All Drug Allergy Labels Require Evaluation: Most Can Be Disproven

By John Accarino, MD

As allergists, we frequently see patients who are concerned for potential food, environmental, or drug allergies. While testing for food and environmental allergies is part of everyday practice, drug allergy evaluation is not as straightforward but is just as important. In many cases, non-allergic symptoms related to the specific medication mechanism of action or underlying illness are mistaken as an allergy caused by the drug. Drug allergy labels that have not been thoroughly evaluated by a physician should be considered “unconfirmed,” and perceived as an unresolved health issue that needs to be actively addressed.

Unconfirmed drug allergy labels are not benign and frequently persist in patients’ health records for years. Avoidance of antibiotics due to the presence of unconfirmed allergy labels is associated with inferior clinical outcomes and increased mortality. The alternative medications used have increased “on-target” side effects as well as increased risk of developing untreatable infections resistant to multiple classes of antibiotics.

As a common example, 10% of the entire US population carries a self-reported penicillin allergy label. These 30 million Americans would benefit from a formal drug allergy evaluation, however only a minority ever present to an allergist’s office. In those who are evaluated, greater than 90% have their allergy deleted after proving they are not allergic to penicillin during their office visit. Even in the minority who retain their penicillin allergy labels upon initial physician evaluation, 80-90% will lose their sensitivity after 5-10 years.

AAFANE’s 2023-24 Medical Research Grant Progress Report

Healthy Homes (HHOMES): Piloting an Innovative Electronic Medical Record Environmental Health Screening Tool in an Urban Primary Care Asthma Population

By: Shalini H. Shah, DO and Marissa Hauptman, MD MPH

Project Aim
The proposed project aimed to develop and implement an environmental screening tool in the Boston Children’s Hospital Primary Care Asthma Program to better detect and address environmental hazards that could be contributing to a patient’s asthma.

Updates/Accomplishments
In its first year, our multidisciplinary team was able to review the literature for current screening tools and develop an environmental screener that screens for a range of known environmental triggers of asthma (Figure 1). This tool is sent to patients in the Boston Children’s Primary Care Asthma Program prior to their clinical visit and results integrate into the electronic medical record through use of the Tonic for Health platform. This program has integrated itself into the structure of a busy clinical program that cares for patients with a range of asthma severity – from mild intermittent to severe persistent. The research team outreach to families to encourage completion of the survey, reviews results, and notifies the provider of environmental hazards identified. Providers are then able to address these concerns within the visit leveraging the use of educational, community-based, and physical resources per their clinical discretion.

HEALTHY HOMES “HHOMES” SCREENER TOPICS

H: Housing type and ownership status
H: H$_2$O (water contamination, mold)
O: Oxygen (indoor/outdoor air quality, smoke exposure)
M: Mites (pets/rodents)
E: Exposure (chemical products)
S: Stressors (social determinants of health, climate change)

Figure 1

Continued on page 2
Allergists are also consulted by patients or other physicians about symptoms that occur after vaccination. The majority of vaccine allergy labels also can be disproven by allergy evaluation with potential rechallenge if additional doses or boosters are indicated. In the 2 years that have passed since the introduction of vaccines for COVID-19, more than 13 billion vaccine doses have been administered worldwide. Immediate and delayed reactions are relatively common and frequently mimic an allergic reaction. However, these reactions are often not allergic in nature and do not contraindicate revaccination. This was confirmed in a meta-analysis of 22 studies including over 1300 patients with immediate reactions to their first dose of COVID-19 mRNA vaccination; greater than 99% tolerated subsequent administered doses.

Overall, true drug allergy is an important consideration after symptoms following a medication or immunization. That being said, there are many patients with unconfirmed drug allergy labels who may be unnecessarily suffering from the harms of that label when it has not been evaluated by a physician. Immediate investigation and formal allergy evaluation can bridge this gap, giving patients back the tangible benefits of 1st-line medications such as shorter hospital stays and improved quality of life.

References:

John J.O. Accarino, MD, is an allergist/immunologist in the Division of Rheumatology, Allergy and Immunology at Massachusetts General Hospital and an instructor in Medicine at Harvard Medical School. His research includes drug allergy, particularly evaluations in special populations such as pediatrics and older adults.

