

Pediatric Pulmonology and Sleep Medicine Focus



Mary Cataletto, MD, FAAP - Editor

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Welcome to the Fall Issue of the AAP Section on Pediatric Pulmonology and Sleep Medicine Newsletter

Mary Cataletto, MD, FAAP



As we look forward to the upcoming AAP National Conference and Exhibition, there are a number of exciting events that will be of interest to pediatric pulmonology and sleep medicine physicians. The 2020 program will feature Dr. Anthony Fauci, Director of the National Institute of Allergy and Infectious Diseases, at the United States National Institutes of Health (NIH) as he discusses “COVID-19: Public Health and Scientific Challenges.” He will be joining AAP members for an open plenary session on Saturday, October 3 between 10 and 11 AM CDT followed by a question and answer session with our AAP President Dr. Sally Goza.

On demand sessions will include: All that Wheezes is Not Asthma, Is the Sweat Test Obsolete? Early Diagnosis of Cystic Fibrosis, Assessing Asthma Control, as well as Advice on New Devices: E-cigarettes, Vape Pens, Hookah. A very timely topic for all of us interested in climate change is a session entitled “From Floods to Wildfires,” in this session, Drs Mark Miller and Scott Needle will discuss caring for children during and in the aftermath of natural disasters. They will highlight steps that every pediatrician can implement to develop disaster preparedness and recovery plans at the community level.

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The live sessions geared towards our subspecialty include a collaboration with the Section on Tobacco Control on Sunday October 4th entitled, “Changing Landscape of Tobacco, E-cigarettes and Vaping: New Products, Old Problems” and a 2-hour program on the Pulmonary Complications of Down’s Syndrome on Monday, October 5, 2020.

In this issue I am pleased to welcome three new authors to our newsletter: Dr. Rasik Shah from New York University (NYU), Dr. Walter Dehority from the University of New Mexico and Dr. Joseph Russo from the Pulmonology Fellowship Training program at the University of Florida. I welcome all members to consider submitting articles to the newsletter.

Comparing data on e-cigarette use among middle and high school students from 2019 to 2020, the Centers for Disease Control and Prevention (CDC) authors reported a trend towards a decline in the use of e-cigarettes. The authors stress that “Comprehensive implementation of evidence based strategies at the national, state and local levels, in coordination with FDA regulation can prevent and reduce youth tobacco product use”. Effective strategies may vary in different age groups and different geographic areas. Pediatricians must continue to work at the forefront of tobacco prevention and control.

Make wise choices in pediatric pulmonology, sleep medicine

From AAP News • August 31, 2020



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Pediatricians and families should consider new guidance from [Choosing Wisely](#) before using medical therapies and practices to treat asthma and sleep disorders in children.

The AAP Section on Pediatric Pulmonology and Sleep Medicine produced the following evidence-based list of Five Things Physicians and Patients Should Question:

- Do not add new drugs, go to higher doses or otherwise step up asthma therapy before assessing adherence and appropriateness of device and technique with current asthma medications.
- Do not use long-acting beta-agonist/steroid combination drugs as initial therapy for intermittent or mild persistent asthma.
- Avoid administering nebulized medications by “blow by.” A t-piece with mouthpiece or face mask should be used instead.
- Do not perform or interpret pediatric sleep studies using adult standards, even if performed in a laboratory that predominantly studies adults.
- Do not routinely use airway clearance therapy in conditions such as asthma, bronchiolitis and pneumonia.

Choosing Wisely is an initiative of the ABIM Foundation that promotes conversations between clinicians and patients in choosing care that is supported by evidence, does not duplicate other tests or procedures already received, is free from harm and is truly necessary. More than 500 recommendations aimed at improving quality and reducing waste in health care have been developed by more than 80 participating medical specialty societies.

Find rationale and references behind this AAP list and others on the Choosing Wisely [Lists of Recommendations](#) webpage.

