Mamta Reddy, MD
Director, South Bronx Asthma Partnership
Chief, Allergy Immunology
Bronx-Lebanon Hospital Center
Department of Pediatrics
Engaging the Community in an Asthma Coalition: The South Bronx Experience
The South Bronx Community

- Homelessness
- Poor housing
- Poor access to health care
- Low educational levels
- Discrimination
- Immigration-related issues
- Poor nutrition
- Low literacy
- Poor health outcomes

- 57% Hispanic, 37% Black
- 32% born outside of the U.S.
- 56% non-English at home
- 68% high school diploma

- 32% born outside of the U.S.
- 56% non-English at home
- 68% high school diploma
SOBRAP Mission

1) Reduce the number of asthma-related ED visits, hospitalizations and unscheduled clinic visits

2) Provide culturally-appropriate, literacy-sensitive educational outreach and medical services for an ethnically and culturally diverse community

3) Engage community stakeholders who can leverage asthma-related policies and resources
Partners

Schools and Day Care Centers
- 80 Head Start and Daycare Centers in MAD
- Bronx DOE
- NYC Elementary, Middle and High Schools

Hospitals, Clinics and Providers
- Bronx-Lebanon Hospital Center
- Martin Luther King Jr. Montefiore Medical Center
- Albert Einstein Medical Center
- Urban Health Plan
- Narco Freedom
- Morris Heights Health Center
- Bronx Smoke-Free Partnership
- Bronx BREATHE
- Visiting Nurse Service of NY

Environmental Groups
- AFSZ
- For A Better Bronx
- Healthy Nest
- Clean Air NY
- Commuter Link

Governmental Agencies
- NYCDOHMH
- Bronx DPHO
- Bronx Boro President

Community Groups
- Catholic Guardian Society
- Episcopal Social Services
- New York Public Library
- Crotona Inn Family Shelter
- Good Shepherd Services
- Boys and Girls Clubs
- Sustainable South Bronx
Mamta Reddy, MD  
Director

Diane Strom, LCSW  
Program Administrator

Evelyn Arguinzoni, AE-C  
Community Asthma Educator

Ram, Kairam, MD  
Chair, Pediatrics

Yudy Persaud, MD, MPH  
Attending, Allergy/Immunology

Lauren Brown, AE-C  
Program Manager, ALP

Tomas Jimenez  
Program Manager, MAD

Sivani Nattama  
AmeriCorps*VISTA
Asthma Jeopardy at a Community Health Fair
TRIGGER TOSS

ROACHES

POLLUTION

POLEN

COLD AIR

EXERCISE

PETS

CIGARETTE SMOKE

DUST
The SOBRAP Asthma Wheel at a Community Health Fair
Smoking Cessation Wheel at the Great American Smokeout
The Great American Smokeout
Integrated Pest Management Workshop at SOBRAP’s “Intensive Asthma Training Day”
BEAM

Bronx Emergency Asthma Management

- Educating a captive audience
- Focus on the basics
  - Controllers vs Quick relievers
  - Spacers vs Nebulizers
  - Symptom Diaries
  - Asthma Triggers
Asthma Emergency Department Visit Rate
per 10,000 Residents by Age Group
New York State, 2005

New York State Asthma Surveillance Summary Report, p 65; October 2007
Managing Asthma in Daycares
80 Sites Across the Bronx
# Demographic information about the child and parent

<table>
<thead>
<tr>
<th>First name</th>
<th>Last name</th>
<th>D.O.B.</th>
<th>Gender</th>
<th>Class</th>
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</thead>
</table>

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<tr>
<th>Parent/caregiver</th>
<th>First name</th>
<th>Last name</th>
<th>Relationship to child</th>
<th>Mother</th>
<th>Father</th>
<th>Other family member</th>
<th>Non-family member (specify):</th>
</tr>
</thead>
</table>

1. In the past 12 months, has your child experienced wheezing or whistling in the chest, or a cough that lasted more than a week? (1) Yes (2) No

2. In the past 12 months, how many times did your child experience wheezing or whistling in the chest, or a cough that lasted more than a week? __ Number of times (record "0" if none) __

3. In the past 12 months, how many nights did your child have trouble sleeping because of wheezing or whistling in the chest, or a cough that lasted more than a week? __ Number of nights (record "0" if none) __

4. I am going to read you the names of some health conditions. For each one, please tell me if a doctor, medical provider or clinic prescribed any medicine, inhaler, nebulizer, or breathing machine treatments for any of these conditions, that is for asthma, reactive airway disease, bronchiolitis, asthma or wheezy bronchitis, or wheezing? (1) Yes (2) No

   - Asthma
   - Reactive Airway Disease (1) Yes (2) No
   - Bronchiolitis (1) Yes (2) No
   - Asthma or Wheezy Bronchitis (1) Yes (2) No
   - Wheezing (1) Yes (2) No

