

June 2016

Asthma Camps

Free Weekend Respiratory camps are available thru Camp Soaring Eagle in Cornville, Arizona, for children ages 6-15 years with asthma.

Apply at: www.campsoaringeagle.org or contact Anna Viviano, Camper Recruiter at 480-253-9924.

Here is a **great resource** to share with parents of a child or teenager with asthma, interested in **finding an asthma camp** in their community:

The Consortium on Children's Asthma Camps - <http://asthmacamps.org/>

**Arizona Asthma Coalition's
10th Annual Clinical Asthma & Allergy Conference
Saturday, October 8th, 2016**

SAVE THE DATE!!!! The Arizona Asthma Coalition will hold its 10th Annual Conference on Saturday, October 8, 2016, from 8 a.m. to 4 p.m. at St. Joseph's Hospital & Medical Center, Phoenix. The theme of the conference is "*The Role of Inter-Professional Teams in Managing Asthma & Allergy.*" The conference will explore best practices and teamwork in various outpatient, inpatient and community settings. There will also be three tracks:

- Pharmacology - comparison of currently-available inhaled corticosteroids, and new biologics in the treatment of asthma
- Clinical Practice - allergy treatments: sublingual vs. subcutaneous immunotherapy, and new biologics in the treatment of asthma
- School Nurses - basic pharmacology of inhalers, long-term control vs. quick-relief inhalers, use of inhalers before exercise, and protocols for asthma emergencies/training non-medical staff to manage asthma emergencies

CME/CEU credits will be applied for: physicians, PAs, nurses, nurse practitioners, asthma educators and respiratory care practitioners. Watch for registration materials in July! www.azasthma.org

For further information, contact: Melanie Esher-Blair at mesher@peds.arizona.edu

**Association of Asthma Educators
2016 Annual Conference
August 5-7, 2016 in Jacksonville Florida**

The Association of Asthma Educators is the premier inter-professional organization striving for excellence to raise the competency of diverse individuals who educate patients and families living with asthma.

The primary purposes of the Association of Asthma Educators are to:

- Promote asthma education as an integral component of a comprehensive asthma program.
- Raise the competence of health care professionals who educate individuals and families affected by asthma
- Raise the standard of care and quality of asthma education delivered to those with asthma.

<http://www.asthmaeducators.org/>

Please submit any upcoming conferences to info@naecb.org

Asthma in the News

Pathways to Asthma Reimbursement

A new publication has been developed by the Childhood Asthma Leadership Coalition which clearly and succinctly summarizes the strategies available through Medicaid to support community asthma services, including home visits.

[http://www.nchh.org/Portals/0/Contents/Medicaid Pathways to Asthma Reimbursement CALC May2016.pdf](http://www.nchh.org/Portals/0/Contents/Medicaid_Pathways_to_Asthma_Reimbursement_CALC_May2016.pdf)

Teenagers with Asthma Have Increased Risk of Anaphylaxis, Study Finds

The link has prompted concerns among health professionals, that a teenager's anaphylactic reaction could be mistaken for an asthma attack, leading to a delay in the administration of a life-saving adrenaline auto injector.

<http://bit.ly/23TKBiS>

Tough-to-Treat Asthma Symptoms Linger for Years

The multicenter, observational TENOR II study evaluated the prevalence of persistent very poorly controlled asthma more than 10 years after their enrollment in TENOR I, which was designed to examine the causes of poor asthma control in this subset of patients. Almost half of TENOR I patients were still poorly controlled a decade later.

<http://bit.ly/23V6o9W>

Extending Authorities to All Tobacco Products, Including E-Cigarettes, Cigars, and Hookah

The FDA will now be able to: 1) Review new tobacco products not yet on the market; 2) Help prevent misleading claims by tobacco product manufacturers; 3) Evaluate the ingredients of tobacco products and how they are made; and 4) Communicate the potential risks of tobacco products. This final rule goes into effect on **August 8, 2016**.

<http://1.usa.gov/ROtOQD>

Survey: Common Asthma Warnings Overlooked

A new national asthma survey commissioned by National Jewish Health shows that many adults are unaware of common symptoms of asthma in adults. Doctors say that the findings explain why many adults with asthma may not realize that they have the disease, and don't seek treatment that can help them. <http://bit.ly/1WmvpvJ>

Mismatching Among Guidelines, Providers, and Parents on Controller Medication Use in Children With Asthma

In a study of 740 children, mismatches between parent reports and providers intentions regarding how the child was supposed to use inhaled steroids occurred for half of the children. Parents were less likely to report the same controller medication type as the provider if they were Latino, had a household smoker, or believed the controller medicine was not helping. <http://bit.ly/27Rfids>

Gene Responsible for Cleaning Airways Discovered

Researchers at Stony Brook University investigating the p73 gene discovered the gene is the master regulator of cells that consistently clean the airways of humans from inhaled pollutants, dust, and pathogens. <http://bit.ly/1UpUAeI>

Scientists Seek Genetic Clues To Asthma's Toll On Black Children

A new study found that the majority of genetic information scientists have on asthma patients doesn't apply to African-Americans, that the longest studies do not include very many minority populations. <http://bit.ly/24LzngE>

Persistent Asthma in Childhood Tied to COPD Risk As Young Adult *Treatments for children don't appear to offset risk in adulthood*

THURSDAY, May 12, 2016 (HealthDay News) -- Children with persistent asthma and reduced growth of lung function may be at increased risk for chronic obstructive pulmonary disease (COPD) in early adulthood, according to a study published in the May 12 issue of the *New England Journal of Medicine* (NEJM).

