Strategic Plan for Asthma in Massachusetts 2009-2014

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Asthma Interferes with Daily Life
Economic Cost of Asthma

• Nationally, total cost was $19.7 billion in 2007\(^1\)

• In Massachusetts, total charges for acute care hospital utilization for asthma were over $136 million in 2006\(^2\)
  – Public insurance was primary source of payment for 53.0% of visits

\(^1\) American Lung Association

\(^2\) Data Source: CY2006 MA Emergency Department Discharge, Inpatient Hospital Discharge, and Outpatient Observation Stay Databases, MA Division of Health Care Finance and Policy
Asthma Prevention and Control Program

• In one year, APCP has:
  – Funded Boston, Brockton, Fall River, New Bedford, Springfield to reduce disparities
  – Coordinated development of two documents:
    • The Burden of Asthma in Massachusetts
    • A Strategic Plan for Asthma in Massachusetts 2009-2014
  – Aggressively pursued additional funding to build program
Prevalence of Lifetime and Current Asthma among Adults in MA and US, 2000-2007

Prevalence of Current Asthma among MA Adults, 2005-2007

• Prevalence is higher among:
  – Females vs. males (12.1% vs. 7.4%)
  – Individuals with lower vs. higher household incomes (11.0% vs. 8.3%)
  – Current smokers vs. never smokers (12.9% vs. 8.9%)
  – Individuals with disability vs. no disability (18.7% vs. 7.3%)

• Similar across race/ethnicity subgroups

Source: 2005-2007 MA BRFSS, MDPH
Work-related Asthma among Massachusetts Adults

• Among MA adults with current asthma:
  – 40.2% reported that their asthma was either caused or made worse by exposures at any job they had ever had (13.9% current job)
  – 10.0% reported discussing relation to work with health care provider
  – 5.1% reported changing or quitting jobs because of their work-related asthma

Source: 2006-2007 MA Adult Asthma Call-back Survey, MDPH
Measures of Impairment among Massachusetts Children with Current Asthma

• 10.3% of MA children have current asthma*
• Among MA children with current asthma‡:
  – 50.9% had activity limitations due to asthma, past year
  – 44.2% had an asthma attack or episode, past year
  – 40.5% experienced symptoms of asthma at least once, past 30 days
  – 16.9% had sleep disruption due to asthma, past 30 days
  – 16.6% used an inhaled short-acting beta agonist 1 or more times per day

*Three-year average annual estimate from 2005-2007 MA BRFSS, MDPH
‡ Two-year average annual estimate from 2006-2007 MA Child Asthma Call-back Survey, MDPH
Level of Asthma Control among Massachusetts Adults and Children with Current Asthma, 2006-2007

Source: 2006-2007 MA Adult and Child Asthma Call-back Survey, MDPH
Magnitude and Trends of Hospital Treatment for Asthma in Massachusetts

• On an average day in Massachusetts, asthma was associated with:
  – 102 emergency department visits (57.8 per 10,000 residents; n= 36,146 in 2005)
  – 25 inpatient hospitalizations (14.7 per 10,000 residents; n=9,457 in 2006)
  – 8 observation stays (3.4 per 10,000 residents; n=2,101 in 2005)

• Annual age-adjusted rates for asthma remained:
  – Stable for emergency department visits (2002-2005)
  – Stable for inpatient hospitalization (2000-2006)
  – Decreased 35% for observation stays (2000-2005)

Age-Specific Rate of Inpatient Hospitalization due to Asthma in Massachusetts, 2000 and 2006

Source: 2000, 2006 MA Inpatient Hospital Discharge Database, MA Division of Health Care Finance and Policy
Age-adjusted Rate of Inpatient Hospitalization for Asthma by Race/Ethnicity in Massachusetts, 2000-2006

Source: 2000-2006 MA Inpatient Hospital Discharge Database, MA Division of Health Care Finance and Policy
Age-adjusted Rate of Inpatient Hospitalization due to Asthma by Community Health Network Area of Residence, 2004-2006

Source: 2004-2006 MA Inpatient Hospital Discharge Database, MA Division of Health Care Finance and Policy
Age-adjusted Rate of Inpatient Hospitalization due to Asthma by City/Town of Residence, 2004-2006

<table>
<thead>
<tr>
<th>Top 10 Cities/Towns</th>
<th>Age-Adjusted Rate*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall River</td>
<td>35.3</td>
</tr>
<tr>
<td>New Bedford</td>
<td>31.6</td>
</tr>
<tr>
<td>Southbridge</td>
<td>31.4</td>
</tr>
<tr>
<td>Brockton</td>
<td>27.7</td>
</tr>
<tr>
<td>Avon</td>
<td>27.6</td>
</tr>
<tr>
<td>Holyoke</td>
<td>26.7</td>
</tr>
<tr>
<td>Boston</td>
<td>25.8</td>
</tr>
<tr>
<td>Springfield</td>
<td>24.6</td>
</tr>
<tr>
<td>Wareham</td>
<td>22.6</td>
</tr>
<tr>
<td>Massachusetts Total</td>
<td>14.1</td>
</tr>
</tbody>
</table>

