Asthma among older adults in Massachusetts: Using surveillance data to prompt action

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Overview

• Background
  – Asthma
  – Older Adults – Priority population in MA

• Data Analysis
  – Purpose
  – Findings

• Taking Action
  – Potential Partners
  – Next Steps
Asthma

• Chronic inflammatory disease of the airways
  – Symptoms: wheezing, shortness of breath, chest tightness, cough
  – Cause of individual cases usually unknown
  – No cure exists, but can be controlled

• Affects all ages
  – US (2008): 7.3% of adults (16.4 mil), 9.4% of children (7.0 mil)
  – Of adults with asthma, 15.9% aged 65+

• Estimated $20.7 billion annual healthcare expenditures (NHLBI, 2009)
Asthma Prevention and Control Program

Our Mission: To improve the quality of life for all MA residents with asthma and to reduce disparities in asthma outcomes.

Selected Key Activities:

• Asthma Surveillance
• Partnering to implement the state asthma plan and coordinate asthma prevention and control activities throughout the state, region and country
Surveillance: Burden of Asthma in Massachusetts

- Asthma prevalence in Massachusetts is among the highest in the nation – approximately 10% of adults and children have asthma.

- Disparities in poor asthma outcomes exist.
  - Children aged 0-4
  - Adults aged 65 and older
  - Black, Non-Hispanics and Hispanics
Population of Adults Aged ≥ 65, United States, 1900-2050

Population age 65 and over and age 85 and over, selected years 1900–2008 and projected 2010–2050

Millions


[Graph showing population trends from 1900 to 2050 with two lines representing those aged 65 and over and those aged 85 and over]

NOTE: Data for 2010–2050 are projections of the population.
Reference population: These data refer to the resident population.

Background - Older Adults and Asthma

- Asthma in older adults is under-diagnosed and under-treated (Stupka E & deShazo, 2009)

- Diagnosis and management of asthma in older adults may pose unique challenges (NAEPP, 1996)

- Considerable knowledge gaps – epidemiology and effectiveness of interventions (NAEPP, 1996)
Partnering:
Strategic Plan for Asthma in Massachusetts

**GOAL 1 – Enhance Surveillance**

**GOAL 2 – Improve Asthma Management for Massachusetts Residents**

- **Identify specific “priority” populations** that have significant disparate outcomes
- Prepare data bulletins to explain and **document the burden of asthma** among priority populations, such as older adults
- Asthma and Allergy Foundation of America – New England Chapter and MDPH will **facilitate the development of state-specific recommendations** for public health and healthcare institutions to improve asthma outcomes for older adults
- MDPH will **promote and support dissemination** of the recommendations
Special Topic Data Bulletin: Highlights

- Prevalence
- Characteristics of Older Adults with Asthma
- Asthma Treatment Guidelines
- Hospitalizations
- Mortality
Asthma Prevalence

Data Source: Behavioral Risk Factor Surveillance System (BRFSS)
BRFSS: Lifetime and Current Asthma

• “Have you ever been told by a doctor, nurse, or other health professional that you had asthma?”

• “Do you still have asthma?”
Prevalence of Current Asthma among Adults Aged ≥ 65, MA and US, 2000-2009

Data Source: Behavioral Risk Factor Surveillance System, 2000-2009
# Current Asthma Prevalence among Adults Aged ≥ 65 in Massachusetts

## Higher among...

<table>
<thead>
<tr>
<th>Comparison</th>
<th>Current Prevalence</th>
<th>Compared to...</th>
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<tbody>
<tr>
<td>Those aged 65-79 (9.5%)</td>
<td>Those aged 80+ (6.5%)</td>
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<tr>
<td>Females (10.2%)</td>
<td>Males (6.4%)</td>
<td></td>
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<tr>
<td>Hispanics (12.6%)</td>
<td>White, Non-Hispanics (8.4%)</td>
<td></td>
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<tr>
<td>Those with &lt; high school degree (11.4%)</td>
<td>Those with 4+ years of college (6.9%)</td>
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<tr>
<td>Those with household incomes of &lt; $25,000 (10.4%)</td>
<td>Those with household incomes of $75,000+ (7.4%)</td>
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<tr>
<td>Those with a disability (14.1%)</td>
<td>Those without (6.5%)</td>
<td></td>
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<tr>
<td>Those overweight (10.0%) or obese (13.5%)</td>
<td>Those not (6.2% &amp; 7.2%, respectively)</td>
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Characteristics of Older Adults with Asthma

Data Source: BRFSS Adult Asthma Call-back Survey
Asthma Call-Back Survey
http://www.cdc.gov/asthma/questions.htm#callback

Methodology:
- Eligible: ‘Yes’ in BRFSS to ever diagnosed with asthma
- Asked if willing to participate in a follow-up interview
- Called within 2 weeks & administered the Asthma Call-Back Survey

Content:
- History of asthma symptoms
- Health care utilization
- Asthma education
- Home environment
- Medications
- Access to care
- Workplace
- Co-morbid conditions
- Complimentary and alternative therapy
Characteristics of Massachusetts Adults Aged ≥ 65 with Asthma

Data Source: 2006-2008 BRFSS Adult Asthma Call-Back Survey
Asthma Treatment Guidelines

Data Sources: BRFSS & BRFSS Adult Asthma Call-back Survey
Persons with asthma should have 2 + visits/yr with their healthcare provider (HCP) for routine asthma care.