As part of this initiative, patient-facing educational handouts were created to pair with the hazards screened for and have been built into a web-based platform 1 (Figures 2-3). These resources are currently available in English and Spanish. AAFANE funds enabled the purchase and distribution of nearly $3,000 worth of physical resources to mitigate reported hazards to 23 families. These resources included, but were not limited to, dust mite covers, indoor pest management supplies, HEPA air filters, safe cleaning supplies, air conditioner assistance. The program has been well adopted and received by the practicing providers.

Major Findings
In a one-year study period from 07/08/2022 to 07/08/2023, 176 of 448 unique patients with childhood asthma completed the survey, representing a response rate of 39%. Results show that 69% (n=122) reported at least one environmental hazard, with 28% (n=49) reporting greater than or equal to 3 concerns. The distribution of concerns reported are visualized in Figure 4.
Highlights from AAFANE’S Fall Gala 2023!

AAFANE’s for life without limits™ Fall Gala 2023 was a vibrant evening of celebration! A sold out event again this year, attendees included AAFA New England’s Board of Directors, members of its Medical Advisory Committee, and our very supportive asthma and allergy community for whom we are grateful. Our Champions of the Asthma & Allergy Community: Dr. Lynda Schneider, New England school nurses and Burtons Grill Restaurant Group represented by Denise Herrera, were all recognized for their outstanding work in the field of asthma and allergies. Heartfelt introductions of the Honorees were followed by the honorees relating their commitment to improving the quality of life for individuals with asthma and allergies each in their own way through their meaningful work.

Giovannie Bejin, pediatric nurse practitioner at Boston Medical Center, provided the Keynote Address and shared an inspiring message of her work with families affected by asthma in marginalized communities. Our Gold Sponsors shared exhibits with important materials highlighting their products for the asthma and allergy community. The evening’s festivities included a silent auction with trips to the Caribbean, dining experiences, and tickets to sporting and cultural events, as well as a host of other items. The evening was once again capped by the spectacular sunset and sparkling backdrop of the Boston skyline.

We are thankful for the generous support of our community! Funds raised will be used directly to provide education, programming, awareness, advocacy and support for our community, as we work every day to fulfill AAFA New England’s mission.
Further analysis revealed a disproportionate burden of environmental hazards experienced by patients residing in subsidized or public housing. For nearly all environmental categories screened with exception of indoor chemical air quality (outdoor air quality, pests, temperature insecurity, mold, and smoke exposure), we found that those residing in subsidized/public housing reported these hazards at a greater frequency compared to the total pool of respondents. We also identified 23% of respondents described temperature conditions within their home and 44% reported utility insecurity which may represent vulnerability to the climate crisis, an area worthy of future exploration and intervention. Analysis of responses showed that families most prefer referral-based resources, in addition to web-based and handouts, which can help inform strategic interventions for the primary care asthma program. When asked to select their visit priorities at their clinical visit, 49% of respondents (n=87) requested to learn more about triggers of asthma and how to avoid them.

Moving forward, we plan to improve our program based on lessons learned in this pilot phase while also looking to up-scale this effort by working with other clinical programs to broaden the reach. We will re-examine our workflows systemically to see how to best improve our response rate and efficiency of resource delivery to families. We will collate and develop more educational resources and expand the languages in which these are available. We will leverage and expand upon our new web-based resource hub to share content with other providers and specialties that care for patients with asthma to amplify the reach to patients and communities. Future analyses will explore health outcomes in the context of the environmental hazards reported by this patient population and examine seasonal trends of responses.

The development and implementation of this environmental screening program was presented in an oral presentation at the annual Pediatric Academic Society Meeting in Washington, D.C. in April 2023. Principles of environmental triggers of asthma and importance of screening were integrated into the Boston Children's Hospital Asthma and Allergy Spring Nursing Conference with over 200 attendees in June 2023. Our findings are currently being composed into a peer-reviewed manuscript for further dissemination. The educational materials are available in English and Spanish on our public facing website.1 We have presented this project to the Boston Children's Hospital Clinical Asthma Teams to expand the outreach efforts of the educational resources developed within our primary care program and in a preliminary effort for the expansion of this program to other clinics caring for children with asthma across Boston Children's Hospital.