*Rates are per 10,000 residents.  
Source: 2004-2006 MA Inpatient Hospital Discharge Database, MA Division of Health Care Finance and Policy
Strategic Plan for Asthma in Massachusetts

2009 - 2014
Socio-ecological Model
Strategic Plan Goals

- Enhance asthma surveillance
- Improve asthma management
- Reduce exposure to environmental factors that cause and/or exacerbate asthma
- Better understand the causes of asthma and the role of primary prevention
- Increase capacity of the statewide and local partnerships
- Evaluate Massachusetts’ progress
Goal 1: Enhance Asthma Surveillance

• Selected highlights:
  – Add occupation and industry questions to the BRFSS to better understand work-related asthma
  – Prepare bulletins to explain and document the burden of asthma among priority populations, such as older adults and certain race/ethnic groups
Goal 2: Improve Asthma Management

6 objectives that include:
1. Reduce disparities
2. Improve standards of care
3. Improve environmental management of asthma in the clinic
4. Improve asthma self-management
5. Increase sustainability of asthma care
6. Improve integration of care outside clinic
Goal 2, Objective 5: Increase sustainability of asthma care

• Inconsistent coverage of:
  – Asthma education
  – Case management
  – Controller medications (tier 3)
• Selected highlights:
  – Promote coverage of asthma care recommended in the national guidelines
Goal 3: Reduce Exposure to Environmental Factors that Cause and/or Exacerbate Asthma

5 Objectives include reducing exposure to environmental factors in the following:

1. Outdoor or ambient air
2. Schools, child care and child recreational areas
3. Homes
4. Work places
5. Chemicals, such as cleaning agents
Goal 3, Objective 4: Reduce Exposures to Factors that Cause and/or Exacerbate Asthma in the Work Place

• In partnership with MDPH Occupational Health Surveillance Program:
  – Track cases and recommend work site changes
  – Raise awareness
  – Advance (or implement) policy initiatives to decrease exposures to hazardous products in worksites
Community Collaborators

- ABCD Head Start
- American Lung Association
- Asthma and Allergy Foundation of America, New England Chapter
- Asthma Regional Council of New England
- Boston Medical Center
- Boston Medical Center HealthNet Plan
- Boston Public Health Commission
- Boston Urban Asthma Coalition
- Boston University
- Brockton Neighborhood Health Center
- Cambridge Health Alliance
- Cape Cod Regional Tobacco Control Program

- Children's Hospital Boston
- Clean Water Action
- Committee for Boston Public Housing
- Community Engagement through Public Broadcasting/WGBH
- Dorchester House Multi Service Center
- Fitchburg Lead Action Group
- GlaxoSmithKline
- Greater Brockton Asthma Coalition
- Greater Lawrence Family Health Center
- Greater New Bedford Community Health Center
- Harvard Pilgrim Health Care
- High Street Health Center
- MA Association for the Chemically Injured
- MA College of Emergency Physicians
Community Collaborators

- MA School Nurse Research Network
- MA Teachers Association
- Mason Square Health Center
- Massachusetts Asthma Advocacy Partnership Massachusetts Coalition for Occupational Safety and Health
- Massachusetts Health Quality Partners
- Metropolitan Area Planning Council
- Neighborhood Health Plan
- Massachusetts Nurses Association
- Northborough Southborough Schools
- Old Colony Planning Council Area Agency on Aging
- Pioneer Valley Asthma Coalition
- Pioneer Valley Planning Commission
- Schering-Plough
- Self Help, Inc.
- Springfield Partners for Community Action
- Springfield Public Schools
- Springfield, Department of Parks, Buildings, and Recreation Management
- Square One
- Stanley Street Treatment and Resources
- The Medical Foundation
- Tobacco Free Mass
- Toxic Use Reduction Institute
- Tufts Medical Center
- UMass Lowell Center for Family, Work, and Community
- UMass Lowell, Lowell Center for Sustainable Production
- Viz Health Consulting
State Agency Collaborators

- Department of Early Education and Child Care
- Department of Elementary and Secondary Education
- Department of Environmental Protection
- MA Operational Services Division
MDPH Collaborators

• Bureau of Environmental Health
• Early Childhood Comprehensive Systems Project (MECCS)
• Essential School Health Services
• Health Survey Program
• Healthy Aging and Disability Unit
• Immunization Program
• MassCHIP
• Occupational Health Surveillance Program
• Office of Statistics and Evaluation
• Tobacco Control Program
• Wellness Division
• View [www.mass.gov/dph/asthma](http://www.mass.gov/dph/asthma)
  – *The Strategic Plan for Asthma In Massachusetts, 2009-2014*
  – *Burden of Asthma in Massachusetts*

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Questions?
Additional Goals and Objectives

• Increase linkages between health care providers and schools and child care settings
• Promote safer alternatives to chemicals
• Develop a roadmap for primary prevention
• Increase the capacity of statewide and local partnership to implement the state asthma plan
• Evaluate our progress