

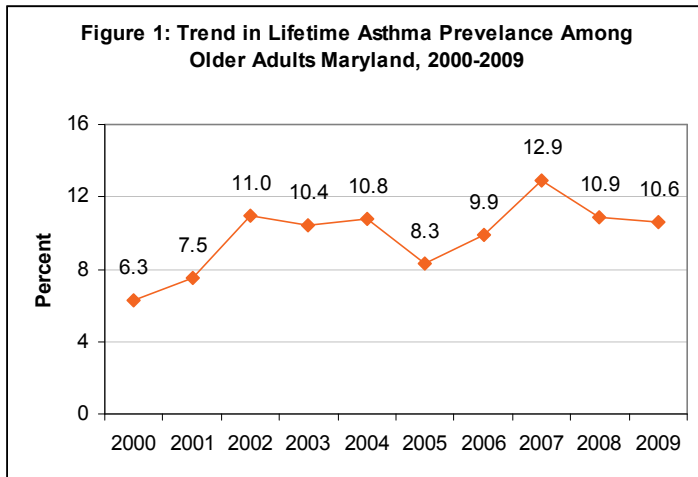


# Asthma in the Older Adult

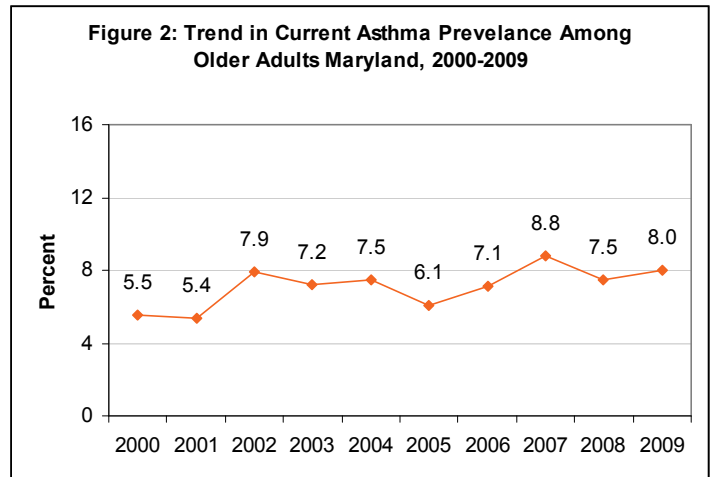
## Background

Asthma is a chronic inflammatory disease of the small airways in the lungs that affects people of all ages, races, ethnicities, and genders. This report presents trends in asthma prevalence and health care utilization for older adults, 65 years of age and older, by race/ethnicity and age. Data are from Maryland’s Behavioral Risk Factor Surveillance System (BRFSS), Health Services Cost Review Commission (HSCRC), and Vital Statistics Administration (VSA). Rates are calculated based on population statistics from the Centers for Disease Control and Prevention’s National Center for Health Statistics (NCHS) vintage population files. Data have been age-adjusted to the 2000 U.S. estimated population when noted. Since some Maryland residents are hospitalized in neighboring states, data on hospitalization of Maryland residents from Delaware, Pennsylvania\*, Washington D.C., and West Virginia are included when possible.

**Asthma and Children:** Asthma affects people of all ages, yet due to its frequent pediatric onset, interest in asthma is often focused on the young. However, adults, particularly older adults (defined as adults 65 years of age and older), are more likely to experience certain negative health effects and complications related to asthma. In fact, morbidity and mortality is particularly high in older adults. Asthma in the older adult is either due to late onset of the disease or the persistence of long-standing asthma and is often under-diagnosed. Diagnosing asthma in the older adult is often difficult because typical asthma symptoms are similar to those of other heart and lung diseases. The loss of elastic recoil of the airways, a decrease in the lung function, concurrent chronic conditions, and resistance to asthma medication are a few of factors that may complicate the problem in older adults.<sup>1,2</sup> These issues create barriers in asthma management for older adults.<sup>3</sup> Therefore, age-specific factors should be addressed in patient care and treatment plans for asthma in older adults.



Maryland BRFSS, 2000-2009.



Maryland BRFSS, 2000-2009.

**Lifetime Prevalence:** In 2009, approximately 73,292 older adults in Maryland (10.6%), ages 65 years and older, had been told by a health professional at some point during their lifetime that they had asthma.