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Severe Acute Respiratory Syndrome Coronavirus 2: Genomic Observations and Emerging Therapies

Walter Dehority MD, MSc, FAAP
University of New Mexico

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), the etiologic agent of COVID-19, was first reported from China in December 2019. Since then, the virus has spread across the globe in unprecedented fashion, producing previously unimaginable stressors to the medical system and the economy. It has demonstrated a continuing predilection for the elderly and those with medical co-morbidities, though reports of severe and potentially novel clinical manifestations of the disease in children are increasingly recognized (e.g. the Multisystem Inflammatory Syndrome in Children associated with COVID-19).

As the scientific and medical communities race to understand the emerging transmission dynamics, pathophysiology and epidemiology of this novel agent, the need for real-time study at both the bench and clinical-trial level is increasingly appreciated, to an extent which would have been unimaginable just months earlier. Playing a lead role in these endeavors is the application of metagenomic next generation sequencing, which may provide real-time clues as to the origins, spread, mutation and introduction of the virus into communities. Indeed, it was this technology that first identified SARS-CoV-2 as the novel cause of the initial outbreak in China, documented similarities between the virus and a SARS-like coronavirus previously isolated from a bat, and later identified different strains of SARS-CoV-2 in circulation. In addition, the need for large, coordinated and real-time clinical trial evaluation of both re-purposed and novel anti-viral agents is increasingly appreciated, as clinicians have been forced to choose from a smattering of drugs and drug combinations (both novel, such as Remdesivir, and re-purposed, such as lopinavir-ritonavir and hydroxychloroquine with or without azithromycin) without any reliable data from large clinical trials. The slow trickle of small studies of these drugs (often with methodological limitations) into the medical literature has underscored the need for large, multi-site, coordinated efforts to help guide medical care for those affected by the virus.

Moving forward, as we collectively focus on the goals of containment of spread and the future development of vaccines and therapeutic agents, metagenomic next generation sequencing and collaborative clinical trial data may provide a light at the end of what is currently a very dark tunnel. The source article, authored by Dehority, Spence and Dinwiddie is available at <https://www.liebertpub.com/doi/pdf/10.1089/ped.2020.1179>

Call for highlights, notices and special events

This newsletter is intended to highlight important articles, position papers, new guidelines and events for pulmonologists and sleep medicine physicians caring for children. If you would like to contribute, please forward your inquiries to Laura Laskosz at llaskosz@aap.org.

Turn on Your Computer. Let's Get Moving!

Joseph Russo MD, MS, FAAP
Pediatric Pulmonology Fellow
University of Florida

Cystic fibrosis centers across the country have been rising to the challenge of managing large-scale telemedicine initiatives set in motion by the COVID-19 pandemic. Multidisciplinary teams that once sat together in clinic workrooms now routinely coordinate care plans in Zoom breakout rooms and educate patients using the screen share function. Although this shift in provision of care has been embraced with varying degrees of enthusiasm, there is little doubt that elements of remote patient monitoring will remain at the forefront of cystic fibrosis (CF) care even as in-person visits resume.

Among those essential aspects of care which will likely find a lasting home in the realm of virtual patient contact are those centered around lifestyle modification. Participation in regular physical activity is an important component of patient care that tends to get less attention during busy clinic visits. Decades of research in the CF population support a multitude of benefits including improved quality of life, reduction in pulmonary function decline, and improved airway clearance for patients of all ages. Despite this body of literature, children and adolescents with CF routinely fail to meet the most recent World Health Organization (WHO) physical activity recommendation for those under 18 years of age to accumulate 60 minutes of moderate to vigorous physical activity.

There are a variety of ways remote monitoring technology is being used to increase CF patient participation in physical activity. Supervised virtual group exercise sessions represent a hybrid approach which is a good fit for centers with significant physical therapy support. Patients have benefitted from the group experience which improves retention and program adherence.

