

# Asthma Disparities in Ohio, 2022

**Bureau of Maternal, Child, and Family Health**

**Data and Surveillance Section**

# Contents

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## Asthma Disparities in Ohio, 2022

Definitions.....	3
Key Findings Adults.....	4
Key Findings Children.....	5

### Adults

• Disparities in Asthma Prevalence	
• Race.....	6
• Sex.....	7
• Age Groups.....	8
• Disparities in Emergency Department Visit Rates	
• Race.....	9
• Sex.....	10
• Disparities in Inpatient Hospitalization Rates	
• Race.....	11
• Sex.....	12

### Children

• Disparities in Asthma Prevalence	
• Race.....	13
• Sex.....	14
• Disparities in Emergency Department Visit Rates	
• Race.....	15
• Sex.....	16
• Disparities in Inpatient Hospitalization Rates	
• Race.....	17
• Sex.....	18

### Overall

• Disparities in Mortality	
• Age Groups.....	19
• Race.....	20
• Sex.....	21
• Summary.....	22
• Data Sources.....	23
• Contact Information.....	24

# Definitions

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In 1984, the Centers for Disease Control and Prevention (CDC) established the Behavioral Risk Factor Surveillance System (BRFSS). BRFSS is the nation's largest health survey that collects state-level data about U.S. residents regarding their health-related risk behaviors and events, chronic health conditions, and use of preventive services. The Ohio BRFSS is a major source of state-based health risk behavior data related to chronic disease prevalence.

**Adult Current Asthma Prevalence:** Estimated number of adult (i.e., 18 years and older) Ohioans who responded, “yes” to the BRFSS question: “Do you still have asthma?”

**Childhood Current Asthma Prevalence:** Estimated number of child (i.e., 17 years and younger) Ohioans who responded, “yes” to the BRFSS question: “Do you still have asthma?”

**Asthma Death:** deaths with International Classification of Diseases (ICD)-10 code J45-J46 as the underlying cause of death among residents during a calendar year.

**Inpatient Hospitalizations:** Inpatient hospitalizations with a primary diagnosis of International Classification of Diseases (ICD)-10-CM code J45 among residents during a calendar year.

**ED Visit:** ED Visits with a primary diagnosis of International Classification of Diseases (ICD)-10-CM code J45 among residents during a calendar year.

# Key Findings — Adults

In 2022, approximately 11.4% of adults in Ohio reported having current asthma, with significant disparities observed across racial and gender lines.

- In 2022, asthma was found to be 1.5 times more common among Black adults compared to White adults in Ohio.
- In 2022, Black adults experienced asthma-related emergency department visits at a rate six times higher than their White counterparts.
- In 2022, asthma-related inpatient hospitalizations among Black adults occurred at a rate nearly six times that of White adults.
- In 2022, women experienced asthma-related emergency department visits at a rate approximately 1.5 times higher than men.
- Between 2017-2022, asthma-related deaths among Black adults were over 2.5 times more frequent than among White adults.
- Between 2017-2022, adults aged 65 years and older experienced the highest rate of asthma-related deaths among all adult age groups.

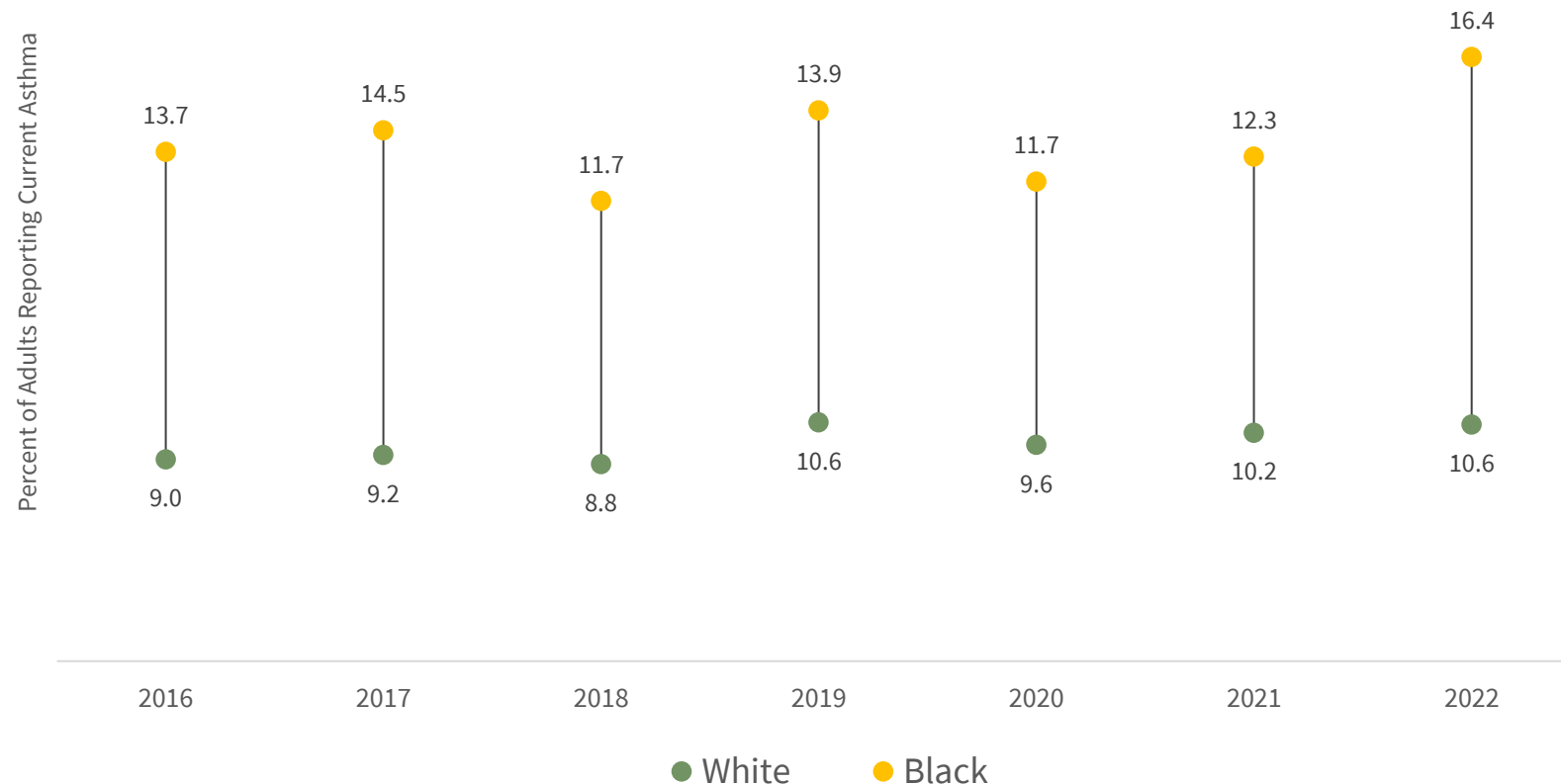
# Key Findings — Children

In 2022, approximately 6.8% of children reported having current asthma. Both racial and gender disparities continue to exist within these populations in Ohio.

- In 2022, female children had a lower asthma prevalence rate when compared to male children with a prevalence percentage of 6.0% compared to 7.8%.
- In 2022, Black children experienced an asthma prevalence twice as high than that experienced by their White counterparts.
- In 2022, Black children experienced asthma-related emergency department visits at a rate nearly five times that of their White counterparts.
- In 2022, Black children experienced asthma-related inpatient hospitalizations at five times the rate compared to that of their White counterparts.
- Between 2017-2022, Black children experienced asthma-related deaths at a rate of approximately eight times that of their White counterparts.

# Disparities in Adult Asthma Prevalence by Race

Estimated Adult Current Asthma Prevalence, by Race and Year, Ohio, 2016-2022



- Throughout the 2016-2022 surveillance period, Black adults in Ohio experienced consistently higher rates of asthma compared to White adults in Ohio.
- In 2022, Black adult Ohioans had an asthma prevalence percentage of 16.4% compared to White adult Ohioans with an asthma prevalence percentage of 10.6%.

