

Addressing Asthma in Massachusetts

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Background

- Asthma is a significant and growing public health problem in the US and Massachusetts.
- Two efforts coordinated by the MDPH Asthma Prevention and Control Program to address this problem
 - *The Burden of Asthma in Massachusetts*
 - *A Strategic Plan for Asthma in Massachusetts, 2009-2014*

Asthma Burden Document

MDPH Collaborators

- Bureau of Environmental Health
- Essential School Health Services
- Health Survey Program
- Occupational Health Surveillance Program
- Office of Statistics and Evaluation

Data Sources in Massachusetts

MA Department of Public Health

- Behavioral Risk Factor Surveillance System (BRFSS)
- Asthma Call-back Survey (Adult and Child)
- Pediatric Asthma Surveillance (Grades K-8)
- Youth Health Survey (Grades 6-12)
- Essential School Health Services program data
- SENSOR: Work-related Asthma
- Registry of Vital Records and Statistics

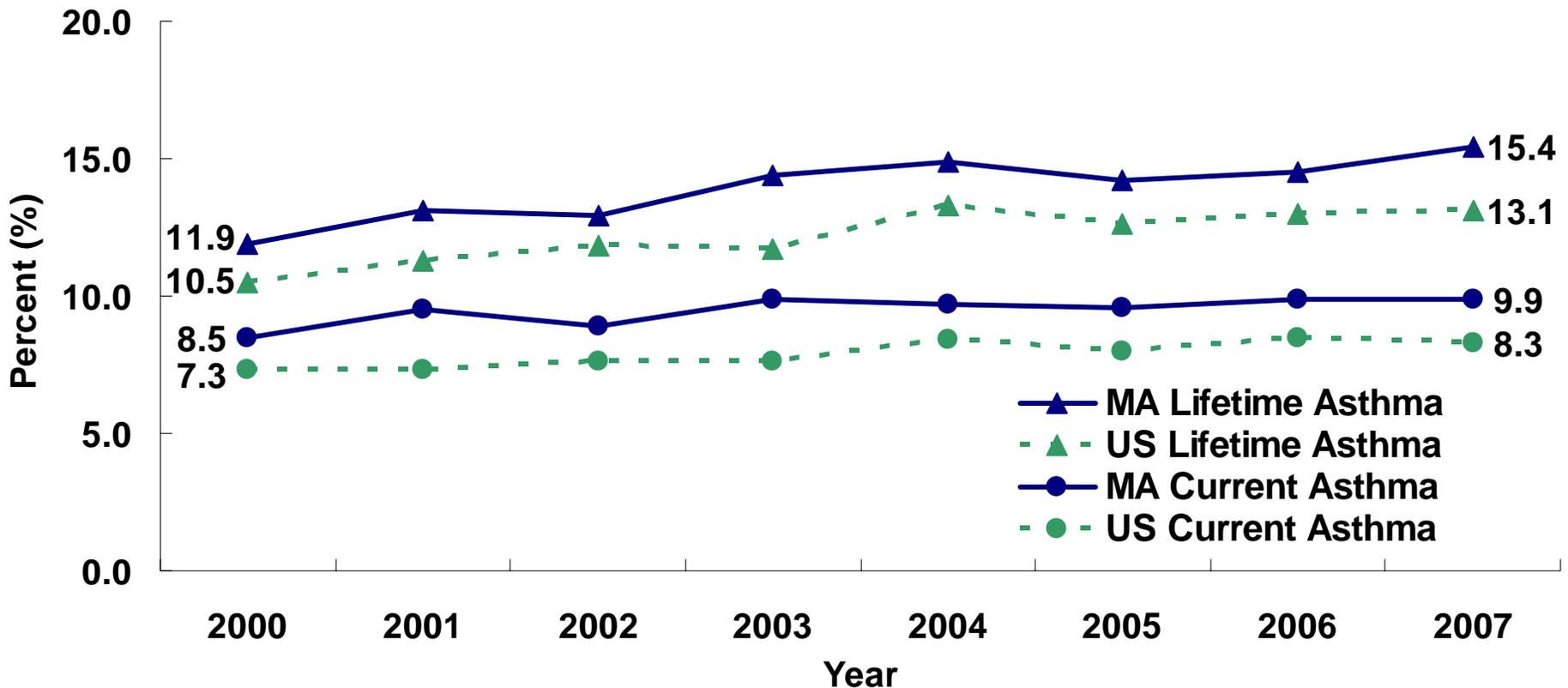
MA Division of Health Care Finance and Policy

- Acute Care Hospital (Inpatient Hospitalizations, Observation Stays, Emergency Department Visits)

