

Breathe Easy: A Report on Asthma in Children and Adults in Upstate New York

Supplement to Corporate Communications Infographic

This supplement is intended to provide additional data and information on methods used to obtain research for the asthma infographic.

The red box indicates which part of the infographic that slide is referring to. →

[Centers for Disease Control and Prevention](https://www.cdc.gov/asthma/)



← Click on the underlined links for more information. They are hyperlinked to the source.

BREATHE EASY: 6 STEPS For Controlling Your Child's ASTHMA

1 in 8 children in upstate N.Y. is affected by asthma. Symptoms include wheezing or shortness of breath. An asthma diagnosis can be confirmed by your doctor.

When asthma symptoms spike, kids are more likely to have an attack or land in the hospital. The good news is that asthma can be controlled. Keep your child healthy by following these steps:

- 1. Check in with the doc regularly**
 - Make sure medication is working
 - Get a note if child will need meds at school
 - Ask for rescue inhalers for home and school
 - Create/review an asthma action plan
- 2. Take meds as directed**
 - Prevent asthma flare-ups! Take controller medicine regularly, even when symptoms are gone
 - For inhalers, use a tube spacer to help the medicine reach the lungs
 - Make sure your child has spacers for home and school
- 3. Alert school staff**
 - Share the asthma action plan
 - Share your child's triggers and signs of an attack
 - Provide medications and sign medical forms
- 4. Empower your child**
 - Teach your child how to manage his/her asthma, notice triggers and warning signs
 - Use kid-friendly materials and asthma games to help your child feel confident when telling an adult about symptoms
- 5. Reduce triggers at home**
 - Wash bedding with hot water once a week
 - Use an allergy-proof cover on mattress and pillows
- 6. Prevent the spread of germs**
 - Encourage good hand washing by the whole family
 - Be sure everyone age 6 months and older gets a yearly flu shot

Have a plan for action so you and your child can BREATHE EASY!

For more information on asthma, visit [HealthyChildren.org](https://www.HealthyChildren.org) and www.lung.org

univera HEALTHCARE an excelsior company

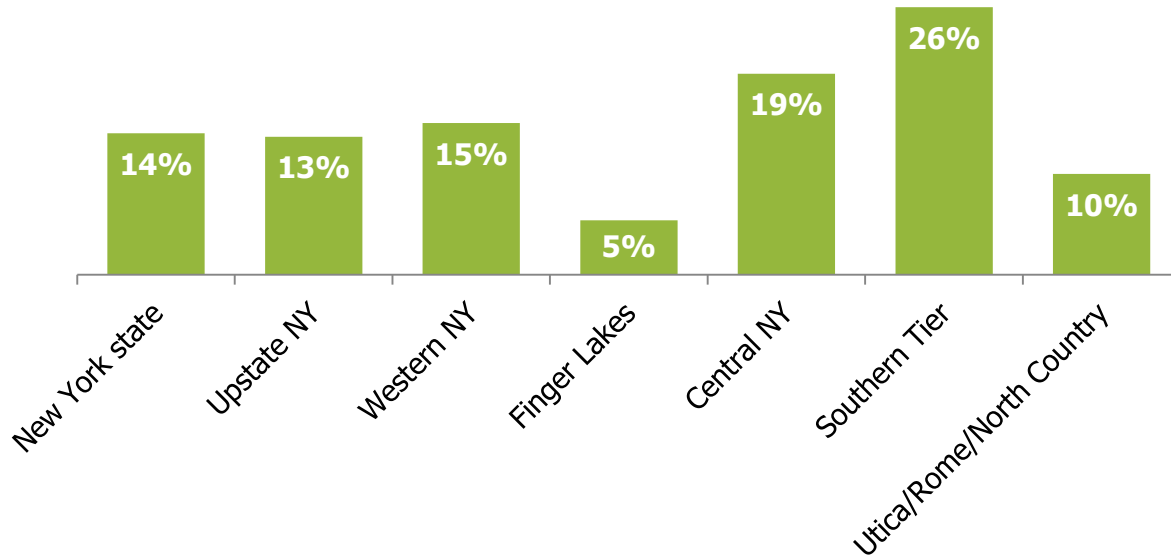
Background

Asthma is one of the most common long-term diseases of children. [Asthma](#) causes wheezing, breathlessness, chest tightness, and coughing at night or early in the morning. As children go back to school, there is a spike in asthma symptoms and flare-ups among children who have asthma. The good news is that asthma can be controlled. The purpose of this report is to describe the impact of asthma in upstate New York and offer strategies to prevent asthma flare-ups.

Asthma Prevalence in Children

About 13% of upstate N.Y. children (ages 0-18) have ever been diagnosed with asthma

Percent of children who have ever been told by a medical professional that they have asthma, by region



BREATHE EASY: 6 STEPS For Controlling Your Child's ASTHMA



1 in 8 children in upstate N.Y. is affected by asthma. Symptoms include wheezing or shortness of breath. An asthma diagnosis can be confirmed by your doctor.