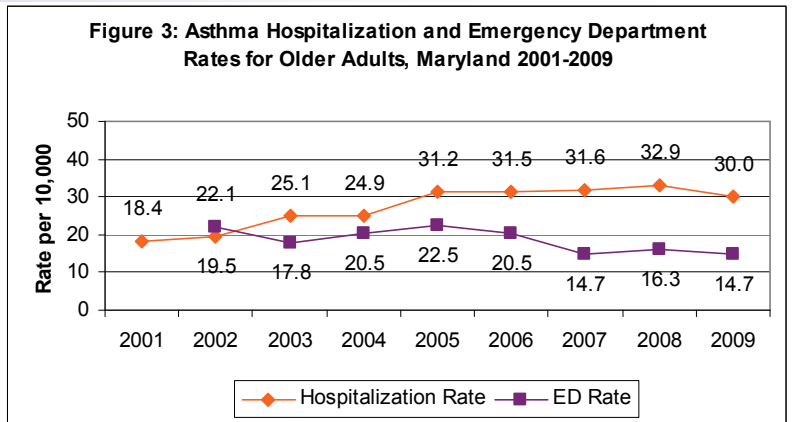
**Current Prevalence:** The prevalence of current asthma (‘Do you still have asthma?’) in 2009 for older Maryland adults was 8.0%, representing 55,006 adults.

\* “The Pennsylvania Health Care Cost Containment Council (PHC4) is an independent state agency responsible for addressing the problem of escalating health costs, ensuring the quality of health care, and increasing access to healthcare for all citizens regardless of ability to pay. PHC4 has provided data to this entity in an effort to further PHC4’s mission of educating the public and containing health care costs in Pennsylvania. PHC4, its agents, and staff, have made no representation, guarantee, or warranty, expressed or implied, that the data – financial, patient, payor, and physician specific information – provided to this entity, are error-free, or that the use of the data will avoid differences of opinion or interpretation. This analysis was not prepared by PHC4. This analysis was done by MACP. PHC4, its agents and staff, bear no responsibility or liability for the results of the analysis, which are solely the opinion of MACP.”

## Asthma Health Care Utilization in Older Adults

There has been a slight increasing trend in asthma hospitalization rates for older adults (ages 65 years and older), until 2009. In 2009, older adults had a 30.0 (per 10,000) hospitalization rate for asthma.

There is no clear time trend yet for emergency department (ED) visit rates in older adults with asthma. In 2009, older adults had a 14.7 (per 10,000) ED visit rate for asthma.



Maryland HSCRC, Delaware Department of Health, Pennsylvania Health Care Cost Containment Council, West Virginia Health Care Authority, 2001-2009.

<sup>a</sup> Rates are adjusted to the 2000 U.S. standard population.

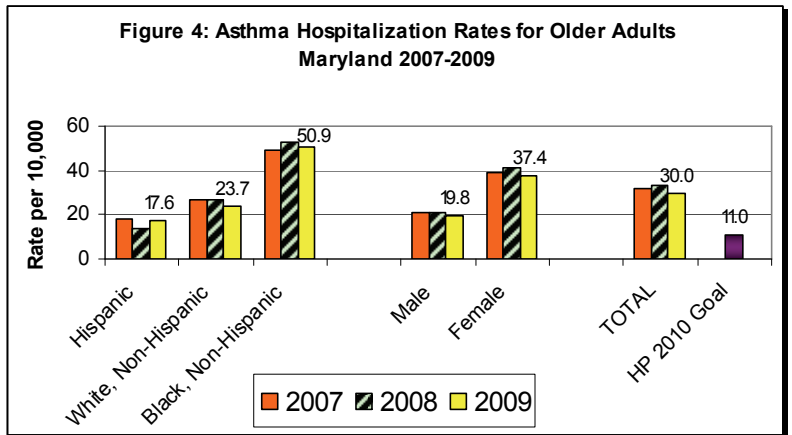
<sup>b</sup> Includes Maryland residents hospitalized in Delaware, Pennsylvania, Washington D.C., and West Virginia.

<sup>c</sup> ED data collection methodology changed in 2007 - data years ≤ 2006 are not comparable to ≥ 2007.

In 2009, Black, non-Hispanic older adults had a 2.1 times higher hospitalization rate compared to White, non-Hispanics (ages 65 years and older). From 2007-2009, the hospitalization rates for each demographic has remained relatively stable.

The hospitalization rate of females was 1.9 times higher than that of males in 2009.

In 2009, the hospitalization rate for older adults exceeded Healthy People 2010 goal (30.0 vs. 11.0, rate per 10,000).



Maryland HSCRC, Delaware Department of Health, Pennsylvania Health Care Cost Containment Council, West Virginia Health Care Authority, 2007-2009.

<sup>a</sup> Rates are adjusted to the 2000 U.S. standard population.

<sup>b</sup> Includes Maryland residents hospitalized in Delaware, Pennsylvania, Washington D.C., and West Virginia.

