



ECHO

Environmental influences
on Child Health Outcomes

A program supported by the NIH



OVER ONE-QUARTER (28%) OF ECHO ISPCTN PARTICIPANTS ARE RURAL

BRIDGING THE BROADBAND GAP FOR RURAL PEDIATRIC PARTICIPANTS

ECHO IDeA States Pediatric Clinical Trials Network (ISPCTN)

Millions of Americans, particularly in rural settings, face multiple barriers to participate in clinical trials including the lack of a reliable, high-speed connection at home. The Environmental influences on Child Health Outcomes (ECHO) Program provides underserved and rural populations access to state-of-the-art clinical trials through its IDeA States Pediatric Clinical Trials Network (ISPCTN).

Over one-quarter (28%) of ECHO ISPCTN participants are rural. ECHO researchers have conducted remote trials for children living far from academic research or medical centers to enable them to participate from the comfort of their own homes. Yet, the lack of reliable, high-speed connection continues to be a barrier for some families.

ECHO's Innovative Solutions to Reduce Barriers



Wi-Fi Hotspots

ECHO researchers provided Wi-Fi hotspots to participants to overcome lack of broadband access.



Electronic Devices

ECHO study provided electronic devices to participants so they can participate from home.

This document was last updated 12/27/2023

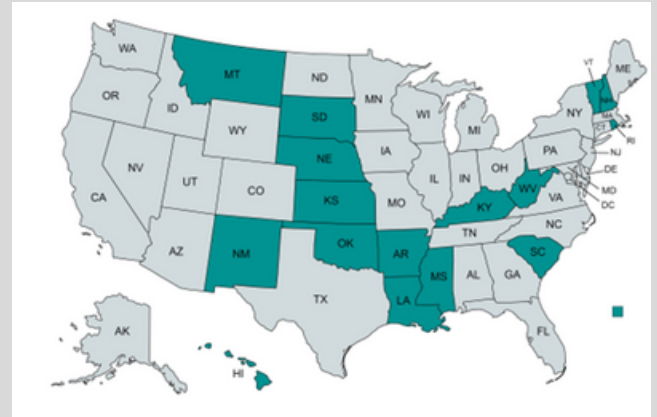
For questions on these findings or other echo program activities, please email
NIHKidsandEnvironment@od.nih.gov

Featured ECHO Clinical Trials that Successfully Bridged the Broadband Gap for Rural Pediatric Participants

1) BRONCHIOLITIS RECOVERY AND THE USE OF HIGH EFFICIENCY PARTICULATE AIR (HEPA) FILTERS (BREATHE) STUDY (ongoing)

Rural and underserved children have a **higher risk of decreased access to medical care** for symptoms and illness episodes, and a higher burden of asthma, often from a greater exposure to wood stove use or exposure to agricultural pollutants or wildfires.

BREATHE is a multi-center ECHO ISPCTN clinical trial to determine if indoor air filtration improves respiratory symptoms in children under 12 months of age who have been hospitalized for bronchiolitis. After two weeks of baseline indoor air quality measurements, the caregiver of the child participant installs air filtration units with or without HEPA filters in the child's sleep space and a common room. Researchers follow the children for respiratory outcomes for approximately 6 months.

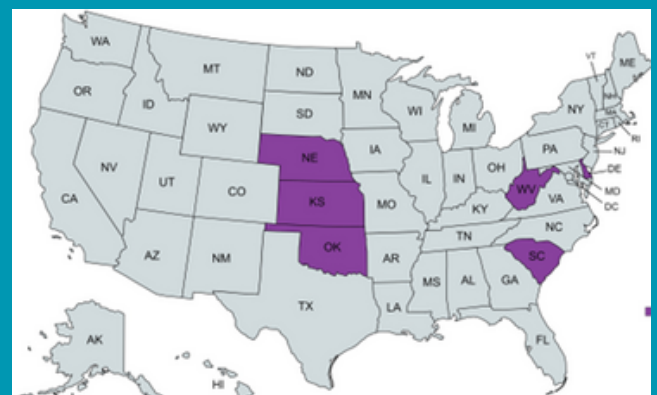


Overcoming Barriers: BREATHE is designed to reduce barriers to participation for rural participants by providing Wi-Fi hotspots to participants and not requiring them to visit a distant study site. Research staff conduct all study activities and data collection remotely. The air quality monitors in the home transmit streaming data.

2) RURAL DISPARITIES IN PEDIATRIC OBESITY: THE IAMHEALTHY INTERVENTION (trial completed)

Children in rural areas are disproportionately affected by pediatric obesity. Poor access to healthcare providers, lack of nutrition education, lower socioeconomic status, and fewer opportunities to be physically active are all unique barriers that contribute to this growing health concern.

iAMHealthy is a family-based behavioral, nutrition, and physical activity intervention developed with input from rural children and families that **capitalizes on the innovative use of mobile health applications (mHealth)**. iAmHealthy is a 25-contact-hour multicomponent intervention delivered over an 8-month period targeting 2nd-4th grade school children and their families.



Overcoming Barriers: to ensure participation and overcome broadband issues, the iAMHealthy trial provided iPads to participants to collect remote consent, remote weight and height data, and online surveys. The results of the trial suggest the mHealth intervention had effect on BMI.