When asthma symptoms spike, kids are more likely to have an attack or land in the hospital. The good news is that asthma can be controlled. Keep your child healthy by following these steps:

- 1. Check in with the doc regularly**
 - Make sure medication is working
 - Get a note if child will need meds at school
 - Ask for rescue inhalers for home and school
 - Create/review an asthma action plan
- 2. Take meds as directed**
 - Prevent asthma flare-ups! Take controller medicine regularly, even when symptoms are gone
 - For inhalers, use a tube spacer to help the medicine reach the lungs
 - Make sure your child has spacers for home and school
- 3. Alert school staff**
 - Share the asthma action plan
 - Share your child's triggers and signs of an attack
 - Provide medications and sign medical forms
- 4. Empower your child**
 - Teach your child how to manage his/her asthma, notice triggers and warning signs
 - Use kid-friendly materials and asthma games to help your child feel confident when talking an adult about symptoms
- 5. Reduce triggers at home**
 - Wash bedding with hot water once a week
 - Use an allergy-proof cover on mattress and pillows
- 6. Prevent the spread of germs**
 - Encourage good hand washing by the whole family
 - Be sure everyone age 6 months and older gets a yearly flu shot

Have a plan for action so you and your child can BREATHE EASY!

For more information on asthma, visit HealthyChildren.org and www.lung.org



Source: Centers for Disease Control and Prevention – Behavioral Risk Factor Surveillance System, [2015](#)

In New York state, 9.0% of children (ages 0-17 years) currently have asthma

- Current asthma prevalence is higher for male children (9.2%) than female children (8.7%)
- Children ages 5-9 have a higher prevalence (14.2%) of current asthma compared with children ages 0-4 (6.8%), ages 10-14 (10.7%), and ages 15-17 (4.5%)

Source: New York State Department of Health – [Child Asthma Prevalence in the United States and New York State, 2013 BRFSS](#)

Nationwide, 8.4% of children under age 18 currently have asthma

Age-adjusted percentages of current asthma for children under age 18, United States, 2015

Source: National Health Interview Survey, 2015

Selected characteristics	Current asthma
Total	8.4%
Sex	
Male	9.9%
Female	6.9%
Race/Ethnicity	
White, Non-Hispanic	7.4%
Black or African American, Non-Hispanic	13.4%
Other, Non-Hispanic	8.4%
Hispanic	8.0%
Age	
0-4 years	4.7%
5-11 years	9.6%
12-17 years	10.0%

Source: Centers for Disease Control and Prevention – [Most Recent Asthma Data](#)

Back-to-School September Asthma Peak

“September Peak”

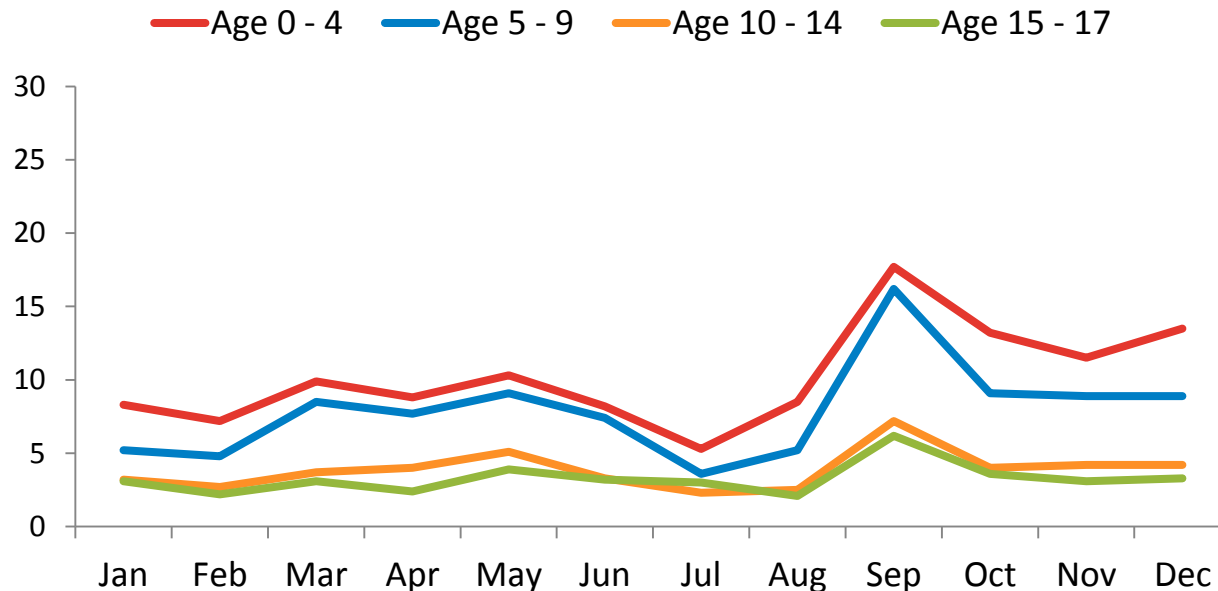
- Children’s asthma may flare up in late August and September because:
(1) viral infections are more prevalent in community, (2) children return to school and are in close quarters with other kids
 - During this time there is a significant increase in asthma attacks
- September epidemic of asthma is largely caused by cold viruses
- The back-to-school period brings a dramatic increase in hospitalizations for children with asthma