Michael McGeachie, Ph.D., an instructor in medicine at Harvard Medical School and Brigham and Women's Hospital in Boston, and colleagues followed 684 participants in the Childhood Asthma Management Program. When the study began, the children were between the ages of 5 and 12. The researchers followed the children until they were at least 23.

At the end of the study, 11 percent of the young adults were diagnosed with COPD. Other than persistent asthma, risks for COPD included being male and having poor lung function at the start of the study, the researchers said. By the time children with persistent asthma reached early adulthood, 75 percent showed an early decline in lung function or reduced lung growth. Treating

asthma in childhood didn't appear to change these patterns.

"Study participants were children with mild-to-moderate persistent asthma, which places them among the most severe 30 or 40 percent of all childhood asthmatics. Among this group, serious airway obstruction is an early-life possibility," McGeachie told HealthDay. "There may be interventions that can help mitigate these risks, although we do not specifically identify any."

Was the Doctor Right About Your Child's Asthma Diagnosis?

By Michael O. Schroeder
May 19, 2016

It seems like a eureka moment - and it may, in fact, be just that: Your child, who has been nursing a cough and wheezing while exerting himself, is finally diagnosed - with asthma.

Historically, research finds this common chronic respiratory disease was missed in many children, and today experts say in certain populations in the U.S., like low-income families, asthma is still considered to be underdiagnosed. But based on more recent international research, some experts now question whether the pendulum has swung way too far in the other direction and argue that today, asthma is overdiagnosed in kids. "The published literature is clear that many have a diagnosis of asthma with no supporting evidence," said Dr. Andrew Bush, a professor of pediatrics at Imperial College London who specializes in pediatric respiratory medicine, in an email. "We therefore need to up our game in using simple tests to confirm the diagnosis of asthma."

Bush co-wrote an article with Dr. Louise Fleming, also of Imperial College London, for the international journal Archives of Disease in Childhood, which commissioned the analysis piece evaluating whether asthma is overdiagnosed. He noted recent research from the Netherlands that concluded overdiagnosis of childhood asthma is common; according to that research, more than half of the children studied who had been diagnosed with asthma likely did not have the condition. Bush and Fleming also cite an Australian paper in which more than half of 100 children who were studied had been given the diagnosis of asthma prior to the investigation; after concluding testing, the proportion thought to have asthma shrank to 5 percent, they wrote. Researchers say overdiagnosis of asthma can lead to unnecessary treatment and expose kids to medication side effects.

One confounding factor in getting it right is that there's no gold standard for diagnosing asthma, says Dr. Elizabeth Matsui, a professor of pediatrics at the Johns Hopkins University School of Medicine, who chairs the American Academy of Pediatrics' Section on Allergy and Immunology. "There's no blood test that tells you, this is asthma," adds Dr. Erwin Gelfand, chair of pediatrics at National Jewish Health in Denver.

Instead, the diagnosis is often made based upon a child's symptoms, without additional testing done. However, experts point out that symptoms alone may not tell the whole story. "All that wheezes is not asthma," Gelfand says. "There are many things that can cause a child to apparently have an asthma-like attack, with wheezing, but it's not really asthma in the usual sense." Instead, he says, the wheezing might be caused by another disease, such as croup or bronchiolitis, a congenital issue causing airway inflammation or even a small foreign body - say, a pea - stuck in a child's wind pipe. Nor is a chronic cough a sure sign of asthma, either,

doctors say.

Practitioners add that, at present, asthma testing also leaves something to be desired. "The tests in asthma are sometimes not sensitive enough or sometimes not specific enough," Matsui explains. That can lead to both missed diagnoses as well as overdiagnosis. In addition, children under 5 or 6 can't be tested using lung function tests, like spirometry, Gelfand says, "because they can't blow properly - they can't use the equipment properly."

Sometimes children are started on medication like an inhaled corticosteroid as a means of diagnosis, to see if their symptoms respond and determine whether they have asthma. The doctor may then have the child stop taking the medications to see if symptoms return. However, though treatment is generally considered safe, Bush and Fleming write that side effects associated with asthma medications range from kidney failure and growth suppression to an increased risk of respiratory infections, and that children shouldn't be left on therapeutic trials of treatment indefinitely. Children should not take asthma medications for prolonged periods if the medication doesn't help address the symptoms they're experiencing, Matsui echoes.

An evaluation of a child suspected to have asthma should include looking at a child's family history - parents with asthma are much more likely to have children with asthma - and other factors that could be contributing, such as allergy triggers ranging from pets to dust mites. For parents of children whose symptoms don't respond to asthma medication, experts recommend taking the child in for a follow-up evaluation and tests, as necessary, to confirm the original diagnosis. (Routine follow-up care for a child with asthma should also include discussing medication dosage with the doctor to ensure it's kept as low as possible to be effective, while limiting side effects.) If parents have questions about a child's asthma diagnosis, they should see

a specialist, such as a pediatric allergist or pediatric pulmonologist, who could more definitively define whether asthma is present, Gelfand says. "It doesn't mean the pediatrician or family practice is wrong, it's just the next step in an evaluation." Furthermore, Bush and Fleming advise an additional safeguard is to consider the diagnosis of asthma as dynamic, since many children outgrow their symptoms, and many doctors frequently get it wrong. "No matter who has made the diagnosis, always consider whether it was actually correct in the first place, or whether it is still relevant," they write.