Asthma Burden Document

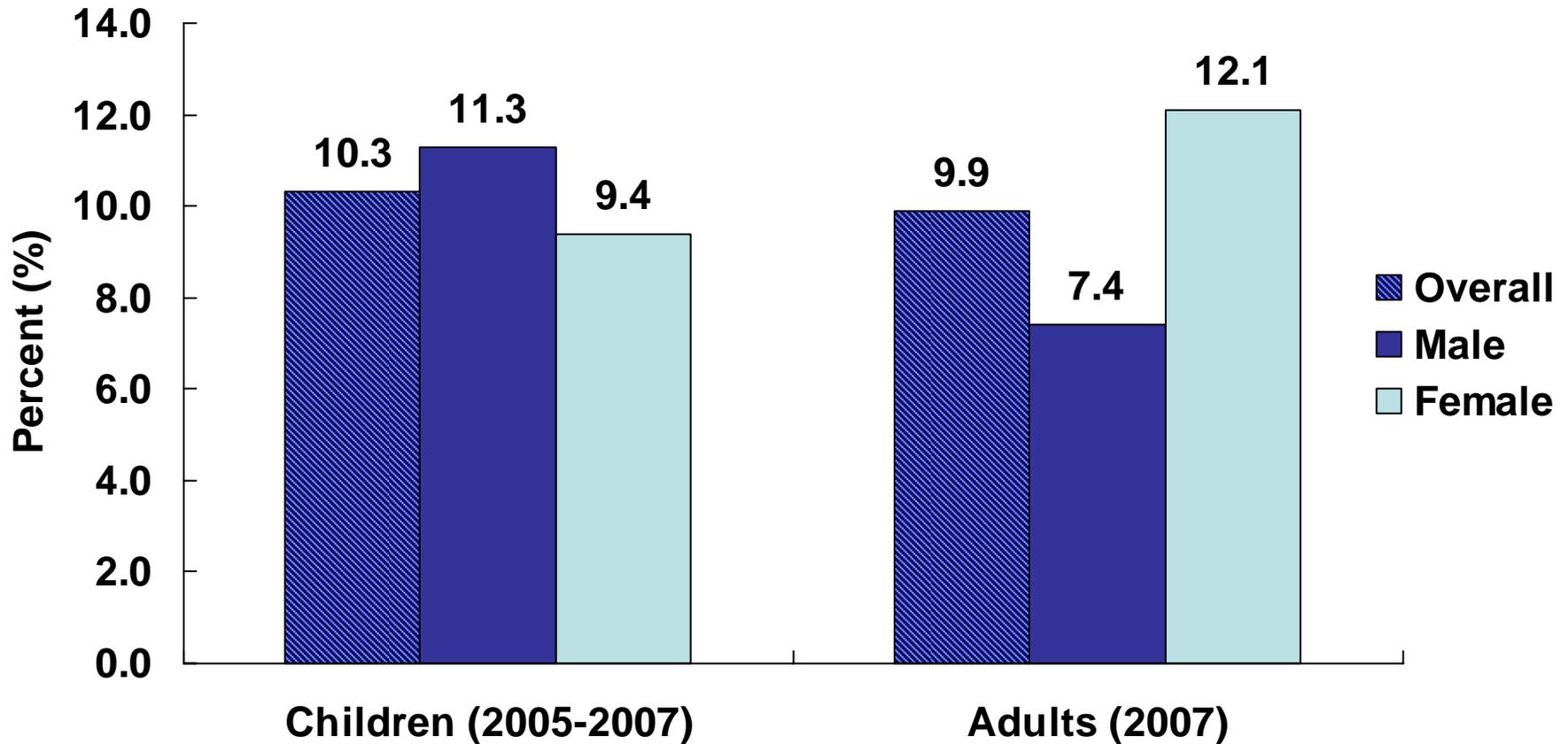
Prevalence of Asthma

Prevalence of Lifetime and Current Asthma among Adults in MA and US, 2000-2007



- From 2000 through 2007, prevalence of current asthma increased 19.8% among adult females and 44% among adults ages 65+ years.

