State of Asthma in Georgia: Looking Back a Decade

Introduction

Asthma is a chronic inflammatory disorder of the airways characterized by episodes of reversible breathing problems due to airway narrowing and obstruction.

Its severity ranges from mild to life-threatening.

Every year in Georgia, a significant amount of dollars are lost due to asthma, hospitalization, emergency room (ER) visits, medications, lost wages and missed school days.

Proper asthma management and control significantly reduces asthma ER visits, hospitalizations, deaths, and other disabilities.

Georgians asthma prevention and control efforts are aimed at reducing asthma prevalence, hospitalizations, ER visits and deaths through policy and environmental changes, education, and an integrated care delivery system.

Since 2000, the Georgia Asthma Control Program has performed surveillance for asthma prevalence, asthma management and control, and emergency room visits, hospitalizations, and deaths due to asthma.

Aim of Study

To estimate the trends of asthma prevalence, hospitalizations, ER visits and deaths among Georgia residents during the past decade.

Methodology

We used data from multiple sources including:

- Behavioral Risk Factor Surveillance Survey (BRFSS) data to estimate hospitalizations, ER visits and deaths due to asthma.
- Hospital Discharge and Emergency Room Visits data to estimate mortality rate.
- Behavioral Risk Factor Surveillance Survey (BRFSS) data to estimate asthma prevalence, asthma management and control, emergency room visits, and deaths due to asthma.

Prevalence

In 2012, an estimated 1,109,984 individuals in Georgia had current asthma; 605,186 (55%) were adults, and 304,798 (28%) were children under the age of 18 years.

Prevalence was highest in the Southeast PHD (PHDs) in Georgia.

Emergency Room Visits

Between 2002 and 2012, there were total of 605,523 asthma ER visits in Georgia, which is an average of 71,410 visits and a rate of 555/100,000 per year.

Emergency Room Visits rate was highest for younger children aged 0-4 years (1393/100,000), blacks (1132/100,000), males (children) (1229/100,000) and females (adults) (495/100,000).

The rate fluctuated over this period, although the highest age-adjusted rate was observed in 2012 (Fig 3).

Hospitalizations

An average of 11,000 asthma hospitalizations occurred annually in Georgia during 2001 to 2012.

During 2001-2012 in Georgia, the rate of asthma hospitalizations declined from about 138 to 103 per 100,000 (Fig 2).

The asthma hospitalization rate was highest among younger children aged 0-4 years (280/100,000), older adults aged 65 years and older (219/100,000), and blacks (163/100,000).

In children, males (281/100,000) had a higher hospitalization rate than females (171/100,000) but in adults, females (156/100,000) had a higher rate than males (96/100,000).

The rate fluctuated over this period, although the highest age-adjusted rate was observed in 2012 (Fig 3).

The rate of asthma hospitalizations declined beginning in 2007, averaging 90 deaths per year and a rate of 0.2 per 100,000 (Fig 4).

About two-thirds of asthma deaths occurred in adults 50 years and older, representing a rate of 2.7 per 100,000, while 60 children under the age of 18 years died from asthma during this period, representing a rate of 0.2 per 100,000.

Geographic Distributions

Asthma burden was unevenly distributed in the 18 Public Health Districts (PHDs) in Georgia.

Prevalence was highest in the Southeast PHD.

The age-adjusted ER visit rates were highest in the metro Atlanta areas, North Central, Southwest and Coastal PHDs.

Age-adjusted hospitalization rates were highest in Cobb-Douglas, South Central and Southwest PHDs.

Discussion/Implications

During the past decade, there were fluctuations in the prevalence of asthma in Georgia while a reduction in asthma-related hospitalizations and deaths in almost every demographic group was observed.

We saw an increase in the asthma-related ER visit rates during this time, particularly during 2008.

In an effort to reduce the burden of asthma in Georgia, the Georgia Asthma Control Program (GACP) focused its efforts on policy, system, and environmental (PSE) changes to address asthma in Georgia. The approach focuses on four focal areas: Environmental, Family Support, Healthcare System, and School-based Strategies.