Experts stress that just as parents should insist on a proper diagnosis, they shouldn't cease a child's treatment simply because they believe a diagnosis of asthma may be wrong. "Don't stop the inhalers! Because if your child does have asthma, this could be catastrophic," Bush says. "Asthma kills children in the USA as well as the UK." More than 3,600 people of all ages died from asthma in 2013, according to the latest data available from the Centers for Disease Control and Prevention.

Poorly managed or undiagnosed asthma can also have significant impact on a child's lung function and quality of life, Gelfand says. For an infant or young child, it could result in poor sleeping, less energy, poor feeding and chronic coughing, so parents should be alert to possible symptoms of asthma in their children: "Are they running around like all the other kids? Do they stop and hunch over because they're trying to catch their breath? Are they waking up at night coughing?" he says. "Nighttime coughing is probably the most important symptom of asthma."

Ultimately, parents' due diligence could make all the difference. Given, as Matsui notes, there's some degree of overdiagnosis and underdiagnosis, experts say parents should discuss any concerns with their child's physician and follow-up, as needed, to ensure proper diagnosis -

whether the child has asthma or not.

<http://health.usnews.com/health-news/patient-advice/articles/2016-05-19/was-the-doctor-right-about-your-childs-asthma-diagnosis>

Capitalizing on a teachable moment motivates parents of kids with asthma to quit smoking

By Boston University Medical Center
May 17, 2016

Parents who smoke are more likely to quit smoking after receiving motivational smoking cessation counseling following a "teachable moment" (TM) such as witnessing their child experience an asthma attack.

The study, which appears in the journal *Addiction*, also found that in-home counseling visits, including feedback on their child's second hand smoke exposure (SHSe) and counseling phone calls improved the likelihood of smoking cessation and less SHSe.

Despite a reduction in overall smoking prevalence, parental smoking and pediatric SHSe remain high, particularly among minority and low income families with children with asthma. More than 40 percent of all children are exposed to SHSe, which increases the risk for asthma.

Led by Belinda Borrelli, PhD, professor of Health Policy & Health Services Research and Director of Behavioral Science Research at Boston University Goldman School of Dental Medicine (BUGSDM), the researchers compared parents who smoke and have a child with asthma to parents who smoke and have healthy children.

They found parents of children with asthma who experienced a TM (child's asthma exacerbation) and motivational smoking cessation counseling were more than twice as likely to quit smoking than those parents of healthy children who received identical counseling. In addition, among parents of children with asthma, those who received long-term in-home and telephone counseling were more than twice as likely to quit smoking versus parents who received short-term counseling. They also had children with an 81 percent lower risk of being hospitalized for asthma and were about half as likely to miss school due to asthma or have asthma symptoms.

According to Borrelli, interventions or counseling provided during a teachable moment does motivate smoking cessation. "Despite the fact that our sample had a high prevalence of risk factors that are typically associated with difficulty quitting smoking such as lower education, low income, single mothers, etc. we achieved quit rates that were two-five times greater than spontaneous quit rates," she explained.

Borrelli believes that these results underscore the need to develop novel interventions to motivate cessation and augment risk perception among parents of healthy children, who had lower quit rates in the study.

<https://www.sciencedaily.com/releases/2016/05/160517083046.html>

Improving pediatric asthma care: a partnership between pediatric primary care clinics.

Sheikh SI, Chrysler M, Ryan-Wenger NA, Hayes Jr D, McCoy KS.

April 2016

Background:

Asthma is a common chronic disease of childhood. Providers' adherence to asthma guidelines is still less than optimal.

Objectives:

To determine if an Asthma Education Program aimed at primary care practices can improve asthma care within practices and if the results vary by duration of the program.

Methods:

Ten practices were randomly assigned to an Early Asthma Education Intervention (EI) group or a Delayed Asthma Education Intervention (DI) group. The EI group received the intervention for 12 months and was monitored for 6 additional months. The DI group was observed without intervention for 12 months, then received the intervention for 6 months, and was monitored for 6 additional months. The program included training of asthma educators in each practice and then monitoring for improvement in medical record documentation of National Asthma Education and Prevention Program (NAEPP) asthma quality indicators by blinded random review of patient charts.

Results:

In the EI group, 6-, 12-, and 18-month data revealed significant improvement in documentation of asthma severity, education, action plan, night time symptoms, and symptoms with exercise compared to baseline and compared to DI group at baseline and at the 12-month interval. In the DI group, significant improvement in documentation in all of the above endpoints and also in documentation of NAEPP treatment guidelines was noted at 18 and 24 months. In both groups, documentation levels remained relatively stable at 6 months after the intervention, with no significant differences between groups. While improved, guideline adherence was <80% for half of the indicators.

Conclusion:

In-office training of non-physician asthma providers improves the quality of asthma care.

<http://www.ncbi.nlm.nih.gov/pubmed/26666448>

The development of an educational video to motivate teens with asthma to be more involved during medical visits and to improve medication adherence

Sleath B, Carpenter DM, Lee C, Loughlin CE, Etheridge D, Rivera-Duchesne L, Reuland DS, Batey K, Duchesne CI, Garcia N, Tudor G
May 2016

OBJECTIVES:

Our objective was to develop a series of short educational videos for teens and parents to watch

before pediatric visits to motivate teens to be more actively involved during their visits.

METHODS:

The development of the short educational videos was theoretically guided by Social Cognitive Theory. First we conducted four focus groups with teens (ages 11 to 17) with asthma, four focus groups with the teens' parents, and seven focus groups with pediatric providers from four clinics. The research team, which included two teens with asthma and their parents, analyzed the focus group transcripts for themes and then developed the initial video script. Next, a visual storyboard was reviewed by focus groups with parents and four with teens to identify areas of the script for improvement. The English videos were then produced. Focus groups with Hispanic parents and teens were then conducted for advice on how to modify the videos to make a more culturally appropriate Spanish version.

