasia

## TREATMENT TEAM

### Pulmonary Medicine

Raouf Amin, MD  
*Program Director, Complex  
Obstructive Sleep Apnea Center*

Carolyn M. Burrows, MSN, APRN,  
CNP, PNP

Barbara Chini, MD

Alicia George, MD

Neepea Gurbani, DO

Michelle Hjelm, MD

### Otolaryngology

Christine Heubi, MD  
*Surgical Director, Complex  
Obstructive Sleep Apnea Center*

Michael DeMarcantonio, MD

Phillip Knollman, MD

David Smith, MD, PhD

Doug von Allmen, MD

### Plastic Surgery

Haithem M. Elhadi Babiker, MD, DMD

Brian Pan, MD

Raquel Ulma, MD

### Radiology

Robert Fleck Jr., MD

### Genetics

Howard Saal, MD, FACMG

Jessica Weberding, APRN

### Thomas Center for Down Syndrome

Susan Wiley, MD

### Program Manager

Kari Tiemeyer, RN-MSN

### Nurse Care Coordinators

Amanda Romanowski, RN

Qushun Scott, RN-BSN

Sheila Singler, RN II-BSN

Heidi Staudigel, RN III-BSN

## CONTACT US

To make a referral to the  
Complex Obstructive Sleep  
Apnea Center contact us at:

Phone: **513-636-3730**

[www.cincinnatichildrens.org/  
complex-osa](http://www.cincinnatichildrens.org/complex-osa)



## TREATMENT APPROACH

To properly diagnose obstructive sleep apnea, the majority of children will need a sleep study. Complex Obstructive Sleep Apnea Center experts strongly recommend that the sleep study be done at a pediatric facility using pediatric scoring. The results of the study are shared during the multidisciplinary team meeting and a treatment plan is developed that will then be shared with the family.

Our physicians specialize in a broad scope of surgical and nonsurgical treatments, depending on the needs of the child. Treatments will depend on the condition or cause of the obstruction but can include positive airway pressure, medications, nasal surgery, jaw surgery, and/or surgery of the tongue base or soft palate.

## CLINICAL RESEARCH TO IMPROVE PATIENT CARE

Several members of our Complex Obstructive Sleep Apnea Center team are part of an ongoing, multidisciplinary team which was awarded a National Institutes of Health (NIH) grant to develop a computational model of the airway in an attempt to better evaluate and treat sleep apnea. This research study is called the DYMOsa study.

In addition, ongoing evaluation of the hypoglossal nerve stimulator in children with Down syndrome as well as development of research models and databases are being collected to better understand sleep apnea in our various patient populations.

**To make a referral to the Complex Obstructive Sleep Apnea Center, contact us at 513-636-3730.**

**For international inquiries, call +1-513-636-3100 or email [international@cchmc.org](mailto:international@cchmc.org).**