Successful Implementation of the National *Guidelines for the Diagnosis and Management of Asthma, 2007* in Nine (9) Suffolk County (New York) Operated Health Centers

Presented by:
Lewis Mooney, M.D., F.C.C.P.
Suffolk County (New York)
Department of Health Services
lewis.mooney@suffolkcountyny.gov
Suffolk County, New York

- Suffolk County occupies the eastern two-thirds of Long Island
Suffolk County, New York

- 912 square miles of rural, suburban and small urban areas
- The 2000 US Census estimates the population to be 1,468,037 (2008 estimate = 1,504,947)
  - 84.6% White
  - 6.9% African-American
  - 10.5% Hispanic or Latino
  - (11.2% foreign-born)
The Suffolk County, New York Department of Health Services (SCDHS)

- The department operates a network of seven (7) community health centers (SCHCs) and 2 satellite health centers.
- These SCHCs provide ambulatory primary health care services to uninsured and medically underserved persons who are residents of Suffolk County.
The Suffolk County, New York Department of Health Services (SCDHS)

- In 2009, there were 311,744 patient visits to the SCHCs
- 6,132 of these visits were for asthma
The Guidelines

National Heart, Lung, and Blood Institute

National Asthma Education and Prevention Program

Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma

Full Report 2007
The Guidelines—their complexity

- Evaluation and treatment are divided into three age groups:
  - 0-4 years
  - 5-11 years
  - 12-adult
The Guidelines-their complexity

- For persons not on long-term controller medication
  asthma is classified into four degrees of severity:
    - Intermittent
    - Mild Persistent
    - Moderate Persistent
    - Severe Persistent
The Guidelines—their complexity

- For persons on long-term controller medication asthma is classified into three levels of control:
  - Well-controlled
  - Not well-controlled
  - Very poorly controlled
The Guidelines - their complexity

- Six therapy steps are provided based on age and classification of severity or level of control
- Each therapy step has:
  - Preferred medications and
  - Alternative medications
The *Guidelines*-their complexity

- Thus, more than 432 combinations of evaluation and therapy possible
Suffolk County
Policy Development, Implementation Tools and Provider Asthma Education

- In 2008, a broad-based task force consisting of end-users:
  - updated the local asthma policy (440 pages became 6 pages)
  - developed and field-tested implementation tools to embed the *Guidelines* into health center clinical practice
  - provided asthma education using three hours of Physician Asthma Care Education (PACE) training and a one hour training session on using the implementation tools
Suffolk County
Implementation Tools
Provider Education Summary Sheets and
Asthma Medication Worksheets

Classifying Asthma SEVERITY
Children > 12 years old and Adults-Initial Visit

<table>
<thead>
<tr>
<th>Classification of Severity</th>
<th>Intermittent</th>
<th>Mild Persistent</th>
<th>Moderate Persistent</th>
<th>Severe Persistent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symptoms</td>
<td>&lt; 2 days/week</td>
<td>&lt; 1 month</td>
<td>&lt; 3 months</td>
<td>&gt; 3 months</td>
</tr>
<tr>
<td>Nighttime awakenings</td>
<td>&lt; 2 days/week</td>
<td>&lt; 1 month</td>
<td>&lt; 3 months</td>
<td>&gt; 3 months</td>
</tr>
<tr>
<td>Use of SABA</td>
<td>&lt; 2 days/week</td>
<td>&lt; 1 month</td>
<td>&lt; 3 months</td>
<td>&gt; 3 months</td>
</tr>
<tr>
<td>Noninvasive wheezing</td>
<td>No</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Risk</td>
<td>5 years</td>
<td>&gt; 5 years</td>
<td>&gt; 5 years</td>
<td>&gt; 5 years</td>
</tr>
</tbody>
</table>

Recommended Therapy Step for INITIATING ASTHMA TREATMENT:

1. Step 1: Step 2
2. Step 3
3. Step 4
4. Step 5

When asthma symptomatically severe based on current therapy steps:

1. Step 1
2. Step 2
3. Step 3
4. Step 4
5. Step 5

Start Therapy: Include SABAK with all steps.

