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

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

Kelly Wright, PharmD, BCACP, TTS; Josh Arnold, BSPS; Rachel Culp, BSPS; Kyle Huffz, 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 States
- 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 2007
- Hispanic children were not as likely to use preventative asthma medications as compared with Caucasians5
- 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 α = 0.05
- Descriptive statistics were performed for all items
- Pearson correlation analysis to assess the association between asthma knowledge and control

Results

Table 1. Demographic Information

<table>
<thead>
<tr>
<th>Subjects</th>
<th>N=12</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>10</td>
<td>83</td>
</tr>
<tr>
<td>Age 26-35</td>
<td>5</td>
<td>42</td>
</tr>
<tr>
<td>Annual income ($) &lt;14,999</td>
<td>7</td>
<td>58</td>
</tr>
<tr>
<td>Did not complete HS</td>
<td>8</td>
<td>67</td>
</tr>
<tr>
<td>Did not receive education in US</td>
<td>9</td>
<td>75</td>
</tr>
</tbody>
</table>

Figure 1. Asthma Knowledge Survey Responses*

Table 2. Association between Asthma Knowledge and Control

<table>
<thead>
<tr>
<th>Asthma Knowledge vs. Control</th>
<th>Pearson’s Rho</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uncontrolled</td>
<td>0.668</td>
<td>0.009</td>
</tr>
<tr>
<td>Controlled</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 2. Asthma Control

Figure 3. Medication Knowledge (% Correct)

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

Acknowledgments/Disclosures

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References


*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.

*Less<50% of participants answered correctly:
  - Question 1. Asthma may be controlled with the use of pharmaceutical agents and avoidance of triggers.
  - Question 2. Hispanic children were not as likely to use preventative asthma medications as compared with Caucasians.
  - Question 3. Patients may not receive enough information from the physician about asthma management.
  - 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.

*Pearson correlation analysis to assess the association between asthma knowledge and control.