A less time intensive option that requires limited staff involvement utilizes online exercise program videos specific for CF patients addressing aerobic and resistance training which can be viewed at the convenience of the patient. Taylor Lewis of Pulmonary Performance Institute, an exercise physiologist with nearly 10 years of experience working with cystic fibrosis patients, has produced several multi-week programs and provided a limited number of complimentary program memberships and discounts to patients during this time of pandemic related social restrictions. However, cost may be prohibitive for many patients and programs. In addition, adherence tracking is highly reliant on patient self-report making it more difficult to accurately record.

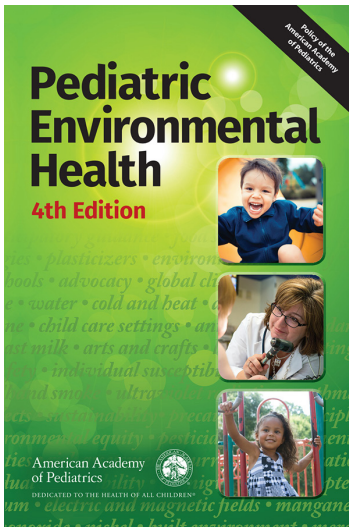
Several CF centers, including the Adult CF Program at the University of Cincinnati, have chosen to take advantage of the FitBit wearable activity tracker to monitor participation in physical activity. Online platforms exist in which patient's may upload their data to dashboards visible to clinic staff who guide physical activity counseling.

The decision regarding which approach to utilize for remote physical activity promotion is highly care center specific and dependent on the availability of staff, funding, and expertise. Regardless of modality, remote patient monitoring technology has enhanced the opportunity to improve the health of our CF patients through exercise and there is no better time than the present as more patients experience the benefits of modulator therapy.

Book Review:

Pediatric Environmental Health 4th Edition

Mary Cataletto MD, FAAP



This latest edition of American Academy of **Pediatrics Pediatric Environmental Health** brings together 72 experts from across our country with diverse experiences working in clinical, public health, government and research organizations to review the impact of the environment on the health of American children. Their goal is to *"provide clinicians with the most accurate information needed to prudently advise parents and children about specific pollutants and situations commonly encountered in 21st century life."* Since the publication of the first edition in 1999 there have been tremendous advances in our knowledge of climate change as well as the health consequences of indoor and outdoor air pollution not only in school age children but on fetal development and postnatal growth. Events ranging from major natural disasters to community, school and home-based exposures can be associated with both physical and psychological stress. Who do we turn to for guidance?

Pediatricians are frequently asked to provide guidance on various aspects of child wellness and disease prevention. As a practicing pulmonologist, I found the sections on air quality particularly useful. We know that today's children spend approximately 80-90% of their time indoors. Exposure to secondhand smoke unfortunately is a major source of indoor air pollution. It is entirely preventable, but clearly a challenge, not only for families living with a

smoker but for those living in rental housing where secondhand smoke exposure is three times higher. Each chapter concludes with a series of frequently asked questions and prepared responses for the pediatrician to guide their discussion with families.

It is important to remember that pediatricians are not only resources for evidence based recommendations, but we are role models for healthy choices as we implement green offices, support open spaces and advocate for improvements in community design with bans on the use and advertising of tobacco and vape products in schools and in areas where children congregate. This book also addresses the bigger picture - providing practical strategies to help pediatricians advocate for their patients – in their homes, schools, communities and with the legislators who make decisions about the quality of the water we drink and the air we breathe. Advocacy is an important aspect of Pediatrics. We advocate for a healthy future for our children by promoting safe environments where children can grow, learn and play. The fourth edition of Pediatric Environmental Health has an entire chapter dedicated to Environmental Health Advocacy with practical strategies and resources for the practicing pediatrician. They emphasize that *"the pediatrician's input is critical to ensuring that the needs of children and adolescents are met when key policy decisions are made."*

Pediatric Environmental Health is divided into 7 sections with a total of 66 chapters and 1233 pages. An appendix is provided which includes helpful resources, a curriculum for environmental education and environmental health as well as AAP policy, technical and clinical reports. I think that you will find this a welcomed addition to your resource library with practical information you can incorporate into your clinical practice.