RESULTS:

Based on focus group results, teen newscasters narrate six one- to two-minute videos with different themes: (a) how to get mom off your back, (b) asthma triggers, (c) staying active with asthma, (d) tracking asthma symptoms, (e) how to talk to your doctor and (f) having confidence with asthma. Each video clip has three key messages and emphasizes how teens should discuss these messages with their providers.

CONCLUSIONS:

Teens, parents, and providers gave us excellent insight into developing videos to increase teen involvement during medical visits.

<http://www.ncbi.nlm.nih.gov/pubmed/27145093>

Medical and social determinants of health associated with intensive care admission for asthma in children.

McDowell KM, Kercksmar CM, Huang B, Guilbert TW, Kahn RS.
May 2016

RATIONALE:

Risk factors for severe asthma exacerbations in children requiring admission to the intensive care unit (ICU) may occur in variety of medical, environmental, economic and socio-economic domains.

OBJECTIVE:

We sought to characterize medical and socio-demographic risk factors among children who required admission to the intensive care unit for asthma.

METHODS:

Data were obtained from the Greater Cincinnati Asthma Risk Study, a population based, prospective, observational cohort of children admitted for treatment of acute asthma or bronchodilator responsive wheezing. Data collected on 774 children included race, socioeconomic status, allergen sensitization, environmental exposures, psychosocial strain and financial hardship. Analyses compared children admitted to the intensive care unit to those admitted to a medical inpatient unit.

MEASUREMENTS AND MAIN RESULTS:

One hundred sixty one (20.9%) children required admission to intensive care. There was no difference in sex, race, insurance status, caregiver educational level, income, financial strain, psychological distress, or marital status between the ICU and non-ICU cohorts. Risk for medication nonadherence assessed by parent report was not different between groups. Although previous hospital admission or emergency department visit history did not differ between the groups, prior intensive care unit admission was more common among those admitted to the intensive care unit at the index admission (27% vs. 16%, $p = .002$). Children requiring intensive care admission were more likely to be sensitized to multiple aeroallergens. Exposure to cigarette smoke (measured as salivary cotinine), although a risk factor for hospital admission, was negatively associated with risk of intensive care unit admission.

CONCLUSIONS:

Social and economic risk factors typically predictive of increased asthma morbidity, including exposure to tobacco smoke, were not associated with intensive care unit admission among a population of children admitted to the hospital for treatment of acute asthma. Intrinsic disease factors including allergic sensitization may be more important predictors of ICU admission.

Abstract word count: 300 Funding source: This project was supported by National Institutes of Health grant (1R01A188116) to Robert S. Kahn.

<http://www.ncbi.nlm.nih.gov/pubmed/27144510>

New alliance targets major child asthma problems

By Jeremy Kelley

5/5/16

Asthma is quietly the No. 1 reason kids are admitted to Dayton Children's Hospital, and affects close to 2,000 Dayton Public Schools students (1 in 7), leading to significant absences and missed educational time.

Eleven Dayton community partners announced an effort to attack this \$56 billion national issue Thursday, with the creation of the Dayton Asthma Alliance.

"Asthma is something I think we just don't talk about, but when you look at the numbers, it's this huge issue that impacts so many kids," said Jessica Saunders, director of the Center for Child Health and Wellness at Dayton Children's. "When kids can't breathe - and that's really what happens with asthma, you feel like you're a fish out of water - it's really difficult to go to school and learn."

The new effort will have strong involvement from Children's, DPS and Public Health, among others, with a major focus on finding and fixing asthma triggers at home and at school - things like mold, dust mites, tobacco smoke and certain cleaning supplies.

"The healthcare that we provide once a child is sick is a very small portion of a child's overall health and wellbeing," said Dayton Children's CEO Deborah Feldman. "What happens in their home and in the schools and in the community bears a major impact."

Dayton Children's saw 14,191 asthma-related emergency room visits last fiscal year, or almost 40 per day. Saunders said in the new alliance, school nurses or the Pulmonary Clinic at Children's can refer families to a community health worker through Wright State University.

"That health worker goes into the home with an air-quality specialist from Public Health and they can find those triggers," Saunders said. "It could be as simple as changing the cleaning products a family is using, or more complicated, and need to involve a landlord for fixes on mold or moisture."

She said Children's is starting to see some early results where children who had repeat emergency room visits are having fewer asthma attacks.

Jeff Cooper, health commissioner for Dayton and Montgomery County, said despite the resources in place, too often there's little improvement in health outcomes. He said Dayton's collaboration - which includes CareSource, physician groups and public housing officials - should help.

"This is a better alignment of resources," Cooper said. "It's important that we have a system in place to correctly diagnose those children, link them to available resources so they can manage their asthma and look at those environmental triggers that may be causing or exacerbating their asthma."

Dayton Schools' Efforts

The city of Dayton and its schools are especially impacted, as asthma disproportionately affects

both poorer and black populations, according to health officials. Cooper said roughly 1 in 5 Ohio children living in poverty has an asthma illness, and DPS Associate Superintendent Shelia Burton said asthma is the No. 1 cause of illness-related 911 calls from the schools.

Dayton Public Schools took the first steps of its own pilot program on asthma back in 2014, as the only Ohio school district selected to participate in an American Academy of Pediatrics project. DPS Director of Health Services Virginia Noe said this year's five-school program will expand to the entire district in the fall.

