

Science and Outcomes of Allergy and Asthma Research (SOAAR)

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A VERTICAL TIMELINE OF SIGNIFICANT RESEARCH ACHIEVEMENTS



2008 - 2013



First to empirically **demonstrate the geographic variability** in childhood asthma prevalence in Chicago. Rates ranged from **0% to 44% by neighborhood with the highest rates observed in Chicago's South and West sides.**

Published the **most comprehensive and widely-cited estimate to date** regarding U.S. childhood food allergy prevalence and severity. Results: **8% of U.S. children (1 in 13) have a food allergy; 40% of whom experienced a severe reaction.**



Found that community factors such as **local violence and drug-related crime** impact **asthma prevalence and severity** in children.

Determined the annual cost of food allergy to be **\$24.8 Billion; \$4,184 per child.** Direct medical costs (e.g. hospitalizations, doctor's visits) were estimated to be **\$4.3 Billion.**



Piloted the STudent Asthma Research Team (START), program to **empower students to improve asthma self-management.** START increased **community asthma knowledge** and led to positive behavior change.



Provided **practical translation of food allergy management guidelines** into recommended practices for pediatricians. www.foodallergythrive.com



2014-2016



Evaluated effectiveness of videos created by students in the START asthma program. **Videos significantly increased asthma knowledge among community members.**

<http://www.ruchigupta.com/asthma-videos/>

Published research on **access to emergency epinephrine** in Chicago Public Schools (CPS). The study showed that **emergency epinephrine** was used **38 times to treat anaphylaxis, 55% of which was for first-time reactions.**



Tracked asthma patients inhaled usage to improve asthma outcomes through new technology. This study will help **decrease asthma attacks in children by improving medication adherence.**

Developed grade-specific food allergy videos to **help students better understand and support** their food allergic classmates. www.foodallergyp2p.com



Improved student's health through an evidence-based community engaged approach that aligned with mandated academic standards. Students are **empowered to understand health conditions** that affect their communities and **create community-level change.**



Developed **anaphylaxis registries** for schools, the general public, and emergency departments (ED) to **systematically track and examine** the most common triggers of allergic reactions, including anaphylaxis; where reactions are occurring; and the care that individuals experiencing anaphylaxis receive.

2017- Future



Co-authored the **Addendum Guidelines for the Prevention of Peanut Allergy in the United States: Report of the National Institute of Allergy and Infectious Diseases-sponsored expert panel**, published in the January 2017 edition of the *Journal of Allergy and Clinical Immunology*.

Reviewing **current school-based food allergy policies in public and private schools**, including policies for the classroom, cafeteria, and extracurricular activities. By understanding what food allergy policies work best, SOAAR will be able to issue evidence-based recommendations for improving food safety for all children in school.



Determining **true prevalence, severity, and distribution of childhood food allergy in India** and identifying modifiable causal determinants of food allergy. SOAAR also hopes to better understand how and why food allergy arises by examining the differences in early dietary and environmental exposures between India and the U.S.

Examining **disparities in the ways that food allergy develops, affects, and is managed** by African American and White children in the U.S. This research is funded by the **National Institutes of Health** through its' prestigious R01 grant program.



Come SOAAR With Us! Support our research and help find answers and enhance allergy and asthma policy.

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www.ruchigupta.com