5. In the past 12 months, has a doctor, medical provider or clinic prescribed any medicine, inhaler, nebulizer, or breathing machine treatments for any of these conditions, that is for asthma, reactive airway disease, bronchiolitis, asthma or wheezy bronchitis, or wheezing? (1) Yes (2) No

6. In the past 12 months, how many times did your child have an emergency visit to a doctor, clinic, or emergency room for asthma, wheezing, cough, chest tightness, or shortness of breath? __ Number of times (record "0" if none) __

7. In the past 12 months, how many times did your child have to stay overnight in the hospital for asthma, wheezing, cough, chest tightness, or shortness of breath? __ Number of times (record "0" if none) __

8. Is your child currently under the care of a doctor, nurse, or clinic for asthma, wheezing, cough, chest tightness, or shortness of breath? (1) Yes (2) No
Asthma & Health Literacy

- quick-relief
- asthma action plan
- two puffs twice daily
- peak flow meter
- controller medicines
- spacers
- nebulizers
- metered-dose inhaler
- only as needed
- daytime symptoms
- night time symptoms
- triggers
- asthma diary
- intermittent
- severe persistent
- intermittent
- persistent
- prevention
- intermittent
- persistent
- b.i.d.
- intermittent
- severe persistent
- metered-dose inhaler
- controller medicines
- nebulizers
- inhaled corticosteroids
- day time symptoms
- night time symptoms
- triggers
- asthma action plan
- quick-relief
ALP
The Asthma Literacy Project
The Asthma Literacy Project

- How to Use a Spacer
- Understanding Asthma Medications
- Keeping a Symptom Diary
- Understanding Asthma Triggers
**How to Use a Spacer with a Facemask**

1. Remove the caps from the inhaler and the spacer.
2. Shake the inhaler well for 5 seconds.
3. Attach the mask to the mouthpiece of the spacer. Now insert the inhaler into the open end of the spacer.
4. Put the facemask up to your child’s face. Make sure that it is tight around the child’s nose and mouth so that no air leaks out.
5. Push the Inhaler down once. This will release one puff of medicine into the spacer.
6. Hold the facemask to your child’s face for enough time to allow at least 6 breaths. This may take 10-15 seconds.
7. Remove the facemask from your child’s face.
8. How many puffs did your doctor say to take? Wait 1 minute between each puff. Follow steps 4-8 for every puff ordered by your doctor.
9. Rinse your child’s mouth with water. Clean the spacer and facemask once a week with soap and warm water and then let air dry. Replace caps on inhaler and spacer.

**Steps:**

1. Remove the caps from the inhaler and the spacer.
2. Shake the inhaler well for 5 seconds.
3. Insert the inhaler into the open end of the spacer.
4. Wrap your lips around the mouthpiece of the spacer so that no air leaks out.
5. Push the Inhaler down once. This will release one puff of medicine into the spacer.
6. Breathe in now and breathe out slowly and deeply to your slow count to 10. Now who is breathe normally.
7. How many puffs did your doctor say to take? Wait 1 minute between each puff. Follow steps 4-8 for every puff.
8. How many puffs did your doctor say to take? Wait 1 minute between each puff. Follow steps 4-8 for every puff ordered by your doctor.
9. Rinse your child’s mouth with water. Clean the spacer and facemask once a week with soap and warm water and then let air dry. Replace caps on inhaler and spacer.
<table>
<thead>
<tr>
<th>The Three Types of Asthma Medicine</th>
<th>What does it do?</th>
<th>When do I take it?</th>
<th>Be Careful!</th>
<th>Medicines:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Daily Preventive</strong></td>
<td>This medicine controls the swelling and mucus build-up in your airways to prevent asthma symptoms.</td>
<td>Take this medicine everyday, even when you feel well and have no asthma symptoms. Take this medicine everyday until your doctor tells you to stop.</td>
<td>This medicine will <strong>not</strong> stop asthma symptoms once they have started! It will <strong>not</strong> relieve symptoms today or make you feel better today!</td>
<td>My daily preventive medication is: Flovent Pulmicort Advair QVAR Singulair I will take this medication:</td>
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<tr>
<td><strong>2. Quick-Relief</strong></td>
<td>This medicine relaxes the muscles around the airways. This helps more air get to the lungs.</td>
<td>Take this medicine at the first sign of asthma symptoms. It will help you feel better now. This medicine might be prescribed for use before exercising or gym class.</td>
<td>This medicine will <strong>not</strong> prevent symptoms. It will only relieve current symptoms. If you use this more than twice a week, you should talk to your doctor.</td>
<td>My quick relief medication is: (Albuterol) Ventolin Pro-Air Proventil Xopenex I will take this medication:</td>
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<tr>
<td><strong>3. Emergency</strong></td>
<td>This medicine brings back control of serious asthma symptoms. It might take several hours to start working. It is taken as a pill or syrup.</td>
<td>This medicine should <strong>only</strong> be taken for serious symptoms. ONLY take this medicine for as long as your doctor tells you to.</td>
<td>This medicine can cause serious side effects in other parts of the body. If you need this medicine more than twice a year, you should talk to your doctor.</td>
<td>Steroids: Prednisone Orapen Prelone Prednisolone</td>
</tr>
</tbody>
</table>

Developed by the Literacy Assistance Center of NYC for SOBRAP's Asthma Literacy Project (funded by the United Hospital Fund)
# My Asthma Diary

<table>
<thead>
<tr>
<th>Date</th>
<th>Peak Flow</th>
<th>Wheezing</th>
<th>Coughing</th>
<th>Stuffy/Runny nose</th>
<th>Medication</th>
<th>What happened</th>
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<td>Sunday</td>
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## My Asthma Diary:

Answer these questions every day:
1. Did my child cough last night?
2. Did my child need the quick-relief inhaler?
3. Did my child have difficulty with exercise or activity?

