

NC Department of Health and Human Services

# Unintentional Fall Injuries in North Carolina

2017-2021

NC Division of Public Health

Data updated November 30, 2023

# Unintentional Falls Technical Notes

Surveillance methods have been updated to identify any mention of an injury in our morbidity data sources. Individual records with multiple injuries listed will be included in the total for each of those injuries, but only counted once for overall total injury count. Previously, only the first listed injury was counted, which has resulted in an increase in the number of specific injuries identified.

For questions or for more information see technical notes document available at

<https://www.injuryfreenc.ncdhhs.gov/DataSurveillance/>

## **Case definitions used:**

- **Deaths** – ICD10 code W00-W19 listed as cause of death

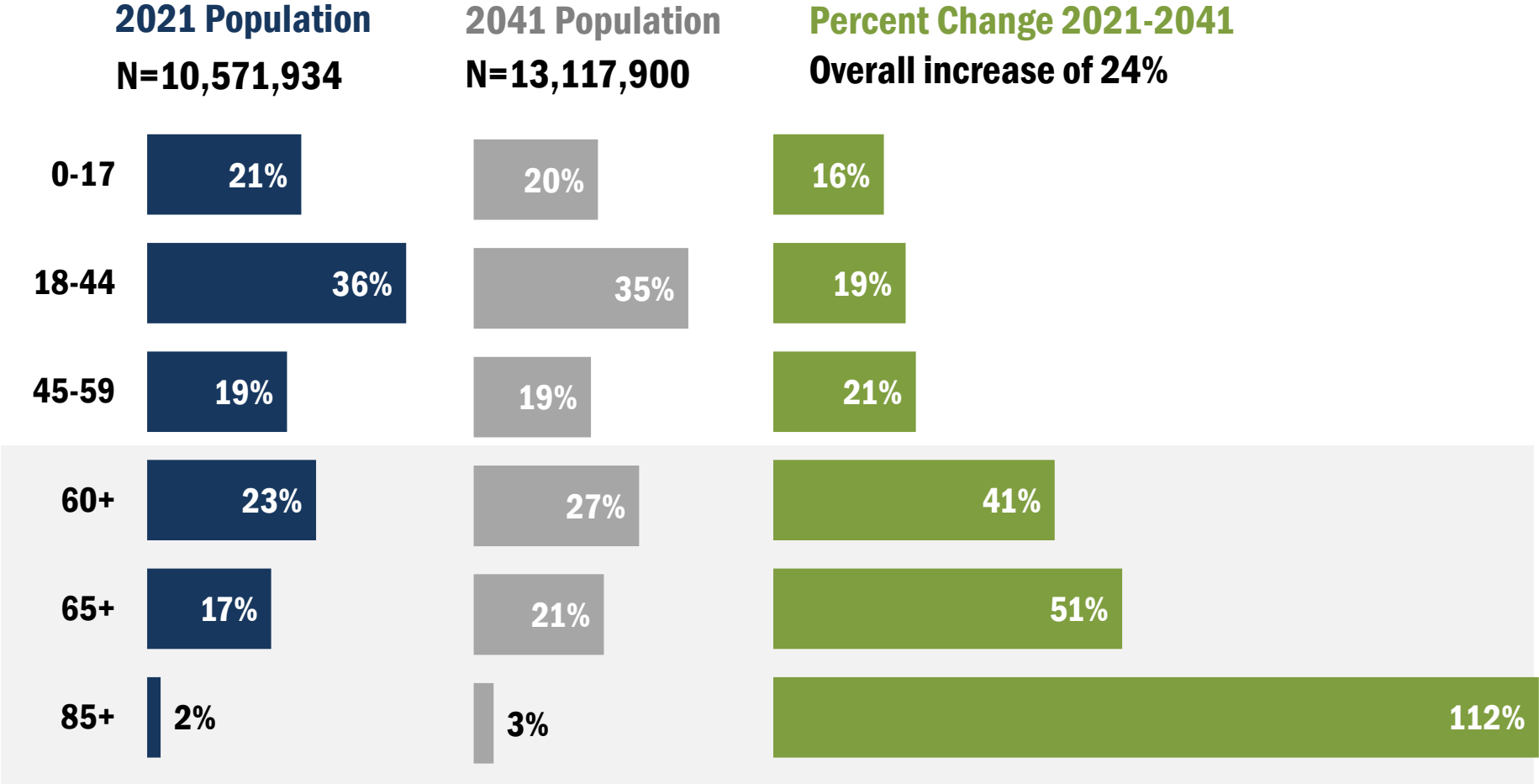
# Technical Notes, Continued

- **Hospitalizations** – Among records with an ICD-10-CM injury code\*, any mention of the following ICD-10-CM codes (includes records resulting in death)
- **Emergency Department Visits** – Any mention of the following ICD-10-CM codes: (includes records resulting in hospitalization or death)

<b>V00.11-V00.89 with 6th character=1</b>	Falls related to pedestrian conveyance
<b>W00-W15, W17, W19</b>	Falls
<b>W16 with 6th character=2 (Except 16.4 and 16.9 with 5th character=2)</b>	Fall, jump, or diving into water
<b>W18.1, W18.2, W18.3</b>	Other falls
7th character of A or missing (reflects initial encounter, active treatment)	

\*See technical notes document for a full list of ICD-10-CM injury diagnosis codes

# The populations most at risk of falls are projected to have the fastest growth over the next 20 years.



Source: North Carolina OSBM, Standard Population Estimates, Vintage 2020 & Population Projections, Vintage 2021

