

LEND project plain language summary

Asthma is a chronic medical condition that affects approximately 1 in 12 children in the United States and has a significant impact on the health and quality of life of affected children. Using asthma inhaler medication correctly can be especially challenging for children with intellectual and developmental disabilities (IDD) as they may struggle to understand instructions for correct inhaler use and caregivers may also face a higher childcare burden from additional social and emotional constraints. This study aims to investigate the benefit of using smart inhalers in the IDD population to improve the rate of correct medication administration. Smart inhalers are the new medical devices that provide step-by-step audiovisual feedback during inhaler administration. During this study, we will recruit adolescents (age 10-19 yo) with intellectual and developmental disabilities (IDD) and co-occurring moderate-to-severe asthma, and conduct a randomized controlled study where one group of patients will receive a smart inhaler to use at home and the other group of patients will not use a smart inhaler. We hypothesize that the group who uses smart inhalers will have improved inhaler administration technique. This effort is aimed at promoting better asthma management and the prevention of exacerbations in the IDD population. Also, as the IDD population is underrepresented in medical research, this research effort aims to expand the current literature database on asthma and its treatment in people with IDD.