Use these symbols to record any other symptoms your child had.

### Symptoms:
- ☐ Day Wheezing
- ☐ Night Wheezing
- ☐ Day Coughing
- ☐ Stuffy Nose
- ☐ Runny Nose
- ☐ Sneezing
- ☐ Itchy Eyes

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</table>
Caregivers’ ability to demonstrate asthma self-management skills before & after intervention

- Module I: Before = 50%, After = 100%
- Module II: Before = 20%, After = 60%
- Module III: Before = 10%, After = 80%
Triggers can cause asthma symptoms.

Not everyone has the same triggers.

What Are Your Triggers?

- Cigarette Smoke
- Colds & Viruses
- Weather Changes
- Hot Air or Cold Air
- Cats
- Dogs
- Odors & Perfumes
- Cleaning Products
- Exercise
- Mold
- Pollution
- Pollen
- Dust Mites
- Cockroaches
- Rats & Mice

Developed by the Asthma Literacy Project for the South Bronx Asthma Partnership
You can reduce your exposure to triggers.

Make your bedroom trigger-free.

Developed by the Asthma Literacy Project for the South Bronx Asthma Partnership

How to Reduce Your Exposure to Triggers

- Don’t bring food into the bedroom
- Keep pets out of the bedroom
- Caulk holes and cracks in walls and corners
- Remove carpets and rugs from the bedroom
- Wipe off dust regularly with a damp cloth
- Remove extra dust-collecting items from the bedroom
- Put away stuffed animals and toys in a bag or box
- Use zipper-encased, allergy-free bedding and pillowcases
- Replace curtains with shades or blinds
- Don’t smoke inside the house
- Keep the windows closed during allergy season
- Keep indoor humidity under 50%
- Use only HEPA vacuums and air purifiers
- Tell your landlord (or call 311) to get rid of mold
- Use ‘green’ cleaning supplies or water and vinegar
**Use an Inhaler Properly**

- An inhaler is used to give your child asthma medication.
  - It is important that you always bring your child's asthma inhaler with you wherever you go.
- Asthma inhalers work best when they are used with a spacer and face mask.

- I will use a spacer and face mask every time I use an inhaler.
- It is important to learn the proper way to use an inhaler with a spacer.
- I know how to use a spacer and face mask.

- I understand how to use an inhaler properly.

---

**Keep a “Symptom Diary”**

- Write down your child's symptoms every day, even when your child feels well.
- Answer the following questions in your child's symptom diary:
  1. Did my child cough last night?
  2. Did my child need to use a quick-killer inhaler?
  3. Did my child have difficulty with exercise or activity?

- You should bring your diary to every doctor visit, because the doctor may ask you about it.
- Remember to start a new diary each month.

- I know how to keep a symptom diary.

---

**Understand Asthma Medicines**

- There are many types of medicines to help you manage your child's asthma:
  - **Long-term controller**: taken every day to prevent symptoms.
  - **Quick-reliever**: taken at first sign of asthma symptoms to help you feel better right away.
  - **Emergency**: given when other medicines are not working.

- If your child has the following asthma medicines:
  - I understand the different asthma medicines.

---

**Identify Asthma Triggers**

- Asthma symptoms are caused by things called triggers.
  - Everyone has different triggers, so pay attention to what triggers your child's asthma.

- My child's triggers:
  1. Piggies & Wheezes
  2. Dust
  3. Mold & Fungi
  4. Change of climate
  5. Change of season
  6. Flu
  7. Tobacco
  8. Secondhand smoke

- You should reduce or remove any triggers that can cause asthma triggers.

- I can identify my child's asthma triggers.
National Asthma Control Initiative
The National Heart, Lung, and Blood Institute Launches New Effort to Put What Works into Action

The Challenge
Today, 25 million people in the United States have asthma, including seven million children under 18 years of age. More than half of these individuals had at least one asthma attack in the previous year.

Asthma accounts for more than 10 million missed work days and almost 15 million missed school days each year. Moreover, ethnic and racial disparities in asthma morbidity and mortality persist, as does the disproportionate burden of asthma on individuals who live in lower-income, inner-city environments.

Implementing evidence-based clinical practice guidelines for asthma has demonstrated effectiveness. Yet, getting most clinicians to implement guidelines-based care for their patients with asthma and getting patients to adhere to their treatment plan remain a challenge.

