IT’S OBVIOUS

Chicago Asthma Consortium
Emergency Management of Asthma
June 4, 2014

Michael McDermott, MD
Cathy Catrambone, PhD, RN

*Funding for this study and presentation was made possible by funds received from the Illinois Department of Public Health, Office of Health Promotion, Contract #83283007
IEDAS Project Team Members

Cathy Catrambone, PhD, RN
PI, Rush University College of Nursing

Michael F. McDermott, MD
Co-Investigator, John H. Stroger, Jr. Hospital, Cook County

Brian Stein, MD, MPH
Co-Investigator, Rush University Medical Center

Nicole Thompson, BA
Project Director, Rush University Medical Center
Project Coordinator

Chris Kelsey, MS
Web Administrator, Northwestern University Feinberg School of Medicine
Figure 1. Adult Asthma Characteristics

- Moderate/severe asthma
  - 2010 (n=748): 74%  
  - 2011 (n=316): 77%
- Moderate/severe taking inhaled corticosteroid
  - 2010 (n=748): 46%  
  - 2011 (n=316): 50%
- Very poor control on inhaled corticosteroid
  - 2010 (n=748): 33%  
  - 2011 (n=316): 31%
- >1 canister/month albuterol
  - 2010 (n=748): 43%  
  - 2011 (n=316): 39%
- ≥3 ED visits in past 12 months
  - 2010 (n=748): 35%  
  - 2011 (n=316): 27%
Figure 2. Pediatric Asthma Characteristics

- **Moderate/severe asthma:**
  - 2011: 54%
  - 2010: 52%

- **Moderate/severe taking inhaled corticosteroid:**
  - 2011: 59%
  - 2010: 50%

- **Very poor control on inhaled corticosteroid:**
  - 2011: 21%
  - 2010: 20%

- **>1 canister/month albuterol:**
  - 2011: 21%
  - 2010: 20%

- **≥3 ED visits in past 12 months:**
  - 2011: 29%
  - 2010: 24%

*2011 (n=153)  2010 (n=304)*
IEDASP Asthma Burden Update
May 2013

Figure 3. Adult Care in ED and at Discharge

- **Peak flow in ED**: 52% (2011) vs 53% (2010)
- **Systemic steroids in ED**: 85% (2011) vs 89% (2010)
- **Systemic steroid script at discharge**: 78% (2011) vs 73% (2010)
- **ICS script at discharge**: 57% (2011) vs 59% (2010)
- **Asthma education**: 84% (2011) vs 83% (2010)

2011 (n=293) vs 2010 (n=719)
Figure 4. Pediatric Care in ED and at Discharge

- **Peak flow in ED**: 2011 (n=144) - 31%, 2010 (n=303) - 32%
- **Systemic steroids in ED**: 2011 - 79%, 2010 - 86%
- **Systemic steroid script at discharge**: 2011 - 61%, 2010 - 67%
- **ICS script at discharge**: 2011 - 38%, 2010 - 43%
- **Asthma education**: 2011 (n=144) - 74%, 2010 (n=303) - 85%
Figure 5. Adult (A) and Pediatric (P) Asthma Care Measures Across Emergency Departments
Emergency Department Asthma Discharge Plan

You were seen today for an asthma attack in the Emergency Department. It is important for you to take steps to recover from this episode. You can learn to control your asthma so that you have less frequent or no attacks. Your regular provider can also give you information about your asthma. They can teach you how to treat your attacks early and at home.

Follow the instructions you receive from the Emergency Department. Make sure to see your provider. It is important to do this within 7-10 days.

Your next appointment

Provider or clinic name: ___________________________________________
Provider phone number: ____________________________
Appointment Date: ______ Time: ______
Phone number to call for appointment if you do not have a regular provider: ______

Follow the directions for your meds. Make sure you know how they work. Know why you are taking them. The dose of your meds and how long to take them are listed below.

Your asthma medicines

Directions for taking your meds:

<table>
<thead>
<tr>
<th>Name of Medicine</th>
<th>Dose/ Number of puffs and how often to take</th>
<th>Number of Days to be taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steroid pills or syrup</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inhaled Steroid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quick relief medicine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other meds</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Taking your meds and avoiding the triggers that brought on this attack will bring about recovery best. This will start you on the path of better control. When you see your provider, tell them about meds from the Emergency Department. Then see what different meds you may need to control your asthma.

Getting better or worse?

You can see if you are getting better or if you should return to the Emergency Department.

You are getting BETTER if:

☐ Less frequent quick relief inhaler
☐ Able to do more without shortness of breath
☐ Sleeping through the night
☐ Improving peak flow

You are getting WORSE if:

☐ Frequent use of quick relief inhaler- more than
☐ Shortness of breath even with slight effort
☐ Breathing like you were before you came to emergency— consider going back to ER or call provider
☐ Peak flow not improving or falling
Asthma Discharge Form

General Asthma Medicines- How to Recover From This Attack

☐ Steroid tablets or liquid (prednisone, prednisolone or other): These are needed for you to recover from your attack. You should take these for the full time prescribed even when you feel better. They are usually given for 5-10 days. When taken for short periods they do not usually have serious side effects.

☐ Inhaled quick relief medicine, “puffer” (albuterol or other): These meds give fast but temporary relief. When recovering from an attack you will need steroid tablets or liquids for these to work well. Take 2 puffs as you have been taught every 4-6 hours for wheezing or chest tightness. If you need this more frequently you are not better yet.

☐ Inhaled steroids (many products): These are the best meds for overall control of your asthma. Taken in the right dose every day they can reduce attacks and improve your quality of life. The do not work immediately but over time will improve your asthma. They do not have the side effects that steroid tablets or liquids do.

☐ Leukotriene modifiers (Accolate, Singulair and others): These meds reduce one of the reactions that contribute to asthma. They are taken as pills daily. They help with control but not for immediate relief.

☐ Other meds: There may be other meds for your asthma or related condition. These include treating allergies with pills or nasal steroids; combining a long acting reliever with an inhaled steroid; and antibiotics if you have a bacterial infection.

Triggers for your asthma

After your talk with the Emergency Department staff you may have a better idea of what caused this attack. It can help to see what you might change. Some of the more common triggers are allergies to pet animals or pollens or household allergies like mold, dust mites or cockroaches. They can also include cigarette smoke (either yours or another’s in the house) and virus infections, especially in the winter. Triggers can be strong household cleaners or chemicals. Some asthma patients can react to aspirin or ibuprofen (Advil or Motrin) type meds. Instead of this use only acetaminophen (Tylenol.)

Some common triggers that cause me problems that I might avoid or change:

☐ Tobacco smoke
☐ Animal or pet allergies
☐ Indoor mold
☐ Pollen/plant allergies
☐ Strong odors/sprays or cleaners
☐ Dust mites

You Can Control Your Asthma

By taking your meds, acting on triggers and learning what good asthma control is, you will be more likely to avoid future attacks. If you do have another attack, your healthcare provider can give you a plan for treating them early, even at home. Asthma can be a lifelong problem but can be controlled and attacks lessened.
Next Steps