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Boston Childrens Hospital

Marissa Hauptman, MD MPH
Boston Childrens Hospital

References
1. Pediatric Environmental Health Center | HHOMES | Boston Children's Hospital (childrenshospital.org - https://www.childrenshospital.org/programs/pediatric-environmental-health-center/hhomes)
Coming This Spring!

“Food Allergies: Diagnosis and Management”
and
“Food Allergies: Advances in Treatment”

Presented by medical experts, these webinars will answer your questions and bring you exciting information about new food allergy treatments.

Dates to be Announced!

Speaker Series webinars are recorded, visit https://asthmaandallergies.org/ to view.

AAFANE-MGH Food Allergy Buddies Update

AAFANE New England's Buddies Team: Sara Voorhees, PhD, Medical Advisor, Meghan Neri, Lead Consultant, Jan Hanson, M.A., Program Manager and Board Members Karen Roberto, Med, BSN, RN, NCSN and Christy O'Brien, JD, MA have been working hard on planning the parent activities associated with each Buddies event, and researching and compiling a comprehensive Resource Guide of Boston area allergists, psychologists, RDs and NP s who specialize in food allergies and are accepting new patients. On February 3, AAFANE was thrilled to attend the Buddies Somersville Founders Skating event with the MGH Buddies Team, Littles, Middles and Bigs! Tara McCarthy, RD, joined AAFANE at this event as our Medical Expert!

Legislative Advocacy

MA S.1338/H.2183 An Act to improve food allergy awareness – AAFANE New England reached out to our community asking folks to put their ‘rally caps’ on and write their legislators asking for co-sponsorship. 60 Co-sponsors to date!

ME LD1165 An Act to enhance cost-savings to consumers of prescription drugs.

AAFANE joined in adding our organization's name to a group sign-on letter requesting Maine legislators’ support of this bill.

Maine Advocacy: On January 10, 2024, AAFANE participated with other stakeholders in a Roundtable Discussion: Health Inequities and Disparities to explore the impact of legislation on marginalized communities.

HELP Co-Pays Bill: AAFANE submitted a letter to Senator Markey thanking him for his leadership in supporting the HELP Co-Pays bill. This Bill would ensure that all co-pays would count towards patients’ out-of-pockets costs enabling better access to needed treatments.

Food allergies aren't a choice. Not for the child, not for their parents, not for the family. When you learn your child has a food allergy you are inducted into a club you never asked to join. The diagnosis. The planning and preparation. The constant vigilance. The uncertainty. The fear.

“Just One Bite” is a book about relatability. As an experienced food allergy parent, educator, support group leader and advocate, some of the best medicine has come from connecting with others who understand. This book follows Meghan Neri's family's journey of fear, adversity, hope and connection. The book features 20 responses from individuals who have/manage various food allergies sharing what is bad AND good about their "restrictions." Meghan's goals while writing this book were to educate people about the seriousness of food allergies through a first-hand account, and help others know they are not alone.

A food allergy mom for more than 14 years, Meghan Neri co-founded a food allergy support group called SAFE (South Shore Allergy Families Educating) in 2017. In early 2023 she founded a food allergy education and consulting business foodallergyallies.com. A former school teacher, she knows the importance of education.

Just One Bite can be found globally through all major online book retailers and at innerpeacepress.com. Check your local bookstore, too!
Boston Children's Hospital

Ideas to Get Involved

**The Food Allergy Program at Boston Children's Hospital**

is interested in evaluating novel therapies for food allergies. We are currently recruiting patients for the **Microbiota Transplantation Therapy (MTT)** phase II trial in **PEANUT ALLERGY**. We are attempting to modify the gut microbiome in order to see if peanut allergy will improve. Eligible patients are between the ages of 12 and 17 years old and have a documented medical history of peanut allergy. We are aiming to identify whether administering MTT capsules orally can increase the dose of peanut at which patients react and protect them against peanut allergic reactions. **All research visits are free of charge. Compensation is provided.** If you have an interested patient or are interested in learning more about this exciting study, please email us at Ghinwa.AlHassanieh@childrens.harvard.edu or Angela.Zhang@childrens.harvard.edu.