Moving from Evidence to Action
The National Asthma Control Initiative (NACI) is a new initiative of the National Asthma Education and Prevention Program (NAEPP), coordinated by the National Heart, Lung, and Blood Institute (NHLBI). The NACI aims to use the recommendations of the NAEPP Expert Panel Report 3 (EP3)—Guidelines for the Diagnosis and Management of Asthma and its companion Guidelines Implementation Panel (GIP) report, to mobilize multistakeholder efforts and bring about meaningful change in asthma clinical care practices and quality of life for people who have asthma.

The NACI is committed to supporting two overarching action items that are based on the GIP report:

1. Convene and engage national, regional, state, and local leaders
2. Mobilize champions networks to implement and integrate clinical and community-based interventions with a focus on sustainability

GOAL: Improved asthma care, asthma control, and quality of life for all people with asthma

Demonstrate evidence-based and best practice approaches for specific audiences in various settings with mechanisms to close the asthma disparity gap

Monitor, evaluate, and assess NACI progress toward its goals by measuring outcomes and sharing lessons learned

GIP Priority Messages
The NACI will build on the GIP's six priority messages, selected for their feasibility and potential to positively impact patient outcomes:
1. Use inhaled corticosteroids
2. Use asthma action plans
3. Assess asthma severity
4. Assess and monitor asthma control
5. Schedule follow-up visits
6. Control environmental exposures

Get involved:
To learn more about the NACI, sign up for NACI updates, or become a web champion, go to the website at http://naci.nhlbi.nih.gov
GIP Priority Messages

1. Use inhaled corticosteroids
2. Use asthma action plans
3. Assess asthma severity
4. Assess and monitor asthma control
5. Schedule follow-up visits
6. Control environmental exposures
South Bronx Asthma Partnership
Bronx, NY
The Asthma Passport

A palm-sized, wire-bound guide that includes 10 key educational messages:
The Asthma Passport

1. Set asthma self-management goals
2. Learn asthma basics
3. Identify my asthma symptoms
4. Understand my asthma medicines
5. Follow my Asthma Action Plan
6. Use my inhaler properly
7. Keep a symptom diary
8. Identify my asthma triggers
9. Schedule a follow-up every 2-6 weeks
10. Ask my doctor specific questions
PEP
The Provider Education Project
Module I

The Stepwise Approach for Long-term Asthma Management

Module II

Communication Strategies to Promote Asthma Self-Management

Module III

Overcoming System Barriers to Achieving Asthma Control
Survey of 182 providers in the Bronx

Practice Tools/Resources
Self Assessment

1. The amount of time that would be both ideal and realistic for me to deliver "good" education to a new asthma patient would be:
   A. 10 minutes
   B. 20 minutes
   C. 30 minutes
   D. I don't think it is a realistic expectation for me to educate a patient with asthma in the time I am allotted to see patients.

2. If I had only 10 minutes to integrate asthma education into an office visit, I would most likely choose to: (select your top THREE messages)
   A. Affirm the diagnosis of asthma/concept of a chronic disease
   B. Address inflammation as the underlying cause of symptoms
   C. Differentiate between "controllers" versus "quick-relievers"
   D. Demonstrate medication delivery device techniques
   E. Identify triggers, including second-hand tobacco smoke
   F. Discuss goals of home monitoring/benefits of self-management
   G. Write and review an Asthma Action Plan
   H. Review how/when to reach the provider
   I. Encourage continuous on-going interaction with the clinician
   J. Administer the annual Influenza vaccine, regardless of severity

3. In my practice setting, I currently have access to the following educational tools:
   A. Models, photos, or diagrams of inflamed vs normal lungs
   B. A valved-holding chamber with mask for office demonstration
   C. A metered-dose Inhaler for office demonstration
   D. A picture chart of various Inhalers
   E. A diskus for office demonstration
   F. Asthma Action Plans in triplicate form (English & Spanish)
   G. A peak flow meter in the triage station
   H. Office spirometry
   I. A validated questionnaire for patient self-administration
   J. Referral resources: pest control, home visits, tobacco cessation
   K. 504b/Medication Administration school forms
1. The amount of time that would be both ideal and realistic for me to deliver "good" education to a new asthma patient would be:

A. 10 minutes
B. 20 minutes
C. 30 minutes
D. I don't think it is a realistic expectation for me to educate a patient with asthma in the time I am allotted to see patients.
2. If I had only 10 minutes to integrate asthma education into an office visit, I would most likely choose to: (select your top **THREE** messages)

A. Affirm the diagnosis of asthma/concept of a chronic disease
B. Stress inflammation as the underlying cause of symptoms
C. Differentiate between “controllers” versus “quick-relievers”
D. Demonstrate medication delivery device techniques
E. Identify triggers, including second-hand tobacco smoke
F. Discuss goals of home monitoring/benefits of self-management
G. Write and review an Asthma Action Plan
H. Review how/when to reach the provider
I. Encourage continuous on-going interaction with the clinician
J. Administer the annual influenza vaccine, regardless of severity
3. In my practice setting, I currently have access to the following educational tools (circle all):