Prevalence of Current Asthma among Massachusetts Adults and Children by Gender



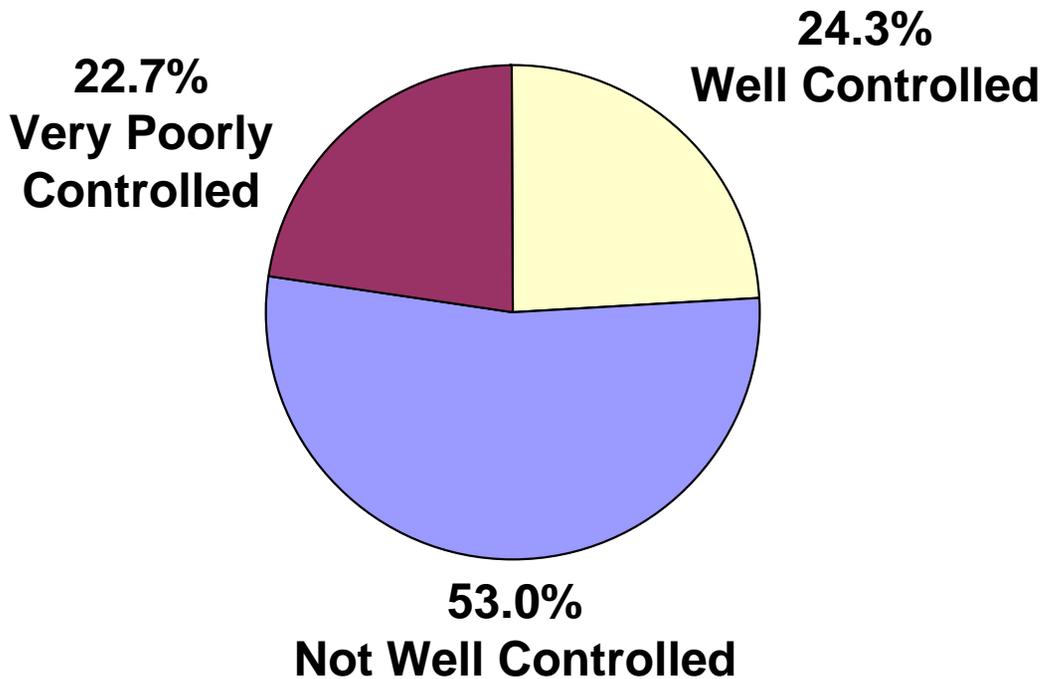
Asthma Burden Document

Factors Associated with Asthma Management

Measures of Impairment among Massachusetts Adults with Current Asthma

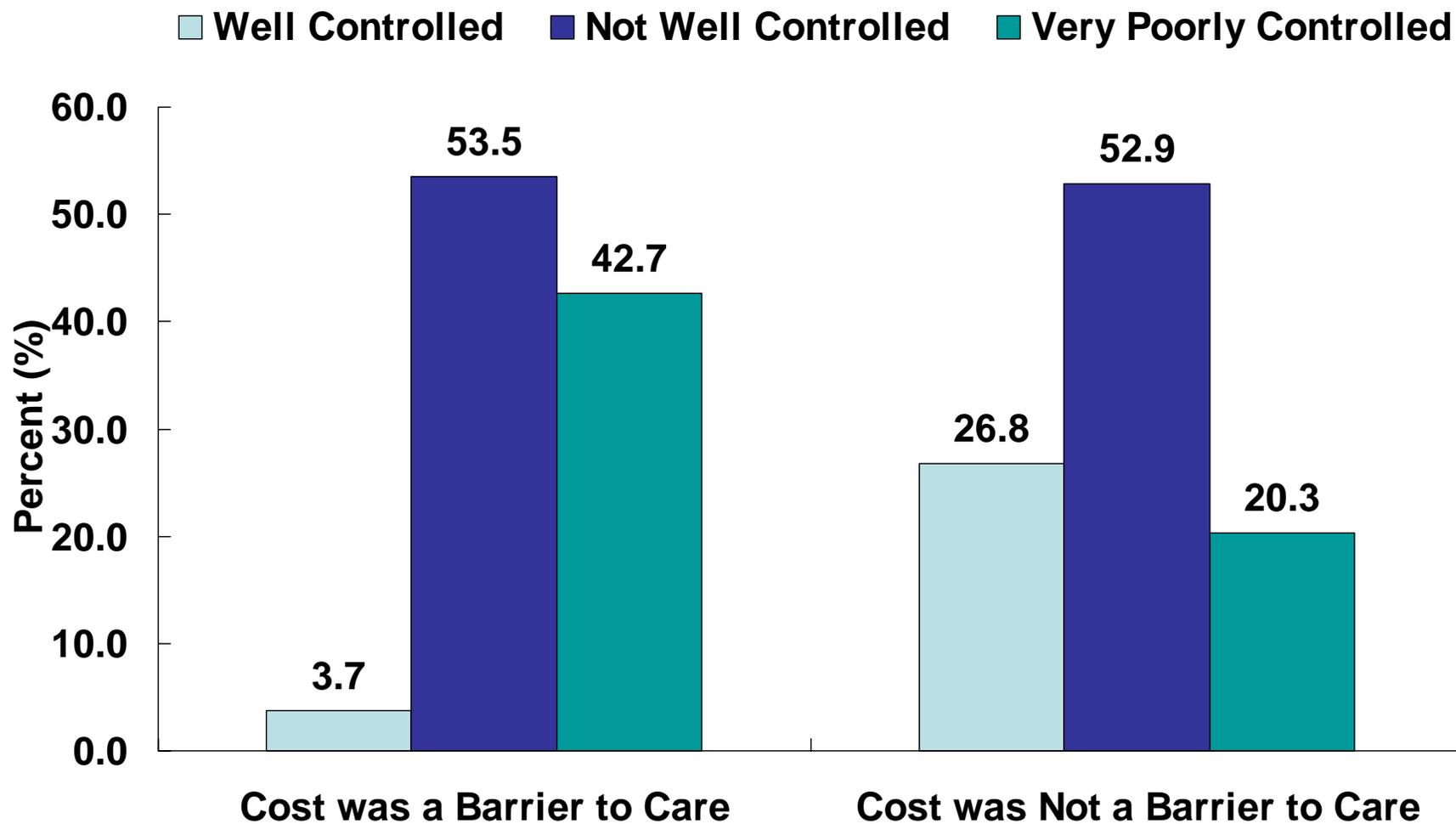
- Among MA adults with current asthma:
 - Almost 7 out of 10 (67.5%) experienced symptoms of asthma at least once in the past 30 days
 - About 6 in 10 (62.5%) reported having activity limitations because of their asthma in the past year
 - Over half (52.9%) had an asthma attack or episode in the past year
 - About one-quarter (24.0%) reported having sleep disruption because of their asthma in the past 30 days

Level of Asthma Control among Massachusetts Adults with Current Asthma, 2006-2007



Among adults with current asthma, about three-quarters (75.7%) do not have good control of their asthma.

