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2018 Asthma Symposium

*Guidelines-Based Asthma Care
for Children and Adults*

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Senior Medical Director
Superior HealthPlan

Sponsors



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TEXAS
Health and Human
Services

**Texas Department of State
Health Services**

Agenda



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- My Background
- Symposium Schedule
- Setting the Stage
- Prevalence and Other Statistics



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My Background



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Symposium Schedule

Symposium Schedule



| Time | Topic | Presenter |
|-------------------------|---|---|
| 7:30 a.m. – 8:00 a.m. | Continental Breakfast/Welcome | Wm Brendle Glomb, M.D., FCCP, FAAP Pediatric Pulmonologist Senior Medical Director, Superior HealthPlan |
| 8:00 a.m. – 8:30 a.m. | Introduction to the Asthma Issue | Wm Brendle Glomb, M.D., FCCP, FAAP |
| 8:30 a.m. – 9:30 a.m. | Asthma Guidelines for Children | Wm Brendle Glomb, M.D., FCCP, FAAP |
| 9:30 a.m. – 9:40 a.m. | Break | |
| 9:40 a.m. – 10:40 a.m. | Asthma in Adults: Pathophysiology and Treatment | Bharat Prakash, M.D., Assistant Professor Pulmonary and Critical Care Medicine Texas Tech University Health Science Center Transmountain Campus, El Paso |
| 10:40 a.m. – 10:50 a.m. | Break | |
| 10:50 a.m. – 11:50 a.m. | Asthma and Allergic Disease Diagnosis & Management | Luis Antonio Gonzalez, M.D. The Allergy, Asthma and Immunology Office, El Paso |
| 12:00 p.m. – 1:00 p.m. | Working Lunch Superior Quality Projects Example | Wm Brendle Glomb, M.D., FCCP, FAAP |
| 1:00 p.m. – 1:30 p.m. | Asthma – Panel Discussion | All Faculty |
| 1:30 p.m. – 2:00 p.m. | Asthma Wrap-Up and Conclusion | Wm Brendle Glomb, M.D., FCCP, FAAP |

Setting the Stage



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- “Asthma is a chronic lung disease that inflames and narrows the airways. Asthma causes recurring periods of wheezing (a whistling sound when you breathe), chest tightness, shortness of breath, and coughing. The coughing often occurs at night or early in the morning.”
 - National Heart, Lung, and Blood Institute

Setting the Stage



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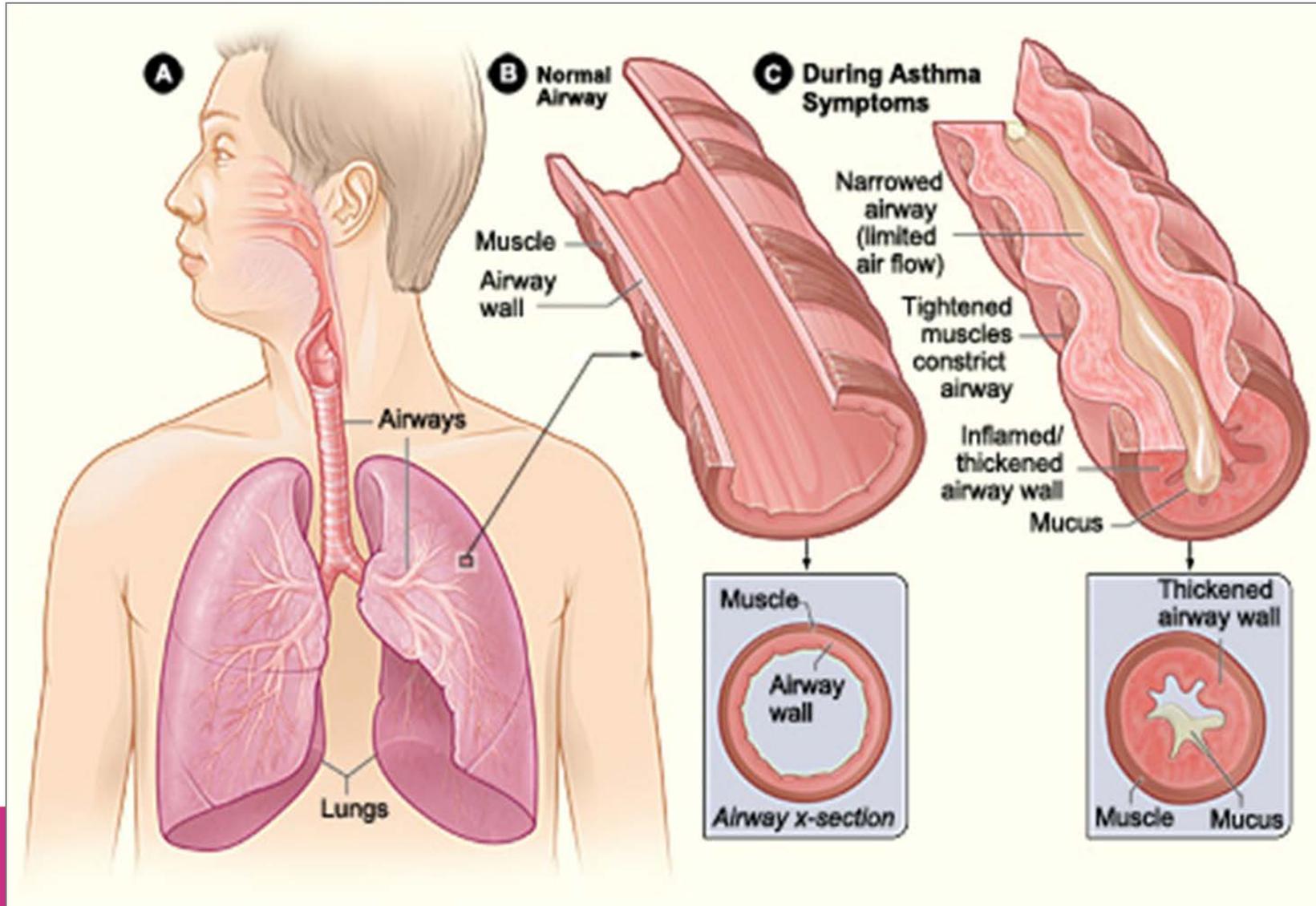
- “...[He] presents with a distressing sense of want of breath and a feeling of great oppression in the chest. Soon the respiratory efforts become violent, and all of the accessory muscles are brought into play. In a few minutes the patient is in a paroxysm of the most intense dyspnea.”