A. models, photos, or diagrams of inflamed vs normal lungs
B. a holding chamber with mask for office demonstration
C. a metered-dose inhaler for office demonstration
D. a picture chart of various inhalers
E. a diskus for office demonstration
F. an Asthma Action Plans in triplicate form (English & Spanish)
G. a peak flow meter in the triage station
H. office spirometry
I. a validated questionnaire for patient self-administration
J. referral resources: pest control, home visits, tobacco cessation
K. 504b/Medication Administration school forms
differentiating between “controllers” versus “quick-relievers”

Key Educational Message # 1

Access to models to review inflammation

Access to visual tools for various inhalers

Access to Tools

35%

32%
Key Educational Message # 2

identify triggers

referral resources

Access Tools
demonstrate medication delivery device technique

Key Educational Message # 3

Access to Tools

- access to a sample spacer: 37%
- access to a sample MDI: 42%
- access to a sample Diskus: 27%
access to asthma action plans

Tools 71%

write and review an asthma action plan

Key Educational Message 29%
office spirometry

validated questionnaire

Other Tools

Other Tools
Conclusion #1

Providers may not be adequately equipped with the appropriate tools and resources to convey the key educational messages that promote asthma self-management.
Conclusion #2

Additional work is needed to enable providers to expand their “educational repertoire” of messages and skills to improve overall asthma care.
<table>
<thead>
<tr>
<th>EPR-3 History &amp; Terminology</th>
<th>Assessing Asthma Severity</th>
<th>Monitoring Asthma Control</th>
<th>Stepwise Treatment &amp; Medications</th>
<th>Education, Environment &amp; Referral</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
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<tr>
<td>200</td>
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<td>300</td>
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<tr>
<td>400</td>
<td>400</td>
<td>400</td>
<td>400</td>
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</tr>
<tr>
<td>500</td>
<td>500</td>
<td>500</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>1. PATIENT'S AGE</td>
<td>0-4 years</td>
<td>5-11 years</td>
<td>12 years-Adult</td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>-----------</td>
<td>------------</td>
<td>----------------</td>
<td></td>
</tr>
<tr>
<td>2. SEVERITY and/or CORRESPONDING TREATMENT STEP</td>
<td>no prior asthma diagnosis or past inhaled medications</td>
<td>Intermittent</td>
<td>Persistent</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mild</td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3. IMPAIRMENT</td>
<td>cough/wheeze/dyspnea</td>
<td>SABA doses</td>
<td>Limitation</td>
<td></td>
</tr>
<tr>
<td></td>
<td># _____days per week</td>
<td># _____nights per month</td>
<td>&lt;2/week</td>
<td>daily</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. RISK (exacerbations requiring systemic steroids)</td>
<td>0-1/ year</td>
<td>2-3/ year</td>
<td>&gt; 3/ year</td>
<td></td>
</tr>
<tr>
<td>5. SEVERITY (if new or different today)</td>
<td>Intermittent</td>
<td>Persistent</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mild</td>
<td>Moderate</td>
<td>Severe</td>
</tr>
<tr>
<td>OR CONTROL</td>
<td>Well Controlled</td>
<td>Not Well Controlled</td>
<td>Very Poorly Controlled</td>
<td>ACT® score:</td>
</tr>
<tr>
<td>6. STEPWISE TREATMENT</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7. INFLUENZA VACCINE</td>
<td>administered</td>
<td>egg allergy testing</td>
<td>refused</td>
<td>documented</td>
</tr>
<tr>
<td>8. EDUCATION for self-management</td>
<td>basic facts</td>
<td>controllers vs quick-relievers</td>
<td>spacer technique</td>
<td>environmental trigger avoidance</td>
</tr>
<tr>
<td>9. Referrals</td>
<td>spirometry</td>
<td>allergy testing</td>
<td>integrated post management</td>
<td>tobacco cessation</td>
</tr>
<tr>
<td>10. RTC</td>
<td>Every 2-6 weeks until “well controlled”</td>
<td>Every 1-6 months if “well controlled” for 3 months</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Developed by the South Bronx Asthma Partnership @ Bronx Lebanon Hospital Center (718) 960-1020
2005-2011 Asthma Severity Documentation: Compliance for All Sites Combined
National Asthma Control Initiative

The National Heart, Lung, and Blood Institute Launches New Effort to Put What Works into Action

The Challenge
Today, 23 million people in the United States have asthma, including seven million children under 18 years of age. More than half of these individuals had at least one asthma attack in the previous year.

Asthma accounts for more than 10 million missed workdays and almost 7.5 million missed school days each year. Moreover, ethnic and racial disparities in asthma morbidity and mortality persist, as does the disproportionate burden of asthma on individuals who live in lower-income, inner-city environments.