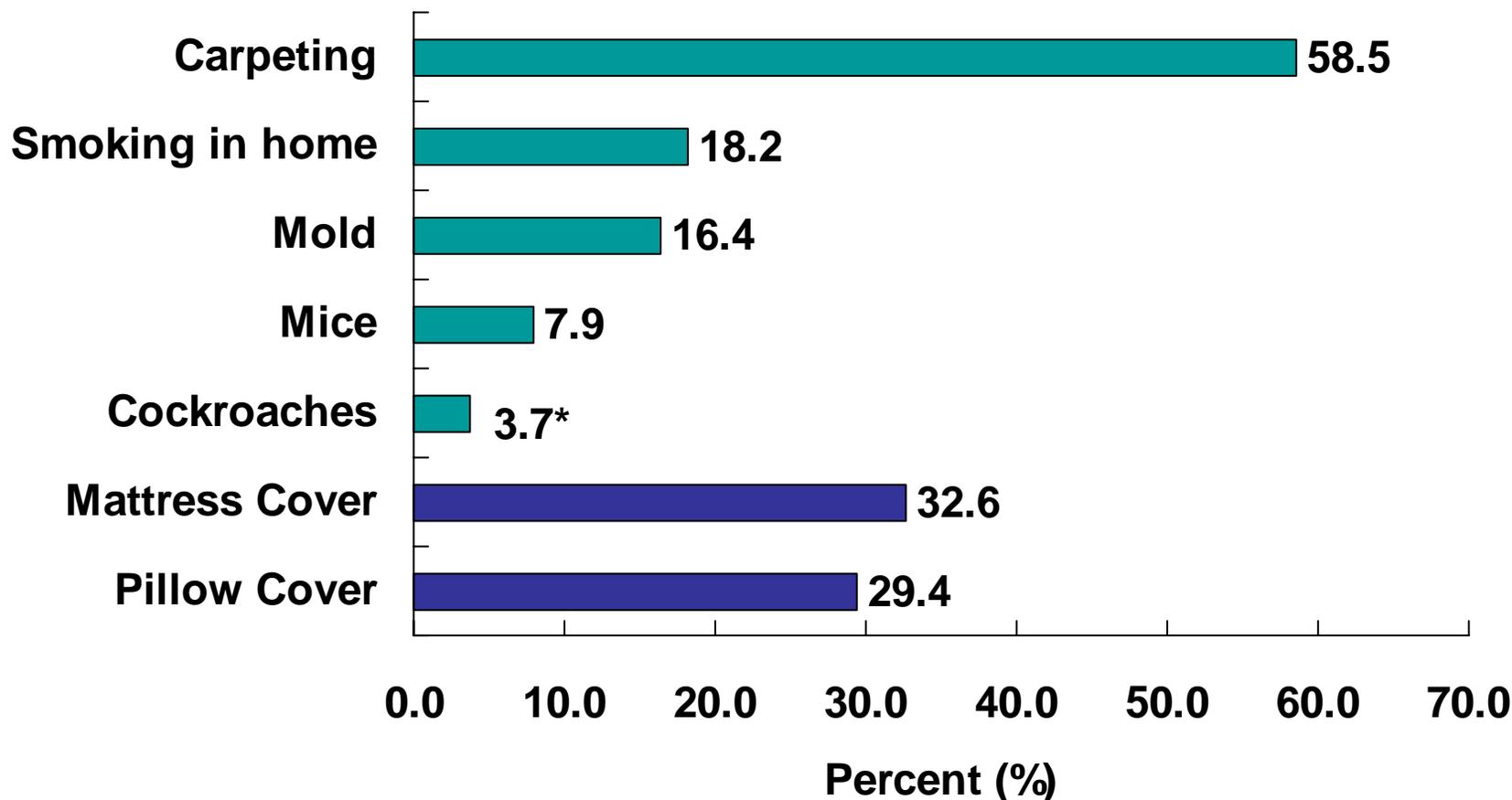
Level of Asthma Control among Massachusetts Adults with Current Asthma by Cost as a Barrier to Care, 2006-2007



Asthma Self-Management Education among Massachusetts Adults and Children with Current Asthma, 2006-2007

	Massachusetts		HP2010 Target
	Adults	Children	
Rec'd instructions on how to use a prescribed inhaler properly	97.6%	97.2%	98.8%
Taught how to respond to an asthma attack or episode	79.8%	89.3%	71%
Rec'd an asthma action plan from their health care provider	33.4%	45.0%	38%

Prevalence of Environmental Triggers and Modifications in the Home among Massachusetts Adults with Current Asthma, 2006-2007



* Relative standard error is >50% therefore the results should be interpreted with caution due to the instability of the estimate.