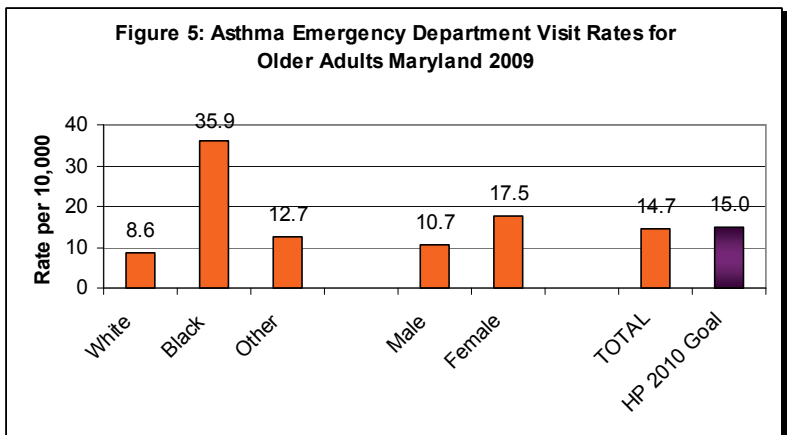
<sup>c</sup> Out of state data for ethnicity only includes Pennsylvania.

Maryland residents, aged 65 and older, spent a total of 10,781 days in the hospital due to asthma during 2009, with an average stay of 5.3 days. Females and males had very similar hospital stay averages (5.2 vs. 5.4 days). Older adults of White and Black racial demographics both had an average hospital stay of 5.3 days. (Maryland HSCRC, 2009).

In 2009, Black adults, aged 65 years and older, had a 4.2 times higher emergency department (ED) visit rate compared to White adults.

The ED visit rate of females was 1.6 times higher than that of males.

The Healthy People 2010 ED visit rate goal for older adults (ages 65 and older) was set at 15.0 (per 10,000). Maryland's older adults met this goal in 2009 with a rate of 14.7 (per 10,000).

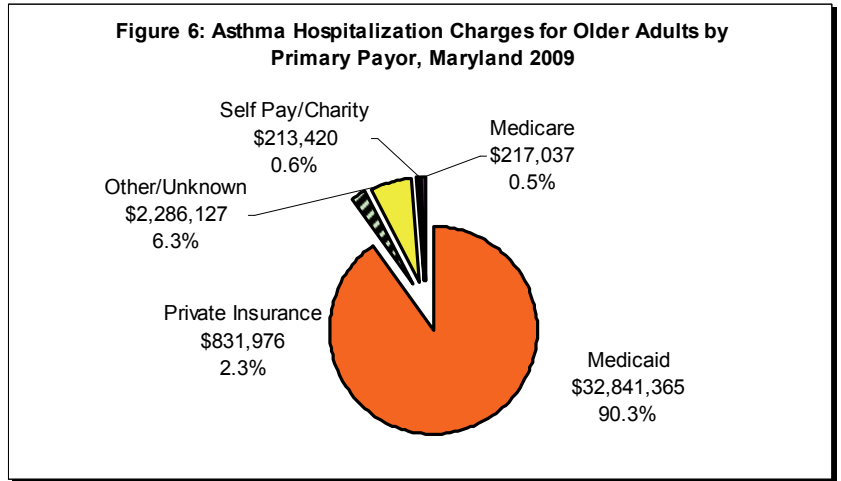


Maryland HSCRC, 2009.

## Asthma Health Care Costs in Older Adults

For adults, ages 65 years and older, total charges for asthma hospitalizations were approximately \$36.2 million and the average charge for an inpatient stay was \$8,600 in 2009. Medicaid covered the largest percentage of hospitalization visits at 90.3%.

Emergency department visits accounted for an additional \$610,000. The average charge for an emergency department visit for asthma was \$600 (data not displayed).