- Sir William Osler

Asthma Overview



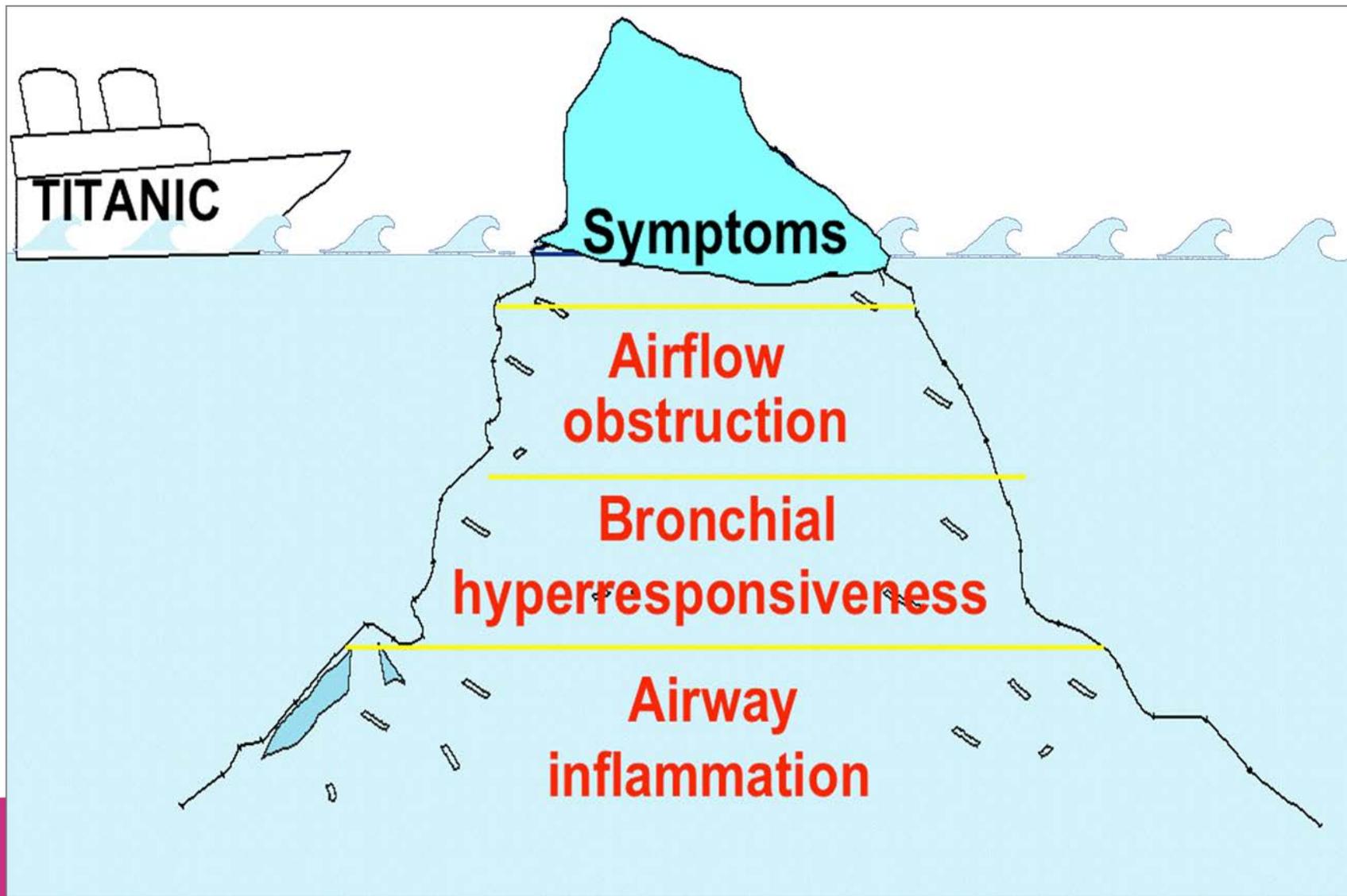
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Symptoms



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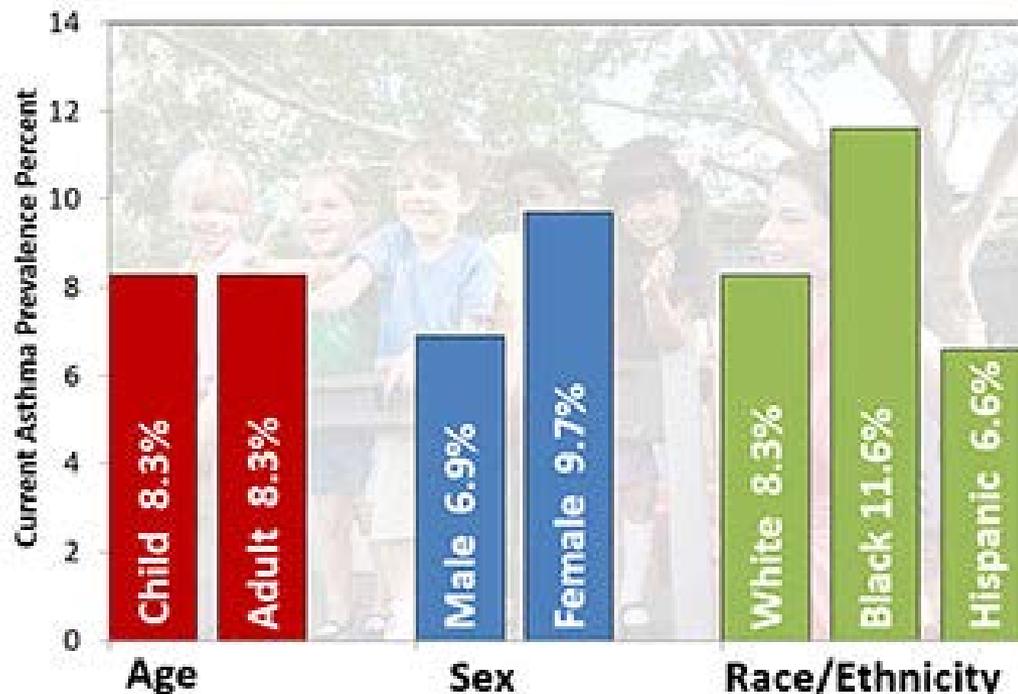
Prevalence and Other Statistics

Prevalence



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Current Asthma Prevalence Percent by Age, Sex, and Race/Ethnicity, United States, 2016



Source: National Health Interview Survey, National Center for Health Statistics, Centers for Disease Control and Prevention

Texas 2015 “Current Asthma”



- The Centers for Disease Control:
 - 1,528,177 affected; 7.6%

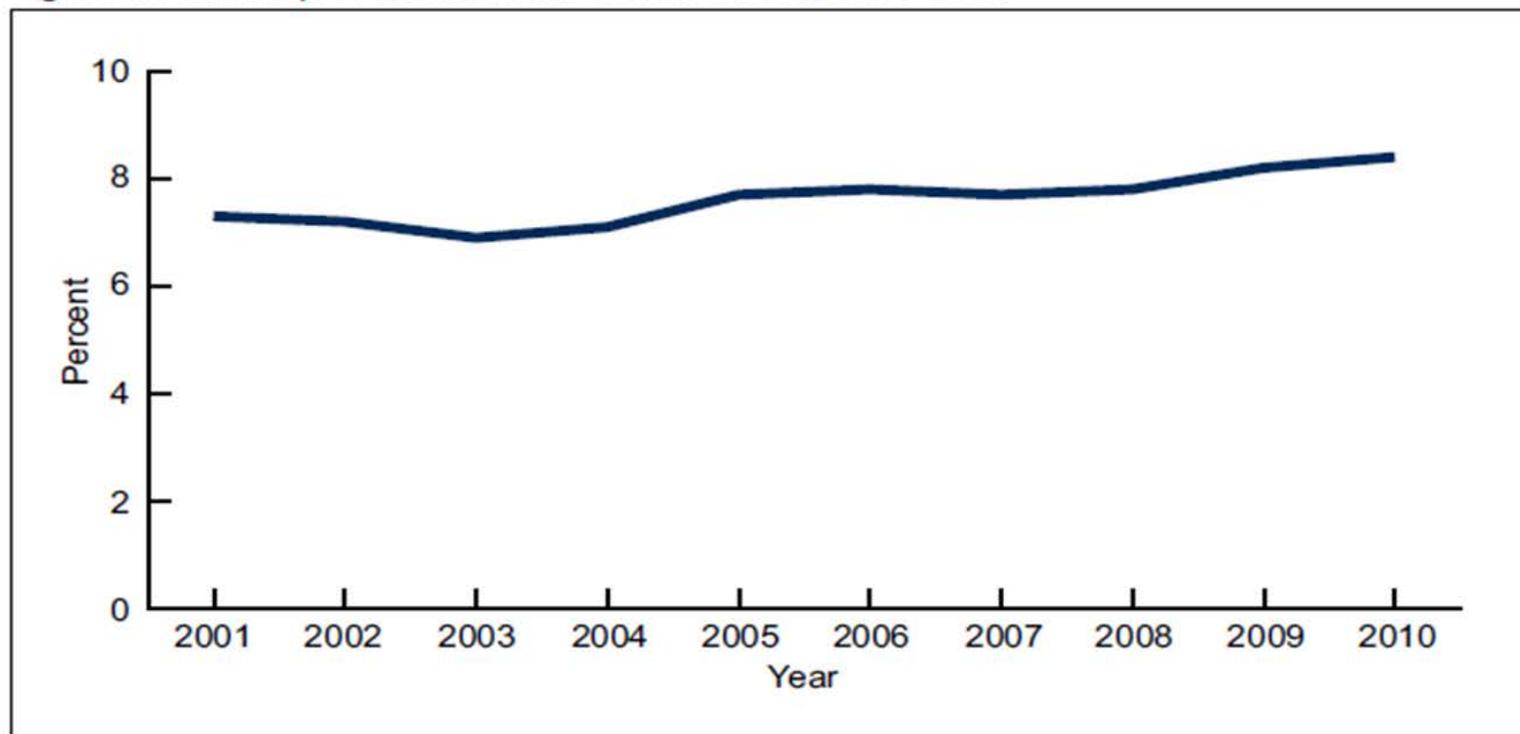
Prevalence



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Asthma prevalence increased from 2001 to 2010 and is now at its highest level.