Source: 2006-2007 MA Adult Asthma Call-back Survey, MDPH

Asthma Burden Document

Work-Related Asthma

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

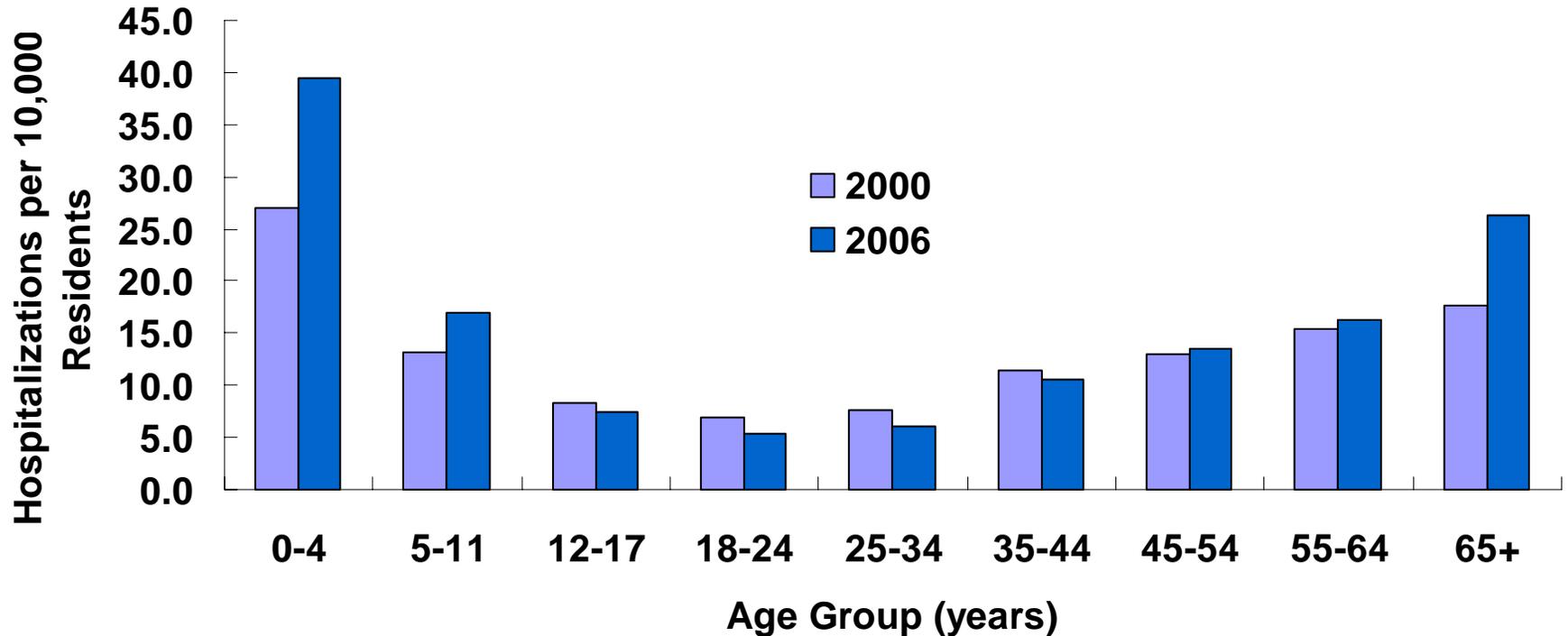
Asthma Burden Document

Hospital Treatment for Asthma

Magnitude and Trends in Massachusetts

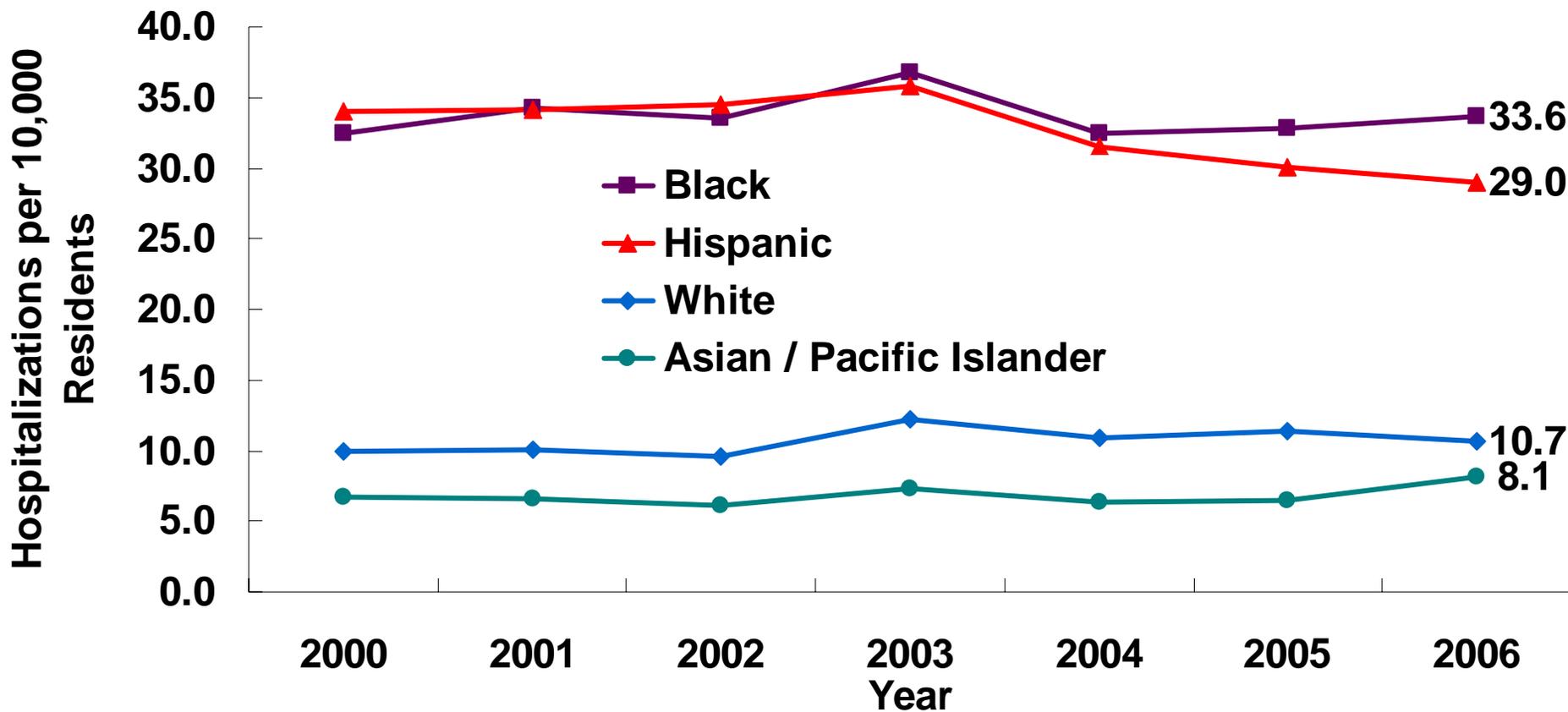
- On an average day in Massachusetts, asthma was associated with:
 - 102 emergency department visits (57.8 per 10,000 residents; n=36,146 in 2005)
 - 25 hospitalizations (14.7 per 10,000 residents; n=9,457 in 2006)
 - 8 observation stays (3.4 per 10,000 residents; n=2,101 in 2005)
- Annual age-adjusted rates for asthma remained:
 - Stable for emergency department visits (2002-2005)
 - Stable for hospitalization (2000-2006)
 - Decreased 35% for observation stays (2000-2005)