# Disparities in Adult Asthma Prevalence by Sex

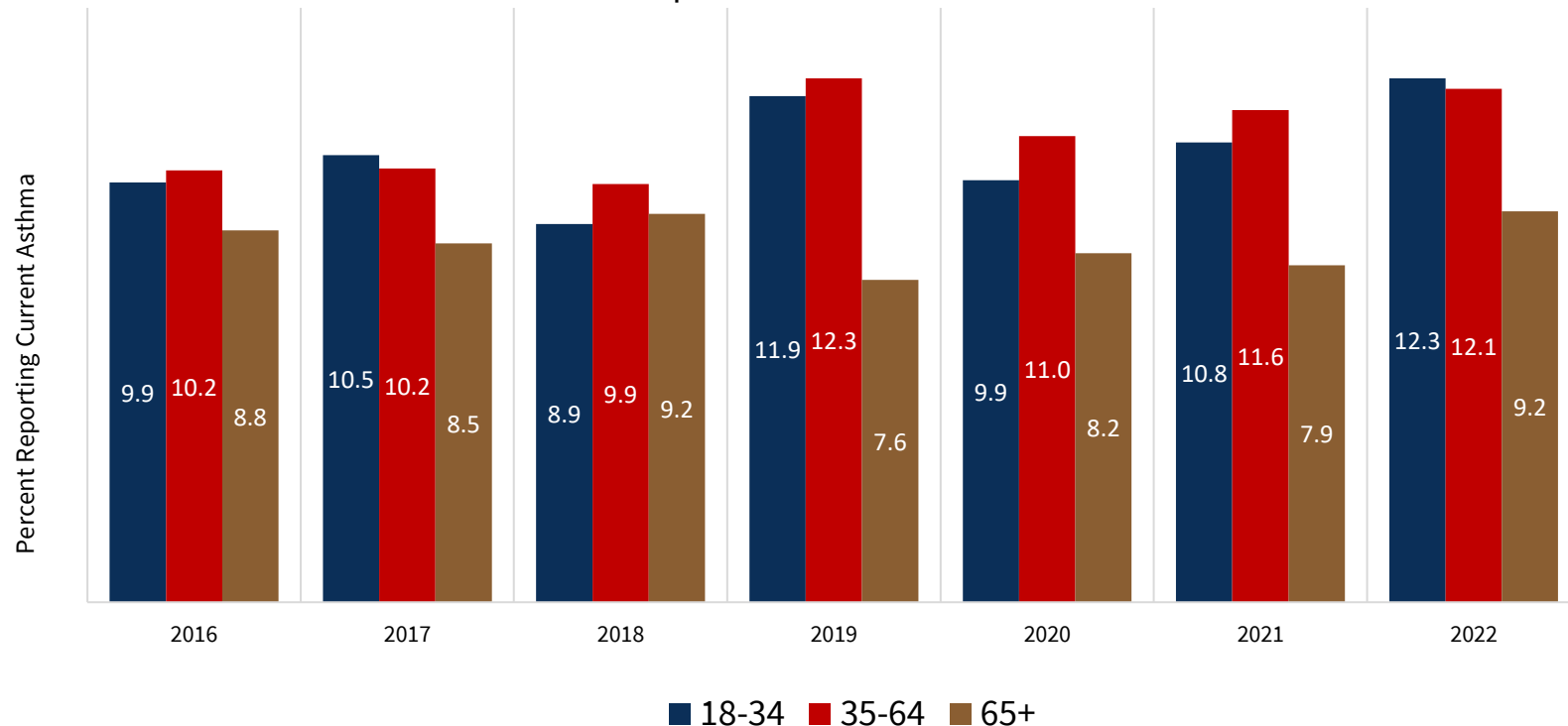
Estimated Prevalence of Current Asthma Among Ohio Adults by Sex and Year 2016-2022



- Throughout the 2016-2022 surveillance period, asthma was more commonly reported among female adults in Ohio compared to their male counterparts.
- In 2022, the asthma prevalence percentage among female adult Ohio residents was 15.1%, whereas among male adult Ohio residents, it was 7.5%.

# Disparities in Adult Asthma Prevalence by Age Group

Estimated Percentage Of Current Asthma Prevalence Among Ohio Adults By Age Groups And Year 2016-2022

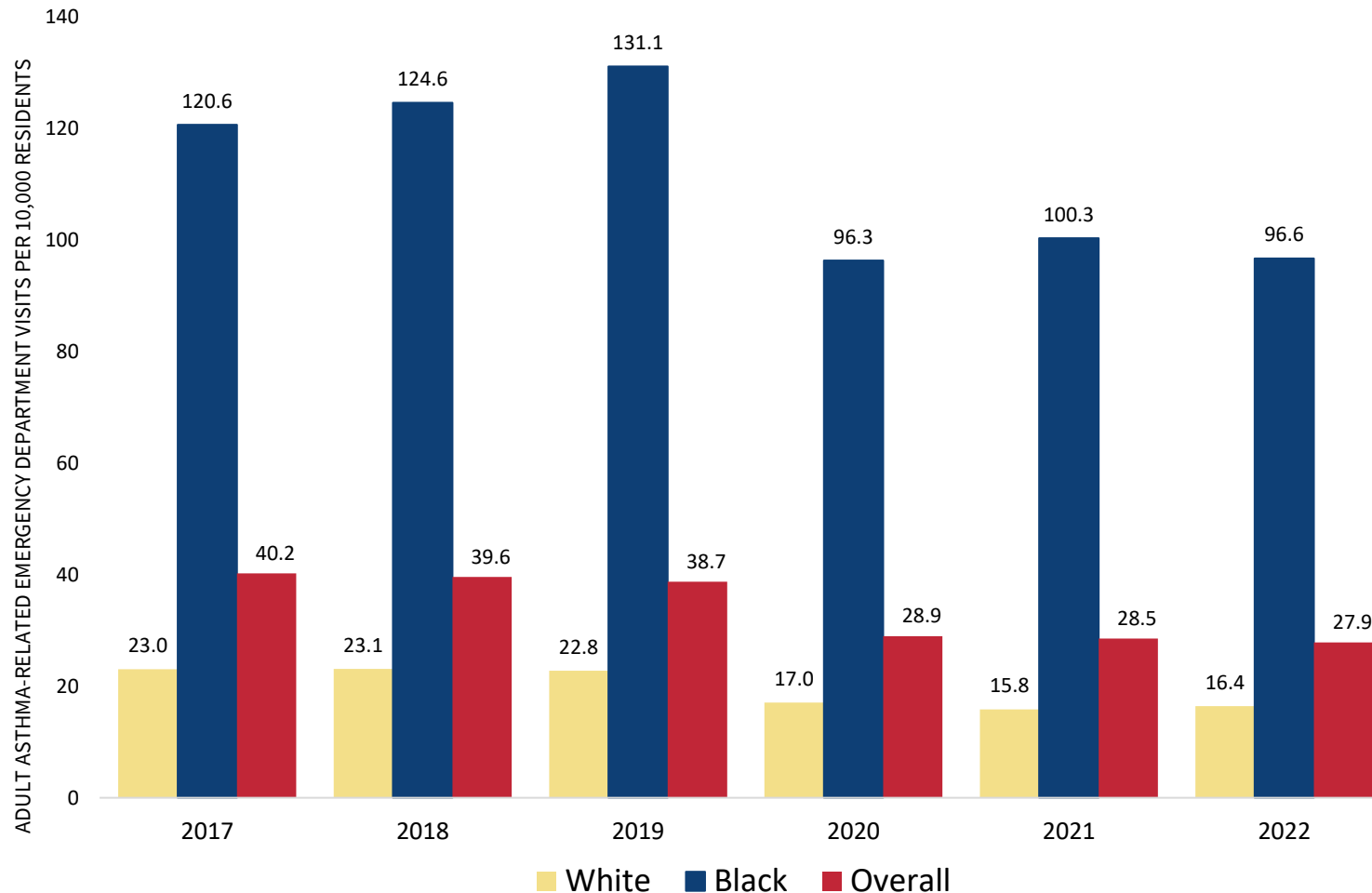


- In 2022, the asthma prevalence was 12.3% among adults aged 18-34, compared to 9.2% among adults aged 65 and older.