"We have 25 full-time school nurses, so we're capable of taking good care of children at school. A lot of parents don't understand that," Noe said. "Our school staff received extra training in the five pilot schools (Kiser, Kemp, Louise Troy, Wogaman and Dayton Boys Prep) to recognize breathing problems earlier and know how to respond in each case."

Noe said in addition to being smoke-free, the district is moving to be fragrance-free, eliminating scented cleaning products and discouraging perfumes. She said DPS nurses are using their existing relationships with families to encourage the Asthma Alliance's home visits, already visiting nine homes of Louise Troy students.

"Those who have participated are having fewer asthma flare-ups at school and reducing the number of visits to the health office," she said.

Noe pointed to several goals - education outreach for more students, developing asthma management plans, training more school staff, plus tracking how many inhalers are available at each school and how many asthma action plans DPS receives from physicians.

"With better health outcomes, they'll be in their seats more often, which means they're learning more at school, which hopefully will translate into better academic success," Noe said.

<http://www.mydaytondailynews.com/news/news/new-alliance-targets-major-child-asthma-problems/nrHrp/>

Attack asthma: Kids are shown to suffer from bad air quality

By the Editorial Board

5/9/16

It's the kind of news that makes a person catch his breath.

Nearly 29 percent of fifth-graders in a study involving several elementary schools were found to have asthma. Another 11.7 percent of the 267 students in the study were determined to be at risk of developing it. And researchers with Allegheny Health Network who conducted the study found that the disease was uncontrolled in more than 45 percent of those already diagnosed with it.

The students hailed from the Environmental Charter School at Frick Park, the Waldorf School of Pittsburgh and the Allegheny Valley, Gateway, Northgate and Woodland Hills school districts. There is one important footnote to the findings: Students volunteered for the study, so

participation may have been skewed toward those who had asthma or feared developing it.

Still, the results point to the continuing need to address air quality in Pittsburgh, even though important strides have been made since the collapse of the steel industry. While Pittsburgh in recent years has received many accolades for livability, it does not fare so well where pollution is concerned.

Deborah Gentile, the network's director of allergy and asthma clinical research, "concluded that poor air quality is at least partially responsible for the high incidence of childhood asthma in the Pittsburgh region."

The results also point to the need to better diagnose asthma and get the affected into treatment. How to accomplish that? For starters, Dr. Gentile is calling for a uniform screening program for schoolchildren in the region, if not the state.

Dr. Gentile, her fellow researchers and The Heinz Endowments, which funded the study, have shed light on an important issue. Diagnosis and treatment are essential to student health, of course, but they also are linked to classroom achievement. Students cannot learn, or schools succeed, if students are out sick or too ill to concentrate on their studies.

<http://www.post-gazette.com/opinion/editorials/2016/05/09/Attack-asthma-Kids-are-shown-to-suffer-from-bad-air-quality/stories/201605310014>

Leveraging Mobile Technology in a School-Based Participatory Asthma Intervention: Findings From the Student Media-Based Asthma Research Team (SMART) Study

Warren CM, Dyer A, Blumenstock J, Gupta RS.

May 2016

Background:

Asthma places a heavy burden on Chicago's schoolchildren, particularly in low-income, minority communities. Recently, our group developed a 10-week afterschool program, the Student Asthma Research Team (START), which successfully engaged high school youth in a Photovoice investigation of factors impacting their asthma at school and in their community.

Purpose:

The present Student Media-Based Asthma Research Team (SMART) intervention adapted START to target middle school students with asthma during the school day. The 13-week SMART intervention leverages recent trends in mobile technology and the power of participatory media to improve student asthma self-management and outcomes, while enhancing asthma knowledge and support at the school and community levels through a student-led participatory media-based campaign.

Methods:

To assess the effectiveness of SMART, pre/post-intervention data were collected from student participants, their caregivers, and their classmates.

Results:

Pre/post assessments identified significant increases in participant asthma knowledge, self-efficacy, control, lung function, and empowerment. Participants also produced 4 educational videos. Through dissemination of these videos, peer and parental asthma knowledge increased. Parental asthma caregiver-related quality of life ($z = 2.83$; $P < .01$) also improved.

Translation to Health Education Practice:

Future health education work should consider leveraging ongoing advances in mobile technology and adopting a participatory media-based approach.

<http://www.tandfonline.com/doi/full/10.1080/19325037.2015.1133337#.VyjRDfkrKUK>

Local pharmacy partnership to prevent pediatric asthma reutilization in a satellite hospital

Sauers-Ford HS, Moore JL, Guiot AB, Simpson BE, Clohessy CR, Yost D, Mayhaus DC, Simmons JM, Gosdin CH.

May 2016

Objectives:

In our previous work, providing medications in-hand at discharge was a key strategy to reduce asthma reutilization (readmissions and emergency revisits) among children in a large, urban county. We sought to spread this work to our satellite hospital in an adjacent county. A key initial

barrier was the lack of an outpatient pharmacy on site, so we sought to determine if a partnership with community pharmacies could improve the percentage of patients with medications in-hand at discharge, thus decreasing reutilization.

Methods:

A multidisciplinary team partnered with community pharmacies. Using rapid-cycle improvement methods, the team aimed to reduce asthma reutilization by providing medications in-hand at discharge. Run charts were used to display the proportion of patients with asthma discharged with medications in-hand and to track 90-day reutilization rates.

