



Cedarville University  
**DigitalCommons@Cedarville**

---

Pharmacy and Nursing Student Research and Evidence-Based Medicine Poster Session

---

11-2012

# Asthma Knowledge, Adherence, and Administration Techniques in Hispanic Caregivers of Pediatrics

Joshua Arnold

*Cedarville University*, [joshuaarnold@cedarville.edu](mailto:joshuaarnold@cedarville.edu)

Rachel Culp

*Cedarville University*, [rculp@cedarville.edu](mailto:rculp@cedarville.edu)

Kyle Hultz

*Cedarville University*, [kylehultz@cedarville.edu](mailto:kylehultz@cedarville.edu)

Benjamin Robertson

*Cedarville University*, [benjaminbrobertson@cedarville.edu](mailto:benjaminbrobertson@cedarville.edu)

Jon Wilkie

*Cedarville University*, [jwilkie182@cedarville.edu](mailto:jwilkie182@cedarville.edu)

*See next page for additional authors*

Follow this and additional works at: [http://digitalcommons.cedarville.edu/pharmacy\\_nursing\\_poster\\_session](http://digitalcommons.cedarville.edu/pharmacy_nursing_poster_session)



Part of the [Pharmaceutical Preparations Commons](#), and the [Pharmacy and Pharmaceutical Sciences Commons](#)

---

## Recommended Citation

Arnold, Joshua; Culp, Rachel; Hultz, Kyle; Robertson, Benjamin; Wilkie, Jon; Wuobio, Amy; Eng, Marty L.; and Hiteshew, Kelly J., "Asthma Knowledge, Adherence, and Administration Techniques in Hispanic Caregivers of Pediatrics" (2012). *Pharmacy and Nursing Student Research and Evidence-Based Medicine Poster Session*. 9.

[http://digitalcommons.cedarville.edu/pharmacy\\_nursing\\_poster\\_session/9](http://digitalcommons.cedarville.edu/pharmacy_nursing_poster_session/9)

This Poster Session is brought to you for free and open access by DigitalCommons@Cedarville, a service of the Centennial Library. It has been accepted for inclusion in Pharmacy and Nursing Student Research and Evidence-Based Medicine Poster Session by an authorized administrator of DigitalCommons@Cedarville. For more information, please contact [digitalcommons@cedarville.edu](mailto:digitalcommons@cedarville.edu).



---

**Authors**

Joshua Arnold, Rachel Culp, Kyle Hultz, Benjamin Robertson, Jon Wilkie, Amy Wuobio, Marty L. Eng, and Kelly J. Hiteshew

# Asthma Knowledge, Adherence, and Administration Techniques in Hispanic Caregivers of Pediatrics

Josh Arnold, Rachel Culp, Kyle Hultz, Ben Robertson, Jon Wilkie, Amy Wuobio  
Marty Eng Pharm.D., Kelly Hiteshew Pharm.D.  
Cedarville University School of Pharmacy

## STATEMENT OF THE PROBLEM

### Background

- Asthma prevalence: one in every twelve people in the United States<sup>1</sup>
- 7.5% of Hispanics suffer from asthma-related diseases<sup>2</sup>
- Latino children are not as likely to use preventative asthma medications as compared with caucasians<sup>3</sup>
- Hispanics are less compliant to preventative medications than both European and North American Caucasians<sup>4</sup>
- Educational interventions may reduce the number of visits to emergency-care<sup>5</sup>

### Significance of the Problem

- Reasons for non-adherence are currently unknown
- Discovering these reasons will help to address the problem

## OBJECTIVES

To describe asthma knowledge, adherence, and administration techniques of pediatric caregivers whose primary language is Spanish in a federally qualified health center.

## HYPOTHESES

1) Null: Hispanic pediatric asthma patients in a federally qualified health center have no needs for education interventions, based on asthma knowledge and technique of medication therapy.

1) Alternative: Hispanic pediatric asthma patients in a federally qualified health center have needs for education interventions, based on asthma knowledge and technique of medication therapy.

2) Null: An education intervention from a pharmacist would make no impact in Hispanic pediatric asthma patients.

2) Alternative: An education intervention from a pharmacist would make an impact for Hispanic pediatric asthma patients.

## REFERENCES

1. Asthma statistics. American Academy of Allergy Asthma & Immunology Web site. <http://www.aaaai.org/about-the-aaaai/newsroom/asthma-statistics.aspx>. Updated 2012. Accessed 08/02, 2012.
2. Asthma data and surveillance. Centers for Disease Control and Prevention Web site. <http://www.cdc.gov/asthma/asthmadata.htm>. Updated 2012. Accessed 08/02, 2012.
3. Lieu TA, Lozano P, Finkelstein JA, et al. Racial/Ethnic variation in asthma status and management practices among children in managed medicaid. *Pediatrics*. 2002;109(5):857.
4. Rajalingam DB. Non adherence to physician prescribed medicines in asthma. eMedicineLive Web site. <http://emedicinelive.com/medical-news/1-pulmonology/130-non-adherence-to-physician-prescribed-medicines-in-asthma>. Published March 19, 2011. Updated March 19,2011. Accessed September 27, 2012.
5. Cates C. Using education to improve control of asthma in children . *CMAJ*. 2009;181(5):09/27/12.

## PROPOSED METHODS

### Study Design: Quantitative Descriptive Survey

### Sample

- Children under 12 years of age
- Westside Health Center in Columbus, Ohio
- Documented with one or more ICD9 asthma diagnosis code
- Primary caregiver's primary language is Spanish

### Data Collection

- Participants will be contacted via mailings and phone calls
- Written informed consent will be obtained before surveys are administered
- Non-monetary compensations will be offered to participants
- Hardcopy surveys will be administered face-to-face on scheduled survey days with assistance of a trained interpreter available

### Measurement

- Descriptive statistics
- Mode- will be used to measure nominal data in the survey (race)
- Median-will be used to measure ordinal data in the survey (family income, insurance coverage, knowledge, adherence)
- Mean- will be used to measure interval and ratio data in the survey (age)

## PROJECT TIMELINE

- Data collection will begin January, 2013 and will continue through May, 2014
- Data analysis will be conducted following collection

## LIMITATIONS

- Difficulty communicating with participants due to a language barrier
- Limited power due to small sample size
  - only one clinic is available for use
  - limited amount of data collection days
- Low generalizability

## FUTURE DIRECTIONS

Use the data collected to implement the necessary services that would be beneficial to pediatric asthma patients and their primary caregivers to increase asthma medication adherence.