Figure 1. Asthma prevalence in the United States, 2001–2010



NOTES: Asthma prevalence refers to percentage of people who have ever been diagnosed with asthma and still have asthma. Data are age adjusted to the 2000 U.S. standard population. Access data table for Figure 1 at: http://www.cdc.gov/nchs/data/databriefs/db94_tables.pdf#1.

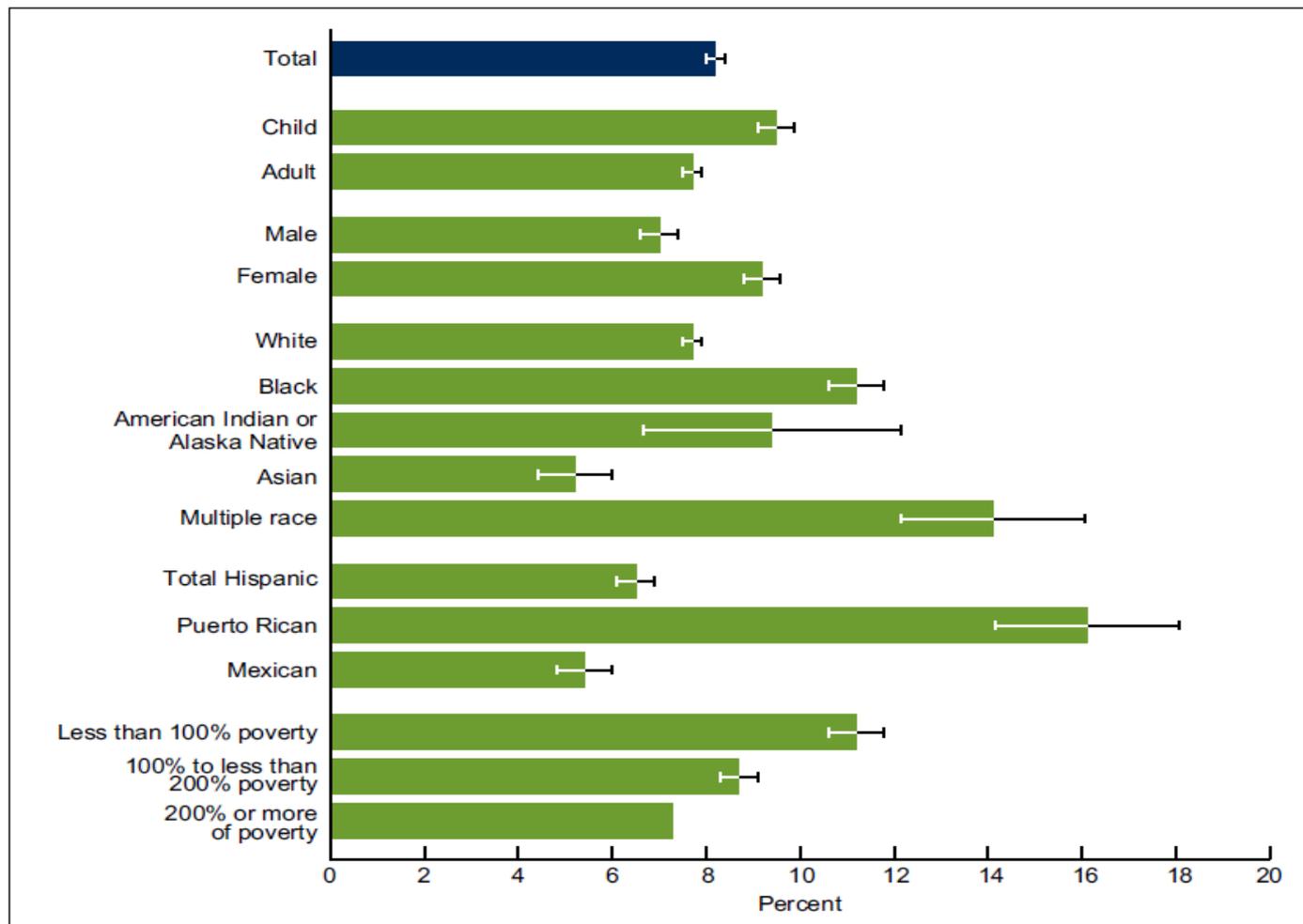
SOURCE: CDC/NCHS, National Health Interview Survey.

Prevalence



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Figure 2. Asthma prevalence, by selected demographic characteristics: United States, average annual 2008–2010



— 95% confidence interval.

NOTES: Asthma prevalence refers to percentage of people who have ever been diagnosed with asthma and still have asthma. Access data table for Figure 2 at: http://www.cdc.gov/nchs/data/databriefs/db94_tables.pdf#2.

SOURCES: CDC/NCHS, Health Data Interactive and National Health Interview Survey.

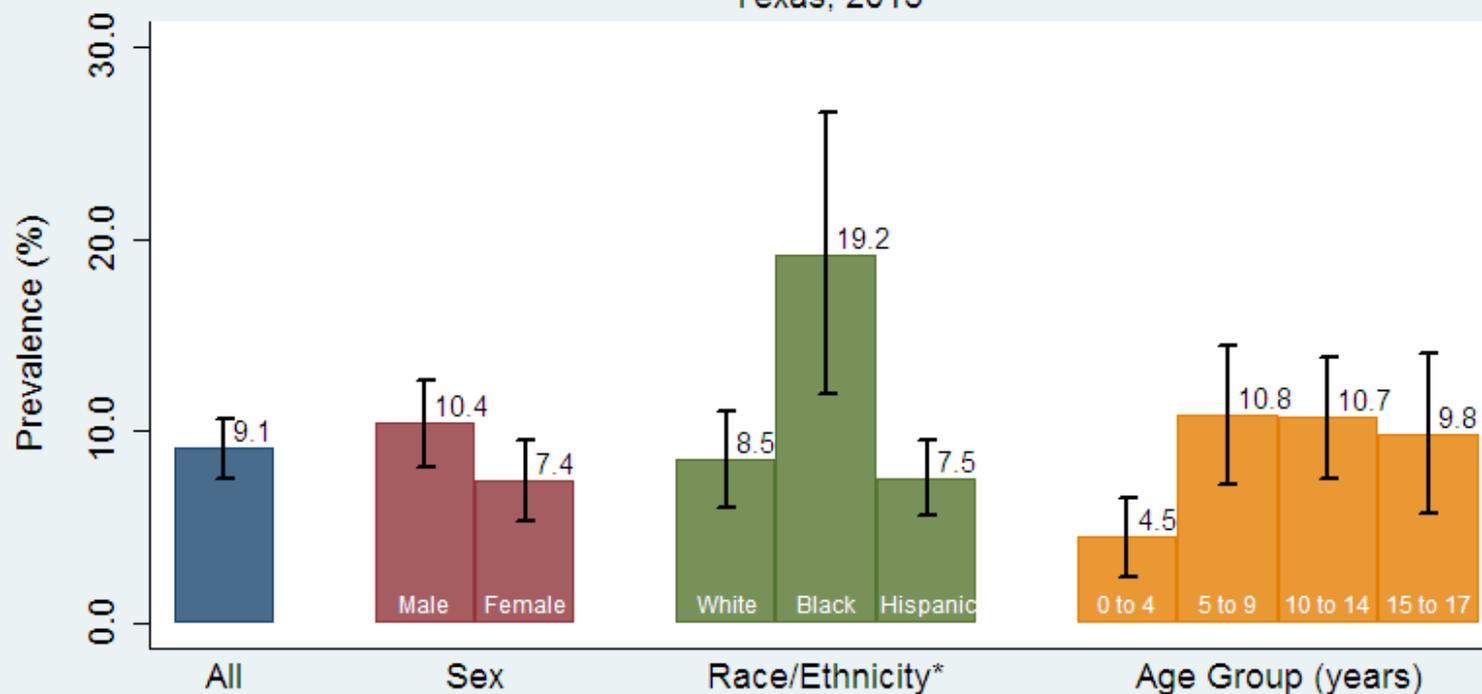
Prevalence



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Current Asthma Prevalence Among Children (0 to 17 years), By Sex, Race/Ethnicity, and Age Group

Texas, 2013



Data Source: 2013 Texas Behavioral Risk Factor Surveillance System (BRFSS), Texas Department of State Health Services, Center for Health Statistics.

