

# Kids E.N.T. Health Month: Child Health Disparities

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## **Introduction: Focus on Health Disparities**

A health disparity may be defined as “an inequitable difference between groups in health, healthcare, and developmental outcomes that are potentially systematic and avoidable.” Every year in the United States, thousands of children experience disparities in healthcare access and utilization resulting in worse overall health status and outcomes. While many factors contribute to these disparities, socioeconomic status, race, and ethnicity are key influential social determinants. Disparities related to socioeconomic status include factors such as parental education, health literacy, insurance status, household income, access to transportation, and availability of social/familial support structures such as childcare. Disparities related to race and ethnicity may arise from cultural beliefs about disease and doctors, language differences, and historical discrimination.

Provider factors may create further barriers to care of children, including issues with qualifications and experience with the care of medically complex children, or non-acceptance of certain insurance programs such as Medicaid. In general, children from low-income families and racial or ethnic minorities experience increased morbidity and disability compared to children who are white or more affluent. Moreover, parents of children from lower income environments are more likely to report poor communication with health providers.

## **Case Studies in Pediatric Otolaryngology: Sleep and Hearing**

Because ear, nose, and throat conditions are so common in children, it is no surprise that a number of disease-specific disparities have been demonstrated in the care of children with otolaryngologic disease. One key example considers variation related to diagnosis and treatment of sleep-disordered breathing (SDB) in children. SDB affects 5 percent to 20 percent of U.S. children and occurs even more frequently in children with co-morbid

conditions such as Trisomy 21 and obesity. Race and ethnicity may influence the risk of SDB in children. Indeed, SDB has been found to be more common in African-American children and Hispanic children compared with white children. Likewise, children in families of low socioeconomic status appear to be at increased risk for SDB. Some proposed explanations for these differences include factors such as household crowding in low-income homes, dietary influences, increased prevalence of obesity among certain racial and ethnic subgroups, higher exposure to secondhand smoke, or increased risk of upper respiratory infections.

Prompt diagnosis and treatment of SDB in vulnerable children is extremely important, particularly with the increased risk for minority children to suffer comorbid conditions such as obesity, neurocognitive delays, and behavioral problems such as Attention Deficit Hyperactivity Disorder. Although one might anticipate higher rates of adenotonsillectomy to treat SDB, which is often seen in at-risk or minority children, this trend has not been observed, perhaps because vulnerable subgroups of children may experience barriers to



otolaryngic care, even with insurance coverage. Moreover, the wide variation in tonsillectomy rates across U.S. geographic regions calls into question the effects of differences in healthcare delivery systems and insurance plans across the country. Efforts to reduce disparities related to evaluation and treatment of pediatric SDB may potentially include standardization of clinical protocols across regions, expanded coverage and access for children with public or no insurance, and application of shared decision-making to reduce unwarranted variation and promote appropriate use of adenotonsillectomy.

Health disparities are also evident for children with hearing loss, where hearing services are limited for children from racial, ethnic, and socioeconomic minorities. For example, proportionately higher rates of cochlear implantation are observed in children who live in areas with high median income and in children who are white or Asian compared to other minority counterparts. Children from low socioeconomic strata display poorer speech and language outcomes following implantation. Families of hearing-impaired children live closer to

the poverty level and more frequently are insured by Medicaid. Additionally, low socioeconomic status is a risk factor for otitis media with effusion. Multiple barriers may contribute to these health disparities experienced by children with hearing loss, including communication hurdles, medical costs for diagnosis, medical visits for audiologic evaluation, fitting of hearing aids, care of associated external and middle ear problems, and costs of assistive devices. Both monetary costs and time commitments related to special education services, speech and language pathologists, and interpreters may also augment health disparities related to hearing loss.

### **The Role of Access**

The presence of health insurance is a key factor for promotion of improved health status and access to routine healthcare. Children of racial minorities and children from low socioeconomic strata are more likely to experience reduced healthcare coverage and access to care. In 2011, about 16.1 million (22 percent) of U.S. children younger than 17 years old lived in poverty, 39 percent

of children were covered by public health insurance, and 7 million children were uninsured. Hispanic children were less likely to have health insurance (85 percent insured) compared to non-Hispanic white (93 percent insured) or black (90 percent insured) children. Even when children do have health insurance coverage, true access may limit referrals to otolaryngologic care. Research on access to specialty care found that in one community 31 percent of patients with public insurance were not offered otolaryngology appointments, and for clinics that accepted all insurance types, children with public insurance waited on average 53 days for an appointment compared with an average of six days for privately-insured children. In another community, less than 20 percent of otolaryngologists were willing to perform tonsillectomy on children with publicly funded insurance due to administrative and financial burdens placed on their practices. Although the Affordable Care Act will expand Medicaid coverage for children, it remains to be seen whether improved access to otolaryngologic and other specialty care will follow.