Suffolk County Department of Health Services - Division of Patient Care Services
Provider Education Summary Sheet
Asthma Medication Worksheets

Asthma Medication Worksheets

Age 12 or Older

<table>
<thead>
<tr>
<th>Medication</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prednisone</td>
<td>Oral prednisone 5 mg (by mouth) every 6 hours</td>
</tr>
<tr>
<td>Fluticasone</td>
<td>Nasal fluticasone 220 mcg (by mouth) every 6 hours</td>
</tr>
<tr>
<td>Mometasone</td>
<td>Topical mometasone 0.1% (by mouth) every 12 hours</td>
</tr>
<tr>
<td>Beclomethasone</td>
<td>Oral beclomethasone 15 mcg (by mouth) every 6 hours</td>
</tr>
<tr>
<td>Triamcinolone</td>
<td>Oral triamcinolone 1 mg (by mouth) every 6 hours</td>
</tr>
<tr>
<td>Cromolyn</td>
<td>Intranasal cromolyn 40 mg (by mouth) every 6 hours</td>
</tr>
<tr>
<td>Ipratropium</td>
<td>Oral ipratropium 1 mg (by mouth) every 6 hours</td>
</tr>
</tbody>
</table>

Other Medications

Budesonide (a corticosteroid) may be used for oral or topical administration.

Corticosteroids (oral) may be used for severe asthma.

Steroids (oral) may be used for severe asthma.

Other medications that may be used for severe asthma include:

- Inhaled corticosteroids
- Long-acting beta-agonists
- Antihistamines
- Decongestants
- Steroids (oral)
- Other medications that may be used for severe asthma
Suffolk County
Implementation Tools
Asthma Management Plan

| Implementation Plan | Education | Equipment | Monitoring | Training
|---------------------|----------|-----------|-----------|--------
|                     |          |           |           |        

Table 1: Implementation Plan Details

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
<th>Responsible Party</th>
<th>Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>01/01/2023</td>
<td>Outreach Program</td>
<td>Health Department</td>
<td>02/15/2023</td>
</tr>
<tr>
<td>02/01/2023</td>
<td>Educational Workshops</td>
<td>Community Centers</td>
<td>03/01/2023</td>
</tr>
<tr>
<td>03/01/2023</td>
<td>Equipment Distribution</td>
<td>Primary Care Providers</td>
<td>04/01/2023</td>
</tr>
</tbody>
</table>

Figure 1: Asthma Management Plan Workflow Diagram

- Educational Workshops
  - Identification of target audience
  - Development of educational materials
  - Delivery of workshops to community centers

- Equipment Distribution
  - Identification of equipment needs
  - Acquisition of necessary equipment
  - Distribution to primary care providers

- Monitoring
  - Collection of data on educational outcomes
  - Assessment of equipment usage
  - Evaluation of asthma management plan effectiveness
The Asthma Management Plan (AMP) is a single-page patient encounter form that is completed during all primary care visits for all persons with asthma.
Suffolk County
Asthma Management Plan
Compliance Measure