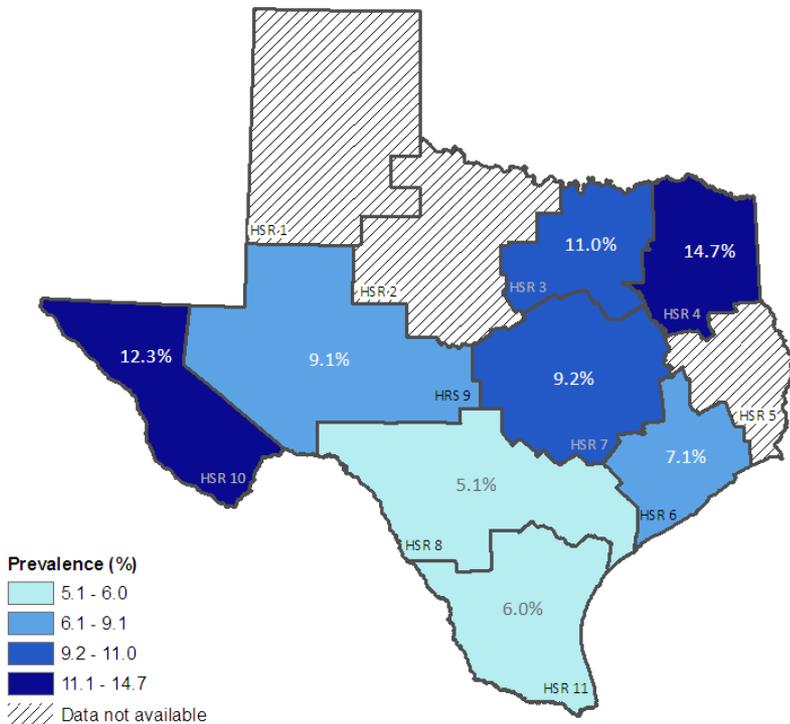
Survey Questions: 'Has a doctor, nurse, or other health professional ever said that the child has asthma?' and 'Does the child still have asthma?'

*Race/ethnicity is categorized differently in 2013 as: White = White only, non-Hispanic; Black = Black only, non-Hispanic; Hispanic = Hispanic; Other (not shown) = Other race only, non-Hispanic; Multiracial

Asthma in Children



Childhood Current Asthma Prevalence by Health Service Region (HSR), Texas, 2013



Childhood Current Asthma Prevalence in Texas = 9.1% (95% Confidence Interval: 7.5-10.6)

Data Categorization: Quantiles.
Data Source: 2013 Texas Behavioral Risk Factor Surveillance System (BRFSS),
Center for Health Statistics, Texas DSHS.

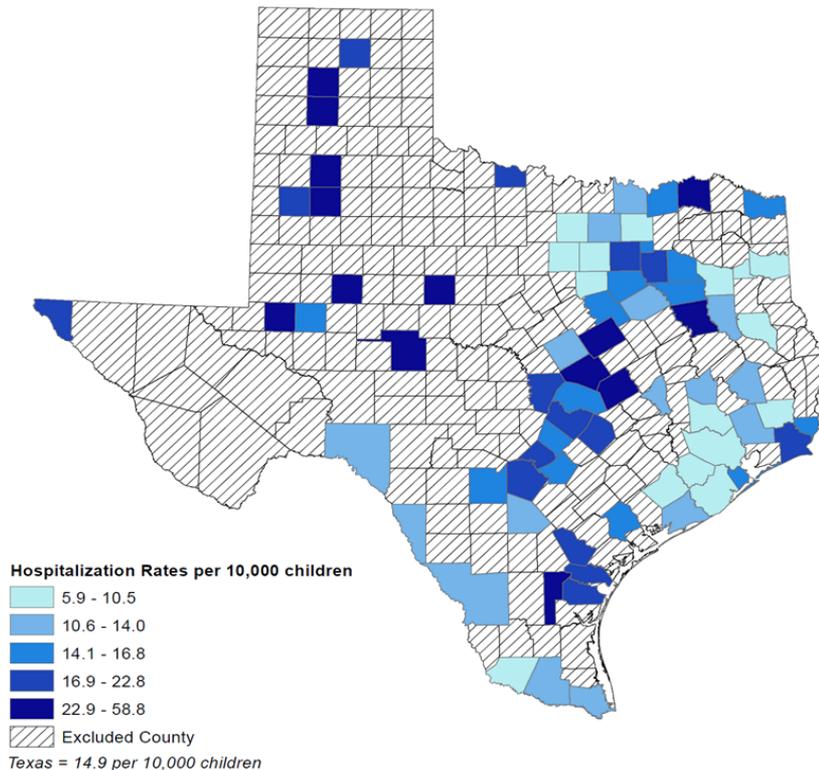
Created by Erin Wu, 10/30/2013



Asthma in Children



Asthma Hospitalization Rates
Per 10,000 Persons Per Year Among Children
(0-17 years) by County, Texas, 2012

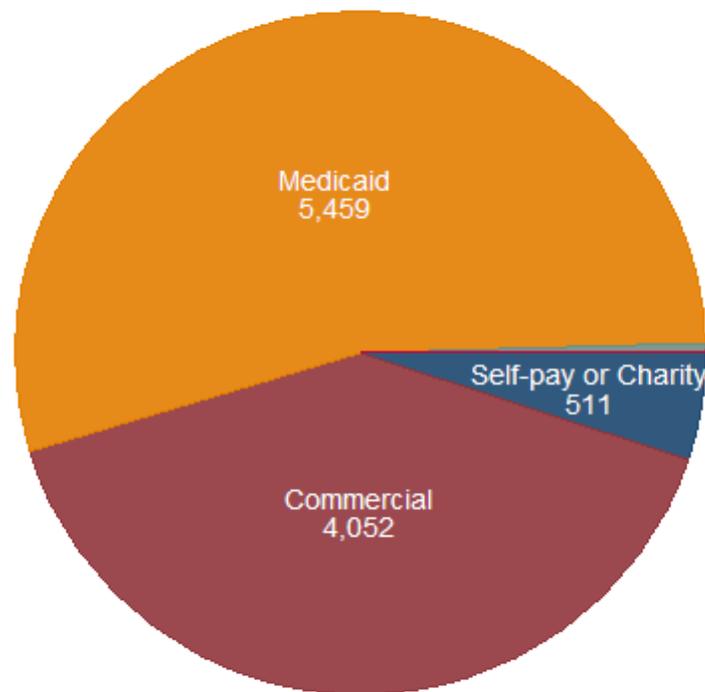


Data Classification: Quantiles
Data Source: Inpatient Hospital Discharge Public Use Data File, 2012.
Center for Health Statistics, Texas Department of State Health Services.
An asthma hospitalization is a hospital record listing ICD-9 Codes 439.0-439.9 as the principal diagnosis.