# Disparities in Adult Emergency Department Visit Rates by Race

Adult Emergency Department (ED) Visit Rates for a Primary Diagnosis of Asthma  
per 10,000 Ohio Adult Residents by Race, 2017-2022

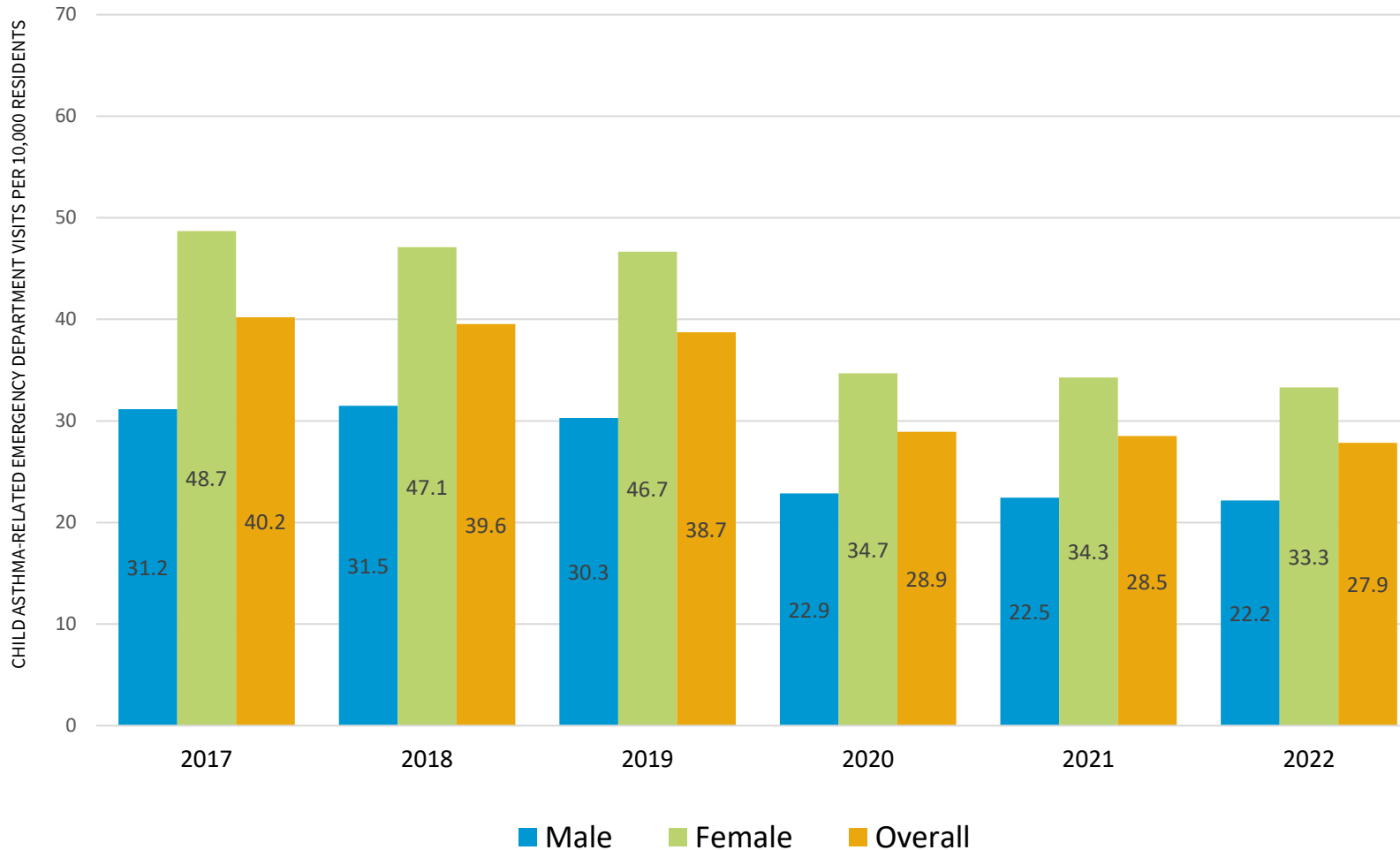


Source: Ohio Hospital Association Clinical-Financial Data Set, Years 2017-2022 and  
CDC WONDER On-line Database 1990-2020, Years 2017-2022

- Black adult Ohioans experienced higher rates of asthma-related emergency department visits compared to their White counterparts throughout the entirety of the observed surveillance period.
- In 2022, Black adults experienced an asthma-related emergency department visitation rate nearly six times higher than their White counterparts.

# Disparities in Adult Emergency Department Visit Rates by Sex

Adult Emergency Department (ED) Visit Rates for a Primary Diagnosis of Asthma per 10,000 Ohio Adult Residents by Sex, 2017-2022

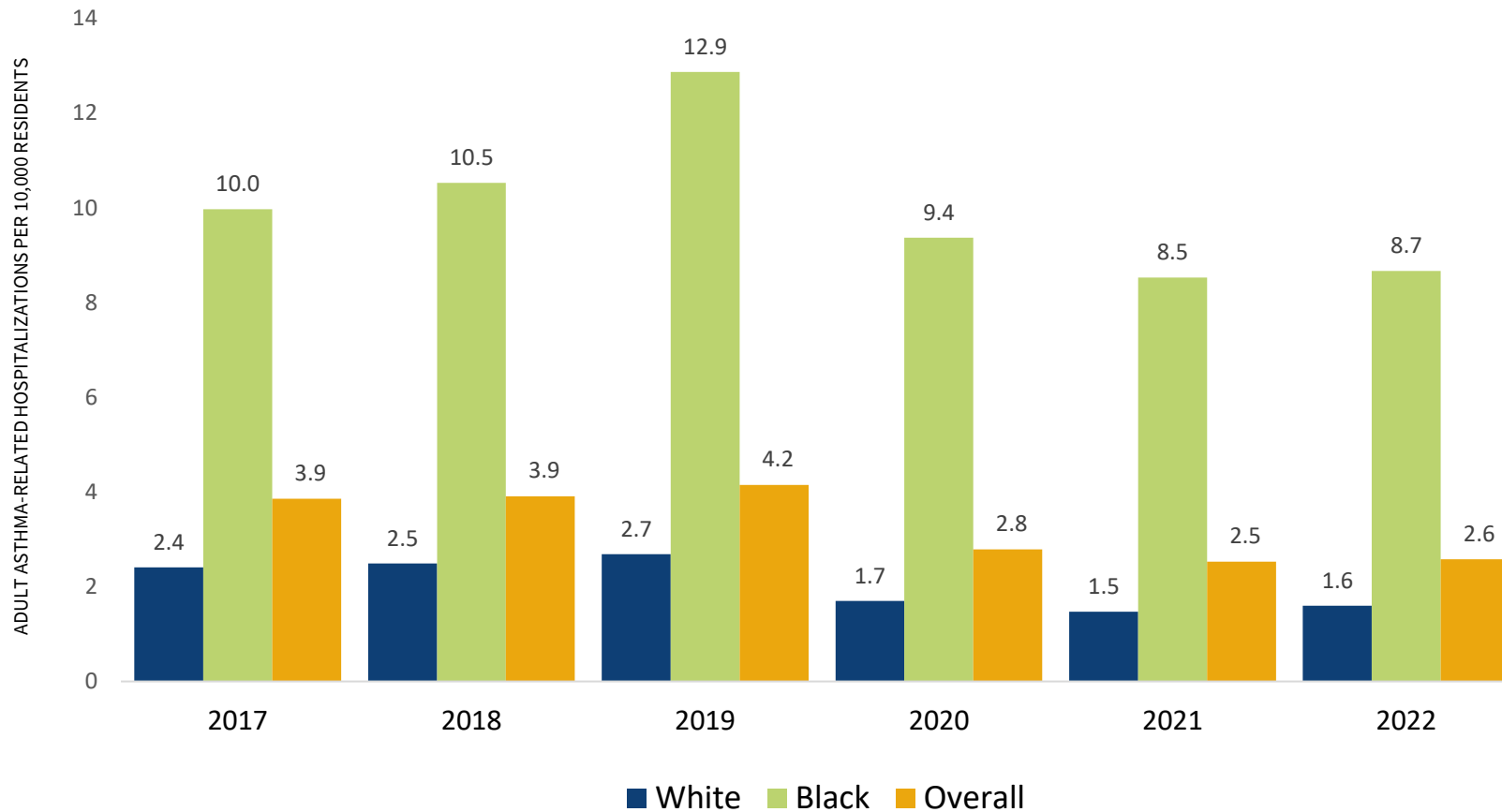


- Throughout the 2017-2022 surveillance period in Ohio, female adults consistently reported higher rates of asthma-related emergency department visits compared to male adults.
- In 2022, the rate of asthma-related emergency department visits among female adults was 33.3 per 10,000 female adult Ohio residents, whereas male adults experienced a rate of 22.2 per 10,000 male adult Ohio residents.

