

Apr 1st, 11:00 AM - 2:00 PM

Asthma Knowledge, Control, and Administration Techniques in Hispanic Caregivers of Pediatrics

Kelly J. Wright

Cedarville University, kellywright@cedarville.edu

Joshua Arnold

Cedarville University, joshuaarnold@cedarville.edu

Rachel Culp

Cedarville University, rculp@cedarville.edu

Kyle Hultz


Cedarville University, kylehultz@cedarville.edu

Benjamin Robertson

Cedarville University, benjaminbrobertson@cedarville.edu

See next page for additional authors

Follow this and additional works at: http://digitalcommons.cedarville.edu/research_scholarship_symposium

 Part of the [Pediatrics Commons](#), [Pharmacy and Pharmaceutical Sciences Commons](#), and the [Respiratory Tract Diseases Commons](#)

Wright, Kelly J.; Arnold, Joshua; Culp, Rachel; Hultz, Kyle; Robertson, Benjamin; Wilkie, Jon; and Wuobio, Amy, "Asthma Knowledge, Control, and Administration Techniques in Hispanic Caregivers of Pediatrics" (2015). *The Research and Scholarship Symposium*. 6.

http://digitalcommons.cedarville.edu/research_scholarship_symposium/2015/poster_presentations/6

This Poster 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 The Research and Scholarship Symposium by an authorized administrator of DigitalCommons@Cedarville. For more information, please contact digitalcommons@cedarville.edu.

Presenters

Kelly J. Wright, Joshua Arnold, Rachel Culp, Kyle Hultz, Benjamin Robertson, Jon Wilkie, and Amy Wuobio



Asthma knowledge, control, and administration techniques in Hispanic caregivers of pediatrics

Kelly Wright, PharmD, BCACP, TTS; Josh Arnold, BSPS; Rachel Culp, BSPS; Kyle Hultz, BSPS; Benjamin Robertson, BSPS; Jon Wilkie, BSPS; Amy Wuobio, BSPS



Introduction

- Asthma is a chronic respiratory disorder that is characterized by episodes of bronchospasm, wheezing, and difficulty in expelling air
- Asthma affects one in every twelve people in the United States¹
 - Prevalence of asthma in Hispanics is 7.0%²
- Asthma may be controlled with the use of pharmaceutical agents and avoidance of triggers
 - Asthma exacerbation and preventative medication cost the United States over \$56 billion in 2007¹
 - Hispanic children were not as likely to use preventative asthma medications as compared with Caucasians³
- Patients may not receive enough information from the physician about asthma management⁴
 - Preventive education and intervention plans may decrease the number of emergency room visits for Latino children with asthma⁵

Objectives

- Describe asthma knowledge, control, and administration techniques in Hispanic caregivers of pediatric asthma patients in primary care clinics
- Determine the association between asthma knowledge and control

Methods

- Pilot, cross-sectional study
- Survey distributed to Spanish-speaking primary caregivers of children under 12 years old with a current diagnosis of asthma
 - Demographic questions (8 items)
 - Modified version of the Asthma Control Questionnaire (ACQ, 5 self-assessment items, 5-point, Likert-type scale), knowledge (21 items), and inhaler use (1 item)
 - Translated into Spanish
- Participants completed the written survey with the aid of a professional interpreter when needed

- Statistics**
- SPSS v. 22.0 (Armonk, NY), with $\alpha = 0.05$
 - Descriptive statistics were performed for all items
 - Pearson correlation analysis to assess the association between asthma knowledge and control

References

- 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.
- 2012 National health interview survey data. Centers for Disease Control and Prevention Web site. <http://www.cdc.gov/asthma/asthmaadata.htm>. Updated 2014. Accessed 11/16, 2014
- 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
- Orrell-Valente J, Jones K, Manasse S, Thyne S, Shenkin B, Cabana M. Children's and parents' report of asthma education received from physicians. *Pubmed.gov Web site*. <http://www.ncbi.nlm.nih.gov/pubmed/21854341>. Published August 22, 2011. Updated 2011. Accessed 09/27, 2012.
- Canino G, Garro A, Alvarez M, et al. Factors associated with disparities in emergency department use among Latino children with asthma. *Pubmed.gov Web site*. <http://www.ncbi.nlm.nih.gov/pubmed/22469447>. Published 03/12/2012. Updated 2012. Accessed 09/27, 2012

Acknowledgments/Disclosures

Thank you to Cedarville University School of Pharmacy for an internal grant which funded this research project. No other financial relationships to disclose.