Created by Erin Wickerham, 3/13/14

Asthma in Children

Asthma Hospital Discharges Among Children (0 to 17 years) by Intended Payer Texas, 2012



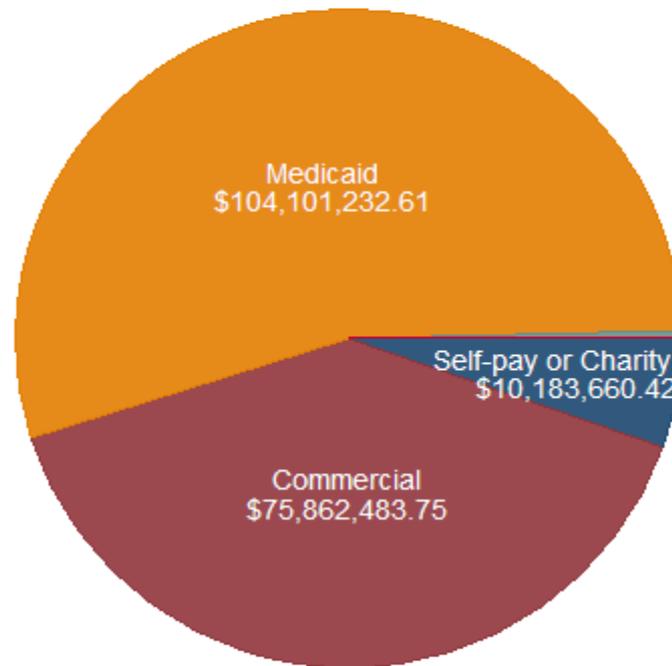
There were 10,075 reported asthma hospital discharges among children.

Data Source: Texas Health Care Information Collection (THCIC), Inpatient Hospital Discharge Public Use Data File, 2012.
Population Data Source: Center for Health Statistics, Texas Department of State Health Services, 2012.
Records listing asthma (ICD-9: 493.0 - 493.9) as the primary diagnosis.
Hospital discharges not shown: Medicare, 3, 0.03%; Other, 43, 0.4%; Missing, 7, 0.07%.

Asthma in Children



Hospital Charges for Asthma Among Children (0 to 17 years) by Intended Payer Texas, 2012



Hospital charges for asthma among children totaled \$190,822,467.41.
The average hospital charge was \$18,940.20.

Data Source: Texas Health Care Information Collection (THCIC), Inpatient Hospital Discharge Public Use Data File, 2012.
Population Data Source: Center for Health Statistics, Texas Department of State Health Services, 2012.
Records listing asthma (ICD-9: 493.0 - 493.9) as the primary diagnosis.
Hospital charges not shown: Medicare, \$18,262.80 total, 0.01%; Other, \$547,558.4, 0.3%; Missing, \$109,269.42, 0.1%.

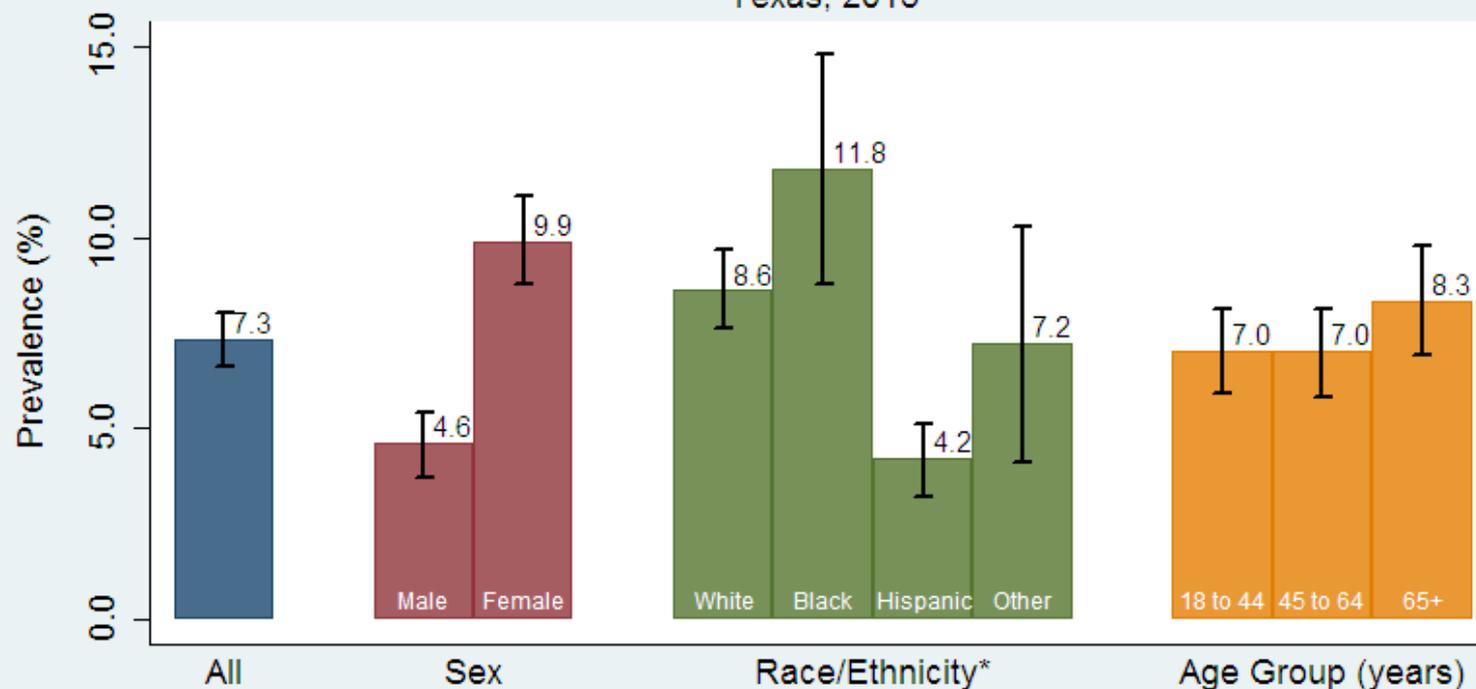
Asthma in Children



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Current Asthma Prevalence Among Adults (18+ years), By Sex, Race/Ethnicity, and Age Group

Texas, 2013



Data Source: 2013 Texas Behavioral Risk Factor Surveillance System (BRFSS), Texas Department of State Health Services, Center for Health Statistics.

Survey Questions: 'Has a doctor, nurse, or other health professional ever told you that you had asthma?' and 'Do you still have asthma?'

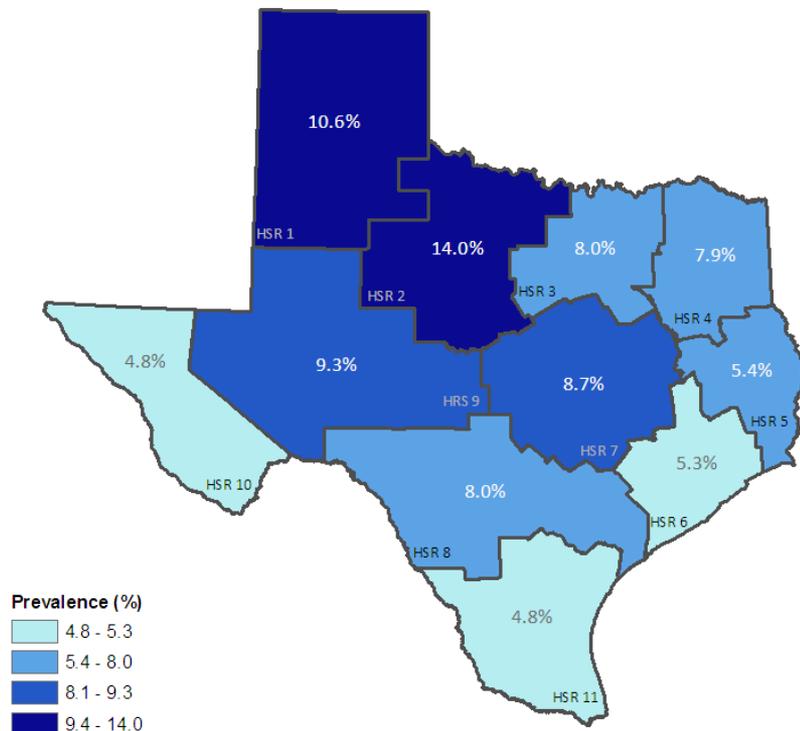
*Race/ethnicity is categorized differently in 2013 as: White = White only, non-Hispanic; Black = Black only, non-Hispanic; Hispanic = Hispanic; Other = Other race only, non-Hispanic; Multiracial.