Source: Ohio Hospital Association Clinical-Financial Data Set, Years 2017-2022 and CDC WONDER On-line Database 1990-2020, Years 2017-2022

# Disparities in Adult Inpatient Hospitalization Rates by Race

Inpatient Hospitalization Rates per 10,000 Residents for Ohio Adults with a Primary Diagnosis of Asthma, by Race, 2017-2022

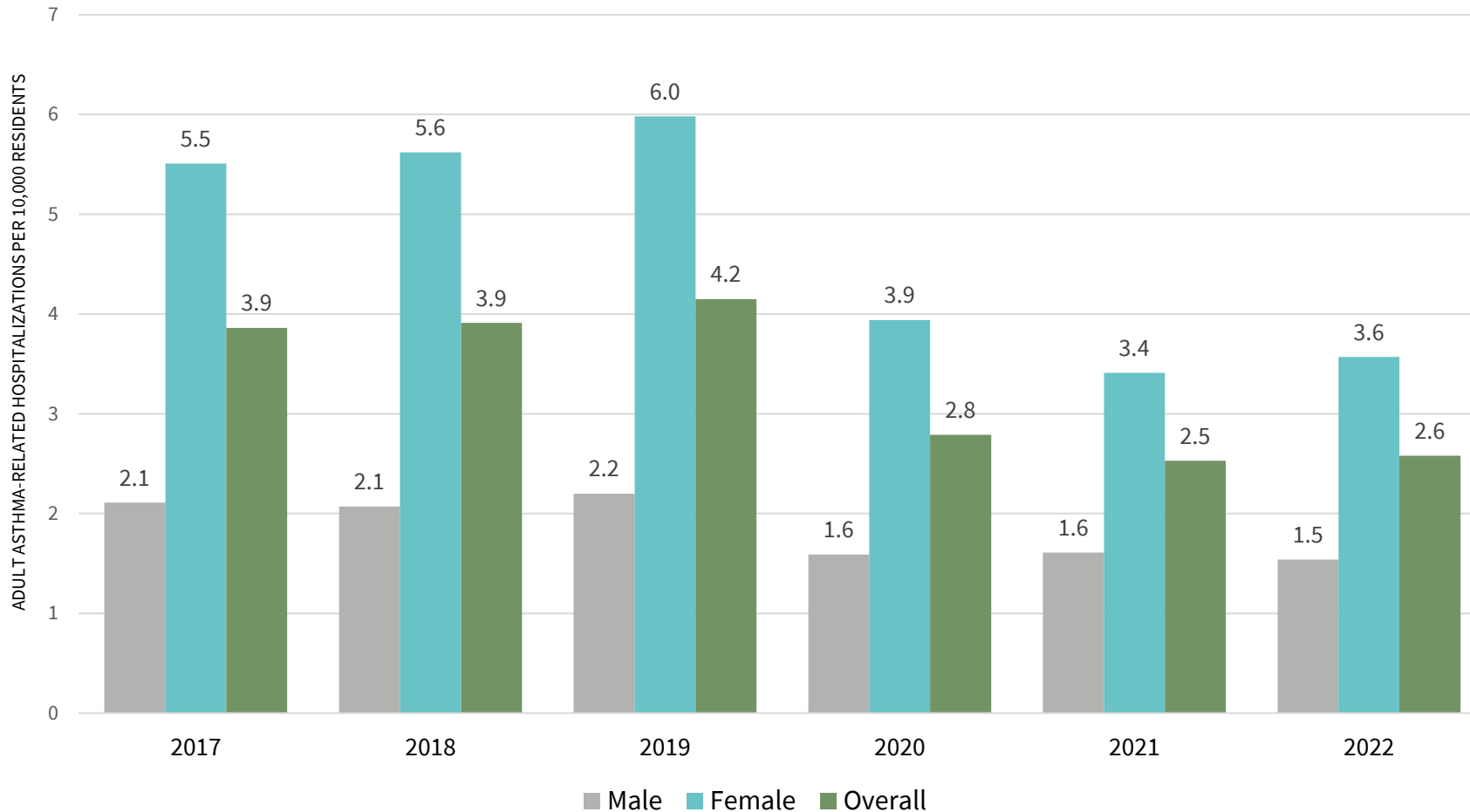


- Throughout the observed surveillance period in Ohio, Black adults consistently had higher rates of asthma-related hospitalizations compared to their White counterparts.
- In 2022, the rate of asthma-related hospitalizations among Black adults was 5.4 times higher than among White adults.

Source: Ohio Hospital Association Clinical-Financial Data Set, Years 2017-2022 and CDC WONDER On-line Database 1990-2020, Years 2017-2022

# Disparities in Adult Inpatient Hospitalization Rates by Sex

Inpatient Hospitalization Rates per 10,000 Residents for Ohio Adults with a Primary Diagnosis of Asthma, by Sex, 2017-2022

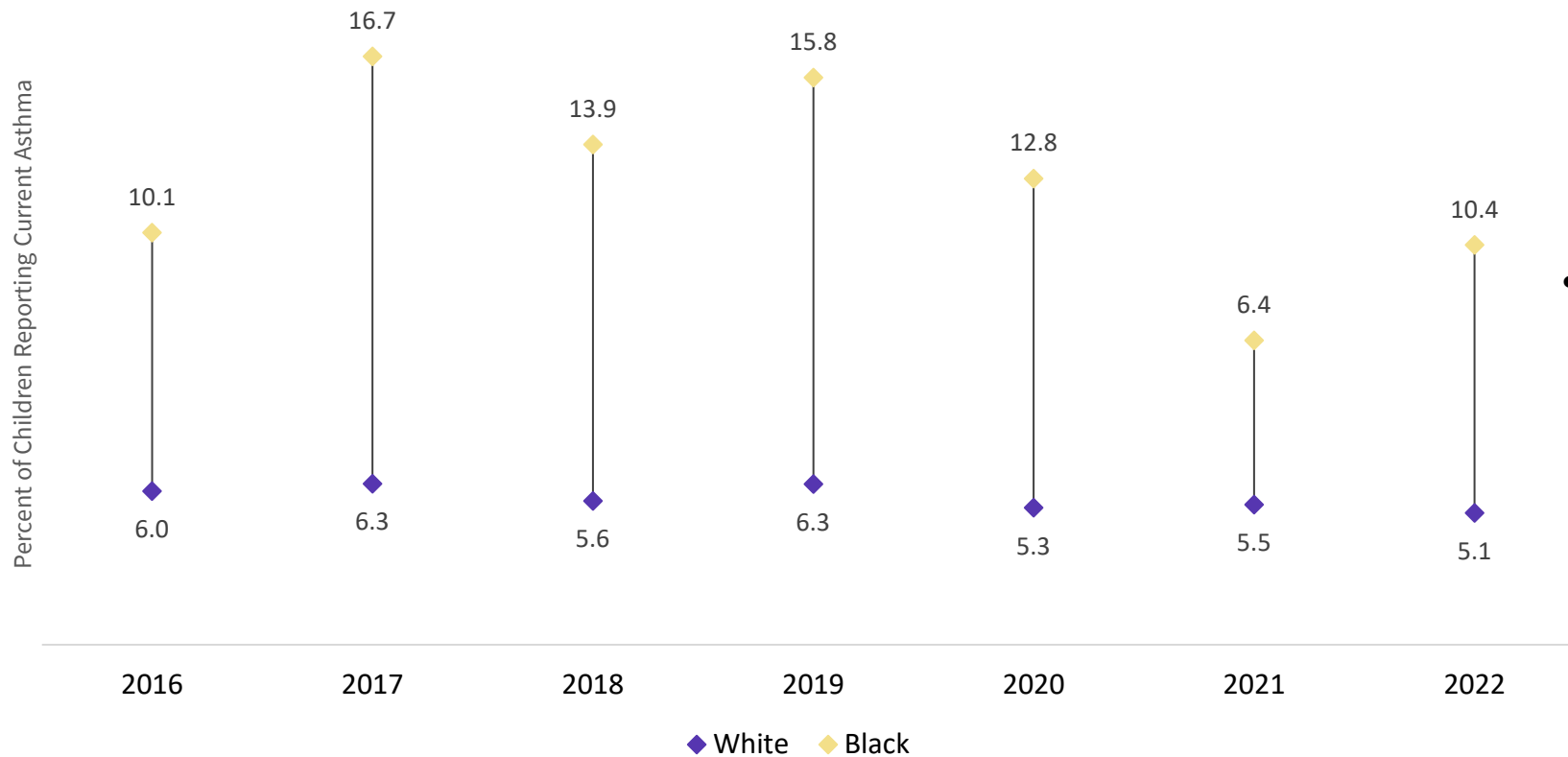


- Throughout the observed surveillance period, female adults in Ohio experienced consistently higher rates of asthma-related hospitalizations compared to male adults in Ohio.
- In 2022, the rate of asthma-related hospitalizations among female adults was 2.4 times higher than the rate experienced by male adults.