- Each month the AMPs are collected and analyzed
- Results are disseminated at monthly departmental meetings and on the county’s asthma intranet site.
<table>
<thead>
<tr>
<th>Monthly Totals</th>
<th># Seen</th>
<th># AMPs Completed (%)</th>
<th># Age Recorded (%)</th>
<th># Severity Recorded (%)</th>
<th># Current Therapy Step (%)</th>
<th># Patient Control (%)</th>
<th># Change to Therapy Step (%)</th>
<th>on SABA (%)</th>
<th># on Controller Medications (%)</th>
<th># Asthma Action Plan (%)</th>
<th># PHN Referral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total 2009</td>
<td>6,132</td>
<td>5229/6132 85%</td>
<td>5091/5299 97%</td>
<td>4591/5229 88%</td>
<td>4251/5229 81%</td>
<td>4306/5229 82%</td>
<td>4624/5229 88%</td>
<td>4931/5229 94%</td>
<td>3539/5229 68%</td>
<td>2809/5229 54%</td>
<td>163</td>
</tr>
<tr>
<td>Jan. 2010</td>
<td>505</td>
<td>468/505 93%</td>
<td>460/468 98%</td>
<td>422/468 90%</td>
<td>391/468 84%</td>
<td>397/468 85%</td>
<td>439/468 94%</td>
<td>448/468 96%</td>
<td>312/468 67%</td>
<td>242/468 52%</td>
<td>3</td>
</tr>
<tr>
<td>Feb. 2010</td>
<td>451</td>
<td>428/451 95%</td>
<td>409/428 96%</td>
<td>377/428 88%</td>
<td>351/428 82%</td>
<td>352/428 82%</td>
<td>357/428 83%</td>
<td>366/428 86%</td>
<td>242/428 57%</td>
<td>187/428 44%</td>
<td>4</td>
</tr>
<tr>
<td>March 2010</td>
<td>547</td>
<td>529/547 97%</td>
<td>520/529 98%</td>
<td>475/529 90%</td>
<td>444/529 84%</td>
<td>444/529 84%</td>
<td>460/529 87%</td>
<td>461/529 87%</td>
<td>328/529 62%</td>
<td>320/529 61%</td>
<td>3</td>
</tr>
<tr>
<td>April 2010</td>
<td>524</td>
<td>487/524 93%</td>
<td>476/487 98%</td>
<td>449/487 92%</td>
<td>418/487 86%</td>
<td>433/487 89%</td>
<td>439/487 90%</td>
<td>441/487 91%</td>
<td>298/487 61%</td>
<td>360/487 74%</td>
<td>3</td>
</tr>
<tr>
<td>May 2010</td>
<td>456</td>
<td>431/456 95%</td>
<td>426/431 99%</td>
<td>394/431 91%</td>
<td>365/431 85%</td>
<td>385/431 98%</td>
<td>391/431 91%</td>
<td>451/431 96%</td>
<td>294/431 68%</td>
<td>298/431 69%</td>
<td>1</td>
</tr>
<tr>
<td>June 2010</td>
<td>448</td>
<td>430/446 96%</td>
<td>420/430 98%</td>
<td>369/430 88%</td>
<td>347/430 83%</td>
<td>373/430 89%</td>
<td>382/430 91%</td>
<td>387/430 92%</td>
<td>266/430 63%</td>
<td>287/430 68%</td>
<td>3</td>
</tr>
<tr>
<td>July 2010</td>
<td>353</td>
<td>347/353 98%</td>
<td>336/347 97%</td>
<td>305/347 88%</td>
<td>289/347 83%</td>
<td>300/347 86%</td>
<td>297/347 86%</td>
<td>319/347 92%</td>
<td>219/347 61%</td>
<td>237/347 68%</td>
<td>3</td>
</tr>
<tr>
<td>August 2010</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>September 2010</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>October 2010</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>November 2010</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>December 2010</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total 2010</td>
<td>3284</td>
<td>3120/3284 95%</td>
<td>3047/3120 98%</td>
<td>2791/3120 90%</td>
<td>2605/3120 84%</td>
<td>2664/3120 86%</td>
<td>2765/3120 89%</td>
<td>2873/3120 92%</td>
<td>1958/3120 61%</td>
<td>1931/3120 61%</td>
<td>20</td>
</tr>
<tr>
<td>Project Total</td>
<td>12,347</td>
<td>11122/12347 90%</td>
<td>10849/11122 98%</td>
<td>9686/11122 89%</td>
<td>9172/11122 83%</td>
<td>9374/11122 84%</td>
<td>9857/11122 88%</td>
<td>10358/11122 93%</td>
<td>7238/11122 65%</td>
<td>6434/11122 58%</td>
<td>183</td>
</tr>
</tbody>
</table>
Suffolk County
Asthma Demonstration Project
Conclusions

- Successful embedding of new and complex national asthma guidelines into clinical practice in a large and diverse health-care delivery system is achievable through broad end-user input into policy design, development and field-testing of effective implementation tools, provider education and ongoing collection and dissemination of results.
Suffolk County
Asthma Demonstration Project

The End