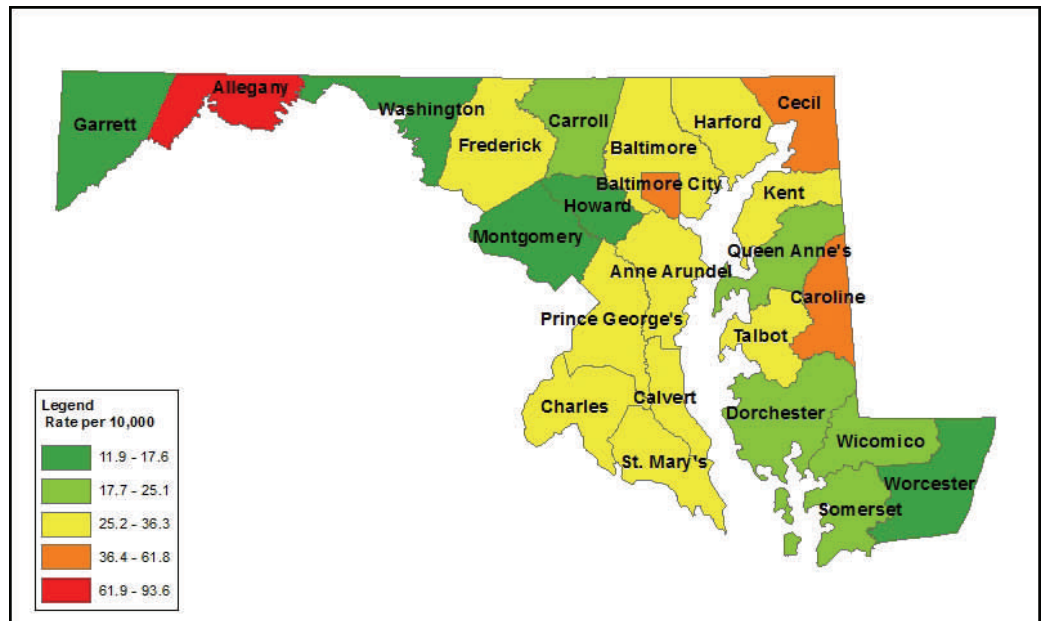
Maryland HSCRC, 2009.

## Asthma Hospitalization Rates in Older Adults by Jurisdiction

Allegany had a significantly higher asthma hospitalization rate of older adults (ages 65 and older) compared to Maryland's state rate in 2009 (93.6 per 10,000 vs. 30.0 per 10,000).

Cecil, Baltimore City, and Caroline all had asthma hospitalization rates for older adults that were significantly higher than Maryland's state rate as well (61.8, 50.9, and 44.0).

**Figure 7: Asthma Hospitalization Rates for Older Adults by Jurisdiction, Maryland 2009**



Maryland HSCRC, 2009; Pennsylvania Health Care Cost Containment Council, 2009; West Virginia Health Care Authority, 2009.

<sup>a</sup> Rates are adjusted to the 2000 U.S. standard population.

<sup>b</sup> Includes Maryland residents hospitalized in Pennsylvania, Washington D.C., and West Virginia.

## Asthma Hospitalization Rates in Older Adults by Jurisdiction - Continued

**Table 1: Maryland Hospitalization Rates for Older Adults by Jurisdiction, 2009**

Jurisdiction	Hospitalization Rates (per 10,000)	Total Number of Hospitalizations
<b>NORTHWEST</b>	39.2 **	250
Garrett	17.5 **	9
Allegany	93.6 **	125
Washington	15.8 **	33
Frederick	34.1	83
<b>BALTIMORE METRO</b>	32.2	1,063
Baltimore City	50.9 **	383
Baltimore County	28.6	324
Anne Arundel	28.9	176
Carroll	25.6	56
Howard	11.9 **	34
Harford	30.1	90
<b>NATIONAL CAPITOL</b>	22.9 **	456
Montgomery	17.6 **	210
Prince George's	31.1	246
<b>SOUTHERN MD</b>	31.2	103
Calvert	29.1	27
Charles	28.7	38
Saint Mary's	36.3	38
<b>EASTERN SHORE</b>	30.7	213
Cecil	61.8 **	74
Kent	26.9	11
Queen Anne's	23.3	16
Caroline	44.0 **	19
Talbot	31.4	27
Dorchester	21.9 **	13
Wicomico	22.2 **	28
Somerset	22.1 **	8
Worcester	15.0 **	17
<b>TOTAL</b>	30.0	2,087

Maryland HSCRC, 2009; Pennsylvania Health Care Cost Containment Council, 2009; West Virginia Health Care Authority, 2009.

<sup>a</sup> Rates are adjusted to the 2000 U.S. standard population.

<sup>b</sup> Includes Maryland residents hospitalized in PA, D.C., and WV.

\*\*Rate significantly different from state of Maryland rate (p < 0.05).

### REFERENCES

1. Tzortzaki EG, Proklou A, and Sifakas NM. Asthma in the elderly: Can we distinguish it from COPD? J Allergy (Cairo) 2011; 84:3543.
2. Jones SC, Iverson D, Burns P, Evers U, Caputi P, and Morgan S. Asthma and ageing: an end user's perspective - the perception and problems with the management of asthma in the elderly. Clinical & Experimental Allergy 2011; 41: 471-481.
3. Baptist AP, Deol BB, Reddy RC, Nelson B, Clark NM. Age-specific factors influencing asthma management by older adults. Qual Health Res 2010; 20: 117-124.

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