## Working to Reduce Disparities

Although tracking and establishing the variations in healthcare access and utilization across child subgroups in otolaryngology is important, reducing these disparities in care and improving outcomes for vulnerable children is a separate challenge. The Department of Health and Human Services “Healthy People” program has made reducing disparities and achieving health equity a major goal during the past two decades. Our specialty is charged with studying the unique characteristics of our specific patient population, our specialty disease patterns and variation, and local practice/health system limitations in order to best design strategies to promote equitable otolaryngic healthcare for children of all backgrounds. Some potentially fruitful interventions may include construction of innovative educational programs targeting rural and inner city pediatricians, which focus on common conditions such as SDB and hearing loss; creation of policies which improve reimbursement to otolaryngologists serving areas where access for at-risk children is limited; development of outreach programs initiated by larger health organizations to provide greater regional otolaryngic care; design of health educational materials which are applicable to parents of all levels of health literacy; and conception of formalized programs educating otolaryngology providers on use of culturally-competent communication strategies with patients. 

### References and Resources:

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2. Cheng TL, Dreyer BP, Jenkins RR. Introduction: Child health disparities and health literacy. *Pediatrics* 2009;124 Suppl 3:S161-S162.
3. National Institute for Health Care Management Foundation. Reducing Health Disparities Among Children: Strategies and Programs for Health Plans. 2007.
4. Boss EF, Smith DF, Ishman SL. Racial/ethnic and socioeconomic disparities in the diagnosis and treatment of sleep-disordered breathing in children. *Int J Pediatr Otorhinolaryngol* 2011;75:299-307.

## Pediatric Patient Resources

Go to <http://www.entnet.org/HealthInformation/pediatric.cfm> to link to these topics

Children face many of the same health problems that adults do, however symptoms may show themselves differently and treatment methods that work well in adults may not be appropriate for children. This topic listing identifies common pediatric ENT, head, and neck ailments and what you may offer patients.

Bell’s Palsy

Children’s Hearing Health

Child’s Hearing Loss

Choking Campaign

El Humo del Tabaco Ambiental y los Niños

Facial Sports Injuries

Fact Sheet: Allergic Rhinitis (Hay Fever)

Fact Sheet: Child Screening

Fact Sheet: Children and Facial Trauma

Fact Sheet: Cochlear-Meningitis

### Social Network

Get social for Kid’s ENT Month and help raise awareness! Visit [www.entnet.org/facebook](http://www.entnet.org/facebook) and [www.entnet.org/twitter](http://www.entnet.org/twitter) for special Kid’s ENT Month posts that you can share with your patients.

Vaccination

Fact Sheet: How Allergies Affect your Child’s Ears, Nose, and Throat

Fact Sheet: Laryngopharyngeal Reflux and Children

Fact Sheet: Noise-Induced Hearing Loss in Children

Fact Sheet: Pediatric Food Allergies

Fact Sheet: Pediatric GERD (Gastro-Esophageal Reflux Disease)

Fact Sheet: Pediatric Obesity and Ear, Nose, and Throat Disorders

Fact Sheet: Pediatric Sleep Disordered Breathing/Obstructive Sleep Apnea

Fact Sheet: Pediatric Thyroid Cancer

Fact Sheet: The Necessity of Early Intervention in Hearing

Fact Sheet: When Your Child Has Tinnitus

Hearing Loss and Ear Infection

Pediatric Sinusitis

Post-Tonsillectomy Analgesia Article

Post-Tonsillectomy Analgesia, an Old Problem Revisited

Reduced Choking Risks fact sheet

Research Gaps-Pediatrics

Second Hand Smoke and Children

Spotlight on Patient Safety

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# Otitis Media, Tympanostomy Tubes, and Clinical Practice Guidelines from 2013

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In 2013, both the American Academy of Pediatrics (AAP) and the American Academy of Otolaryngology—Head and Neck Surgery Foundation (AAO-HNSF) published clinical practice guidelines (CPGs) that address the management of recurrent

acute otitis media (AOM) and otitis media with effusion (OME), including treatment with tympanostomy tubes. In the table below we compare and contrast the different CPGs so clinicians can better understand the recommendations made by these two organizations.