Asthma in Adults

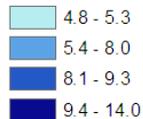


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Adult Current Asthma Prevalence by Health Service Region (HSR), Texas, 2013



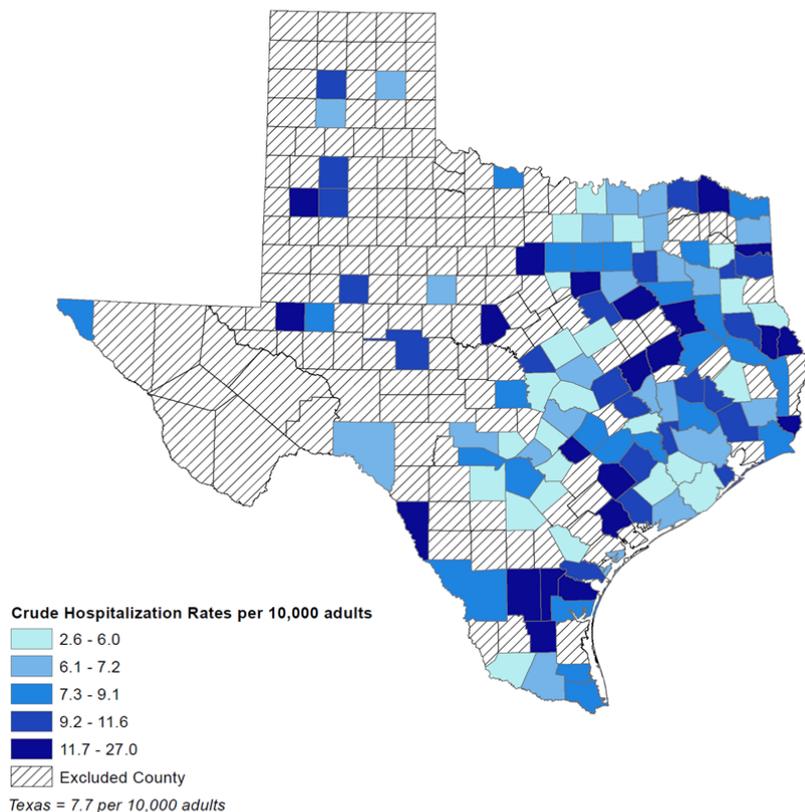
Prevalence (%)



Adult Current Asthma Prevalence in Texas = 7.3% (95% Confidence Interval: 6.6-8.0)

Asthma in Adults

Asthma Hospitalization Rates
Per 10,000 Persons Per Year Among Adults
(18+ years) by County, Texas, 2012



Data Classification: Quantiles
Data Source: Inpatient Hospital Discharge Public Use Data File, 2012.
Center for Health Statistics, Texas Department of State Health Services.
An asthma hospitalization is a hospital record listing ICD-9 Codes 439.0-439.9
as the principal diagnosis.

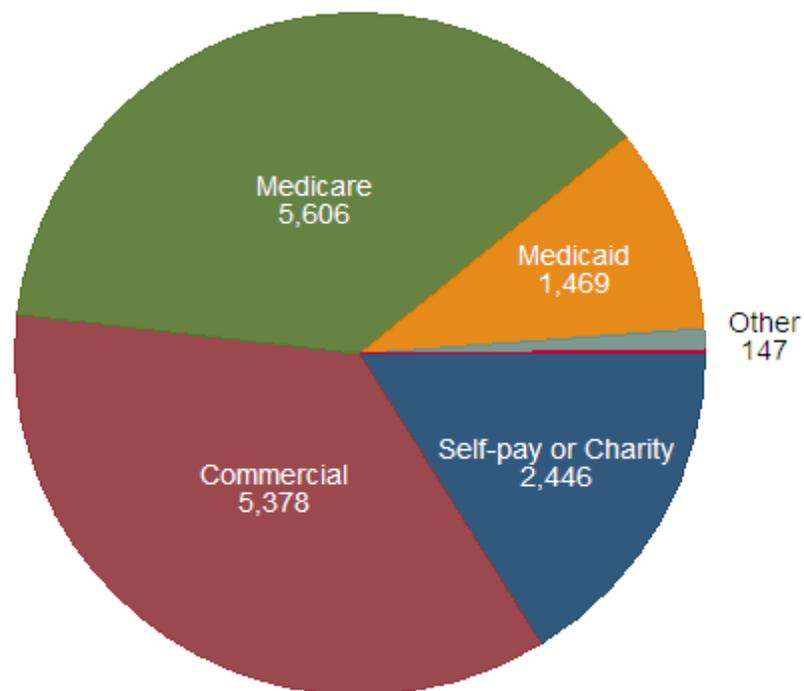
Created by Erin Wickerham, 3/13/14

Asthma in Adults



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Asthma Hospital Discharges Among Adults (18+ years) by Intended Payer Texas, 2012

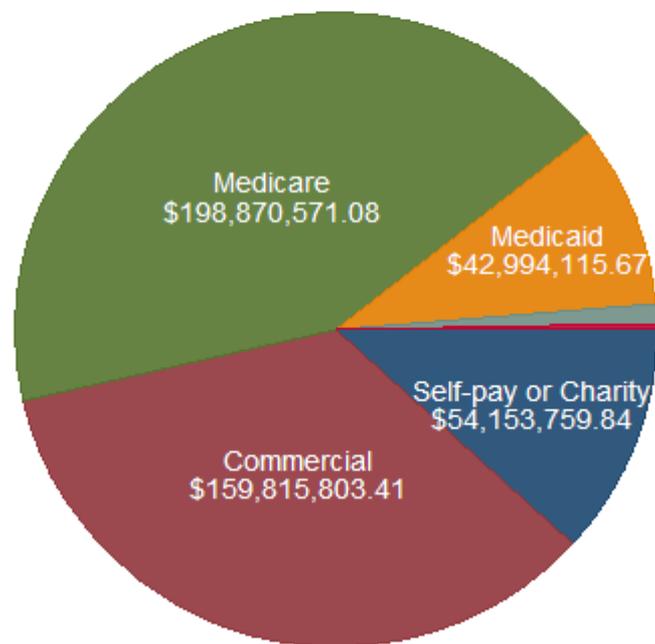


There were 15,083 reported asthma hospital discharges among adults.

Data Source: Texas Health Care Information Collection (THCIC), Inpatient Hospital Discharge Public Use Data File, 2012.
Population Data Source: Center for Health Statistics, Texas Department of State Health Services, 2012.
Records listing asthma (ICD-9: 493.0 - 493.9) as the primary diagnosis.
Hospital discharges not shown: Missing, 37, 0.2%.

Asthma in Adults

Hospital Charges for Asthma Among Adults (18+ years) by Intended Payer Texas, 2012



Hospital charges for asthma among adults totaled \$461,697,014.41.
The average hospital charge was \$30,610.42.

Data Source: Texas Health Care Information Collection (THCIC), Inpatient Hospital Discharge Public Use Data File, 2012.
Population Data Source: Center for Health Statistics, Texas Department of State Health Services, 2012.
Records listing asthma (ICD-9: 493.0 - 493.9) as the primary diagnosis.
Hospital charges and percents not shown: Other, \$4,468,933.73, 1.0%; Missing, \$1,393,830.68, 0.1%.
*Average hospital charge per hospital discharge among children in which asthma was the primary diagnosis.



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But, of course, the dollars
and numbers don't tell
the whole story...