# Most older adults in NC are non-Hispanic white

**White\***



**77%**

**Black\***



**17%**

**American Indian/  
Alaskan Native\***



**1%**

**Asian\***



**2%**

**Multi\***



**1%**

**Hispanic**

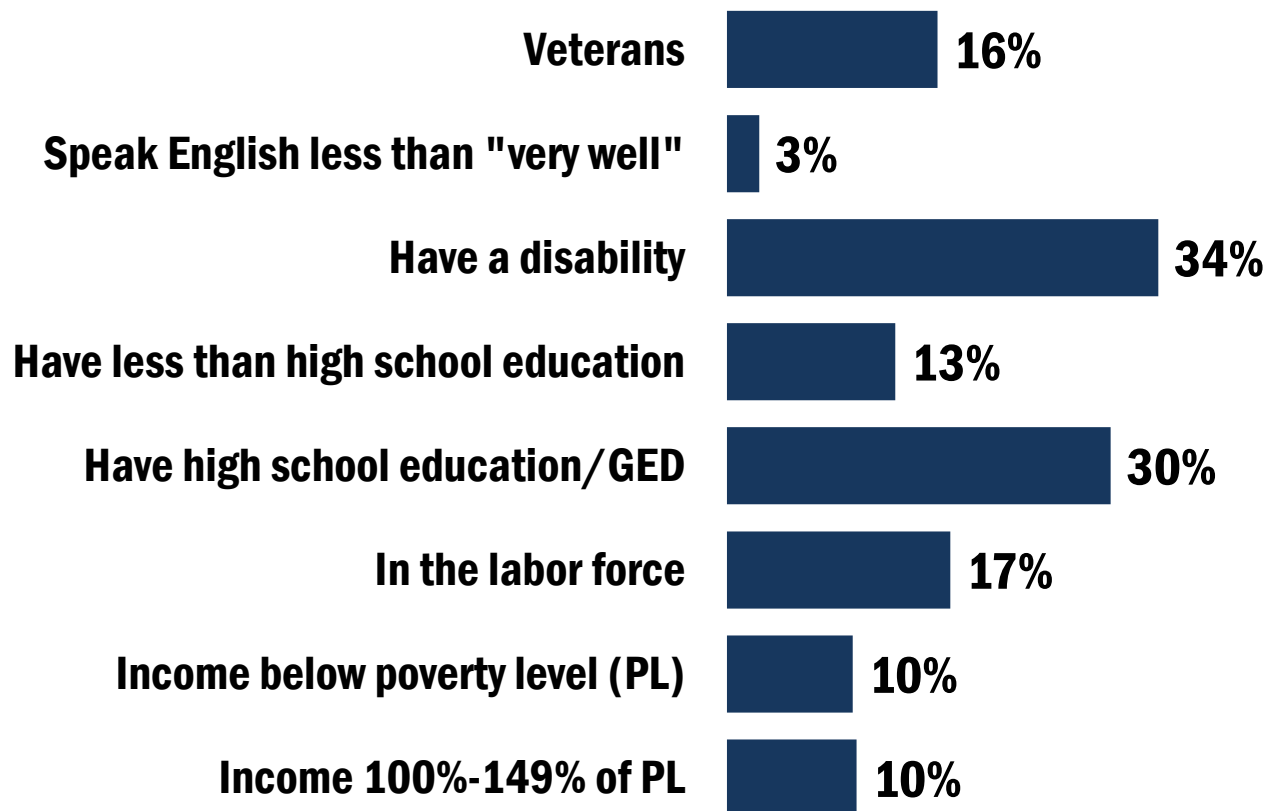


**3%**

\*Non-Hispanic

Source: U.S. Census Bureau Population Estimates, 2021; ages 65 and older

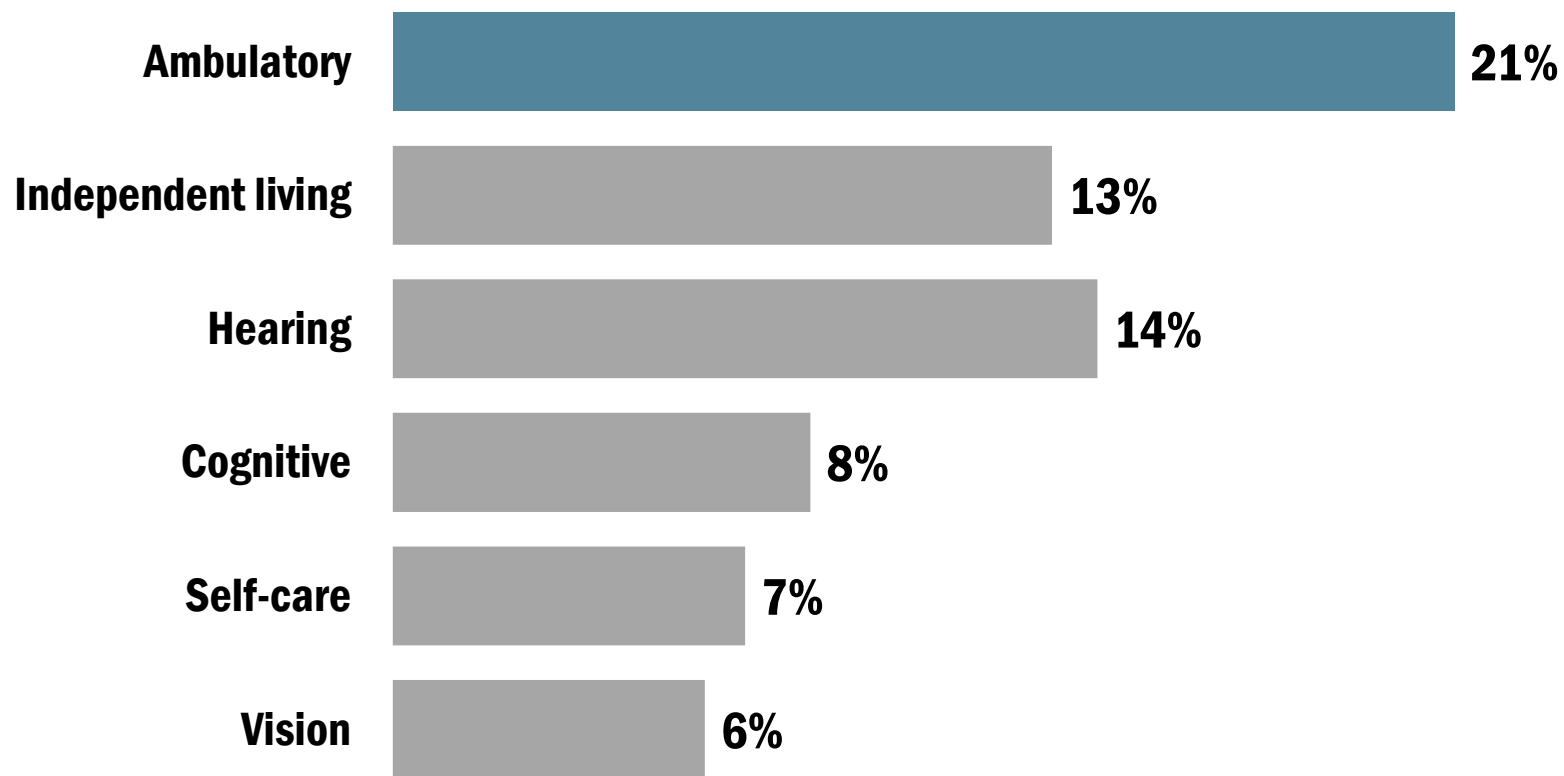
# Demographic characteristics among older adults in North Carolina