Source: Ohio Hospital Association Clinical-Financial Data Set, Years 2017-2022 and CDC WONDER On-line Database 1990-2020, Years 2017-2022

# Disparities in Child Asthma Prevalence by Race

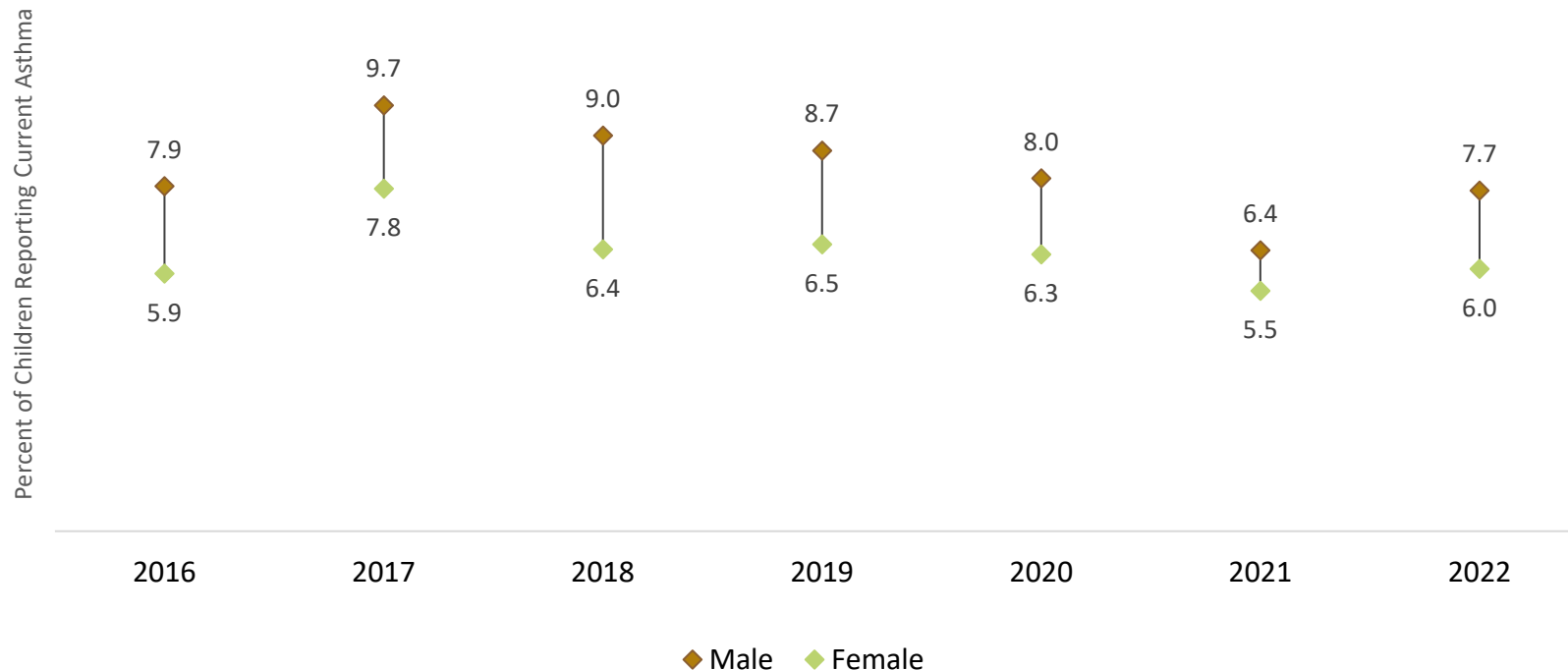
Estimated Child Current Asthma Prevalence by Race and Year, Ohio 2016-2022



- Asthma was more common among Black children in Ohio compared to White children in Ohio throughout the 2016-2022 surveillance period.
- In 2022, approximately 10.4% of Black children in Ohio reported current asthma compared to 5.1% of White children in Ohio.

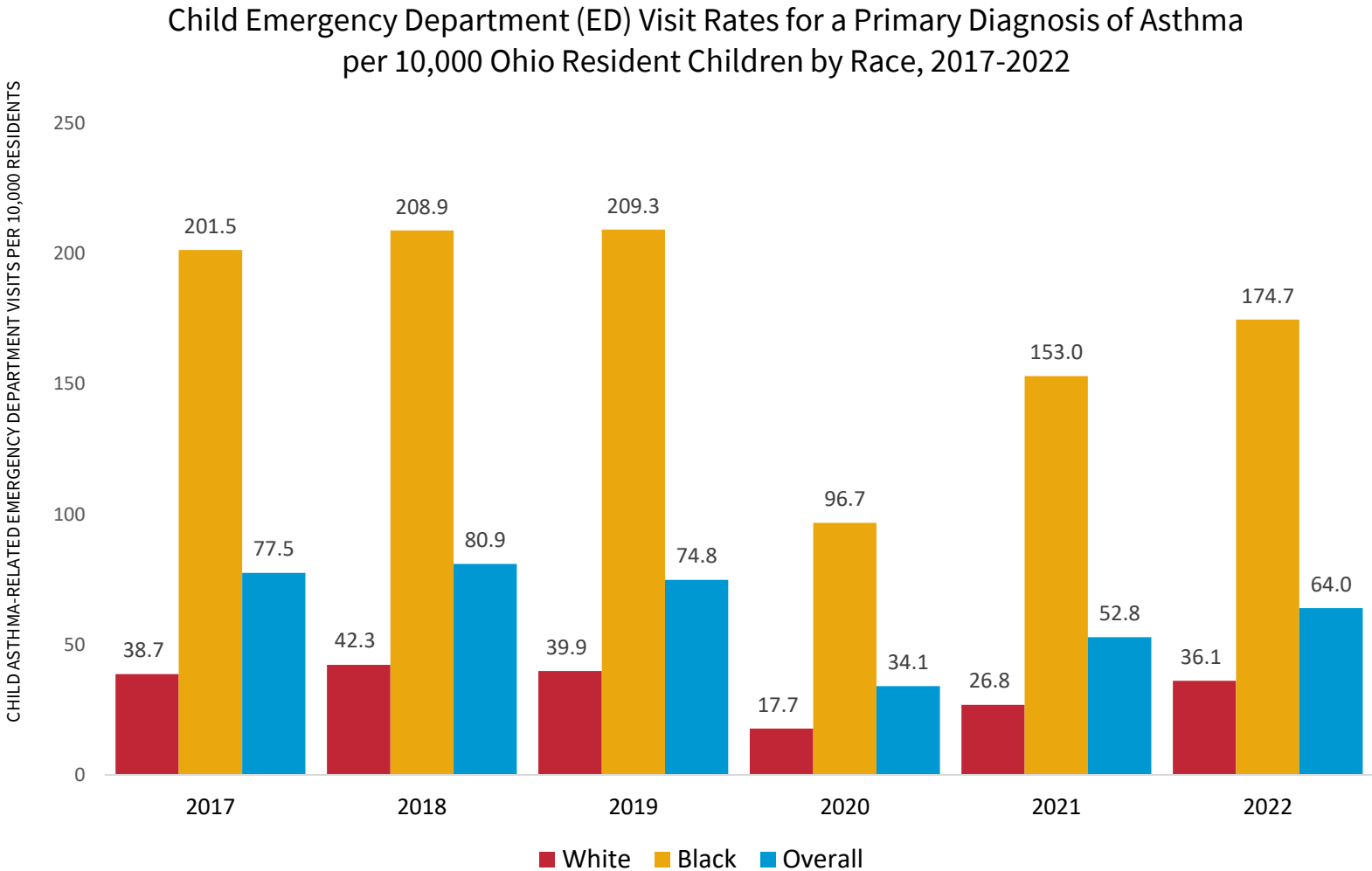
# Disparities in Child Asthma Prevalence by Sex

Estimated Child Current Asthma Prevalence by Sex and Year, Ohio 2016-2022



- In Ohio, male children consistently exhibited a higher prevalence of asthma compared to their female counterparts.
- In 2022, asthma prevalence among male children was 7.7%, whereas among female children it was 6.0%.

