



# IMPROVE HEALTH LITERACY TO INCREASE KNOWLEDGE AND HEALTH OUTCOME EFFECTS FOR VIETNAMESE CHILDREN WITH ASTHMA IN A COMMUNITY PRACTICE SETTING

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## BACKGROUND

- ✓ Nationwide, 7 million children diagnosed with asthma, making asthma the third most common childhood chronic disease.
- ✓ Medical expenses for managing asthma in children are \$50.1 billion yearly, with each hospitalization approximating \$13,338.
- ✓ The annual cost for loss of school or work days in children is \$3.8 billion. Premature deaths in children from asthma complications cost \$2.1 billion yearly.
- ✓ NHLBI's pediatric asthma guideline goals are to achieve disease control and to prevent symptom exacerbation; these guidelines have not been widely utilized.
- ✓ Among children with asthma and their parents, only 34.2% received a written asthma action plan, and 68.1% were taught appropriate responses to asthma attacks; and only 33% of children were found to use long-term control medication such as corticosteroids.

## OBJECTIVES

The objectives for this evidence-based practice project customized for Vietnamese children ages 5-17 and or their parents were to 1) increase asthma knowledge and 2) decrease asthma exacerbation episode.

### Specific Aims:

- ✓ 50 participants, children or parents, to complete the education intervention
- ✓ < 30 min. for 1:1 education component
- ✓ No extra overhead cost to implement the education intervention

## METHODS AND DESIGN

**Setting:** Community pediatric practice

**Design:** Pre and post quasi experimental repeated measures

**Sample:** 50 Vietnamese children with asthma, ages 5-17, and or their parents

**Intervention:**

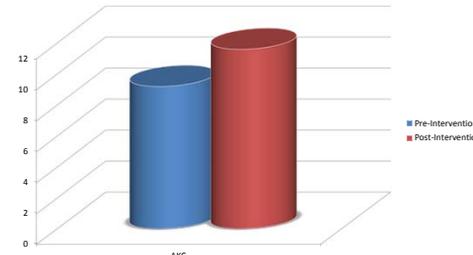
- ✓ May, 2012: Retrospective chart review
- ✓ June, 2012: asthma education intervention
  - In-clinic asthma education video
  - In-service on the use of inhaler
  - Handouts in preferred language, Vietnamese or English
- ✓ July to September, 2012: Evaluation post intervention

## RESULTS

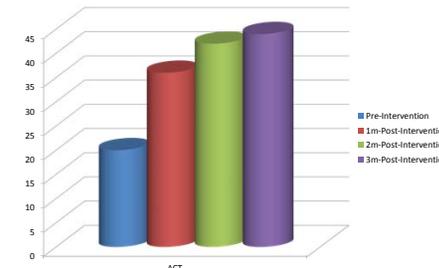
Descriptive Statistics for Asthma Participants Demographics

Variables	Parents N = 35	Children N = 15
Mean age	31.6 (23-54 years)	11.3 (9-17 years)
Gender		
Male	20 (57.1%)	6 (40%)
Female	15 (52.9%)	9 (60%)
Education		
< High school	10 (28.6%)	12 (80%)
High school	8 (22.9%)	3 (20%)
College	17 (48.6%)	0 (0%)
Insurance		
Medi-Cal	28 (80%)	12 (80%)
Private	7 (20%)	3 (20%)

## RESULTS



✓ Means of AKC scores increased from 9.14 pre-intervention to 11.3 post-intervention

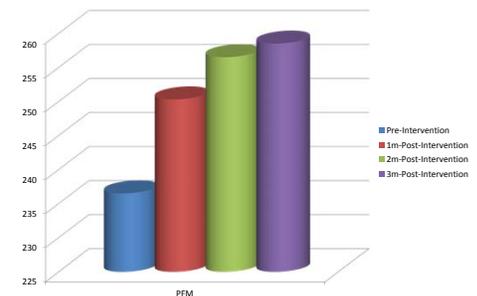


✓ Number of participants with ACT score of >19 increased from 20 to 36 1-month post-intervention, 42 2-month post-intervention, 44 3-month post-intervention.

## DISCUSSION

This Asthma Education Plan:

- ✓ Increased asthma knowledge, decreased frequency of asthma symptoms, and improved asthma control.
- ✓ Use of video, printed handouts, and simple demonstration of asthma inhaler doesn't put an undue burden on providers' time.
- ✓ Minimal funds were needed to implement.
- ✓ Minimal time and cost needed for this intervention makes this intervention project sustainable to future practice.



✓ Means of PFM measurements increased from 236.5 pre-intervention to 250.3 1-month post-intervention, 256.5 2-month post-intervention, 258.5 3-month post-intervention

## CONCLUSION

This Asthma Education Program:

- ✓ Provided an opportunity to improve asthma outcomes in this vulnerable population.
- ✓ Was successful and well received by the providers, staff, and participants.
- ✓ Reinforced the concepts of adhering to the NHLBI's pediatric asthma guideline for all future asthma improvement projects.
- ✓ Demonstrated that quality improvement projects can be tailored to accommodate the clinic resources, providers' constraints, and patients' needs.

## ACKNOWLEDGMENT

Special thanks to:

- ✓ Dr. Mary-Rose Mueller, PhD, RN
- ✓ Dr. Khoa Nguyen, MD
- ✓ Dr. Barbara Piper, PhD, RN