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**Children and Adolescents: Peanut Allergy**

**A Safety and Efficacy Study of PVX108 in Children and Adolescents with Peanut Allergy**

- **Children aged 4 – 11 years (Cohort 2), inclusive, at the time of consent.**
- **Physician-diagnosed IgE-mediated peanut allergy**
- **Positive peanut DBPCFC with a reactive dose (RD) ≤300 mg peanut protein (≤443 mg [CRD]).**
- **Physician-diagnosed peanut allergy or children with a well-documented medical history of IgE-mediated reaction(s) after ingestion of peanut**
- **A Safety and Efficacy Study of PVX108 in Children and Adolescents With Peanut Allergy**

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**IDEA** (Investigating Dupilumab’s Effect on Asthma by genotype)

We are studying if people have a certain genetic make-up (genotype) will respond better to dupilumab. Adolescents and Adults age 12 and above with asthma are eligible. [https://answers.childrenshospital.org/dupilumab-asthma/](https://answers.childrenshospital.org/dupilumab-asthma/)

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**CHEETAH** (Mechanisms Underlying Asthma Symptoms and Exacerbations Across T2 status in children)

We are studying if there are different mechanisms in asthma symptoms during asthma exacerbations. Children age 6 17 with asthma are eligible.

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**ADRN** (Atopic Dermatitis Research Network)

We are investigating mechanisms of atopic dermatitis in any age 2 and above. This study wants to understand how the severity of atopic dermatitis or eczema is influenced by genetic factors.

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**LEADS** (Longitudinal Endotyping of Atopic Dermatitis through Transcriptomic Skin Analysis (Atopic Dermatitis Research Network))

We are aiming to learn certain characteristics of the skin and how those characteristics are related to the severity of Atopic Dermatitis and the skin’s response to different treatments. Anyone age 6 and above are eligible, including adults. We are also recruiting healthy controls.

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**EAGLE** (A Randomized, Placebo-Controlled, Double-Blind, Multicenter, Phase 2 Study to Assess the Efficacy and Safety of Daily OM-85 Treatment vs. Placebo given in Children Aged 6 Months to 5 Years with Recurrent Wheezing)

We are studying whether babies with wheezing will benefit from an oral treatment that modifies the gut microbiome.

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**SICAS-3** (School Inner-City Asthma Study)

We are evaluating whether children and adults with or without asthma have novel signatures in asthma control. Children and adults 5 and above including healthy controls are eligible.

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**Adolescents With Peanut Allergy - Full Text View**

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**The Food Allergy Center at Massachusetts General Hospital has several upcoming clinical trials for infants, toddlers, adolescents, and adults. Many studies involve peanut allergy, while one study involves multiple food allergies. We have trials starting for Eosinophilic Esophagitis. If you are interested in receiving information regarding any of the following, please email foodallergy@mgh.harvard.edu**
Thank You to Our Community and 2023 Sponsors!

On behalf of the AAFA New England Board of Directors and Medical Advisory Committee, we sincerely thank you for your support in 2023. Because of your generosity, we had an amazing and productive year. We have worked tirelessly to improve quality of life for all impacted by asthma, allergies and related diseases through our Educational and Family Programming, Awareness Activities, Speaker Series webinars, Research Support and Advocacy.

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Alert:
Brand name Flovent HFA and Flovent Discus asthma medicines were discontinued by GSK as of January 1, 2024. GSK’s authorized generics for these medicines ARE available, and have the exact same medicine as the brand name. These inhaled corticosteroid medicines are used as controller medicines to treat asthma. Please check with your insurance to find out if the generic versions of these medicines are covered. If they are not covered, you may request from the insurance company a “formulary exception” to see if your insurance company will provide an exemption and cover the authorized generic medicine.

Join the AAFANE Community and Get Involved!
- Join the AAFANE Community
- Receive emails about our Speaker Series Programs and Register to learn from the experts!
- Advocate with us for changes in public policy that will benefit the asthma and allergy community!
- Spread Awareness by participating in our social media!
- Support AAFA New England: your donations help us all “for life without limits”!
- Join us for AAFANE’s Fall Gala 2024 on November 1!

By joining our community you will receive updates and notifications about research, educational programs and events of interest to you.

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