Source:

- Cleveland Clinic - [Why Fall is Worst Season for Your Child's Asthma](#)
- Health Central - [Asthma and the September Epidemic](#)
- Asthma Canada - [September Asthma Peak](#)

The “September Peak” in upstate New York

Average Asthma-Related Emergency Room Visits Per 1,000 by Age Group in Upstate N.Y. (2014-2016)



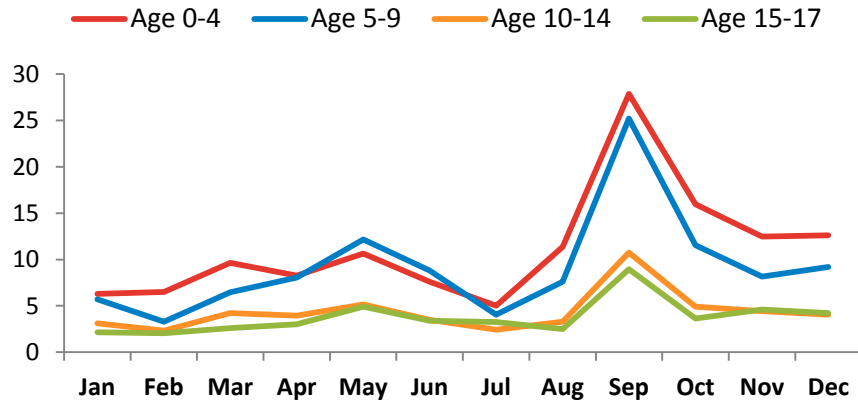
- According to health plan claims data, upstate N.Y. children ages 0-17 experience a peak in asthma-related emergency room visits during the month of September.
- The peak in asthma-related emergency room visits is higher for younger children than for older children

Source:

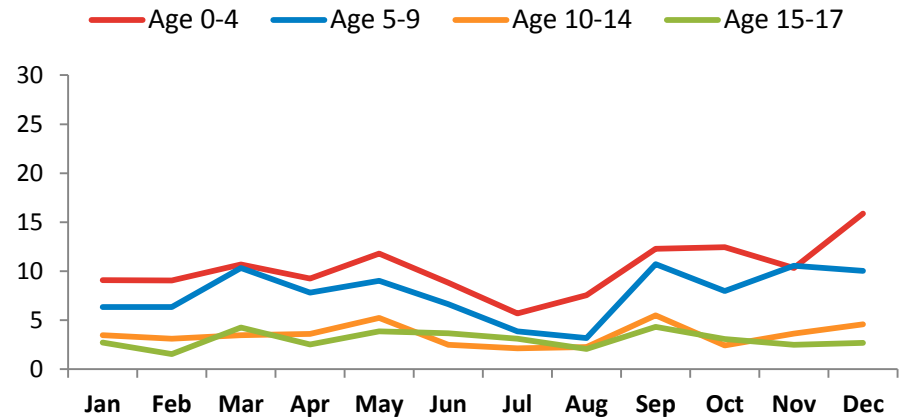
- Univera Healthcare Claims Data, 2014-2016. The average was calculated by summing the utilization and membership months for the past three years (slide 10), and then applying the formula: $(\text{utilization}/\text{member months}) \times 12,000$

Year-by-Year: Asthma Utilization Patterns in School Age Children

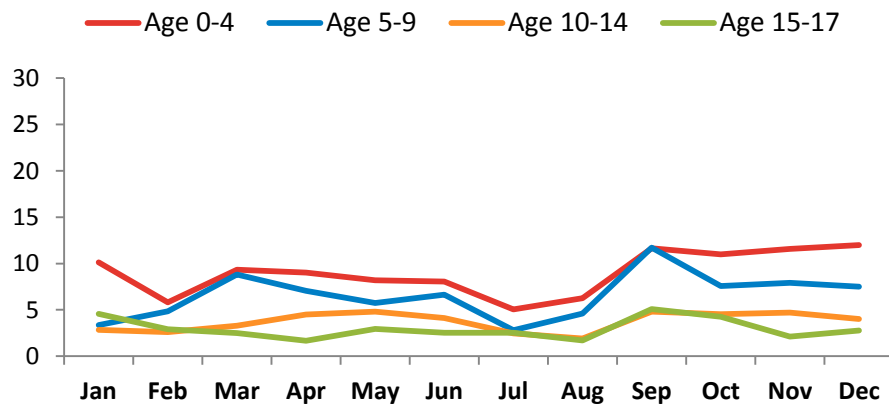
2014: Asthma-Related Emergency Room Visits Per 1,000 by Age Group in Upstate NY



2015: Asthma-Related Emergency Room Visits Per 1,000 by Age Group in Upstate NY



2016: Asthma-Related Emergency Room Visits per 1,000 by Age Group in Upstate NY



Source:

- Univera Healthcare Claims Data, 2014-2016. Claims reported are for all standard commercial and safety net products. Reflects utilization in the 39-county region of upstate New York. Claims reported from January 2014-December 2016, paid through March 2017.