**43%**  
of housing units  
with people 65  
and older are  
single person  
households

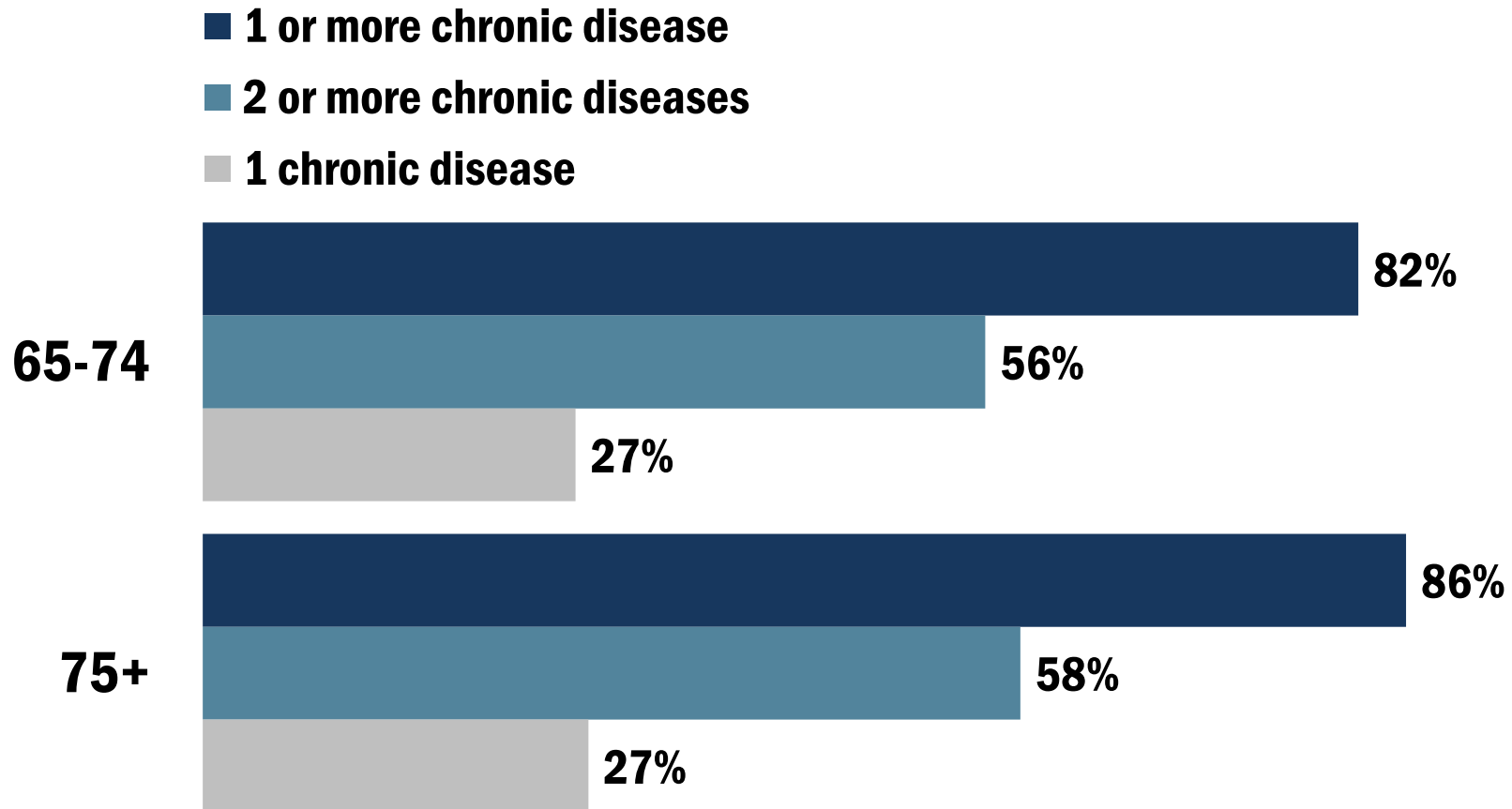
Source: American Community Survey, 2022 5-year estimates. Table S0103: Population 65 and older

# Almost one in five older adults in NC reports trouble walking



Source: American Community Survey, 2022 5-year estimates. Table S1810: Population 65 and older

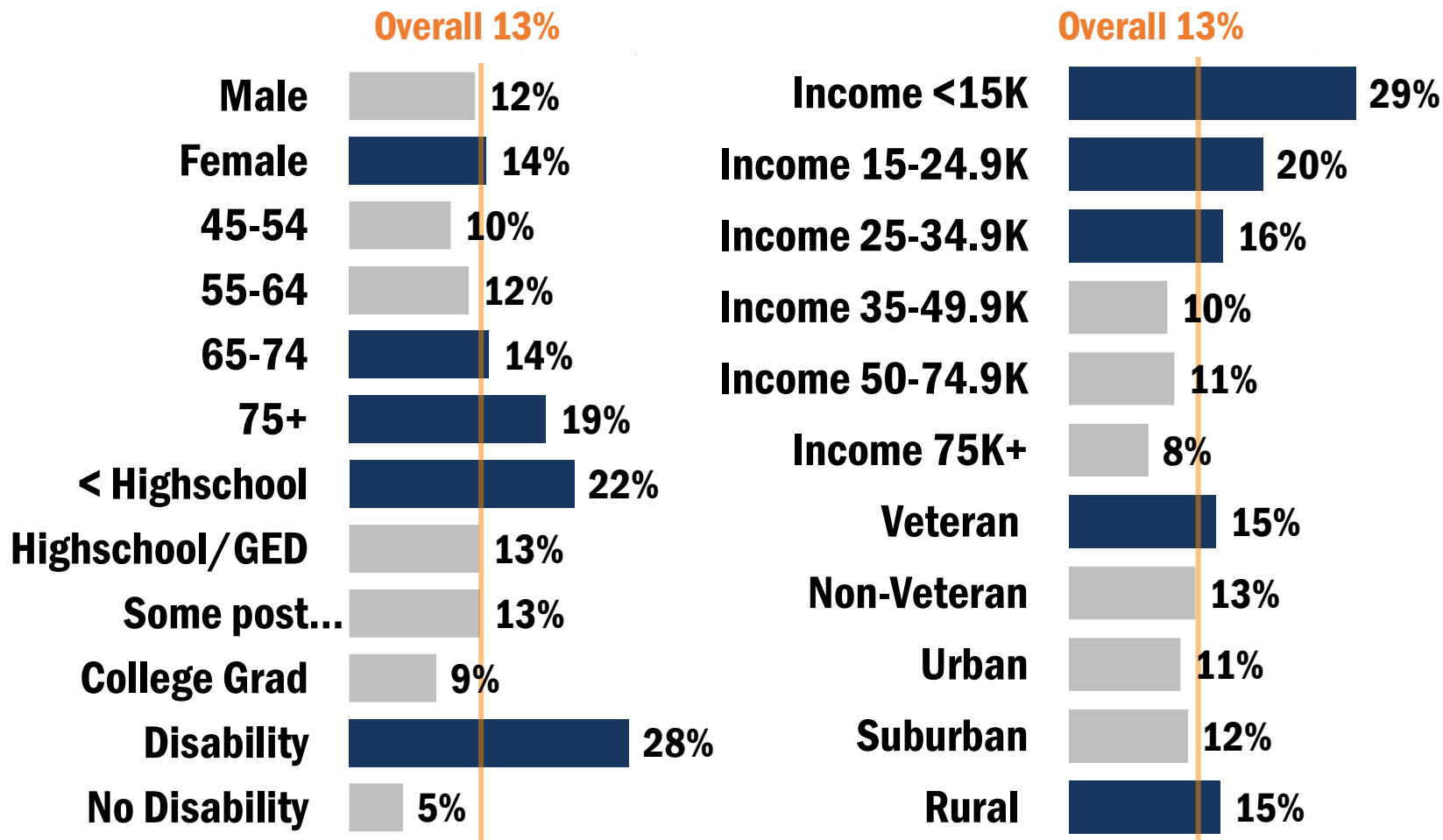
# More than 80% of older adults in NC have one or more chronic diseases