Mortality



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Age-Adjusted Asthma Mortality Rates By Year, All Ages

Texas, 2002 to 2012

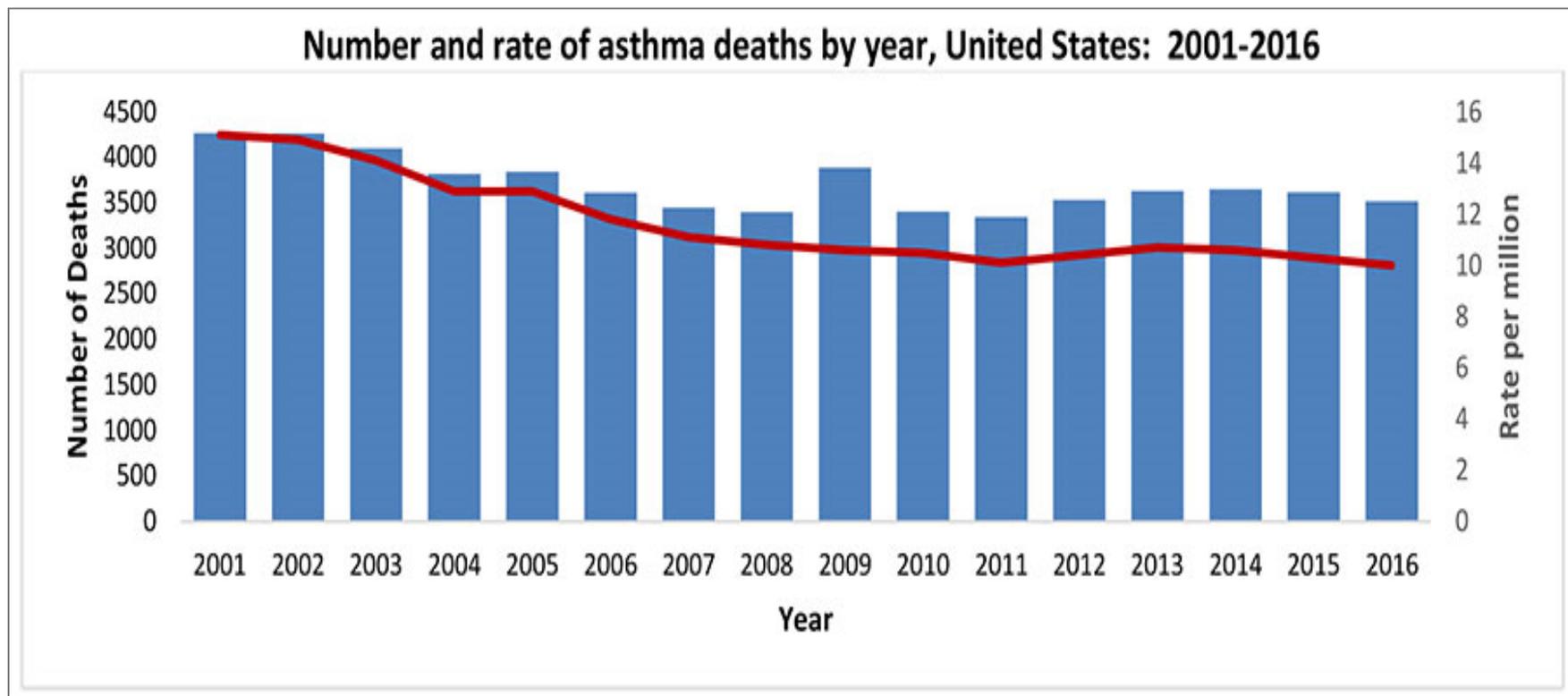


Data Source: 2006-2012 Vital Statistics Unit, Center for Health Statistics, Texas Department of State Health Services.
Mortality based on ICD-10 codes for asthma (J45 and J46).
Asthma mortality rates are age-adjusted to the 2000 U.S. Census Population.

Mortality



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Source: Centers for Disease Control

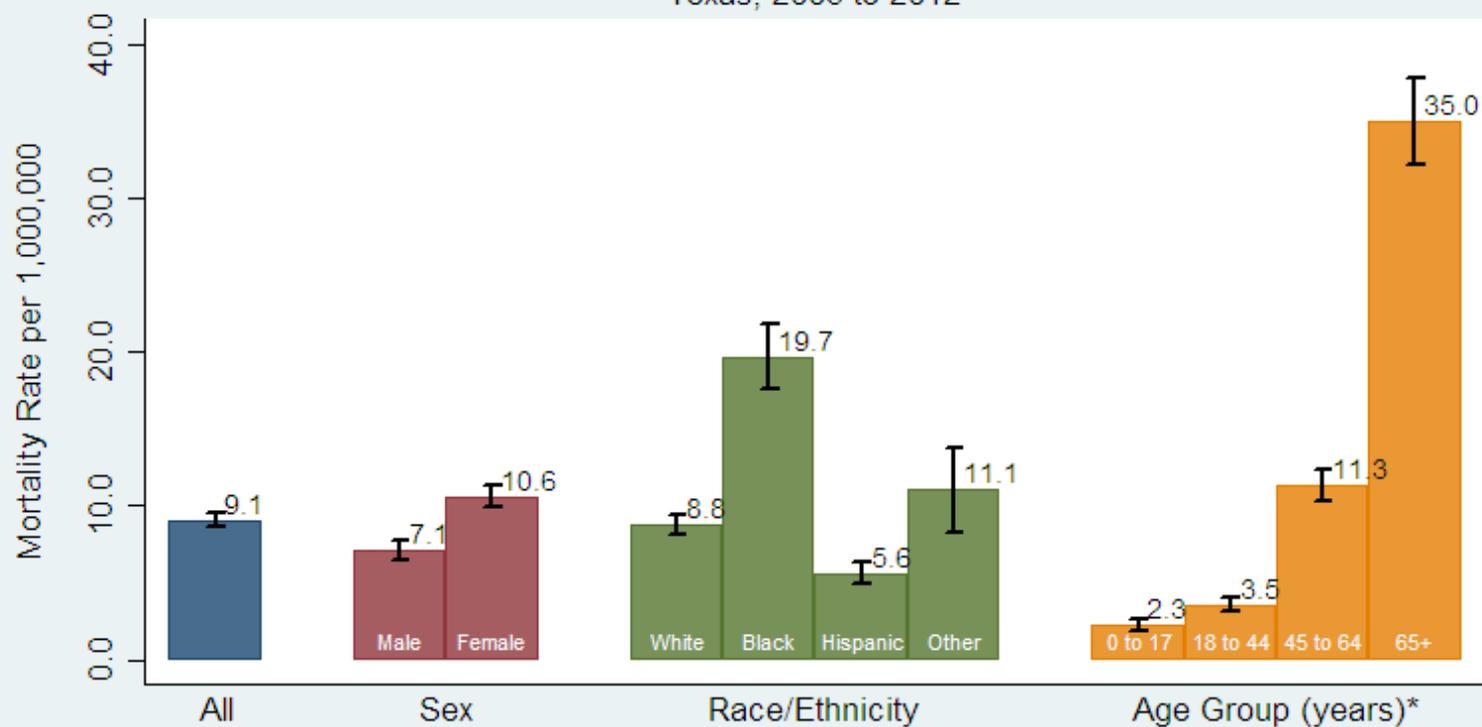
Mortality



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Age-Adjusted Asthma Mortality Rates Among All Ages by Sex, Race/Ethnicity, and Age Group

Texas, 2006 to 2012



Data Source: 2006-2012 Vital Statistics Unit, Center for Health Statistics, Texas Department of State Health Services.
Mortality based on ICD-10 codes for asthma (J45 and J46).
Asthma mortality rates overall, by sex, and by race/ethnicity are age-adjusted to the 2000 U.S. Census Population.
*Asthma mortality rates by age-group cannot be age-adjusted.

Suboptimal Asthma Care's Impact



- Definitions of Terms
 - Clinical Risk Group (CRG)
 - 3M groups patients with like-condition based on claim history data.
 - Potentially Preventable Visits (PPV)*
 - Emergency department visits for diagnosis that could have been treated in outpatient/provider office setting.