Implementing evidence-based clinical practice guidelines for asthma has demonstrated effectiveness. Yet, getting most clinicians to implement guidelines-based care for their patients with asthma and getting patients to adhere to their treatment plan remain a challenge.

Moving from Evidence to Action
The National Asthma Control Initiative (NACI) is a new initiative of the National Asthma Education and Prevention Program (NAEPP), coordinated by the National Heart, Lung, and Blood Institute (NHLBI). The NACI aims to use the recommendations of the NAEPP Expert Panel Report 3 (EPAR 3) — Guidelines for the Diagnosis and Management of Asthma and its companion Guidelines Implementation Panel (GIP) Report, to mobilize multi-sectoral stakeholders and bring about meaningful change in asthma clinical care practices and quality of life for people who have asthma.

The NACI is committed to support the two overarching action items that are based on the GIP Report:

1. Develop a communication infrastructure for information sharing and tracking resources
2. Convene and engage national, regional, state, and local leaders
3. Mobilize champions network to implement and integrate clinical and community-based interventions to improve care for all people with asthma

GOAL: Improved asthma care, asthma control, and quality of life for all people with asthma

GIP Priority Messages
The NACI will build on the GIP's six priority messages, selected for their feasibility and potential to positively impact patient outcomes:
1. Use inhaled corticosteroids
2. Use asthma action plans
3. Assess asthma severity
4. Assess and monitor asthma control
5. Schedule follow-up visits
6. Control environmental exposures

Get involved:
Learn more about the NACI, sign up for NACI updates, or become a web champion, go to the NACI website at http://nait.web.nih.gov
GIP Priority Messages

1. Use inhaled corticosteroids
2. Use asthma action plans
3. Assess asthma severity
4. Assess and monitor asthma control
5. Schedule follow-up visits
6. Control environmental exposures
Clinical Asthma Champions Leadership Training Program
# Clinical Asthma Champions Leadership Training

## CONGRATULATIONS!

### Workshop Dates and Participants

#### CHAMPIONS GROUP #1: FRIDAY, SEPTEMBER 5TH AND SATURDAY, SEPTEMBER 10TH

<table>
<thead>
<tr>
<th>Champion</th>
<th>Institution</th>
<th>City</th>
</tr>
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<tbody>
<tr>
<td>Traci A. Dowses, MD</td>
<td>Stony Brook Children’s Hospital</td>
<td>East Setauket, NY</td>
</tr>
<tr>
<td>Anil Gogineni, MBBS</td>
<td>Bronx-Lebanon Hospital Center</td>
<td>Bronx, NY</td>
</tr>
<tr>
<td>Jason Hughes, DO</td>
<td>Koalaua Community Health and Wellness Center</td>
<td>Kailua, HI</td>
</tr>
<tr>
<td>Edward Awanregie, MD</td>
<td>Michigan State University</td>
<td>East Lansing, MI</td>
</tr>
<tr>
<td>Megan Pierce, MD</td>
<td>Children’s Hospital at Erlanger</td>
<td>Chattanooga, TN</td>
</tr>
<tr>
<td>Anele Sleeter, MD</td>
<td>Bronx-Lebanon Hospital Center</td>
<td>Bronx, NY</td>
</tr>
</tbody>
</table>

#### CHAMPIONS GROUP #2: FRIDAY, SEPTEMBER 16TH AND SATURDAY, SEPTEMBER 17TH

<table>
<thead>
<tr>
<th>Champion</th>
<th>Institution</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shoko Balamonde, MD</td>
<td>Morris Heights Health Center</td>
<td>Bronx, NY</td>
</tr>
<tr>
<td>Elliott S. Attisha, DO</td>
<td>Henry Ford Health System, School-Based &amp; Community Health Program</td>
<td>Detroit, MI</td>
</tr>
<tr>
<td>Kenneth E. Mckeena, MBBS</td>
<td>Bronx-Lebanon Hospital Center</td>
<td>Bronx, NY</td>
</tr>
<tr>
<td>Tabassum Jrish, MBBS</td>
<td>UAMS Ave Fort Smith</td>
<td>Fort Smith, AR</td>
</tr>
<tr>
<td>Aarti Gopin, MBBS</td>
<td>Bronx-Lebanon Hospital Center</td>
<td>Bronx, NY</td>
</tr>
<tr>
<td>Shrila Krahon, MD</td>
<td>Morris Heights Health Center</td>
<td>Bronx, NY</td>
</tr>
<tr>
<td>Nadia J. Rohls, DO</td>
<td>Jersey Shore University Medical Center</td>
<td>Neptune, NJ</td>
</tr>
<tr>
<td>Jamie M. Pinto, MD</td>
<td>K. Homanian Children’s Hospital</td>
<td>Neptune, NJ</td>
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#### CHAMPIONS GROUP #3: FRIDAY, OCTOBER 14TH AND SATURDAY, OCTOBER 15TH

