Allergic sensitization and asthma morbidity are influenced by geographic factors including environmental exposures, climate, socio-economic conditions, urbanicity, and population ethnicity. What is less clear is how the unique characteristics of a given location impact allergic sensitization and household exposures of the local patient population with asthma.

CHAMPS (Community Healthcare for Asthma Management and Prevention of Symptoms) is a translational research study evaluating the effectiveness of an evidence-based childhood asthma intervention in 3 federally qualified health centers (FQHCs) in Arizona, Michigan, and Puerto Rico.

CHAMPS enrolled 319 children with asthma between 5 and 12 years of age. Allergic sensitization was assessed by either skin prick test (Arizona) or IgE testing. Puerto Rican children had a higher prevalence of sensitization to all allergens tested, except for mold, where the highest prevalence was found in Arizona (37%), followed by Michigan (32%), and Puerto Rico (19%). In Puerto Rico, 77% of children were sensitized to Dust Mite, compared to 38% in Michigan and 34% in Arizona. Cochroach sensitization was 34% in Puerto Rico, 22% in Arizona, and 17% in Michigan. Allergen exposure can lead to both acute and chronic symptoms in sensitized asthmatics.

These exposures have been well studied in inner-city environments, but less so in other urban and rural environments. The CHAMPS study was designed to translate evidence-based asthma interventions from two successful NIH-funded clinical trials into the primary care practices at FQHCs serving diverse and underserved populations in three distinct geographic locations.

Methods

- The reasons for childhood asthma disparities are complex and involve many factors.
- Allergen exposure can lead to both acute and chronic symptoms in sensitized asthmatics.
- These exposures have been well studied in inner-city environments, but less so in other urban and rural environments. The CHAMPS study was designed to translate evidence-based asthma interventions from two successful NIH-funded clinical trials into the primary care practices at FQHCs serving diverse and underserved populations in three distinct geographic locations.

Results

- Allergen testing resources
- Electronic Medical Records in clinic
- Blood testing
- Off site
- Clinic program
- Blood testing off site
- Skin testing in clinic
- Mobile Home

Conclusions and Recommendations

- Allergen sensitizations, environmental exposures and housing conditions vary by geographic location.
- Many of these sensitivities and exposures are known to influence asthma development and subsequent morbidity.
- Clinicians should consider local geographic and environmental influences when treating their patients with asthma in order to guide their care and target patient and family education.