Steps to Control Asthma

Back-to-School Checklist for Kids with Asthma

- Know the school nurse
- Keep an up-to-date [action plan](#) with health care provider and school nurse
 - The [action plan](#) shows your daily treatment (medication dosage and timing), how to control asthma long-term and how to handle asthma attacks, explains when to call doctor or go to the emergency room
- Make sure child knows how to properly use medication
- Have allergies accurately diagnosed in order to determine allergens to avoid
 - Common asthma and allergy triggers in the classroom include – dust mites, mold, chalk dust, animal dander

BREATHE EASY: 6 STEPS For Controlling Your Child's ASTHMA

1 in 8 children in upstate N.Y. is affected by asthma. Symptoms include wheezing or shortness of breath. An asthma diagnosis can be confirmed by your doctor.

When asthma symptoms spike, kids are more likely to have an attack or land in the hospital. The good news is that asthma can be controlled. Keep your child healthy by following these steps:

- 1. Check in with the doc regularly**
 - Make sure medication is working
 - Get a note if child will need meds at school
 - Ask for rescue inhalers for home and school
 - Create/review an asthma action plan
- 2. Take meds as directed**
 - Prevent asthma flare-ups! Take controller medicine regularly, even when symptoms are gone
 - For inhalers, use a tube spacer to help the medicine reach the lungs
 - Make sure your child has spacers for home and school
- 3. Alert school staff**
 - Share the asthma action plan
 - Share your child's triggers and signs of an attack
 - Provide medications and sign medical forms
- 4. Empower your child**
 - Teach your child how to manage his/her asthma, notice triggers and warning signs
 - Use kid-friendly materials and asthma games to help your child feel confident when talking an adult about symptoms
- 5. Reduce triggers at home**
 - Wash bedding with hot water once a week
 - Use an allergy-proof cover on mattress and pillows
- 6. Prevent the spread of germs**
 - Encourage good hand washing by the whole family
 - Be sure everyone age 6 months and older gets a yearly flu shot

Have a plan for action so you and your child can BREATHE EASY!

For more information on asthma, visit HealthyChildren.org and www.lung.org

univera HEALTH CARE an excelus company

Source:

- American Lung Association - [Back to school with asthma checklist](#)
- Centers for Disease Control and Prevention - [Asthma Action Plan](#)
- National Asthma Council Australia - [Back to school checklist for kids with asthma](#)

How to Manage Asthma – Tips from Choosing Wisely

- Ask for a spirometry test if you have symptoms
- Take your medication as directed
- Avoid triggers (like pollen, mold, pets)
 - Stay indoors when pollen count is high
 - Wash bedding with hot water once a week
 - Put an allergy-proof cover on mattress and pillows
- Stay active (ask doctor about short-acting medication before you exercise)
- Protect yourself from cold and flu, which can trigger symptoms
 - Wash hands often
 - Get an annual flu shot

BREATHE EASY: 6 STEPS For Controlling Your Child's ASTHMA

1 in 8 children in upstate N.Y. is affected by asthma. Symptoms include wheezing or shortness of breath. An asthma diagnosis can be confirmed by your doctor.

When asthma symptoms spike, kids are more likely to have an attack or land in the hospital. The good news is that asthma can be controlled. Keep your child healthy by following these steps:

- 1. Check in with the doc regularly**
 - Make sure medication is working
 - Get a note if child will need meds at school
 - Ask for rescue inhalers for home and school
 - Create/review an asthma action plan
- 2. Take meds as directed**
 - Prevent asthma flare-ups! Take controller medicine regularly, even when symptoms are gone
 - For inhalers, use a tube spacer to help the medicine reach the lungs
 - Make sure your child has spacers for home and school
- 3. Alert school staff**
 - Share the asthma action plan
 - Share your child's triggers and signs of an attack
 - Provide medications and sign medical forms
- 4. Empower your child**
 - Teach your child how to manage his/her asthma, notice triggers and warning signs
 - Use kid-friendly materials and asthma games to help your child feel confident when talking an adult about symptoms
- 5. Reduce triggers at home**
 - Wash bedding with hot water once a week
 - Use an allergy-proof cover on mattress and pillows
- 6. Prevent the spread of germs**
 - Encourage good hand washing by the whole family
 - Be sure everyone age 6 months and older gets a yearly flu shot

Have a plan for action so you and your child can BREATHE EASY!