Results:

During the intervention period, the median percentage of patients with asthma who received medications in-hand increased from 0% to 82%. A key intervention was the expansion of the medication in-hand program to all patients. Additional changes included expanding team to evening stakeholders, narrowing the number of community partners, and building electronic tools to support key processes. The mean percentage of patients with asthma discharged from the satellite who had a readmission or emergency department revisit within 90 days of their index admission decreased from 18% to 11%.

Conclusions:

Impacting population-level asthma outcomes requires partnerships between community resources and health providers. When hospital resources are limited, community pharmacies are a potential partner, and providing access to medications in-hand at hospital discharge can reduce asthma reutilization.

<http://pediatrics.aappublications.org/content/early/2016/03/15/peds.2015-0039>

Exploring the theoretical pathways through which asthma app features can promote adolescent self-management.

Carpenter DM, Geryk LL, Sage A, Arrindell C, Sleath BL
May 2016

Asthma apps often lack strong theoretical underpinnings. We describe how specific features of asthma apps influenced adolescents' self-observation, self-judgment, and self-reactions, which are key constructs of Self-Regulation Theory (SRT). Adolescents (ages 12-16) with persistent asthma used two asthma self-management apps over a 1-week period.

During semi-structured interviews, participants identified their asthma goals and the app features that best promoted self-observation, self-judgment, and fostered positive self-reactions. Interviews were digitally recorded, transcribed verbatim, and analyzed thematically using MAXQDA. Adolescents' goals were to reduce the impact of asthma on their lives.

Adolescents reported that self-check quizzes, reminders, and charting features increased their ability to self-observe and self-judge their asthma, which, in turn, helped them feel more confident they could manage their asthma independently and keep their asthma well-controlled. Asthma apps can positively influence adolescents' self-management behaviors via increased self-observation, self-judgment, and increased self-efficacy.

<http://link.springer.com/article/10.1007/s13142-016-0402-z>

Exposure to extreme heat and precipitation events associated with increased risk of hospitalization for asthma in Maryland, U.S.A.

Soneja S, Jiang C, Fisher J, Upperman CR, Mitchell C, Sapkota A.
May 2016

BACKGROUND:

Several studies have investigated the association between asthma exacerbations and exposures to ambient temperature and precipitation. However, limited data exists regarding how extreme events, projected to grow in frequency, intensity, and duration in the future in response to our changing climate, will impact the risk of hospitalization for asthma. The objective of our study was to quantify the association between frequency of extreme heat and precipitation events and increased risk of hospitalization for asthma in Maryland between 2000 and 2012.

METHODS:

We used a time-stratified case-crossover design to examine the association between exposure to extreme heat and precipitation events and risk of hospitalization for asthma

RESULTS:

Occurrence of extreme heat events in Maryland increased the risk of same day hospitalization for asthma (lag 0) by 3 % (Odds Ratio (OR): 1.03, 95 % Confidence Interval (CI): 1.00, 1.07), with

a considerably higher risk observed for extreme heat events that occur during summer months (OR: 1.23, 95 % CI: 1.15, 1.33). Likewise, summertime extreme precipitation events increased the risk of hospitalization for asthma by 11 % in Maryland (OR: 1.11, 95 % CI: 1.06, 1.17). Across age groups, increase in risk for asthma hospitalization from exposure to extreme heat event during the summer months was most pronounced among youth and adults, while those related to extreme precipitation event was highest among ≤ 4 year olds.

CONCLUSION:

Exposure to extreme heat and extreme precipitation events, particularly during summertime, is associated with increased risk of hospitalization for asthma in Maryland. Our results suggest that projected increases in frequency of extreme heat and precipitation event will have significant impact on public health.

<http://ehjournal.biomedcentral.com/articles/10.1186/s12940-016-0142-z>

Pediatric acute asthma exacerbations: evaluation and management from emergency department to intensive care unit.

Pardue Jones B, Fleming GM, Otilio JK, Asokan I, Arnold DH.
May 2016

OBJECTIVE:

The goal of this report is to review available modalities for assessing and managing acute

asthma exacerbations in pediatric patients, including some that are not included in current expert panel guidelines. While it is not our purpose to provide a comprehensive review of the National Asthma Education and Prevention Program (NAEPP) guidelines, we review NAEPP-recommended treatments to provide the full range of treatments available for managing exacerbations with an emphasis on the continuum of care between the ER and ICU.

DATA SOURCES:

We searched PubMed using the following search terms in different combinations: asthma, children, pediatric, exacerbation, epidemiology, pathophysiology, guidelines, treatment, management, oxygen, albuterol, β 2-agonist, anticholinergic, theophylline, corticosteroid, magnesium, heliox, BiPAP, ventilation, mechanical ventilation, non-invasive mechanical ventilation and respiratory failure. We attempted to weigh the evidence using the hierarchy in which meta-analyses of randomized controlled trials (RCTs) provide the strongest evidence, followed by individual RCTs, followed by observational studies. We also reviewed the NAEPP and Global Initiative for Asthma expert panel guidelines.

RESULTS AND CONCLUSIONS:

Asthma is the most common chronic disease of childhood, and acute exacerbations are a significant burden to patients and to public health. Optimal assessment and management of exacerbations, including appropriate escalation of interventions, are essential to minimize morbidity and prevent mortality. While inhaled albuterol and systemic corticosteroids are the mainstay of exacerbation management, escalation may include interventions discussed in this review.

<http://www.ncbi.nlm.nih.gov/pubmed/27116362>

World Asthma Day- 4 out of 5 doctors say environmental pollution is the biggest cause of asthma

5/3/16

Asthma is a common inflammatory condition of airway that affects people of all ages and groups. This imposes a human and economic burden on not only the family of an asthmatic but also the nation. There are 300 million asthmatics worldwide with 1/10th of those living in India. A recent review analysis of 15 epidemiological studies showed that the mean prevalence of asthma among children was 7.24%. The prevalence of childhood asthma has continued to increase in last 10 years on the Indian subcontinent.