In Massachusetts

- 47.3% of older adults with asthma reported having the recommended number of routine visits in past year.
- 14.6% reported one visit.
- 38.1% reported no visits.

– HP2020: None (Developmental)
Persons with asthma should have an Asthma Action Plan.

In Massachusetts

• 24.6% of older adults with asthma reported ever having been given an Asthma Action Plan by a HCP.
  – HP2020: 36.8%
Older adults with asthma should receive influenza vaccination annually and pneumococcal vaccination per recommended schedule.

In Massachusetts

• 81.1% of older adults with asthma reported having influenza vaccination in past year.
  – HP2020 (all adults ≥ 65): 90%

• 84.1% reported ever having pneumococcal vaccination.
  – HP2020 (all adults ≥ 65): 90%
Persons with asthma should receive education about appropriate response to an asthma episode, including recognizing early signs and symptoms or monitoring peak flow results.

In Massachusetts

- 58.0% of older adults were taught how to recognize early signs and symptoms of an attack.
- 69.1% were taught by a HCP what to do in response to an asthma attack.
- 46.7% were taught how to use a peak flow meter to adjust daily medications
  - HP2020(combined): 68.5%
Persons with asthma should have a discussion with their HCP about environmental exposures at home and work.

In Massachusetts

- 33.7% of older adults with asthma advised by HCP to change aspects of home or work to improve asthma.
  - HP2020: 54.5%

- 31.0% reported believed their asthma was caused or made worse by any job they’d ever had, but only 7.7% reported discussing it with a HCP.
  - HP2020: None (Developmental)
Smoking or exposure to tobacco smoke should be avoided.

In Massachusetts

• 6.2% of older adults with asthma were characterized as current smokers.
  – HP2020 (all adults): 12.0%

• In addition, 7.4% of never or former smokers reported exposure to environmental tobacco smoke at home in the past week.
Asthma Hospitalizations

Data Source: Massachusetts Inpatient Hospitalization Discharge Database
Asthma Hospitalizations among Older Adults in Massachusetts

- 23.2% of the ~9,725 asthma hospitalizations each year among aged ≥ 65
- 44% occurred January-April
- Compared to adults aged 18-64:
  - Longer avg. length of stay (4.6 vs. 3.5 days)
  - Higher mean total charge ($12,745 vs. $10,368)
- Medicare expected payer for 90%

Data Source: MA: 2006-2008 Massachusetts Inpatient Hospital Discharge Database
Rate of Hospitalization for Asthma among Adults Aged ≥ 65, MA, 2000-2008

Rate of Hospitalization for Asthma among Adults Aged ≥ 65 by Sex, MA, 2000-2008

Data Source: MA: 2000-2008 Massachusetts Inpatient Hospital Discharge Database
Asthma Mortality

Data Source: Massachusetts Registry of Vital Records and Statistics
Asthma Mortality Rate by Age, MA, 2000-2007

Summary

- Asthma prevalence among adults aged ≥ 65 - increasing nationally & in MA.
- Asthma hospitalization rate among older MA adults – 2nd highest of any age group & increasing; the rate for younger adults has been consistently lower & stable.
- 327 older MA adults died from asthma between 2000-2007; accounted for over half of the asthma deaths during this time.
- Asthma mortality rate for older MA adults has consistently been higher than the rate for younger ages.
- Among older MA adults, females and Hispanics bear a disproportionate asthma burden.
- MA has not yet reached HP2020 targets for asthma management or outcomes in this age group.
Taking Action – Potential Partners

- MDPH Office of Healthy Aging
- MDPH Chronic Disease Self Management Program
- State/Local Councils On Aging & Senior Centers
- State/Local Elder Affairs Offices
- Healthcare Providers
- MCPHS Pharmacy Outreach Program
- AARP
- Home Care Alliance of Mass.
- LeadingAge Mass.
- Mass. Assisted Living Facilities Association
- Mass. Council for Home Care Aide Services
- LGBT Aging Project
Taking Action – Next Steps

• Share findings

• Convene Task Force
  – Identify & evaluate effective interventions for addressing asthma in older adults
  – Identify areas where more research is needed

• Develop recommendations

• Disseminate recommendations
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