SOURCE: Etzel, RA, Balk, SJ (EDS), American Academy of Pediatrics Council on Environmental Health, **Pediatric Environmental Health** 4th edition, American Academy of Pediatrics Itasca, IL, 2019

Influenza 2020-21 and the COVID Pandemic

Rasik Shah, MD

There is considerable anxiety within our communities over school reopening coinciding with prospect of Influenza overlapping with a second wave of COVID-19.

The use of face masks and hand hygiene will help to mitigate the transmission of SARS-CoV-2 especially when used with social/physical distancing. This will also help to reduce transmission of other respiratory viruses. In effort to protect those at increased risk for complications, it is important to work to reduce the overall burden of respiratory infections. Both SARS-CoV-2 and Influenza are respiratory viruses and co-infection may cause serious morbidity such as asthma exacerbations and hospitalizations, especially in vulnerable populations. While we have vaccines available against Influenza, there is no vaccine available at this time to prevent SARS-CoV-2.

The influenza virus mutates often. Hence the component viruses in the vaccine are adjusted depending on predictions for the upcoming season. Three of the four viruses in vaccine are upgraded to better match incoming season. The available influenza vaccines for 2020-2021 are listed below:

	2019-20 Flu vaccine	2020-21 Quadrivalent (IIV)	2020-21 Quadrivalent (RIV4)
		Egg based	Cell/Recombinant [no egg]
		IM	IM
A H1N1	A/Brisbane/02/2018 (H1N1)pdm09-like virus	A/Guangdong-Manonan/SWL1536/2019 (H1N1) pdm09-like virus*	A/Hawaii/70/2019(H1N1) pdm09 like virus*
A H3N2	A/Kansas/14/2017 (H3N2)-like virus	A/Hong Kong/2671/2019 (H3N2)-like virus*	A/Hong Kong/45/2019 (H3N2)-like virus*
B/Victoria	B/Colorado/06/2017 (B/Victoria lineage)-like virus	B/Washington/02/2019 (B/Victoria lineage)-like virus*	B/Washington/02/2019 (B/Victoria lineage)-like virus*
B/Yamagata	B/Phuket/3073/2013-like (Yamagata lineage) virus	B/Phuket/3073/2013-like (Yamagata lineage) virus	B/Phuket/3073/2013-like (Yamagata lineage) virus

Courtesy of Rasik Shah, MD

The * suggests updates from 2019-2020 flu vaccine to better match anticipated Influenza virus for 2020-2021. Trivalent egg base vaccine contains first three Antigens (AH1N1, A H3N2 and B/Victoria lineage) only. For adult > 65 years, both high dose (4 times more antigens) and adjuvant (containing MF59 as adjuvant) trivalent vaccines will be now Quadrivalent.

The Centers for Disease Control recommend universal immunization of all children 6 months of age or older through adulthood with rare exception. It is the best way to prevent the flu and is especially important for people with chronic respiratory diseases such as asthma and cystic fibrosis. Ideally influenza immunization should be given before the onset of flu season in your community as antibodies will take about 2 weeks to develop and provide protection against the flu.

In these uncertain times, it is important to stress the importance of the flu vaccine to our patients and families to decrease the chances of flu illness and the chances of co-infection with SARS-CoV-2.

AAP National Conference & Exhibition 2020 Virtual



October 2-5, 2020*

* Internet Live activity content is available 10/2/20-10/5/20 and Enduring Material content is available 10/2/20-1/31/21.