** Essentially, ALL non-scheduled visits for asthma are “potentially preventable,” irrespective of location.*

Top 5 Dx for PPV's of Asthma CRG Patients



State of Texas

| Rank | Primary Diagnosis | Percent of Total |
|------|--|------------------|
| 1 | Acute upper respiratory infection, unspecified | 8.13% |
| 2 | Unspecified asthma with (acute) exacerbation | 5.64% |
| 3 | Viral infection, unspecified | 3.03% |
| 4 | Acute pharyngitis, unspecified | 2.89% |
| 5 | Unspecified asthma, uncomplicated | 2.89% |

Asthma = 8.5%

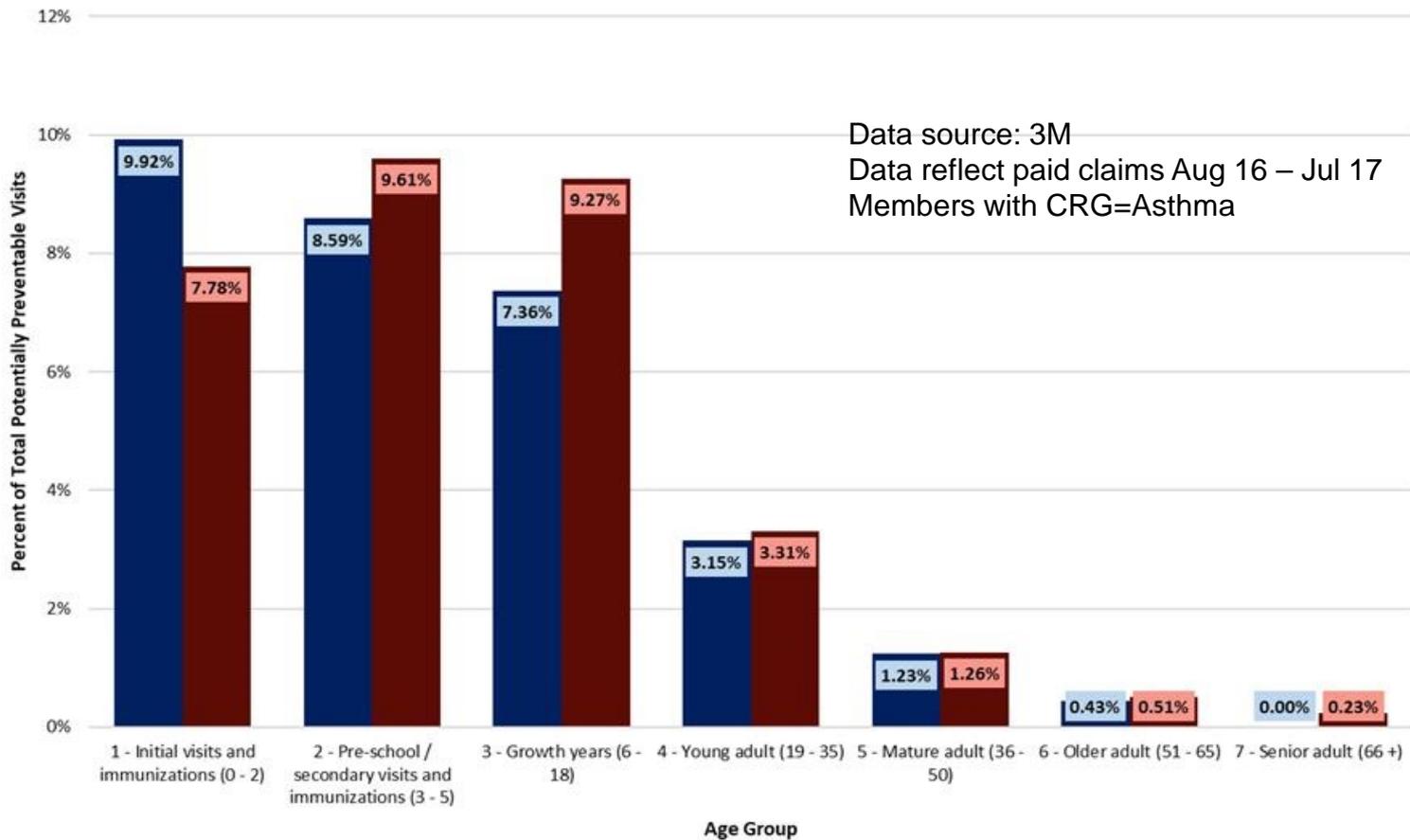


PPVs



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Potentially Preventable Visits (PPV's) by Asthma CRG as Percent of Total PPV's by all CRG's
El Paso County compared to State of Texas
(Jan 2017 - Dec 2017)



Data source: 3M

■ El Paso, TX

■ State of Texas

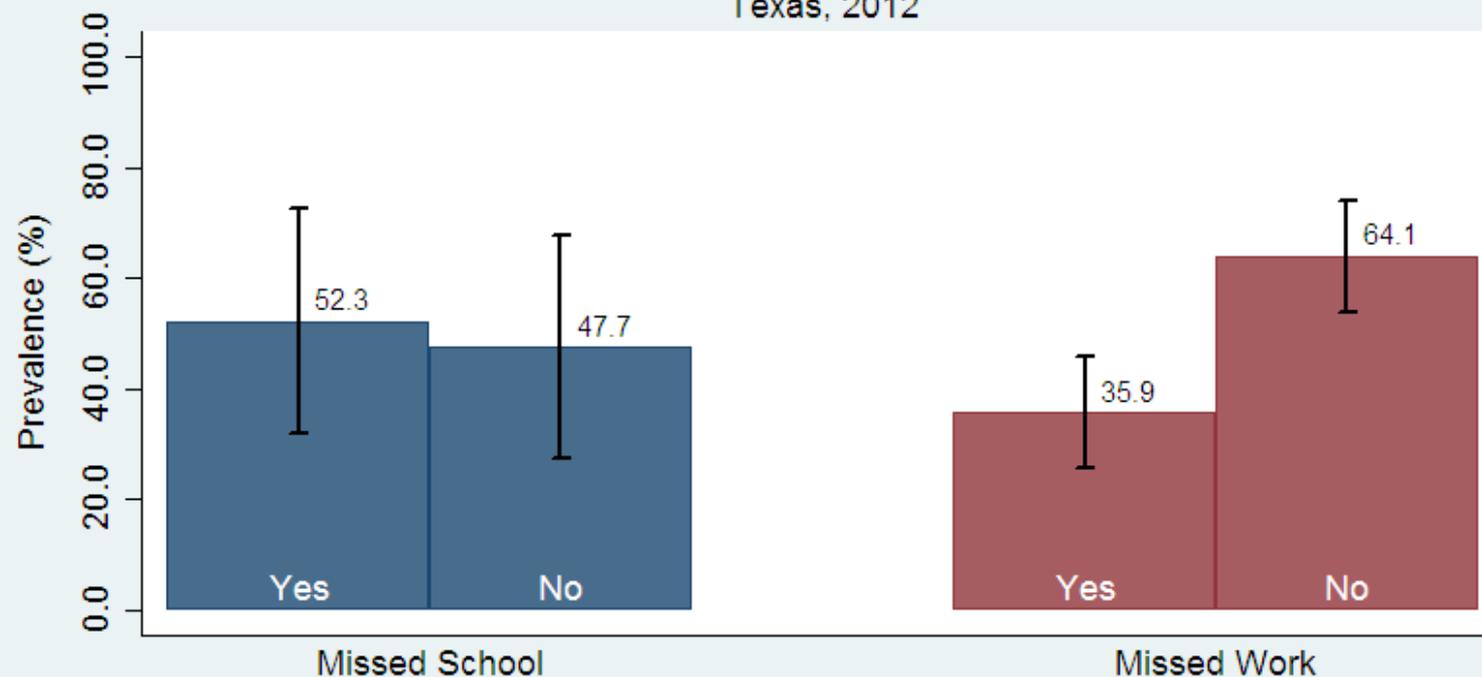
Sick Days



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Prevalence of Missed School Days Among Children (0 to 17 years) and Missed Work Days Among Adults (18+ years) Due to Their Asthma

Texas, 2012



Data Source: 2012 Adult and Child Asthma Callback Surveys, Texas Behavioral Risk Factor Surveillance System (BRFSS), Texas Department of State Health Services, Center for Health Statistics.

Results are among children and adults with current asthma.

Survey Questions: 'During the past 12 months, about how many days of school did [he/she] miss because of his/her asthma?'

'During the past 12 months, how many days were you unable to work or carry out your usual activities because of your asthma?'



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Asthma

And now...On with the show!