Source: NC State Center of Health Statistics, 2022 Behavioral Risk Factor Surveillance System (BRFSS) Survey Results



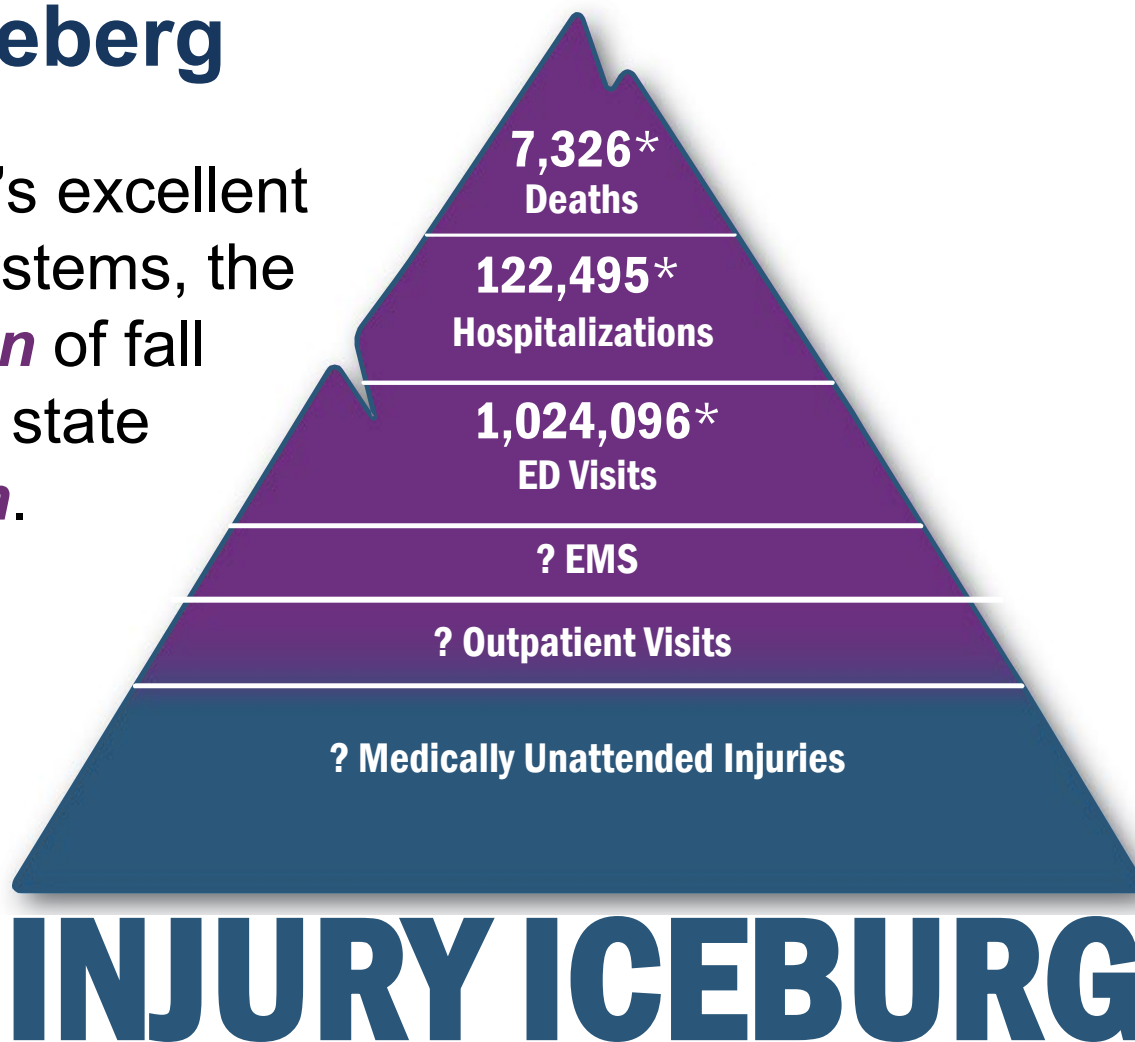
# Proportion of demographic groups reporting two or more falls in the last 12 months, 2020 BRFSS



Source: NC State Center of Health Statistics, 2020 Behavioral Risk Factor Surveillance System (BRFSS) Survey Results

# Unintentional fall-related deaths are the tip of the iceberg

Despite NC's excellent reporting systems, the *total burden* of fall injury in the state is *unknown*.



# INJURY ICEBURG

Limited to NC Residents, 2017-2021

Source: NC State Center for Health Statistics, Vital Statistics-Deaths (2017-2021) and Hospitalization Discharge Data (2017-2021); NC DETECT (2017-2021)