For more information and to register: <https://aapexperience.org/registration/>

On Demand Sessions

- **All That Wheezes Is Not Asthma** - faculty will review causes of localized wheezing through case presentations and differential diagnosis of unilateral wheezing, including foreign bodies, bronchomalacia/bronchial stenosis, airway tumors, mucus plugs, and compressing airway masses. Management strategies and when to refer also will be discussed.
Faculty: Chris Landon, MD, FAAP
- **Is the Sweat Test Obsolete? Early Diagnosis of Cystic Fibrosis** - This session will highlight advances in the early diagnosis of cystic fibrosis, discuss the risk of false-negative newborn screening tests, and provide practical advice for identifying and confirming cystic fibrosis in older children or adolescents. *Faculty: Susanna McColley, MD, FAAP*
- **Assessing Asthma Control: Tricks of the Trade**- This session will provide an overview of national and international guidelines for assessment of asthma control as well as validated assessment tools. Common reasons for over- and underestimating asthma control also will be covered. *Faculty: John Kelso, MD, FAAP*
- **Advice on New Devices: E-cigarettes, Vape Pens, Hookah** - Faculty will review new and emerging tobacco products such as vaping devices, tobacco heating units, and hookah. Information on use patterns, including co-use with other products, associated health risks, and strategies to address product use with patients also will be presented.
Faculty: Susan Walley, MD, CTTS, FAAP
- **From Floods to Wildfires: Preparing for Natural Disasters Due to Climate Change** - Pediatricians and others who care for children often face challenges during and after disasters. This session will draw on experiences with recent disasters such as floods and wildfires to highlight steps pediatricians can take to develop disaster preparedness and recovery plans at the community level. *Faculty: Mark Miller, MD / Scott Needle, MD, FAAP*

Live Sessions

Sunday, October 4, 2020

3:00-5:00 pm CDT

Section on Tobacco Control Program: Changing Landscape of Tobacco, E-Cigarettes, and Vaping: New Products, Old Problems, and How Pediatricians Can Help

During this condensed section program, we will discuss the current crisis in e-cigarette/tobacco use, including the epidemiology and the role of advertising and anti-tobacco counter-messaging. Participants will learn strategies to address tobacco use with their patients and opportunities for advocacy.

Faculty: Kathleen Crosby / Brian King, PhD, MPH / Theresa Watkins-Bryant, MD, FAAP

Moderators: Rachel Boykan, MD, FAAP / Susan Walley, MD, CTTS, FAAP

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Monday, October 5, 2020

1:00 – 3:00 pm CDT

Section on Pediatric Pulmonology and Sleep Medicine Program – Pulmonary Complications of Down Syndrome.

This program will provide an in-depth review of pulmonary complications in children with Down syndrome. Pediatricians, medical subspecialists, and surgical specialists are encouraged to participate to develop a better understanding of pathophysiology, sleep-disordered breathing, aspiration and pneumonia, and pulmonary hypertension. A family representative will present the patient/family perspective on this topic.

Faculty: Lee Brooks, MD, FAAP / Douglas Bush, MD / Emily DeBoer, MD, FAAP / Susanna McColley, MD, FAAP / Jena Terry



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Pulmonary and Sleep Medicine Conferences: Calendar and Contact Information

2020 AAP National Conference Exhibition (Virtual)

October 2-6, 2020

North American Cystic Fibrosis Conference (Virtual)

October 7-23, 2020

CHEST 2020 Annual Meeting (Virtual)

October 18-21, 2020

American College of Allergy, Asthma and Immunology (ACAAI) Virtual

November 13-15, 2020

American Academy of Allergy, Asthma, & Immunology (AAAAI) Annual Meeting Virtual

February 26 – March 1, 2021

American Thoracic Society Annual Meeting

May 14 – 19, 2021
San Diego, CA

Featured Speaker

Anthony S. Fauci, M.D.

COVID-19: Public Health and Scientific Challenges



PRESENTED DURING

Opening Plenary Session
Saturday, October 3

10:00 AM – 11:00 AM CDT

Hear from Dr. Anthony S. Fauci, director of the National Institute of Allergy and Infectious Diseases at the U.S. National Institutes of Health, as he discusses "COVID-19: Public Health and Scientific Challenges." Following, Dr. Fauci will sit down with **AAP President Sara "Sally" H. Goza, MD, FAAP**, for a question and answer session.

Section on Pediatric Pulmonology and Sleep Medicine Executive Committee Roster

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