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

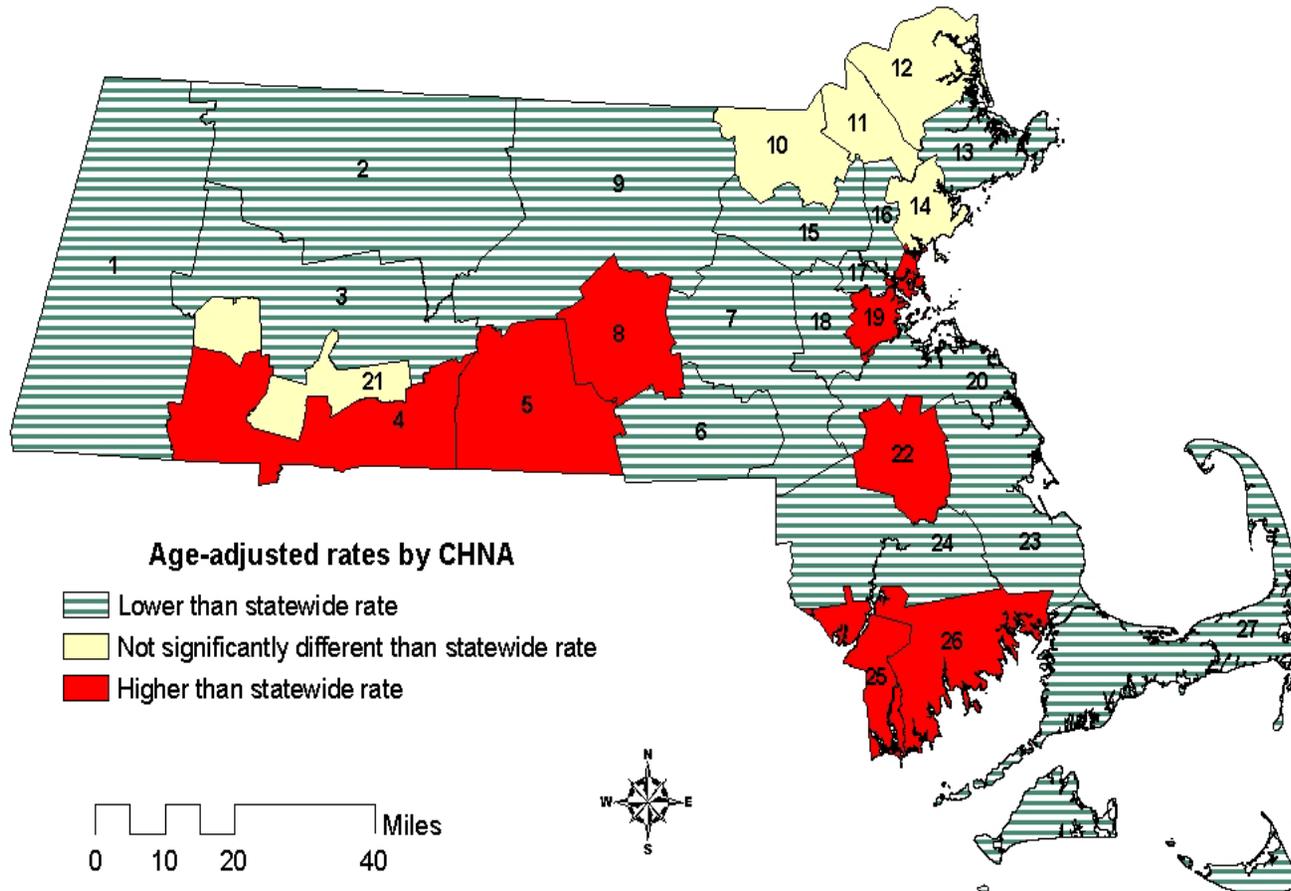


- Age-specific rates were highest among children ages 0-4 years and adults ages 65+ years. This pattern holds true over time and is similar to national findings.
- Adults ages 65+ years experienced a 49.4% increase from 2000 through 2006.

Age-adjusted Rate of Hospitalization for Asthma by Race/Ethnicity in Massachusetts, 2000-2006



Average Annual Age-adjusted Rate of Hospitalization for Asthma by Geography, 2004-2006



Total Charges for Hospitalization for Asthma in Massachusetts

- In 2006, total charges for hospitalizations for asthma were over \$88 million. This does not include lost productivity or other indirect measures.
- Public insurance (including Free Care, Medicare, and Medicaid) was the expected payer for 62.6% of hospitalizations for asthma in 2006.

Asthma Burden Document

Asthma Mortality

Asthma Deaths are Rare but Disparities Exist in Massachusetts

- In 2006, 52 deaths from asthma occurred among Massachusetts residents
- From 2000 through 2006, the annual Massachusetts asthma death rate decreased 50.9% from 16.5 to 8.1 per 1,000,000 residents
- Average annual age-specific asthma death rate (2002-2006) was highest among adults ages 65 years and older (46.9 per 1,000,000 residents)
- Compared with White, non-Hispanics (8.8 per 1,000,000 residents), the average annual age-adjusted asthma death rate (2002-2006)
 - among Black, non-Hispanics was 3.4 times higher (29.8 per 1,000,000 residents)
 - among Hispanics was 2.7 times higher (23.5 per 1,000,000 residents)

Summary

- Asthma prevalence is higher in MA than the US and is increasing
- Poorly controlled asthma is associated with cost barriers to care in Massachusetts
- Exposures in the workplace may be important contributing factors to asthma among MA adults
- Disparities exist in asthma hospitalizations and mortality (e.g. age, race/ethnicity, geography)