Analysis by Injury Epidemiology and Surveillance Unit

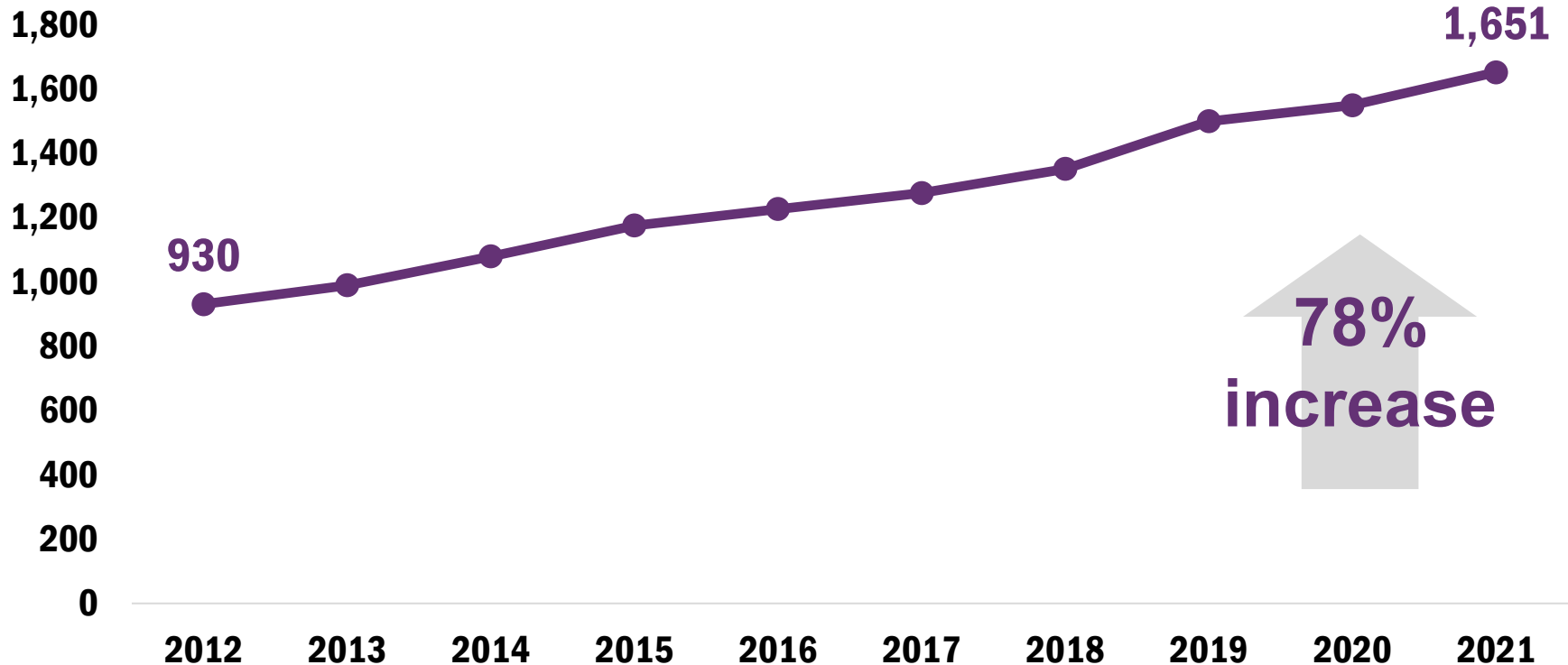


# Unintentional Fall Deaths

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# Unintentional fall-related deaths have continued to increase over the last 10 years

Number of Deaths

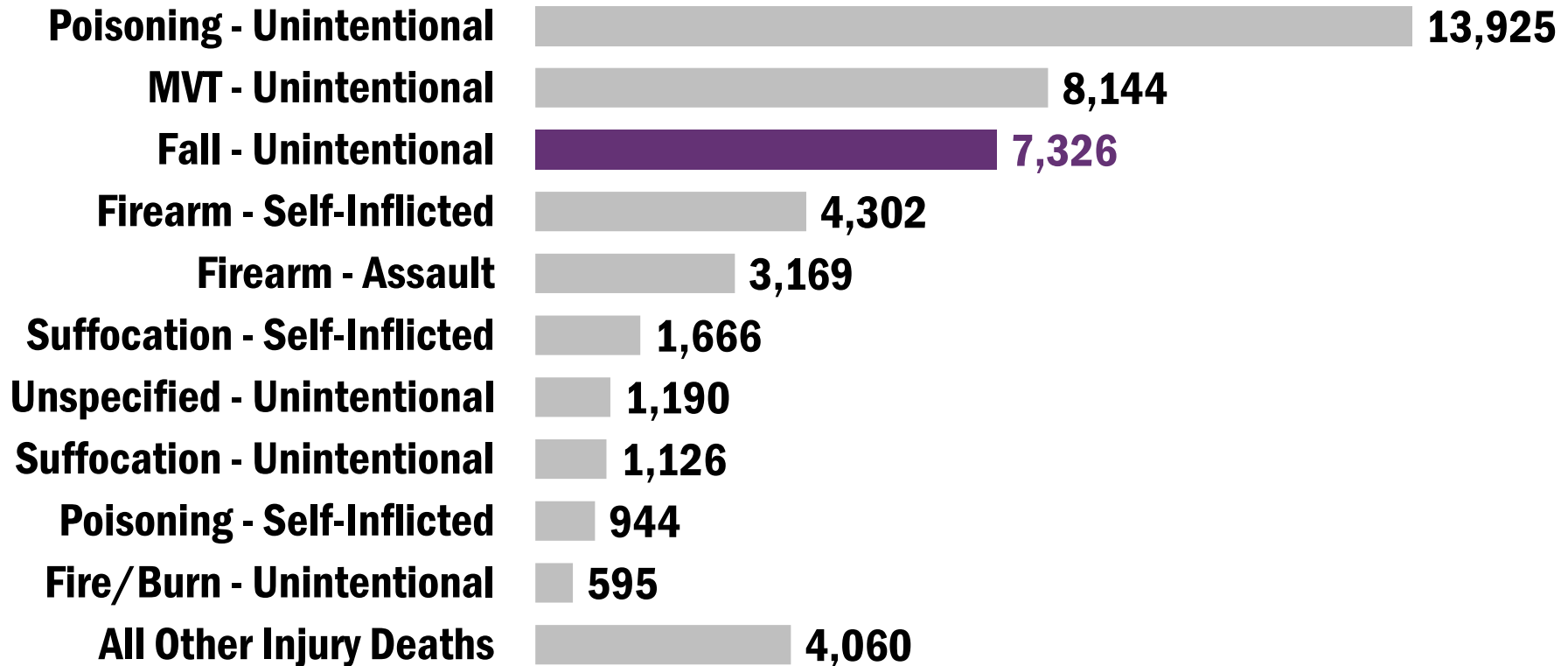


Limited to NC Residents, 2017-2021

Source: NC State Center for Health Statistics, Vital Statistics-Deaths (2017-2021)