<table>
<thead>
<tr>
<th>Champion</th>
<th>Institution</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shirish Balachandra, MD</td>
<td>Urban Health Plan</td>
<td>Bronx, NY</td>
</tr>
<tr>
<td>Kelly Clark, MD</td>
<td>Munson Medical Center</td>
<td>Traverse City, MI</td>
</tr>
<tr>
<td>Matthew Graham, MD</td>
<td>Greenville Hospital System University Medical Group</td>
<td>Greenville, SC</td>
</tr>
<tr>
<td>Leon Matsum, MD</td>
<td>West Hawaii Community Health Center</td>
<td>Kailua-Kona, HI</td>
</tr>
<tr>
<td>Shyann Milewski, MD</td>
<td>Montefiore Medical Center</td>
<td>Bronx, NY</td>
</tr>
<tr>
<td>Pamela Ponce, MD</td>
<td>Orlando Health</td>
<td>Orlando, FL</td>
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#### CHAMPIONS GROUP #4: FRIDAY, OCTOBER 21ST AND SATURDAY, OCTOBER 22ND

<table>
<thead>
<tr>
<th>Champion</th>
<th>Institution</th>
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<tbody>
<tr>
<td>Janice Lichtenberg, MD</td>
<td>The Children’s Hospital at Monmouth Medical Center</td>
<td>Long Branch, NJ</td>
</tr>
<tr>
<td>Kristin Miller, MD</td>
<td>Sinai Hospital of Baltimore</td>
<td>Baltimore, MD</td>
</tr>
<tr>
<td>Vijay Narapareja, MBBS</td>
<td>Hurley Medical Center</td>
<td>Flint, MI</td>
</tr>
<tr>
<td>Jenese Reynolds, MD</td>
<td>McLaren Family Medicine Residency Program</td>
<td>Flint, MI</td>
</tr>
<tr>
<td>Lakshmi Upal, MBBS</td>
<td>UMDNJ/ Robert Woods Johnson Medical School</td>
<td>New Brunswick, NJ</td>
</tr>
<tr>
<td>Christine Verma, MD</td>
<td>Center for Advanced Pediatrics</td>
<td>Norwalk, CT</td>
</tr>
</tbody>
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#### CHAMPIONS GROUP #5: WEDNESDAY, NOVEMBER 16TH AND THURSDAY, NOVEMBER 17TH

<table>
<thead>
<tr>
<th>Champion</th>
<th>Institution</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annette Cameron, MD</td>
<td>Hospital of Saint Raphael</td>
<td>New Haven, CT</td>
</tr>
<tr>
<td>Rhenique Harris, MD</td>
<td>Children’s National Medical Center</td>
<td>Washington, D.C</td>
</tr>
<tr>
<td>Ann Sahaisan, MD</td>
<td>Hospital of Saint Raphael</td>
<td>New Haven, CT</td>
</tr>
<tr>
<td>Justin Sanders, MD</td>
<td>MonroeCare Medical Center/Family Health Center</td>
<td>Bronx, NY</td>
</tr>
<tr>
<td>Teresa Stander, DO</td>
<td>Wisconsin Comprehensive Health Center</td>
<td>Wisconsin, WI</td>
</tr>
<tr>
<td>Karen Thompson, MD</td>
<td>Spectrum Health Group</td>
<td>Grand Rapids, MI</td>
</tr>
</tbody>
</table>
“Change Projects”

• Embedding guidelines into routine care
• Using non-clinical team members more effectively
• Planned pro-active encounters for preventive asthma care
• Using brief educational encounters to provide structured self-management support
• Coordinating case management for high risk patients
• Linkages to effective community resources
• Enhancements to clinical information systems (registries)
Workshop Overview

- **Part 1: Friday Morning**
  - Stepwise approach for long-term asthma management
  - Communication strategies that promote asthma self-management

- **Part 2: Friday Afternoon**
  - Defining the current systems
  - Developing, implementing and testing a change

- **Part 3: Saturday Morning**
  - The change project proposal
  - Making the business case
  - Expectations, next steps
Informed, Supportive, Integrated Community

Prepared, Proactive Practice Team

Productive Interactions
Functional and Clinical Outcomes

The Chronic Care Model

Community
- Resources and Policies
  - Self-Management Support

Health Systems
- Organization of Health Care
  - Delivery System Design
  - Decision Support
  - Clinical Information Systems

Supportive, Integrated Community

Informed, Activated Patient

Prepared, Proactive Practice Team

Developed by The MacColl Institute
© ACP-ASIM Journals and Books
The Chronic Care Model requires changing practice culture and infrastructure as well as changing specific aspects of patient care.
What are we trying to accomplish?

How will we know that a change is an improvement?

What change can we make that will result in improvement?