# Disparities in Childhood Emergency Department Visit Rates by Race

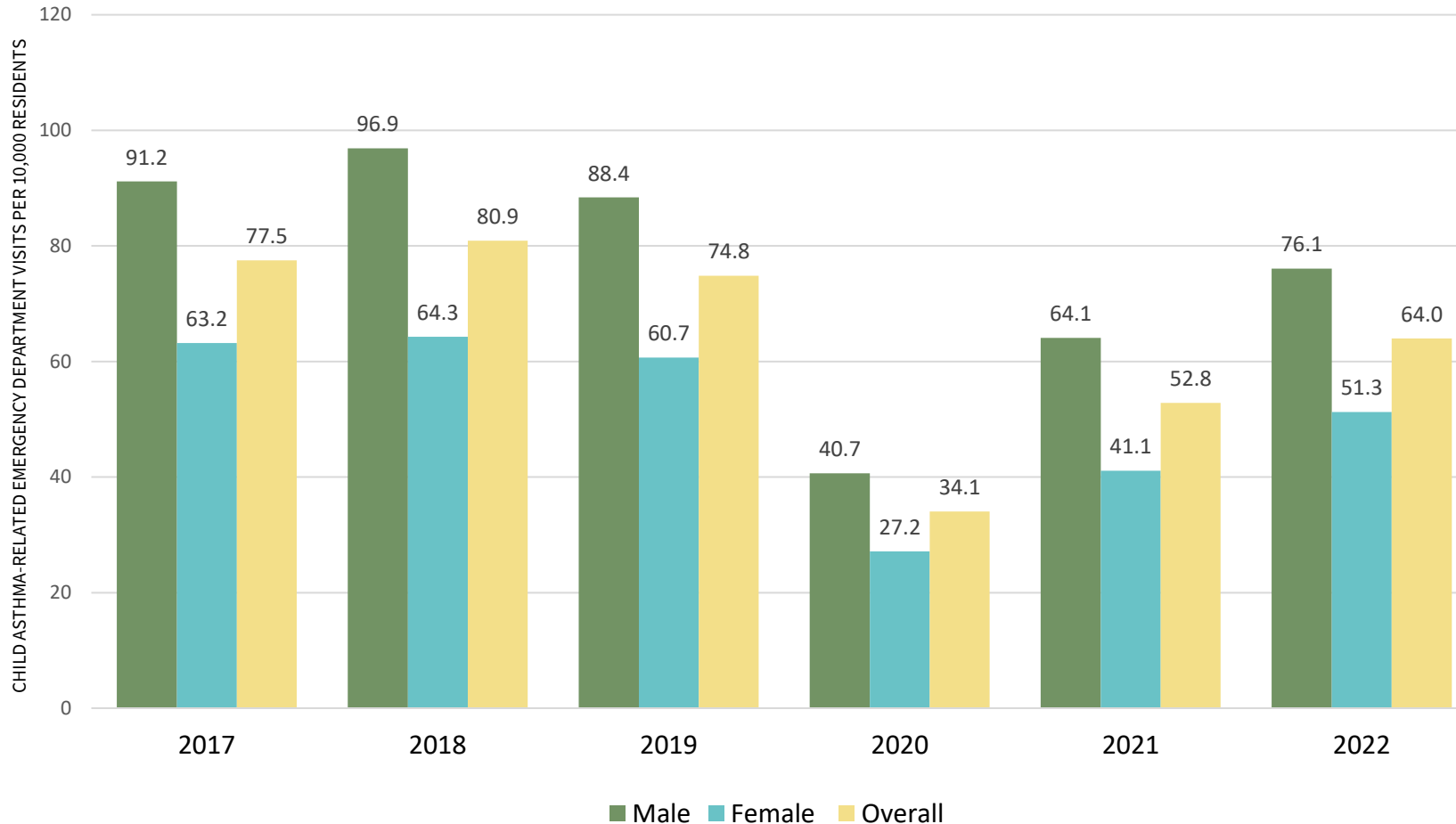


- Throughout the 2017-2022 surveillance period, Black children in Ohio experienced consistently higher rates of emergency department visits compared to White children in Ohio.
- In 2022, Black children in Ohio experienced an asthma-related emergency department visitation rate of 174.7 per 10,000 compared to White children who experienced a rate of 36.1 per 10,000.

Source: Ohio Hospital Association Clinical-Financial Data Set, Years 2017-2022 and CDC WONDER On-line Database 1990-2020, Years 2017-2022

# Disparities in Childhood Emergency Department Visit Rates by Sex

Child Emergency Department (ED) Visit Rates for a Primary Diagnosis of Asthma per 10,000 Ohio Resident Children by Sex, 2017-2022

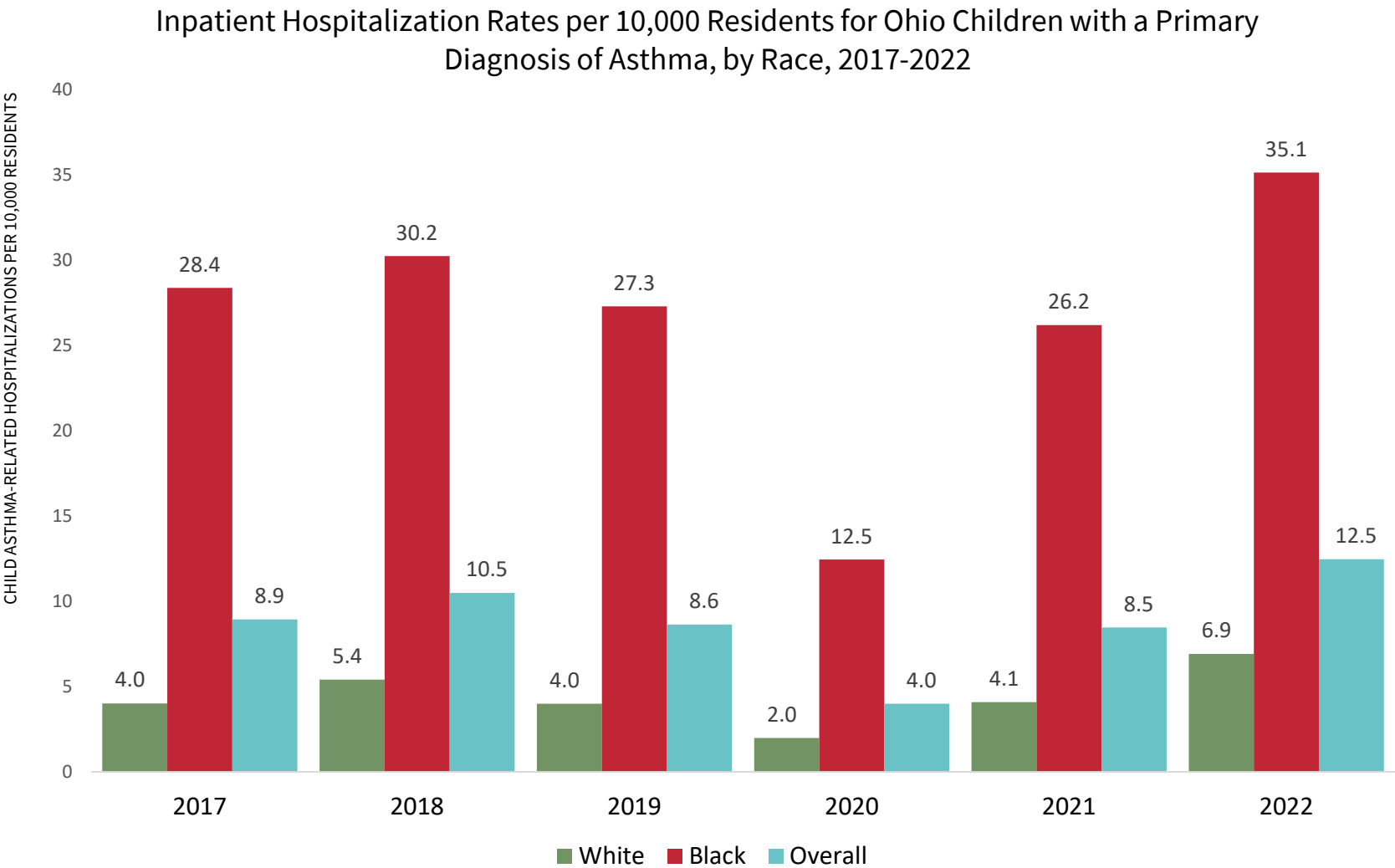


- Throughout the 2017-2022 surveillance period, male children in Ohio experienced higher rates of asthma-related emergency department visits during the observed surveillance period compared to female children in Ohio.
- In 2022, male children in Ohio experienced an asthma-related emergency department visitation rate of 76.1 per 10,000 compared to female children in Ohio who experienced a rate of 51.3 per 10,000.

Source: Ohio Hospital Association Clinical-Financial Data Set, Years 2017-2022 and CDC WONDER On-line Database 1990-2020, Years 2017-2022