Analysis by Injury Epidemiology and Surveillance Unit

# Unintentional falls were the third leading cause of injury death\* from 2017-2021



\* by mechanism and intent  
MVT = Motor vehicle traffic

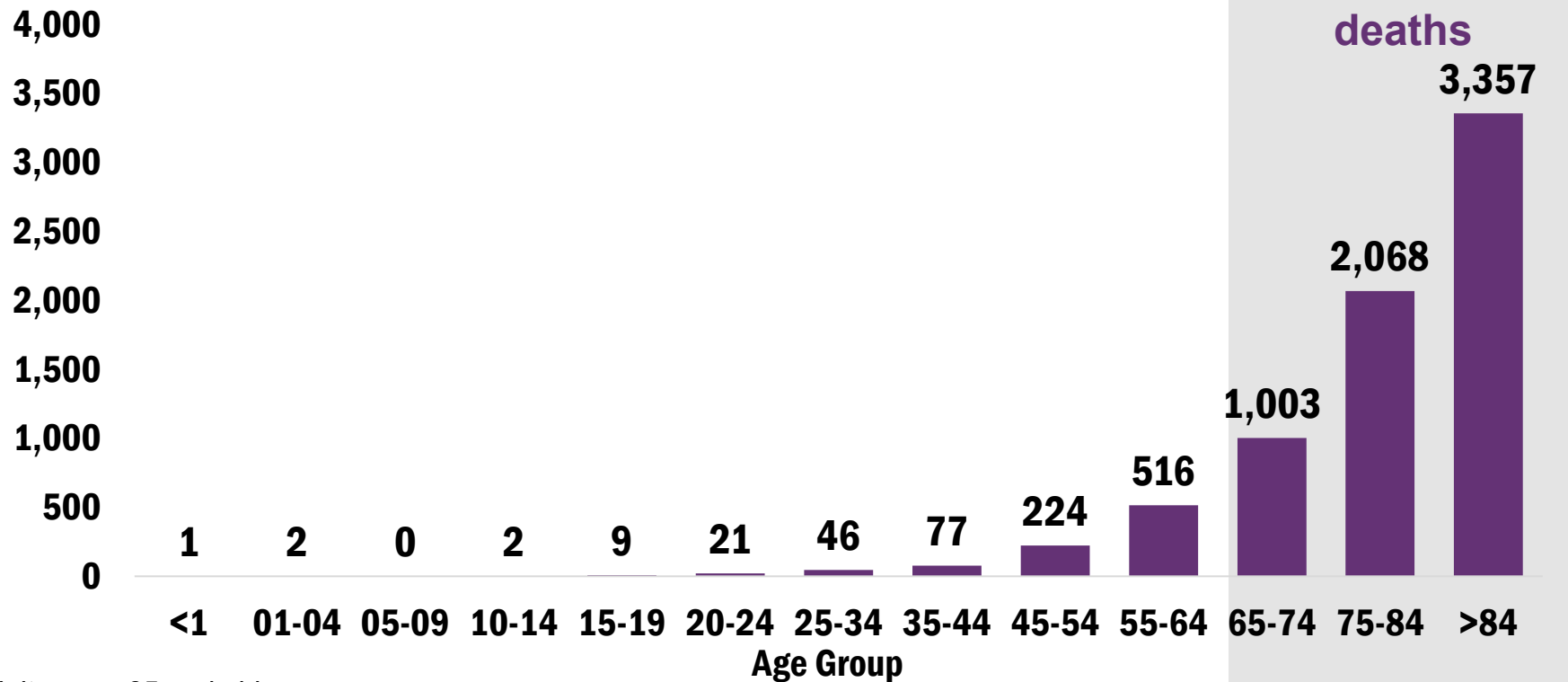
Limited to NC Residents, 2017-2021

Source: NC State Center for Health Statistics, Vital Statistics-Deaths (2017-2021)

Analysis by Injury Epidemiology and Surveillance Unit

# Unintentional falls were the number one cause of injury death among older adults\*

Number of Deaths



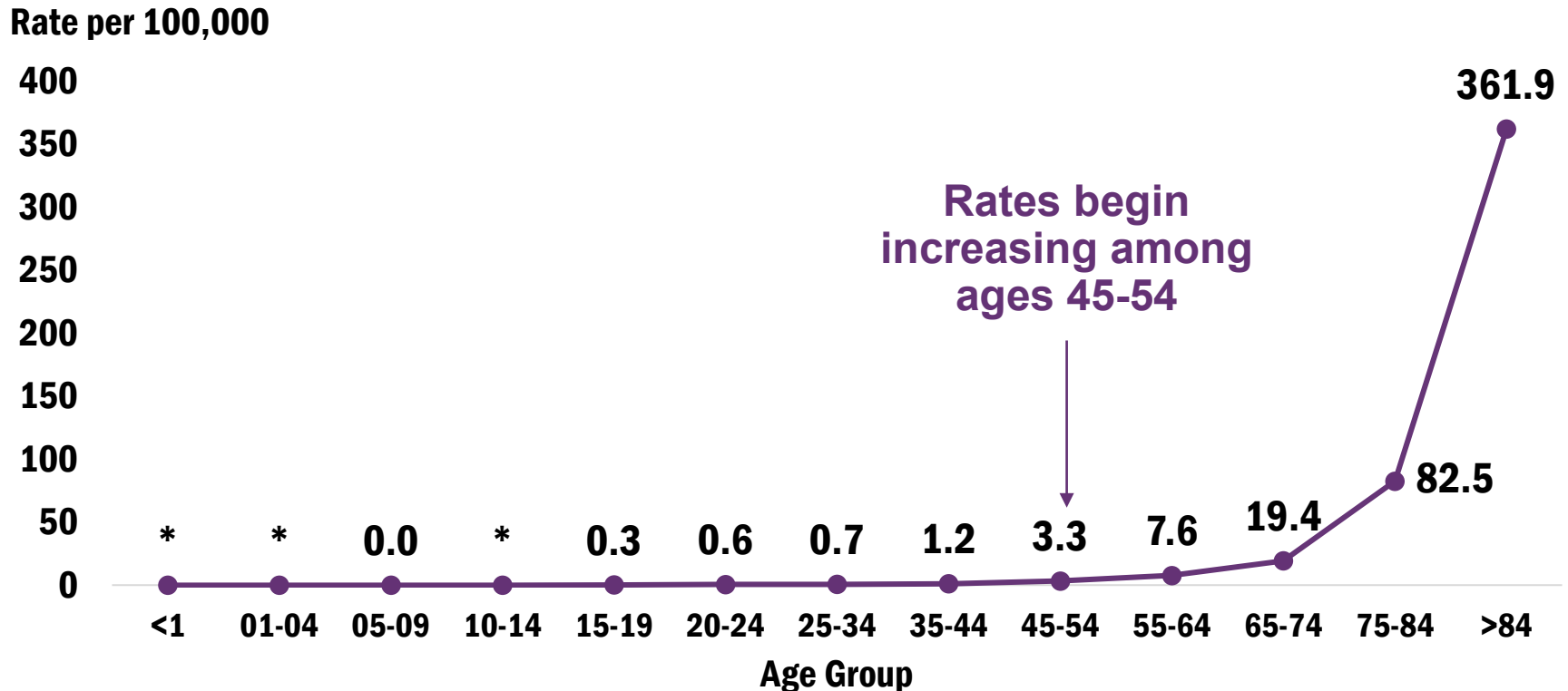
\* Adults ages 65 and older

Limited to NC Residents, 2017-2021, (N=7,326)