Three Fundamental Questions

Model for Improvement

Aim Statement

Measures

PDSA

Act

Plan

Study

Do
Activated Provider Champions

- Understand key concepts of the EPR-3
- Reinforce GIP priority messages
- Disseminate pictorial tools for education
- Conduct a “change project”

Activated Practice Delivery Systems

- Self-Management Support
- Decision Support
- Clinical Information Systems
- Delivery System Design
- Health Care Organization
- Community

“Clinical Asthma Champions Leadership Training Program”
Early Career Physicians as Asthma Champions in National Pediatric Practices

The Chronic Care Model

- Community Resources and Policies
- Health Systems Organization of Health Care
  - Delivery System Design
  - Decision Support
  - Clinical Information Systems

Improved Outcomes

- Informed, Activated Patient
- Productive Interactions
- Prepared, Proactive Practice Team

NACI

- Improved functional and clinical outcomes
  - Optimizing entry-to-exit asthma care
  - Setting shared goals for asthma control
  - Fostering patient-provider communication

The Model for Improvement

- What are we trying to accomplish?
- How will we know that a change is an improvement?
- What change can we make that will result in improvement?
Using Hospital-based EMR to Monitor Utilization Patterns of Pediatric Asthma Visits in an Urban Community Hospital

Lalit Bansal MD, Mantu R. Reddy MD, Ram Kairam MD, Ronald Bainbridge MBBS, Caroline Leeds BA and Richard Neugebauer PhD, MPH
Department of Pediatrics, Bronx-Lebanon Hospital Center, Bronx, New York

Background
- Asthma remains a major public health problem.
- Prevalence amongst children age 0-17 years is 9.4% nationally, 11.2% in New York City and as high as 17% in the South Bronx.\(^1\,^2,^3\)
- Unfortunately, such statistics cataloged by state and national databases often lag by several years, complicating real-time analysis of disease-specific burden and resource allocation for high-risk populations.

Objective
- To describe the eight-year burden of pediatric asthma-related visits within this community hospital using an electronic medical record (EMR) system.

Methods
- Setting: urban/community teaching hospital.
- Using the hospital-based EMR, data were collected from 4/1/01-12/5/08 for children age 0-18 years.
- Data included: General and asthma-specific visits to the emergency department (ED), ambulatory care clinic (ACC), and hospital admissions.
- Asthma-specific visits were defined by principal diagnosis ICD-9 codes of 493.0-493.9.
- Annual asthma visits (ED + ACC visits) for a specific year were calculated as a percentage of general visits to the hospital.
- Asthma admission rate for a specific year was calculated as number of asthma-specific admissions per 1000 asthma-specific ED visits.
- ACC visit rate for a specific year was calculated as asthma-specific ACC visits per 1000 general ACC visits.
- ED admission rate for a specific year was calculated as asthma-specific ED visits per 1000 general ED visits.

Results

<table>
<thead>
<tr>
<th>YEAR</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
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<tbody>
<tr>
<td>General ED Visits</td>
<td>27287</td>
<td>30000</td>
<td>30000</td>
<td>30376</td>
<td>37090</td>
<td>41561</td>
<td>40709</td>
<td>37117</td>
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<tr>
<td>Asthma-specific ED Visits</td>
<td>2665</td>
<td>4893</td>
<td>4417</td>
<td>3769</td>
<td>3424</td>
<td>3424</td>
<td>4036</td>
<td>4465</td>
</tr>
<tr>
<td>General ACC Visits</td>
<td>46788</td>
<td>50677</td>
<td>10067</td>
<td>10754</td>
<td>109536</td>
<td>105314</td>
<td>103737</td>
<td>96785</td>
</tr>
<tr>
<td>Asthma-specific ACC Visits</td>
<td>4374</td>
<td>7764</td>
<td>8998</td>
<td>7230</td>
<td>6832</td>
<td>5345</td>
<td>5720</td>
<td>4963</td>
</tr>
<tr>
<td>General Admissions</td>
<td>3286</td>
<td>5768</td>
<td>6364</td>
<td>6984</td>
<td>6924</td>
<td>5756</td>
<td>5787</td>
<td>5204</td>
</tr>
<tr>
<td>Asthma-specific Admissions</td>
<td>414</td>
<td>826</td>
<td>1110</td>
<td>676</td>
<td>576</td>
<td>576</td>
<td>790</td>
<td>550</td>
</tr>
</tbody>
</table>

Data from 4/1/2001 - 12/5/2008

- Asthma visits decreased by 2.4% from 2001-2008 (6.4% to 7%).
- Asthma admission rate declined from 267.8 to 129.7 per 1000 asthma-specific ED visits between 2003-2008.
- ACC visit rate decreased from 93.5 to 51.2 between 2000-2008.
- ED asthma visits, general ED visits and general ACC visits remained relatively constant between 2001-2008.

Conclusions
- The burden of asthma visits has decreased at this institution over the past eight years.
- Based on the observed decrease in asthma-specific admissions, we speculate an overall decrease in the severity of exacerbations presenting to the ED.
- The ability to observe real-time utilization patterns through a hospital-based EMR system can help elucidate current burden.

References
A Pebble in the Water

Drop a pebble in the water: just a splash, and it is gone;

But there's half-a-hundred ripples circling on and on and on.

Spreading, spreading from the center, flowing on out to the sea.

And there is no way of telling where the end is going to be.

~ James W. Foley