# Disparities in Childhood Inpatient Hospitalization Rates by Race

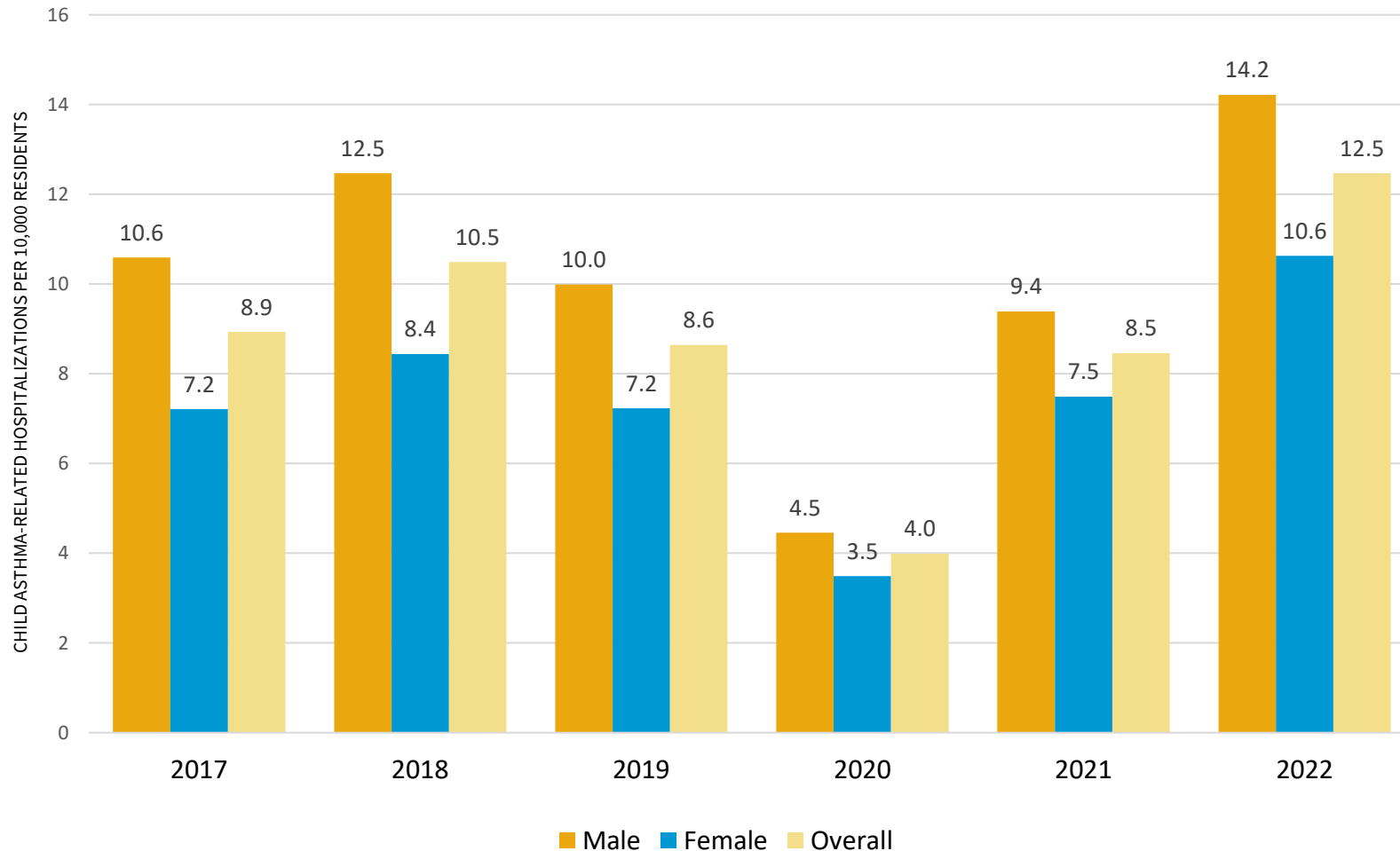


- Throughout the 2017-2022 surveillance period, Black children in Ohio experienced significantly higher rates of asthma-related hospitalizations compared to White children.
- In 2022, Black children in Ohio experienced an asthma-related hospitalization rate five times higher than the rate experienced by White children in Ohio, (35.1 per 10,000 compared to 6.9 per 10,000).

Source: Ohio Hospital Association Clinical-Financial Data Set, Years 2017-2022 and CDC WONDER On-line Database 1990-2020, Years 2017-2022

# Disparities in Childhood Inpatient Hospitalization Rates by Sex

Inpatient Hospitalization Rates per 10,000 Residents for Ohio Children with a Primary Diagnosis of Asthma, by Sex, 2017-2022

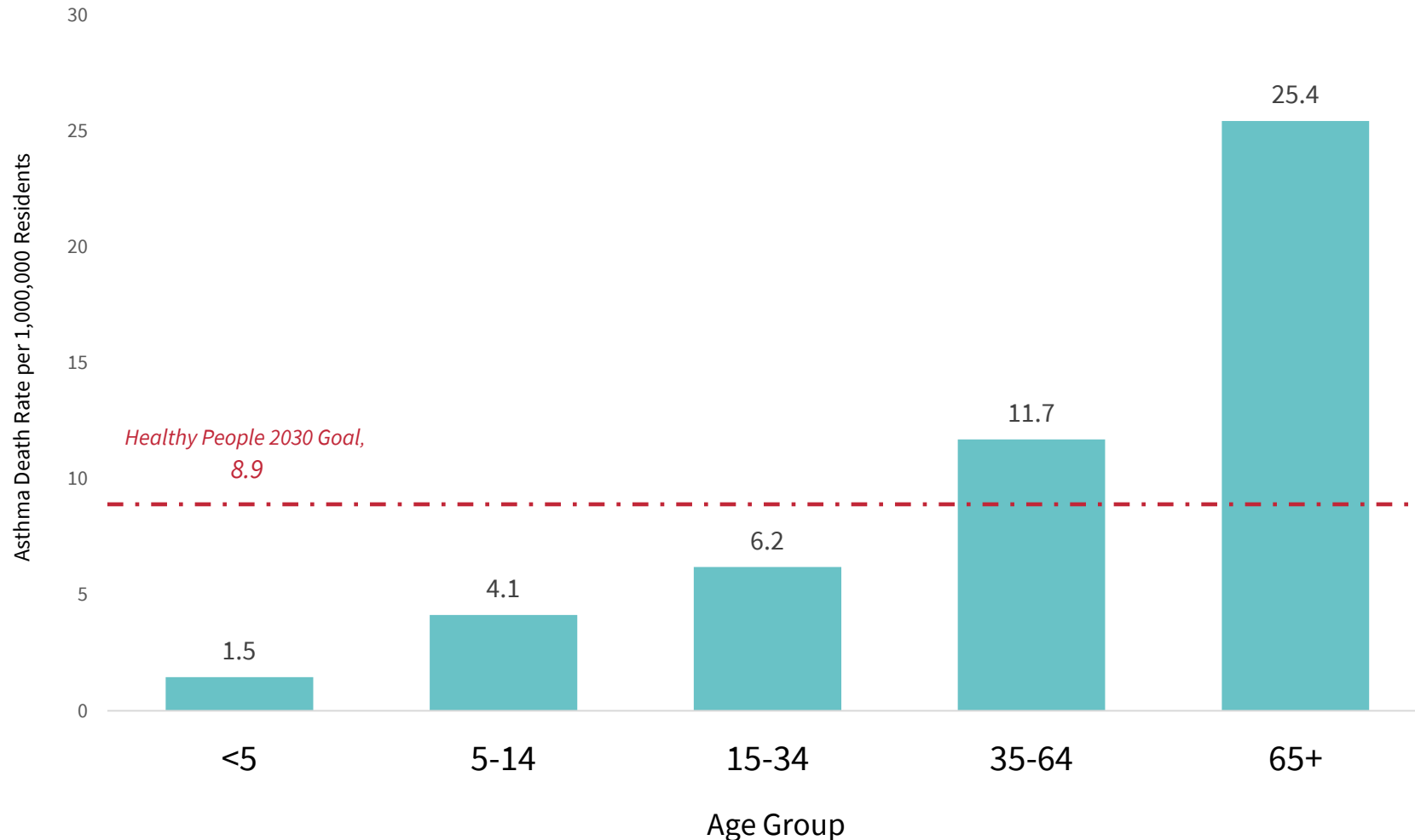


- Male children in Ohio consistently experienced higher rates of asthma-related hospitalizations compared to female children in Ohio.
- In 2022, male children in Ohio experienced an asthma-related hospitalization rate of 14.2 per 10,000 compared to female children that experienced a rate of 10.6 per 10,000.

Source: Ohio Hospital Association Clinical-Financial Data Set, Years 2017-2022 and CDC WONDER On-line Database 1990-2020, Years 2017-2022