For more information on asthma, visit HealthyChildren.org and www.lung.org

univera
HEALTHCARE
an excelis company

Source:

- Choosing Wisely - [Spirometry for Asthma](#)
 - Choosing Wisely is an initiative of the ABIM Foundation and Consumer Report

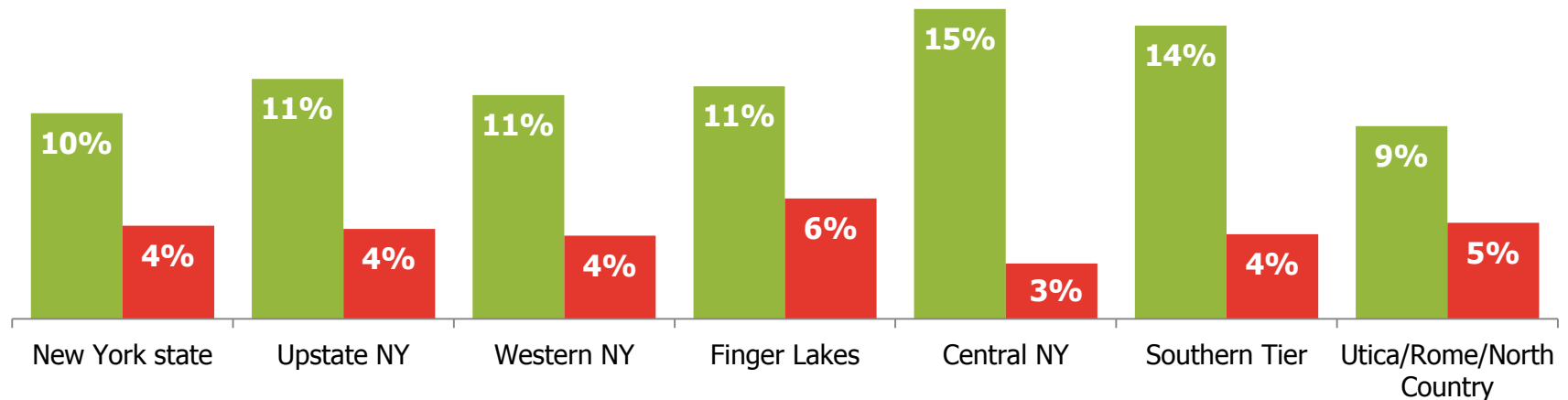
Additional Data

Asthma Prevalence in Adults

About 1 in 10 upstate N.Y. adults currently have asthma.
Nationwide, 7.6% of adults currently have asthma.

Asthma Status, by Region

■ Current Asthma ■ Former Asthma



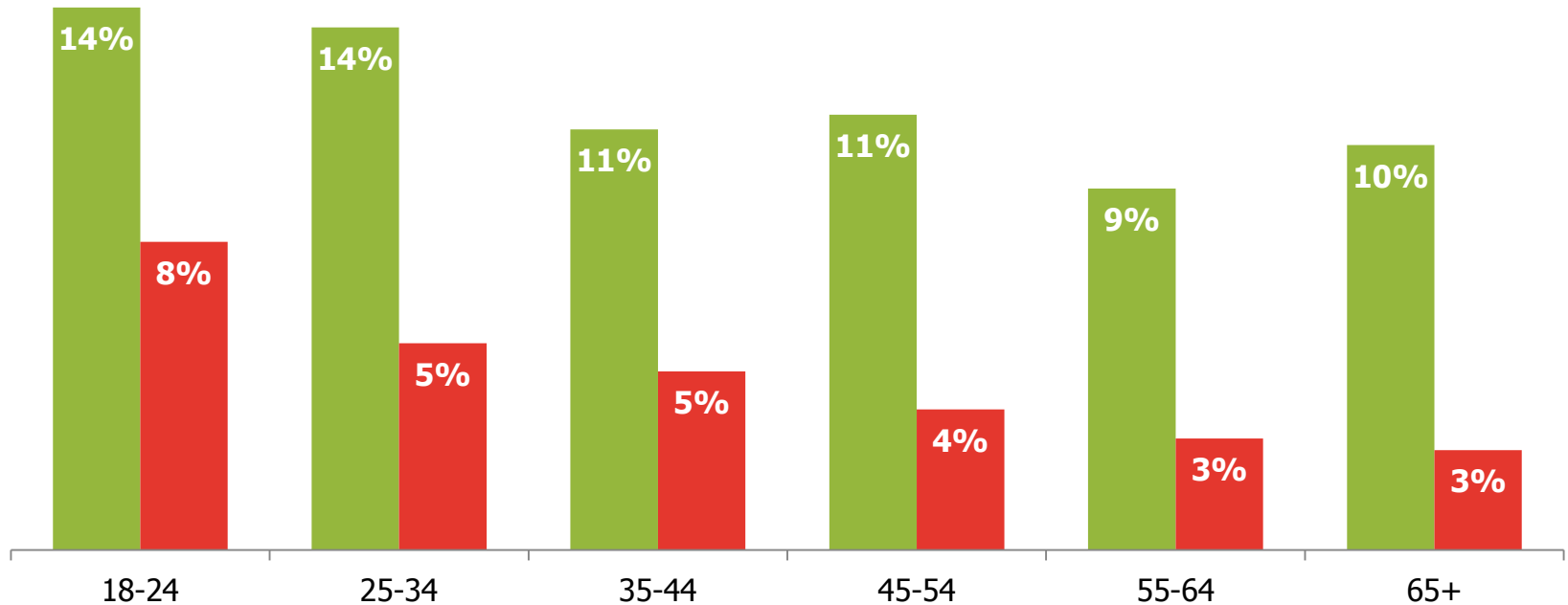
Source:

- Centers for Disease Control and Prevention - Behavioral Risk Factor Surveillance System, [2015](#)
- Centers for Disease Control and Prevention - [Most Recent Asthma Data](#)

In upstate N.Y., current asthma is highest among adults under age 35

Asthma Status, by Age

■ Current Asthma ■ Former Asthma



Source:

- Centers for Disease Control and Prevention - Behavioral Risk Factor Surveillance System, [2015](#)

The relationship between obesity and asthma

- Obesity is a risk factor for the development of asthma
- Obesity is associated significantly with asthma development, worsening symptoms and poor asthma control
- In 2010, the obesity rate among adults with current asthma (38.8%) was significantly higher than the rate among adults without current asthma (26.8%)
- Conversely, research has also suggested that children with asthma may be at higher risk of obesity

Source:

- Centers for Disease Control and Prevention – [Asthma and Obesity](#)
- Chen, Z., Salam, M. T., Alderete, T. L., Habre, R., Bastain, T. M., Berhane, K., & Gilliland, F. D. (2017). Effects of childhood asthma on the development of obesity among school-aged children. *American journal of respiratory and critical care medicine*, 195(9), 1181-1188. [Link](#)

Spirometry: a test that can confirm whether you have asthma or another disease

- If your doctor assumes you have asthma without a spirometry test, you could be taking asthma drugs when you don't need them.
 - On the other hand, your doctor may assume the cause of your symptoms is another problem, when it is asthma. If your asthma is not treated, you could have severe asthma attacks
- Choosing Wisely Recommendation: Children age 5 or older, and adults of any age, who have asthma-like symptoms should have a spirometry test

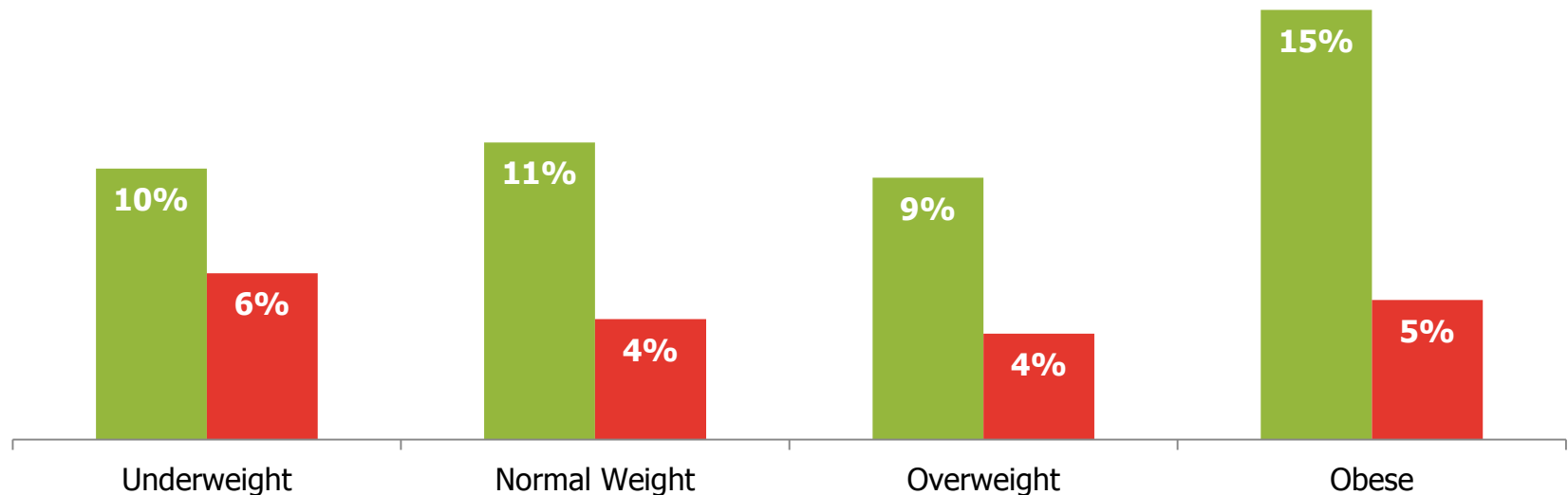
Source:

- Choosing Wisely - [Spirometry for Asthma](#)

In upstate N.Y., more individuals who are obese report current asthma compared with other BMI categories

Asthma Status, by BMI Category

■ Current Asthma ■ Former Asthma



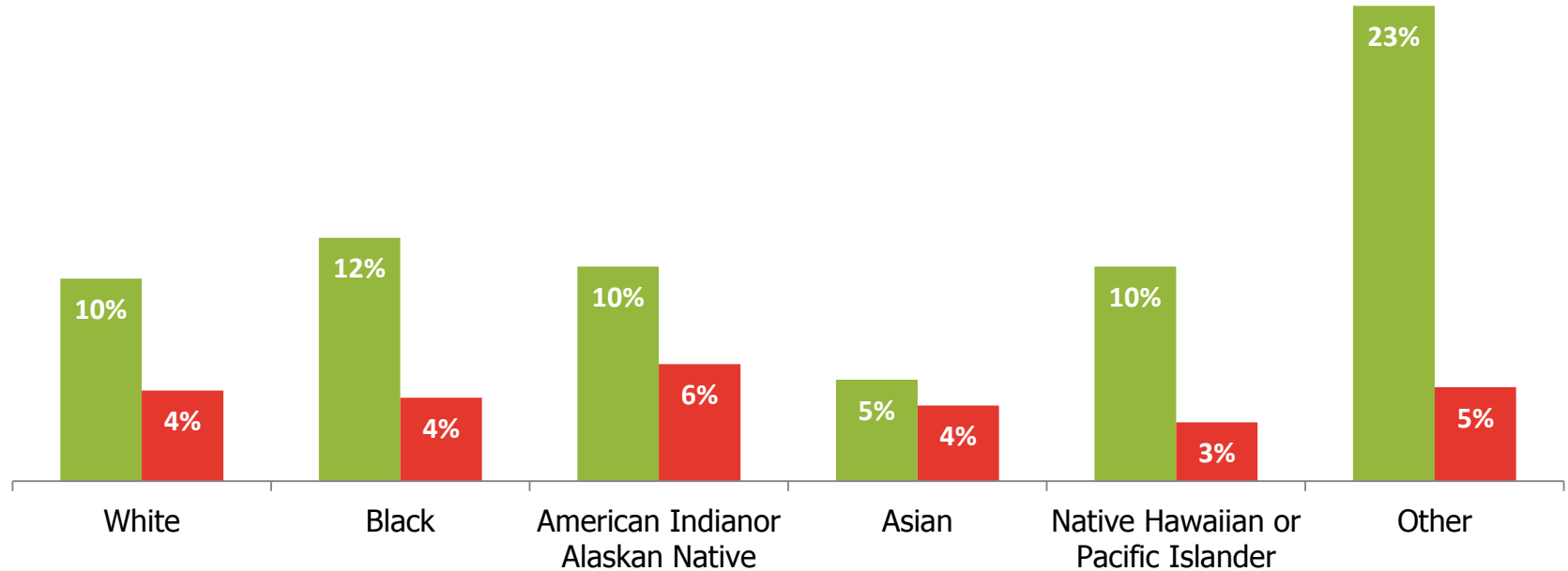
Source:

- Centers for Disease Control and Prevention - Behavioral Risk Factor Surveillance System, [2015](#)

In upstate N.Y., there are racial differences in asthma rates

Asthma Status, by Race

■ Current Asthma ■ Former Asthma



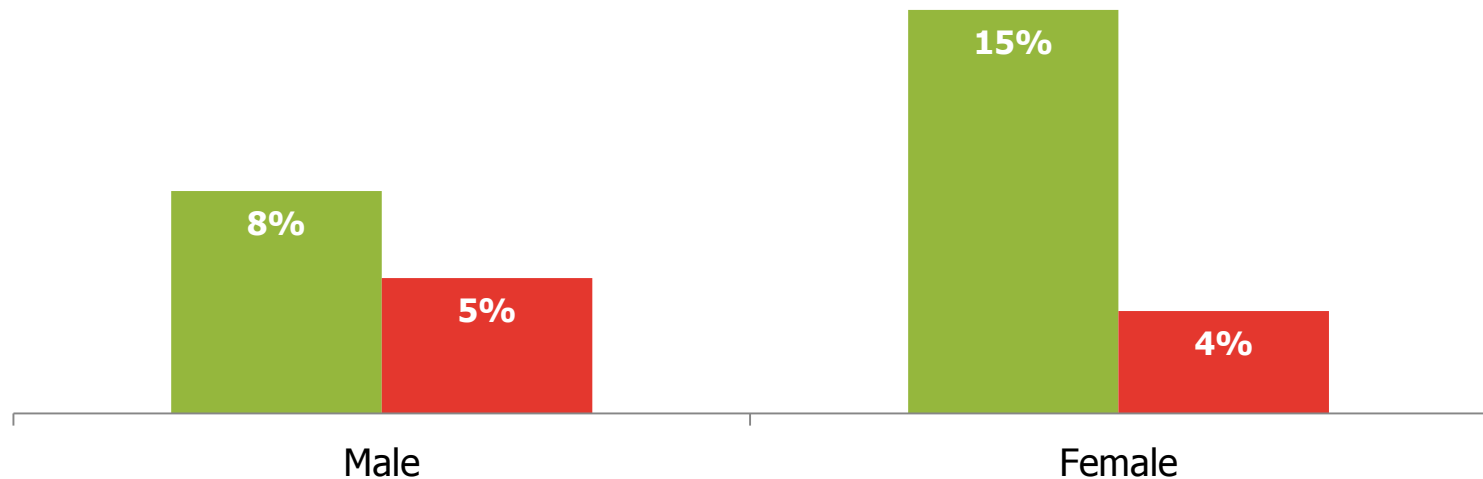
Source:

- Centers for Disease Control and Prevention - Behavioral Risk Factor Surveillance System, [2015](#)

In upstate NY, fewer adult men report current asthma compared with adult women

Asthma Status, by Sex

■ Current Asthma ■ Former Asthma



Source:

- Centers for Disease Control and Prevention - Behavioral Risk Factor Surveillance System, [2015](#)

Women with chronic asthma face extra challenges due to pregnancy, menopause and menstrual cycle

- Changing estrogen levels can lead to an inflammatory response, which can bring on asthma symptoms
- Asthma attacks are very dangerous for pregnant women

Source:

- Centers for Disease Control and Prevention – [Asthma in Women](#)

Additional Data

Asthma Attacks, Hospitalizations, and Mortality

Asthma attacks can be terrifying, and can last for a few minutes, hours or even days

- Asthma attacks can be triggered by common allergens (trees, dust, pollen), illnesses (flu, upper respiratory infection), strenuous exercise, strong emotions, extreme weather
 - Some triggers can particularly affect children with asthma: smoke, strong smells, changes in weather, running or playing hard
 - The common cold is one of the most frequent triggers for asthma attacks in very young children
 - Allergic reactions can cause asthma attacks
- In the U.S., 48% of children with current asthma and 47% of adults with current asthma have reported one or more asthma attacks

Source:

- American College of Allergy, Asthma & Immunology - [Asthma Attack](#)
- Cleveland Clinic - [Why Fall is Worst Season for Your Child's Asthma](#)
- Centers for Disease Control and Prevention - [Most Recent Asthma Data](#)

Exacerbation of asthma symptoms or asthma attacks can lead to medical care

- There were 1.6 million **emergency department** visits for asthma in the U.S. in 2013
- In 2012, there were 10.5 million **doctor's office** visits for asthma in the U.S.
- In 2010, there were 1.3 million **hospital outpatient** department visits for asthma in the U.S.
- The national rate of asthma **hospital inpatient** discharges is higher for children (18.3 per 10,000) than for adults (13.0 per 10,000)
- The national rate of asthma **hospital inpatient** discharges is higher for African Americans/Blacks (29.9 per 10,000) than for Whites (8.7 per 10,000)

Source:

- Centers for Disease Control and Prevention – [Most Recent Asthma Data](#)

Deaths from asthma are rare in the United States and in upstate N.Y.

- In 2015, the national asthma death rate for children (3.0 per million) was lower than for adults (13.7 per million)

Age-adjusted asthma mortality rate per 1,000,000 in upstate New York Source: 2012-2014 Vital Statistics Data as of May 2016	
Upstate N.Y.	7.4
Western N.Y.	7.6
Finger Lakes	5.8
Central N.Y.	5.2
Southern Tier	9.6
Utica/Rome/North Country	8.8

Source:

- Centers for Disease Control and Prevention – [Most Recent Asthma Data](#)
- New York State Department of Health - [Total Asthma Death Rate per 1,000,000, 2012-2014](#)

Recent trends in utilization and cost of asthma medications

- Per member per year (PMPY) spend on asthma therapy class = \$30.42
 - Trend – utilization: 3.3%; unit cost: -2.6%; total : 0.7%
- PMPY spend on asthma medications increased by 0.7% in 2016. Unit cost continues to decline in this class.
- Montelukast, the generic formulation of Singulair, has more than 35% of the market share and decreased 14.4% in unit cost last year, but increased in utilization
- Top 5 drugs by market share: Monteleukast, ProAir HFA, Ventolin HFA, Symbicort, Advair Diskus
- Forecast for 2017: Overall trend will increase slightly in 2017. It is projected to decline after the FDA's potential approval for Advair Diskus generics in the next two years.

Source:

- Express Scripts – [Drug Trend Report 2016](#)