Condition	CPG	Key Action Statement	Discussion Points
<b>RECURRENT ACUTE OTITIS MEDIA (AOM)</b>	<b>AAP</b> Clinical Practice Guideline on Acute Otitis Media <sup>1</sup>	Clinicians <b>MAY</b> offer tympanostomy tubes for recurrent AOM (three episodes in six months or four episodes in one year with one episode in the preceding six months).	This is considered an “option” for treatment of recurrent AOM.  Most AOM guidelines before 2013 did not contain statements about tympanostomy tubes for recurrent AOM.
	<b>AAO-HNSF</b> Clinical Practice Guideline on Tympanostomy Tubes in Children <sup>2</sup>	Clinicians <b>SHOULD NOT</b> perform tympanostomy tube insertion in children with a history of recurrent acute otitis media who do not have a middle ear effusion in at least one ear at the time of evaluation.	Children in the control groups of antibiotic prophylaxis trials for prevention of AOM did not have middle ear effusions at trial entry and did have a favorable natural history, with most children experiencing less than two infections during the study period.  Children with a history of recurrent AOM and a normal examination at presentation perhaps are “over-diagnosed,” given the known difficulties of diagnosis of AOM in young children.
		Clinicians <b>SHOULD</b> offer tympanostomy tube insertion in children with history of recurrent AOM who have middle ear effusion in one or both ears at the time of evaluation.	Trials that did not exclude children with middle ear effusion suggest a modest reduction in number of episodes of AOM after tympanostomy tubes.  While reduction of episodes of AOM is the primary goal, tympanostomy tubes may reduce pain during episodes of acute otitis media and can allow treatment of otorrhea with ototopical antibiotics.
<b>OTITIS MEDIA WITH EFFUSION (OME)</b>	<b>AAO-HNSF</b> Clinical Practice Guideline on Tympanostomy Tubes in Children <sup>2</sup>	Clinicians <b>SHOULD NOT</b> perform tympanostomy tube insertion in children with a single episode of OME of less than three months’ duration, from the date of onset (if known) or from the date of diagnosis (if onset is unknown).	Short-term effusions can occur after viral infection or AOM and often resolve without therapy.
		Clinicians <b>SHOULD</b> offer tympanostomy bilateral tube insertion to children with bilateral OME for three months or longer AND documented hearing difficulties.	Hearing difficulties may include abnormal audiometry and other functional assessments of hearing status.
		Clinicians <b>MAY</b> perform tympanostomy tube insertion in children with unilateral or bilateral OME for three months or longer (chronic OME) AND symptoms that are likely attributable to OME that include, but are not limited to, balance (vestibular) problems, poor school performance, behavioral problems, ear discomfort, or reduced quality of life.	Otitis media with effusion can be associated with symptoms and conditions such as dysequilibrium, behavioral problems, and otalgia. Placement of tympanostomy tubes has been shown to improve disease-specific quality of life measures.
		Clinicians <b>MAY</b> perform tympanostomy tube insertion in at-risk children with unilateral or bilateral OME that is unlikely to resolve quickly as reflected by a type B (flat) tympanogram or persistence of effusion for three months or longer.	Tubes are an option for “at risk” children with OME and type B tympanograms.  Who are these “at risk” children? 1) Children who likely will have increased consequence of the hearing and other effects of otitis media, and those where otitis media is unlikely to resolve. 2) “At risk” group includes children with: underlying hearing loss not from OME, speech-language delays, autism and other pervasive developmental disorders, craniofacial syndromes that include cognitive and communication delays, visual impairment, cleft palate, other developmental delays.  “At risk” children are rarely included in otitis media trials, yet they may have greater need for interventions such as tympanostomy tubes.
<b>CARE ISSUES FOR CHILDREN WITH TYMPANOSTOMY TUBES</b>	<b>AAO-HNSF</b> Clinical Practice Guideline on Tympanostomy Tubes in Children <sup>2</sup>	Clinicians <b>SHOULD</b> prescribe topical antibiotic eardrops only, without oral antibiotics, for children with uncomplicated acute tympanostomy tube otorrhea.	This strong recommendation is made as ototopical drops have increased efficacy, treat organisms such as <i>Pseudomonas aeruginosa</i> and <i>Staphylococcus aureus</i> , and have few side effects.  Children with complicated otorrhea, cellulitis of the ear, other bacterial infection such as sinusitis or pharyngitis, and children with impaired immune status may require systemic antibiotics when otorrhea occurs after tympanostomy tubes.
		Routine, prophylactic water precautions <b>SHOULD NOT</b> be encouraged for children with tympanostomy tubes.	Evidence from clinical trials shows no benefit or trivial clinical benefit from routine water precautions.  Some children with tubes may benefit from water precautions in specific situations (lake swimming, deep diving, history of recurrent otorrhea, head dunking during bathing, or otalgia with water entry into the ear canal).