Curofy- India's largest community of doctors conducted a poll asking doctors what they thought was the main reason for prevalence of childhood asthma in India. Out of the 1040 doctors who polled their opinion 82% say that there has been an increased asthma incidence in children due to increased environmental pollution. Though asthma is thought to have a genetic predilection, the recent increase in asthma in children is a cause of concern. This surge has been blamed on various causes ranging from allergies to environmental pollution.

More than a million people are suffering from asthma, it is highly common in all ages. Incidence is on a rise because of recent changes in our global environment. Air pollution & particulate dust matters are on a rise. It requires regular pulmonary evaluation like spirometry followed by proper

medication to prevent further complications.' said Dr Anshum Aneja Arora, consultant W-Pratiksha hospital, Gurgaon.

11% of the doctors polled for second and first hand smoking whereas 7% chose genetic predilection as the leading cause for increased childhood asthma.

On being asked how to manage asthmatic patients Dr Sandeep Nayar from BLK hospital said, 'Self management is a necessity among asthma patients. Young children may not necessarily understand the chronic nature of their disease or how asthma is affecting their lives in a negative manner. The question then becomes, how can someone improve their quality of life if they do not even realise it is being negatively affected? Education is the key! Parents should make sure they make their young ones well aware about the disease and also, teach them steps to be followed during emergency.' (Read: World Asthma Day-India has 30 million asthma patients, 10% of global burden)

'A large chunk of younger generation is suffering from asthma which a matter of concern' said Nipun Goyal, Co Founder, Curofy. 'Its a problem and the first step towards solving it is identification of the cause. We tried to do that by asking doctors about it and the results clearly told us that environment pollution needs to be controlled to save our younger generation.' (Read: 10 asthma triggers you should avoid)

<http://www.thehealthsite.com/news/world-asthma-day-3rd-may-4-out-of-5-doctors-say-environmental-pollution-is-the-biggest-cause-of-asthma-ag0516/>

National Institutes of Health Statement on World Asthma Day 2016

5/3/16

On World Asthma Day 2016, the National Institutes of Health reaffirms its commitment to support research to improve the lives of all people with asthma. NIH-funded research has advanced our understanding of asthma as a disease as well as the impact asthma has on the lives of those affected. We have made great strides in learning how to treat and prevent asthma, and we are committed to ensuring that scientific discoveries move quickly into clinical practice to provide the best possible care for all people with asthma.

Asthma is a chronic disease that intermittently inflames and narrows the airways. People with asthma may experience wheezing, breathlessness, chest tightness and coughing when the airways narrow. Roughly 300 million people worldwide live with this condition, including approximately 24 million in the United States. In the United States, asthma is a major contributing factor to missed time from school and work, and is also a major cause of hospitalization and emergency department visits.

Three NIH institutes lead studies of asthma: the National Heart, Lung, and Blood Institute (NHLBI); the National Institute of Environmental Health Sciences (NIEHS); and the National Institute of Allergy and Infectious Diseases (NIAID). Together, these institutes support research to understand the causes of asthma and develop ways to better manage this condition as well as on the increasingly important area of implementation, which translates scientific discoveries into clinical practice.

NHLBI-supported research on the development and testing of new asthma treatments and management strategies has shaped current practice recommendations, but these interventions are implemented inconsistently in children who are at high risk for poor asthma outcomes. To address the need to use proven interventions to help all children who are at high risk for poor asthma outcomes, NHLBI will soon launch the second part of the Asthma Empowerment Collaborations to Reduce Childhood Asthma Disparities program. The first part of the program is ongoing, with nine teams of investigators reaching out within their communities to understand the needs of everyone involved in the care of children with asthma. Later this year, applications will be accepted for the second part of the program to test interventions designed to meet the needs of their community. The program will require investigators to create systems to better coordinate care among health care providers, families, and the communities in which they live, extending from the child's home to the community. Investigators will be tasked with finding ways to widely distribute the most successful models of care and identifying partners to sustain the interventions locally.

NIEHS scientists are studying the complex relationship between the environment, the immune system, and asthma. Specifically, the scientists want to identify triggers of asthma attacks, what conditions may cause asthma, and the biological mechanisms involved. This strategy will inform future treatment and prevention efforts and has already produced some exciting results. In 2015, NIEHS researchers showed that easy-to-use allergen test kits and educational materials helped parents reduce asthma-triggering allergens in their homes. Other NIEHS projects are currently working with families to improve air quality at home through strategies such as air filters and greener cleaning products. Efforts to reduce outdoor air pollution during recent decades also are making a difference in homes and cities across the country. NIEHS-supported researchers at the University of Southern California recently showed that long-term improvements in regional air

quality resulted in healthier lung growth and fewer symptoms of bronchitis-like symptoms in children.

NIAID's asthma research focuses on better understanding the role of the immune system in the disease and identifying new treatment and prevention strategies. The NIAID-sponsored Inner-City Asthma Consortium (ICAC) designs and implements immune-based asthma therapies and conducts studies to define and treat the disease in inner-city children. Past ICAC studies have shown that programs aimed at decreasing exposures to household allergens and at implementing guidelines-based asthma therapy decrease children's asthma symptoms and health care visits. Recently, ICAC investigators found that adding a short course of the drug omalizumab to ongoing guidelines-based care decreases seasonal asthma attacks and colds. In addition, NIAID-supported investigators in Boston are assessing whether a school-based program aimed at reducing children's exposure to mouse allergen, mold, and air pollutants will decrease the burden of asthma among urban schoolchildren.

