



# Asthma Knowledge Gained After An Educational Video Designed For Limited English Proficiency Asthma Caregivers

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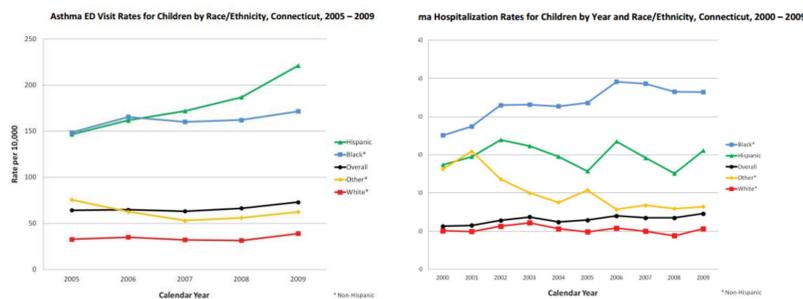
## Objective

- 1.) To evaluate the impact on asthma knowledge after exposure to a Spanish instructional video designed for limited English proficiency (LEP) asthma caregivers.
- 2.) To compare the feasibility of video delivery in both emergency department and community settings.

## Background

Pediatric asthma prevalence in the United States is highest for Puerto Rican children and research has shown that unique barriers to quality asthma care exist for this group. These include parental reliance on folk remedies and holistic treatments, high levels of medication concerns, medication recognition errors, and communication burdens for those caregivers that experience LEP.

In Connecticut, emergency department (ED) visits for pediatric asthma care are highest and rising for children of Hispanic ethnicity. During this time, hospitalization rates have remained stable which suggests that this increase in ED utilization may be preventable. The impact of focused instructional videos geared towards limited English proficiency (LEP) asthma caregivers is not well studied.



From the Department of Public Health *Burden of Asthma in Connecticut 2012 Surveillance Report*.

## Methods

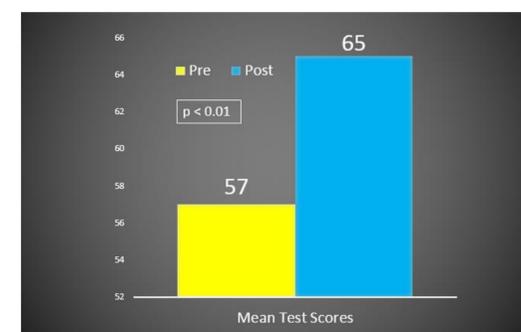
Using insights from prior patient-centered qualitative research, a Spanish language asthma instructional video was developed. This evidence-based video covers key topics recommended by the 2007 National Asthma Education and Prevention Panel (NAEPP) guidelines: understanding basic pathophysiology, correct use of medications, symptom monitoring, and trigger avoidance. The 12 minute video was iteratively developed by a multi-disciplinary bilingual team and professionally produced.



A previously validated, Spanish asthma knowledge questionnaire was administered to LEP parents of children 2-12 years old with a diagnosis of persistent asthma and an active prescription for an inhaled corticosteroid. The questionnaire has 17 statements that explore three domains: asthma myths and beliefs, asthma knowledge, and associated factors. Answers were scored from 1 to 5 using a 5-point Likert scale of “strongly disagree” to “strongly agree.” Higher scores reflect greater asthma knowledge. Participants gave baseline responses to the questionnaire, viewed the instructional video, and immediately repeated the same questionnaire. Differences in mean test scores were measured with a paired t-test. Subjects were enrolled either during a child’s emergency care visit or through a scheduled visit at a local community organization.

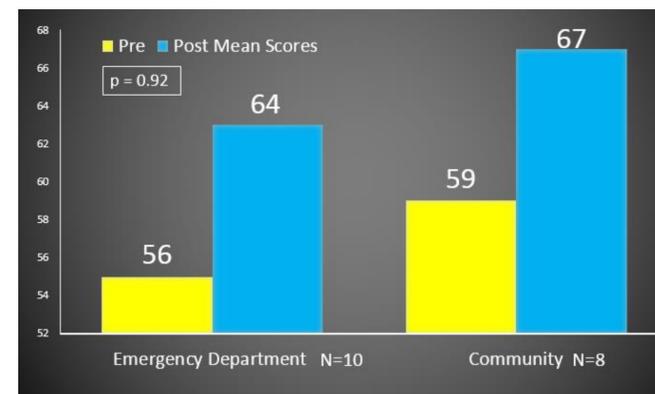
## Results

To date, we have analyzed data from 18 caregivers able to speak English well (28%), not well (44%), or not at all (28%). Mean asthma knowledge scores improved significantly following a single viewing of the instructional video (57 vs. 65,  $p < 0.01$ ).

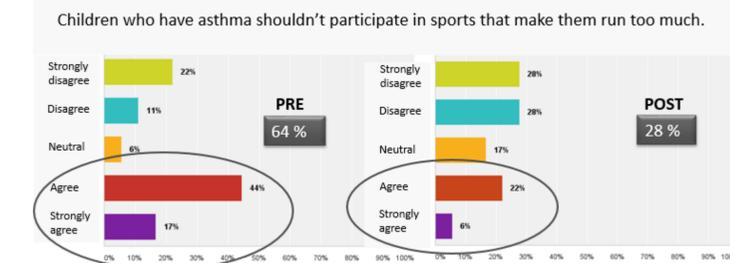


The participants ranged from 20-48 years old, they all spoke Spanish very well and their ability to read in Spanish was rated as very well (83%) or well (17%). The majority were from Puerto Rico (78%), were not using a language concordant asthma action plan (72%), had attained at least a high school diploma (89%) and cared for a child whose asthma diagnosis was active for more than three years (89%).

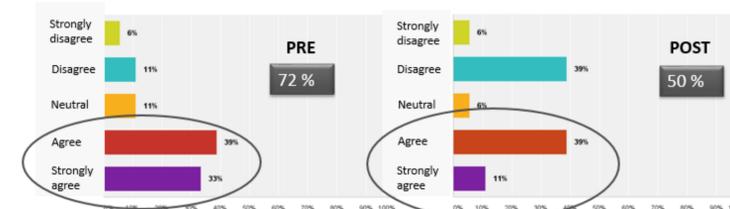
Improvements in asthma knowledge scores were similar across both sites.



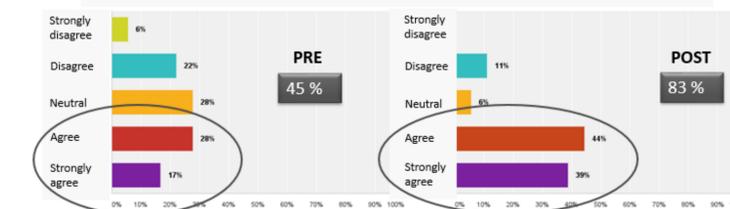
Examples of asthma knowledge gained are shown in the areas of activity limitations, perceptions of ED care, and medication usage.



When a child has an asthma attack it's best to go to the emergency room even if symptoms are mild.



Asthma attacks can be prevented if medications are taken even when there are no symptoms-between attacks.



## Conclusions

The developed instructional video can improve asthma knowledge for an at-risk population that faces barriers to quality asthma care. Video delivery seems feasible in both emergency and outpatient settings. Additional work is necessary to evaluate its impact on knowledge retention, asthma care behaviors and resource utilization.

## Disclosure

The authors report no financial conflicts of interest to disclose.