# Disparities in Mortality by Age Group

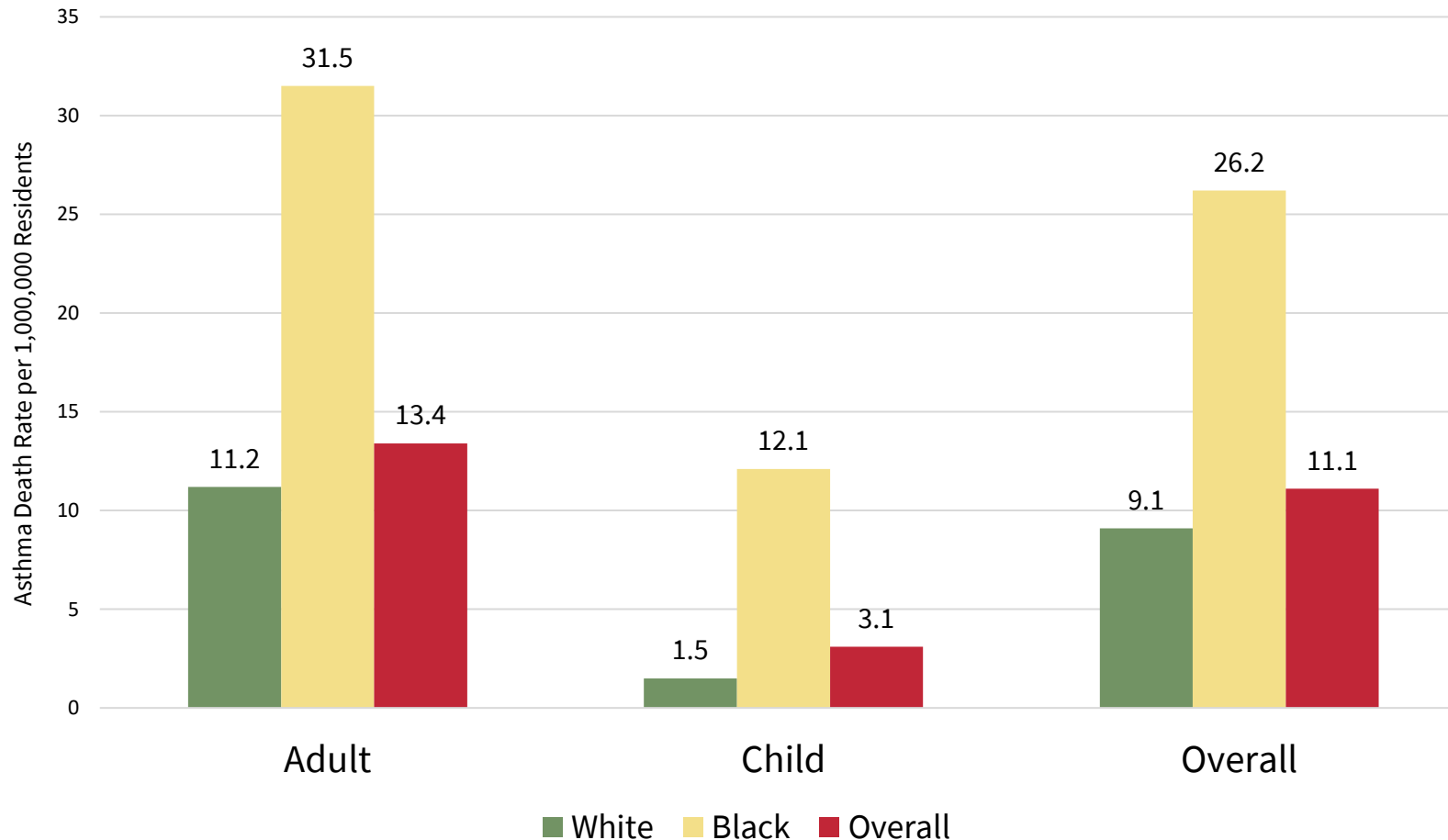
Asthma Death Rates by Age Group, Ohio, 2017-2022 Annual Averages



- On average, between the years 2017-2022, adults aged 65 years and older experienced the highest rate of asthma related deaths among any other age group.
- On average, adults aged 65 years and older experienced an asthma death rate more than twice that of the second-highest age group.

# Disparities in Mortality by Race

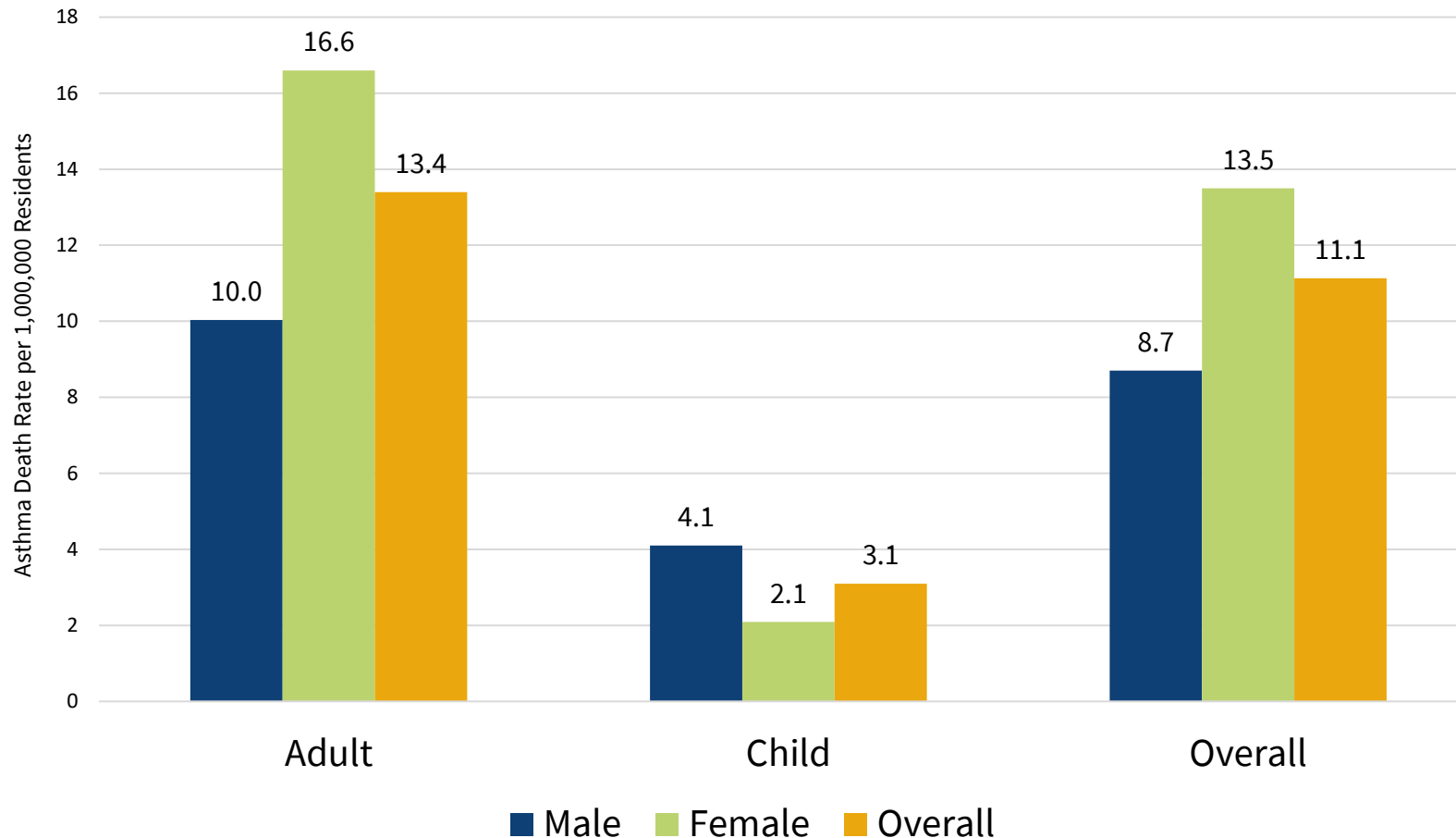
Asthma Death Rates Among Ohio Adults and Children by Race, 2017-2022 Annual Averages



- Between 2017 and 2022, Black adults and children in Ohio experienced significantly higher average rates of asthma-related deaths than their White counterparts.
- On average, Black adults in Ohio experienced asthma related deaths at nearly three times the rate of that experienced by White adults.
- Black children in Ohio experienced asthma related deaths at a rate, on average, eight times higher than that experienced by White children.

# Disparities in Mortality by Sex

Asthma Death Rates Among Ohio Adults and Children by Sex, 2017-2022 Annual Averages



- On average, female adults in Ohio experienced higher rates of asthma-related deaths throughout the 2017-2022 surveillance period than their male counterparts.
- On average, male children experienced higher rates of asthma-related deaths compared to female children.
- Overall, on average, female Ohioans experienced asthma deaths at a higher rate between 2017-2022 compared to male Ohioans.

# Summary

- Significant asthma disparities have been observed among different populations in Ohio.
- Asthma is most common among Black adults and children, female adults, and male children.
- These groups also experienced higher rates of asthma-related emergency department visits and hospitalizations compared to their counterparts throughout the observed surveillance period.

# Data Sources

1. Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey (BRFSS) Data, Years 2016-2022
2. Ohio Department of Health, Bureau of Vital and Health Statistics, Years 2017-2022
3. Ohio Hospital Association Clinical-Financial Data Set, Years 2017-2022
4. CDC WONDER On-line Database 1990-2022

# Contact Information

Email: [Asthma@odh.ohio.gov](mailto:Asthma@odh.ohio.gov)

Website: <https://odh.ohio.gov/know-our-programs/asthma-program>

- Be a part of the conversation and join the Asthma Collaborative Improvement Committee Sign-Up.
- Asthma Collaborative Improvement Committee's monthly meeting goal is to bring together healthcare professionals, community groups, and other stakeholders to enhance asthma care in our community!
- [Sign up for the Asthma Collaborative Improvement Committee.](#)
- Sign up for free email updates from the [Ohio Department of Health Asthma Program.](#)



# QUESTIONS?

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