Results

Table 1. Demographic Information

Subjects	N=12	%
Female	10	83
Age 26-35	5	42
Annual income (\$) <14,999	7	58
Did not complete HS	8	67
Did not receive education in US	9	75

Figure 2. Asthma Control

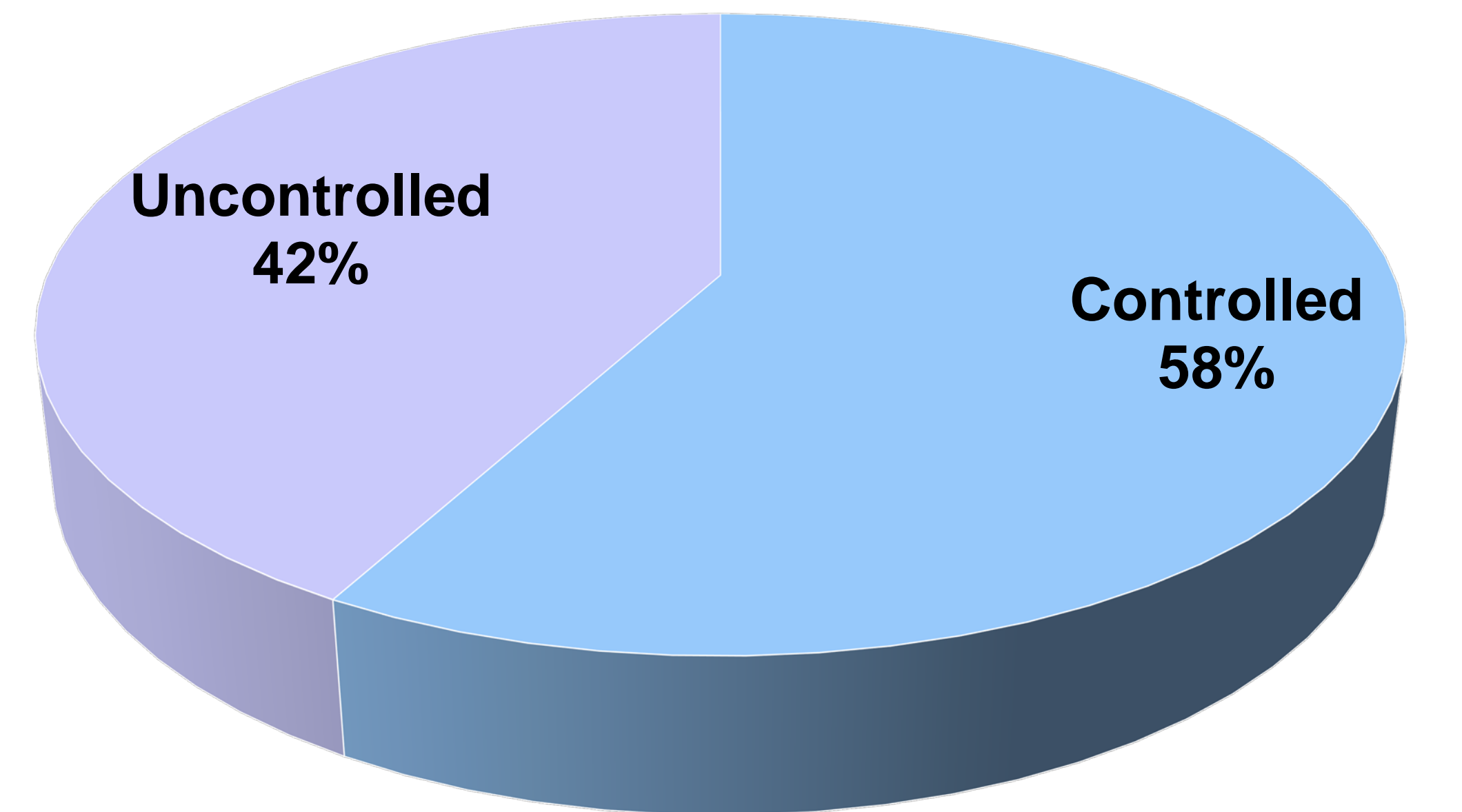


Figure 1. Asthma Knowledge Survey Responses*

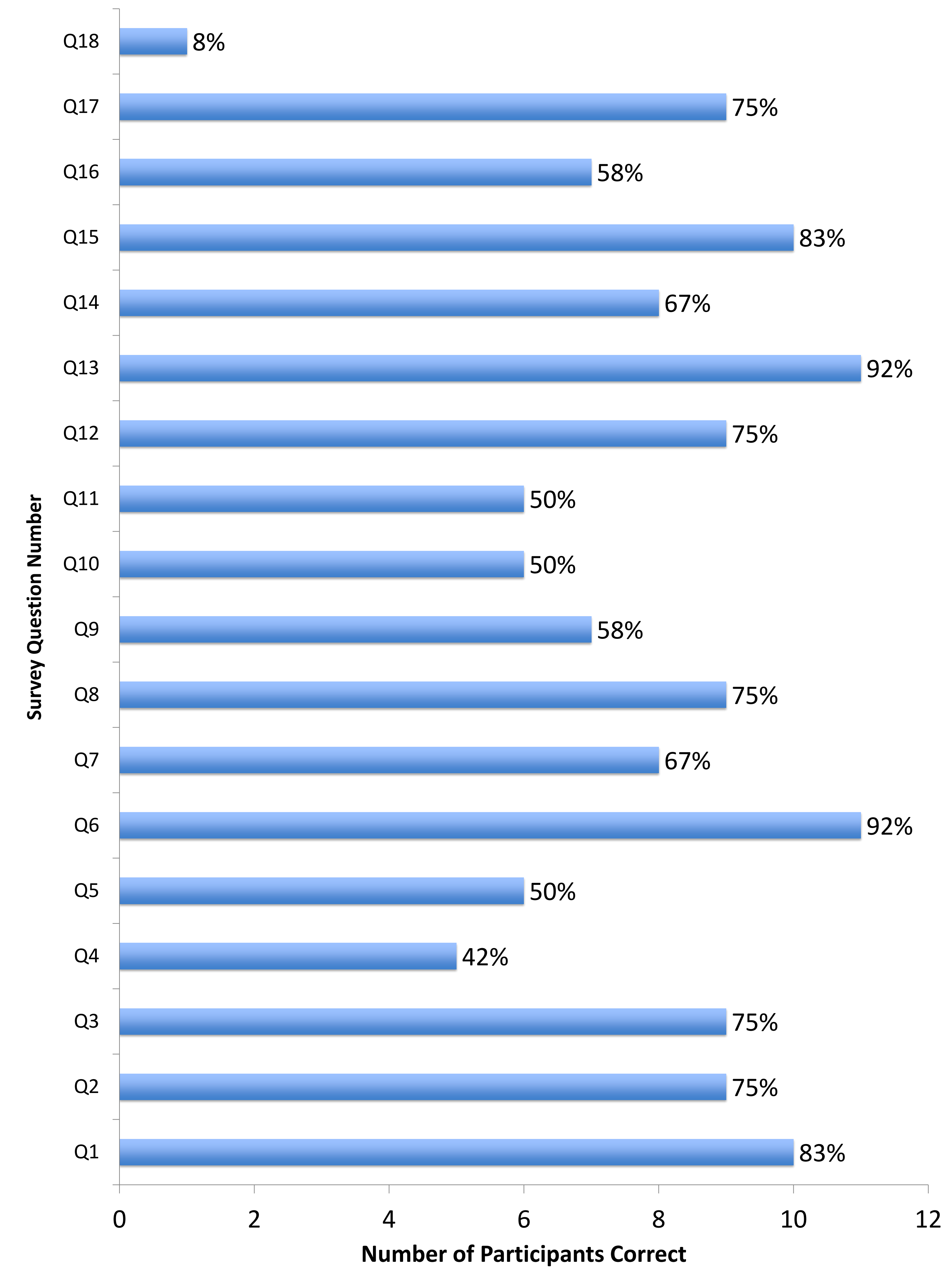


Figure 3. Medication Knowledge (% Correct)