Scientists hope these on-going and future NIH-supported research efforts will lead to new implementation approaches to treat and prevent asthma for future generations. Learn more about how NHLBI, NIEHS and NIAID are turning discovery into health at <https://www.nih.gov>.

Part of the National Institutes of Health, the National Heart, Lung, and Blood Institute (NHLBI) plans, conducts, and supports research related to the causes, prevention, diagnosis, and treatment of heart, blood vessel, lung, and blood diseases; and sleep disorders. The Institute also administers national health education campaigns on women and heart disease, healthy weight for children, and other topics. NHLBI press releases and other materials are available online at <http://www.nhlbi.nih.gov>.

NIAID conducts and supports research - at NIH, throughout the United States, and worldwide - to study the causes of infectious and immune-mediated diseases, and to develop better means of preventing, diagnosing and treating these illnesses. News releases, fact sheets and other NIAID-related materials are available on the NIAID website.

NIEHS supports research to understand the effects of the environment on human health and is part of NIH. For more information on environmental health topics, visit <http://www.niehs.nih.gov>. Subscribe to one or more of the NIEHS news lists <http://www.niehs.nih.gov/news/releases/newslist/index.cfm> to stay current on NIEHS news, press releases, grant opportunities, training, events, and publications.

About the National Institutes of Health (NIH): NIH, the nation's medical research agency, includes 27 Institutes and Centers and is a component of the U.S. Department of Health and Human Services. NIH is the primary federal agency conducting and supporting basic, clinical, and translational medical research, and is investigating the causes, treatments, and cures for both common and rare diseases. For more information about NIH and its programs, visit www.nih.gov.

<http://www.readingeagle.com/ap/article/many-of-dcs-poor-children-struggle-with-asthma-and-officials-might-make-it-worse-for-some>

Asthma, ADHD significantly increased among impoverished children

5/2/16

BALTIMORE - Children living in poverty experienced significantly higher rates of asthma and attention-deficit/hyperactivity disorder compared to wealthier children, according to recent study findings presented at the Pediatric Academic Societies Meeting.

"With the recent release of the American Academy of Pediatrics guidelines suggesting poverty screening as an essential component at every child health visit, we need to be aware that poor children already at greater risk for common childhood illnesses such as asthma, ADHD and autism often face even more medical conditions on top of these," Christian D. Pulcini, MD, MEd, MPH, from Children's Hospital of Pittsburgh of UPMC, said in a press release.

To evaluate sociodemographic trends in prevalence and comorbidities for asthma, ADHD and autism - three common conditions which could have important policy implications for government programs, such as the Supplemental Security Income program - the researchers conducted secondary analyses of the National Survey of Children's Health data in 2003, 2007, 2011 and 2012.

The researchers used multivariable regression to determine sociodemographic predictors of comorbidities among children with asthma, ADHD and autism in 2011/12.

According to study results, children living in poverty experienced the largest increases in asthma (25.8% in the 0-99% Federal Poverty Level; 14.9% in the 100-199% level) and ADHD (43.2% in the 0-99% level; 52.4% in the 100-199% level) with a statistically significant increased vs. more affluent children ($P < .001$).

The researchers noted that children with asthma and ADHD with two or more comorbidities also significantly increased (27.28%, 32.44%, $P < .01$) among impoverished children vs. wealthier children. Additionally, researchers found that children in extreme poverty with asthma and ADHD were twice as likely to exhibit more than one comorbidity when compared to wealthier children.

"This study reinforces the importance for clinicians to carefully assess and monitor comorbid conditions among children with ADHD and asthma, especially those in poverty," Pulcini told *Infectious Diseases in Children*. "Policies which support practitioners, promote medical homes and support children and families in poverty or near poverty should be considered to adequately address the complex medical needs of children in poverty. Further study is needed to ensure that these children are receiving the appropriate health services based on their primary diagnosis, co-morbid conditions and socioeconomic status." - by Bob Stott

<http://www.healio.com/pediatrics/add-adhd/news/online/%7B845db11f-43b3-4e9d-afb4-c60ec6c0e50d%7D/asthma-adhd-significantly-increased-among-impoverished-children>

The editors would like to acknowledge Madeline Daniels and Gabriel Vasquez from First Focus, and Tisa Vorce from the Michigan Department of Health and Human Services, for sharing news items related to Asthma in the News.

NAECB Newsletter Editors:

Kimberly Byrne, RN, BSN, CPN, AE-C
Karen Meyerson, MSN, APRN, FNP-C, AE-C

Helpful Links

[Exam Info And Registration](#)

[Review Classes](#)

[Candidate Handbook](#)

[FAQ's](#)

[Code of Conduct](#)

NAECB Members

Visit the [NAECB Certificant Corner](#) for past newsletters, forms for replacement pins and certificates, and to update your contact information.

Promoting Excellence in Asthma Education

CONSULTING SERVICES

What We Offer

Our goal is to help make your business as efficient and profitable as possible. We will work with you to help solve your problems, while understanding that you have limited resources and budget. Upon completion, we will present to you a written assessment of your business and recommendations for improving inefficiencies and cost. **Sign up today.**

© Copyright 2013. National Asthma Educator Certification Board
4001 E. Baseline Suite 206, Gilbert AZ 85234
Telephone No: 877.408.0072 | Email Adress: info@naecb.org