Source: NC State Center for Health Statistics, Vital Statistics-Deaths (2017-2021)

Analysis by Injury Epidemiology and Surveillance Unit

# Unintentional fall death rates are highest among those ages 75 and older



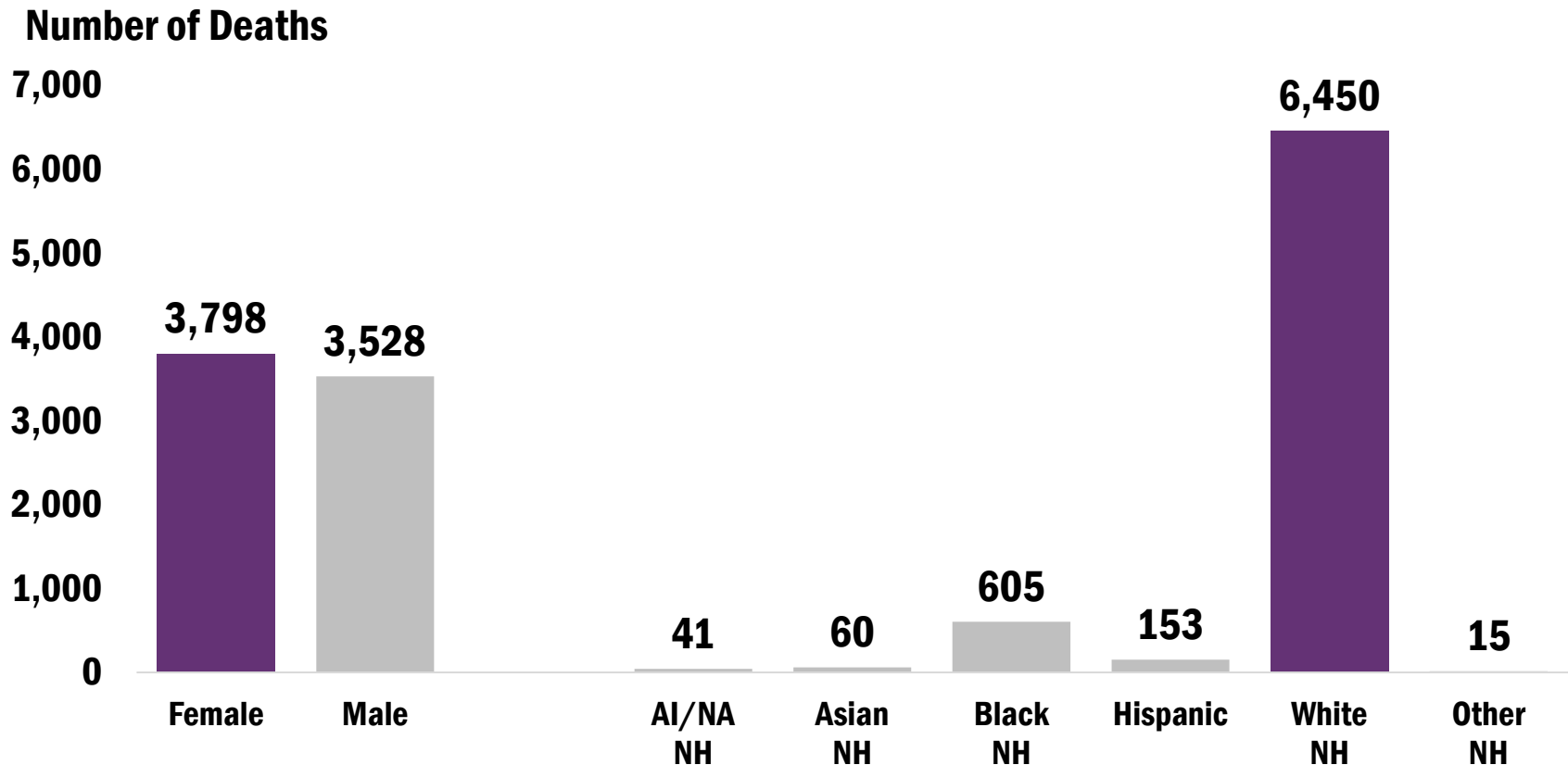
\*Rate suppressed due to count being less than 5

Limited to NC Residents, 2017-2021, (N=7,326)

Source: NC State Center for Health Statistics, Vital Statistics-Deaths (2017-2021)

Analysis by Injury Epidemiology and Surveillance Unit

# Most fall-related deaths occurred among women and non-Hispanic whites



NH - non-Hispanic; There were 2 deaths where the race/ethnicity was unknown

Limited to NC Residents, 2017-2021, (N=7,326)