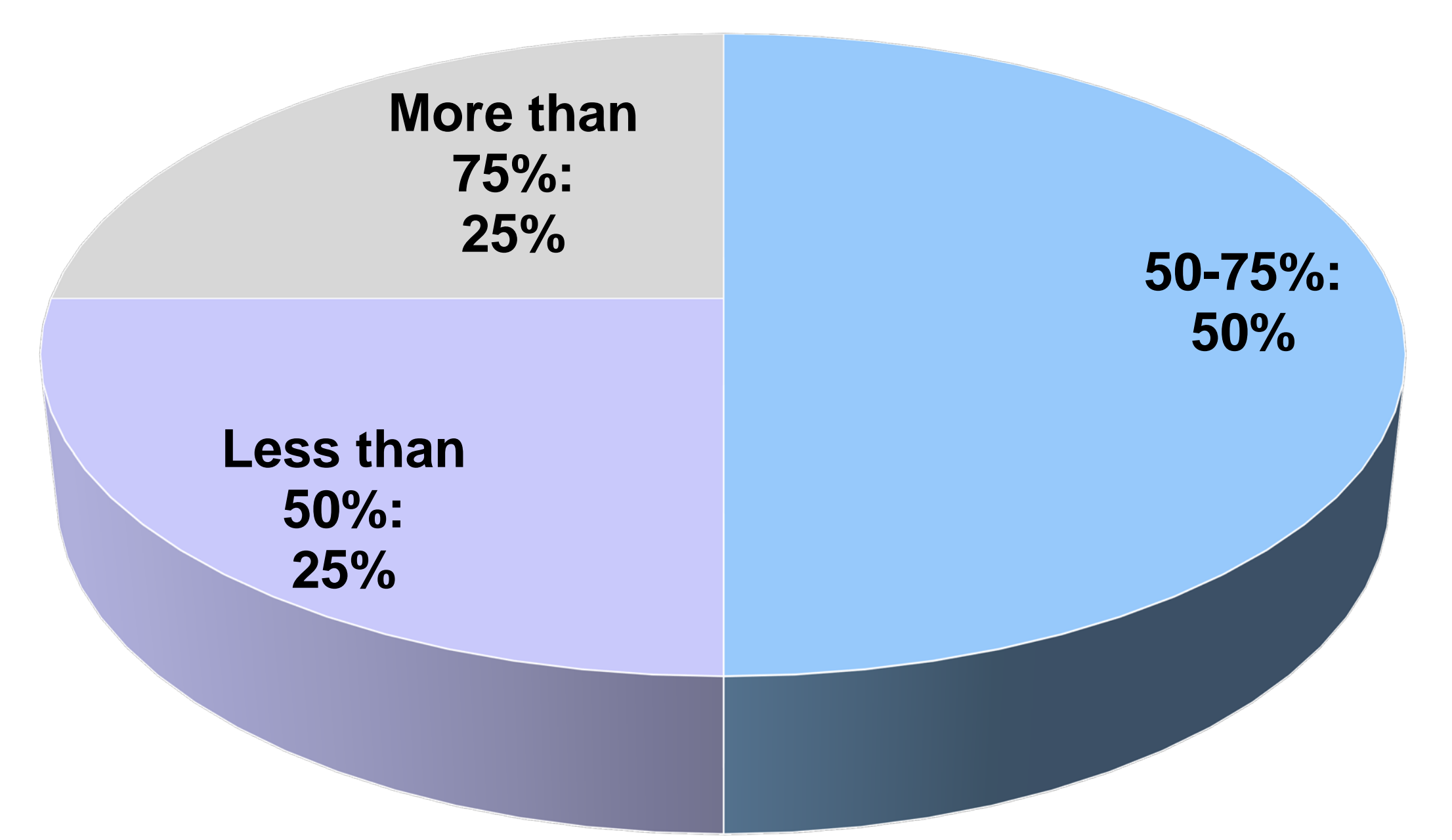


Table 2. Association between Asthma Knowledge and Control

	Pearson's Rho	P-value
Asthma Knowledge vs. Control	0.668	0.009

Conclusions/Evaluations

- Conclusions**
- Asthma knowledge positively correlated with asthma control
 - Participants showed lack of knowledge in:
 - Inhaler technique
 - Recognition of asthma triggers
 - Recognizing situations necessitating a physician visit
 - Possible strategies to increase asthma control:
 - Caregiver asthma education
 - Caregiver asthma medication education
 - Education material needs to be tailored to caregiver's literacy level

- Clinical Application**
- Pharmacists are trained and educated to share information on these topics
 - Pharmacists' personal interaction with patients allows them unique opportunities to educate patients and should be included in every patient visit to the clinic

*Less<50% of participants answered incorrectly:
 • Question 4. If someone takes asthma medication everyday, they do not have to stay away from things to which they are allergic.
 • Question 18. When a child has an asthma attack, they should see a doctor immediately.