

The Ohio State University is developing a rapid, point-of-care, smartphone-based test of house dust for semiquantitative detection of inhalant allergens which commonly cause asthma symptoms. This app will be consistent with allergen measurement by the HUD standard protocol and better than questionnaire responses used as standard-of-care in homecare programs. They will develop and validate a rapid, smartphone-based app to detect allergens in dust and provide residents with education and intervention strategies.

They are validating and demonstrating usability of the app for improved real-time residential environmental hazard assessment in homes of asthmatic children by working with their community partner, the Asthma Express program, at Nationwide Children's Hospital Homecare. The program has direct access to the community and provides follow-up education and instruction to families of pediatric patients who suffer from severe asthma attacks through in-home nurse visits. Ohio State University researchers are working with them to integrate direct allergen measurement into their workflow using the developed app, which will enhance their ability to target interventions for each family and help reduce emergency room usage.