Strategic Plan for Asthma in Massachusetts

2009 - 2014

Purpose of the State Asthma Plan

Improve the quality of life for all
people with asthma

Reduce disparities in asthma
outcomes

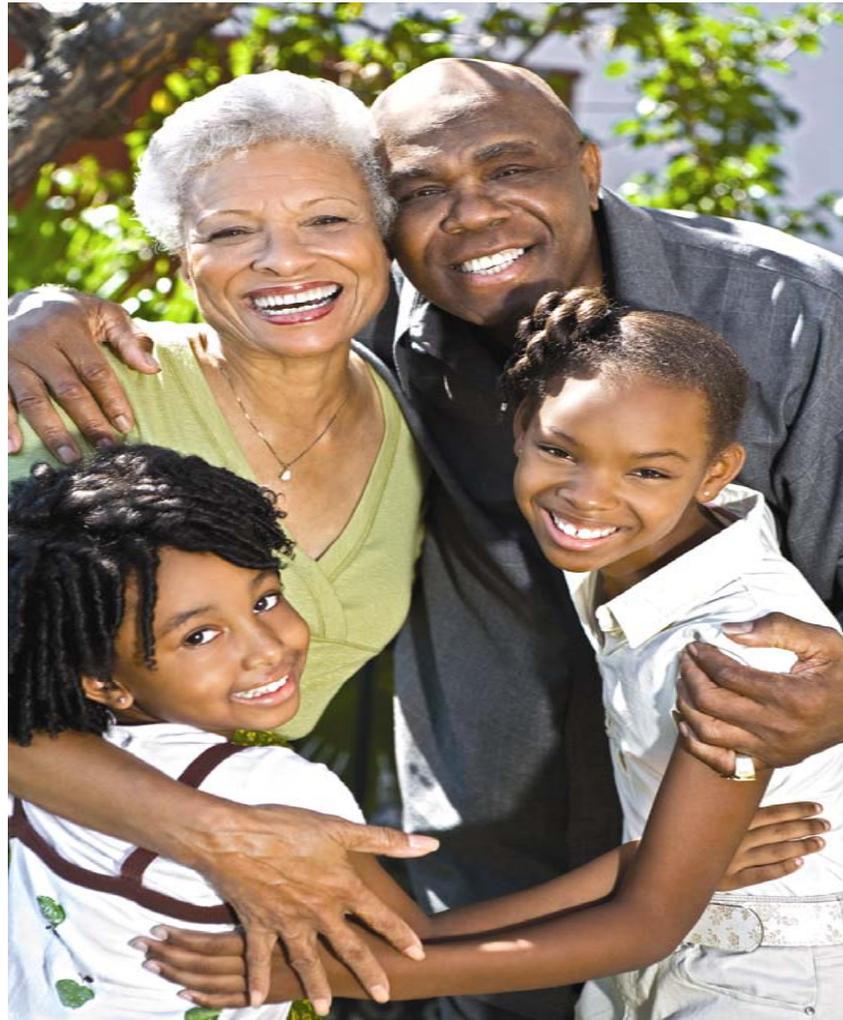
State Asthma Plan Goals

1. Enhance asthma surveillance to inform asthma prevention and control efforts in Massachusetts
2. Improve asthma management for Massachusetts residents
3. Reduce exposure to environmental factors that cause and/or exacerbate asthma in Massachusetts
4. Develop a roadmap for better understanding the causes of asthma and the role of primary prevention
5. Increase capacity of the statewide and local partnerships to implement the plan
6. Evaluate Massachusetts' progress on the plan

Collaborators to the Plan

- Massachusetts Asthma Advocacy Partnership
- Over 78 other parents, community groups, health care providers, school officials, day care providers, housing agencies, environmental groups, state agencies, local governments, and others

Action Steps



Enhance Asthma Surveillance

- Selected highlights:
 - Include questions about occupation and industry on the BRFSS to better understand work-related asthma
 - Explore the utility of a new database (e.g. *Health Care Claims Database*) to understand primary care office visits and prescriptions filled for asthma among the managed care population
 - Prepare bulletins to explore the burden of asthma among priority populations, such as older adults

Reduce Asthma Disparities

- Selected highlights:
 - Use asthma surveillance data to identify priority populations
 - Promote best practices to reduce disparities
 - Support coalition efforts to address the social and environmental factors

Improve Standards of Care

- Selected highlights:
 - Develop at least one standard of care measure and track it over time
 - Improve the diagnosis and assessment of asthma
 - Improve care coordination between hospitals and ambulatory care settings
 - increase asthma knowledge and competency of health care professionals

Increase the number of health care providers that address the environmental factors related to asthma

- Selected highlights:
 - Increase home visits for asthma
 - Increase flu vaccination
 - Promote smoking cessation
 - Increase number of providers that assess the role of work environment in adult asthma

Improve the asthma self-management of Massachusetts residents

- Selected highlights:
 - Increase the # of people who receive asthma self-management education in the clinic
 - Increase the # of people who attend chronic disease self-management courses
 - Expand multi-media campaign *Kids with Asthma Can!* across the state

Increase sustainability of asthma care

- Selected highlights:
 - Promote coverage of asthma care recommended in the national guidelines

Improve the integration of care outside the health care setting with schools and child care settings

- Selected highlights:
 - Improve linkages between school nurses and primary care providers
 - Increase the capacity of early education and child care settings to manage asthma

Reduce exposure to specific outdoor air pollutants linked to asthma

- Selected highlights:
 - Decrease vehicle idling
 - Reduce pollution caused by diesel transportation sources
 - Continue to implement and develop potential strategies to reduce air pollution from mobile and stationary sources
 - Make environmental and public health data accessible to the public
 - Use environmental and public health data to inform community planning

Reduce Exposures to Factors that Cause and/or Exacerbate Asthma in School, Child Care and Child Recreational Settings

- Selected Highlights:
 - Renewed focused on school environment and asthma through a multi-agency and community taskforce
 - Training for school staff on preventing and addressing triggers
 - Increase use of green cleaners in schools
 - Increase number of child care settings that have indoor air quality policies

Reduce Exposures to Factors that Cause and/or Exacerbate Asthma in Home Setting

- Selected Highlights:
 - Increase multi-unit properties that have smoke-free home rules
 - Build the capacity of at least 5 boards of health on addressing asthma triggers in the home
 - Enhance regulations and guidance documents that focus on reducing exposures in the home
 - increase the use of integrated pest management for eliminating/reducing pest problems in homes

Reduce Exposures to Factors that Cause and/or Exacerbate Asthma in the Work Place

- Selected Highlights:
 - Investigate and facilitate changes for WRA in response to case reported to MDPH
 - Raise worker and employer awareness of WRA and promote safe work practices
 - Advance (or implement) policy initiatives to decrease exposures to hazardous products in worksites

Additional Goals and Objectives

- 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

Resources

- View www.mass.gov/dph/asthma
 - *The Strategic Plan for Asthma In Massachusetts, 2009-2014*
 - *Burden of Asthma in Massachusetts*
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