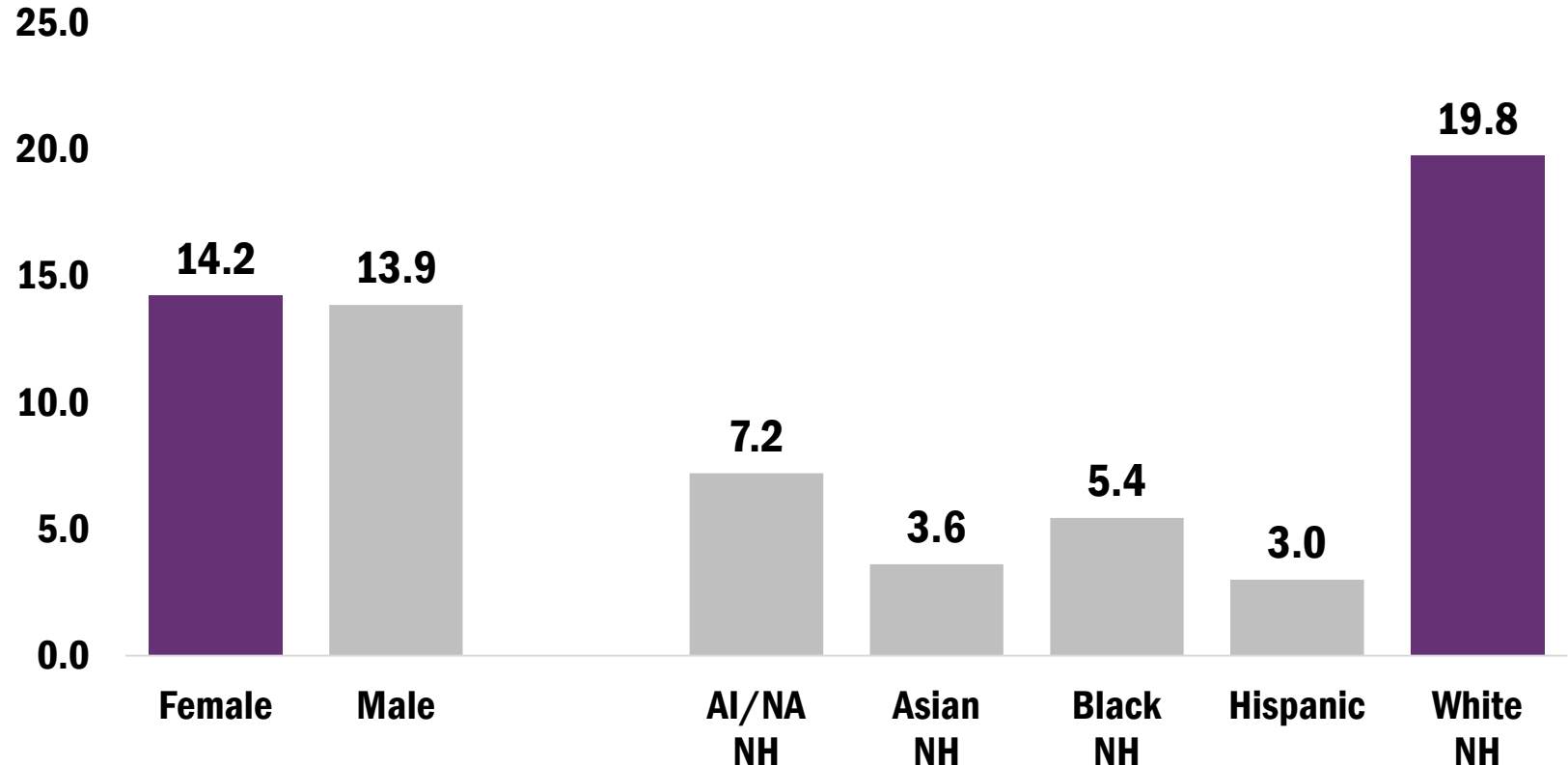
**Source: NC State Center for Health Statistics, Vital Statistics-Deaths (2017-2021)**

Analysis by Injury Epidemiology and Surveillance Unit



# Rates of fall-related deaths were highest among women and non-Hispanic whites

Rate per 100,000



NH – non-Hispanic; Rate not calculated for Other, NH

Limited to NC Residents, 2017-2021, (N=7,326)

Source: NC State Center for Health Statistics, Vital Statistics-Deaths (2017-2021)

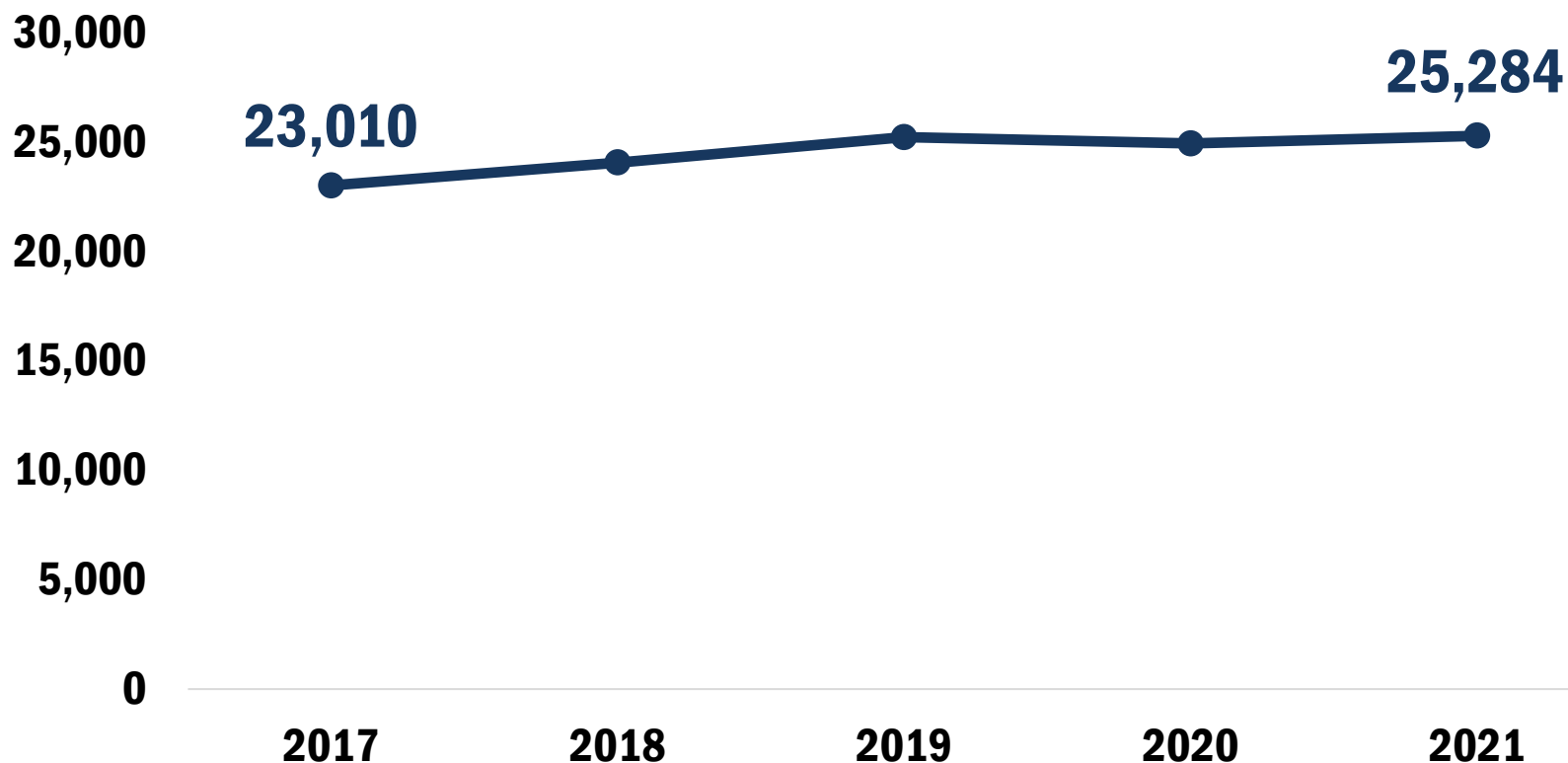
Analysis by Injury Epidemiology and Surveillance Unit



# Unintentional Fall Hospitalizations

# Unintentional fall-related hospitalizations increased by 10% over the last four years

## Number of Hospitalizations



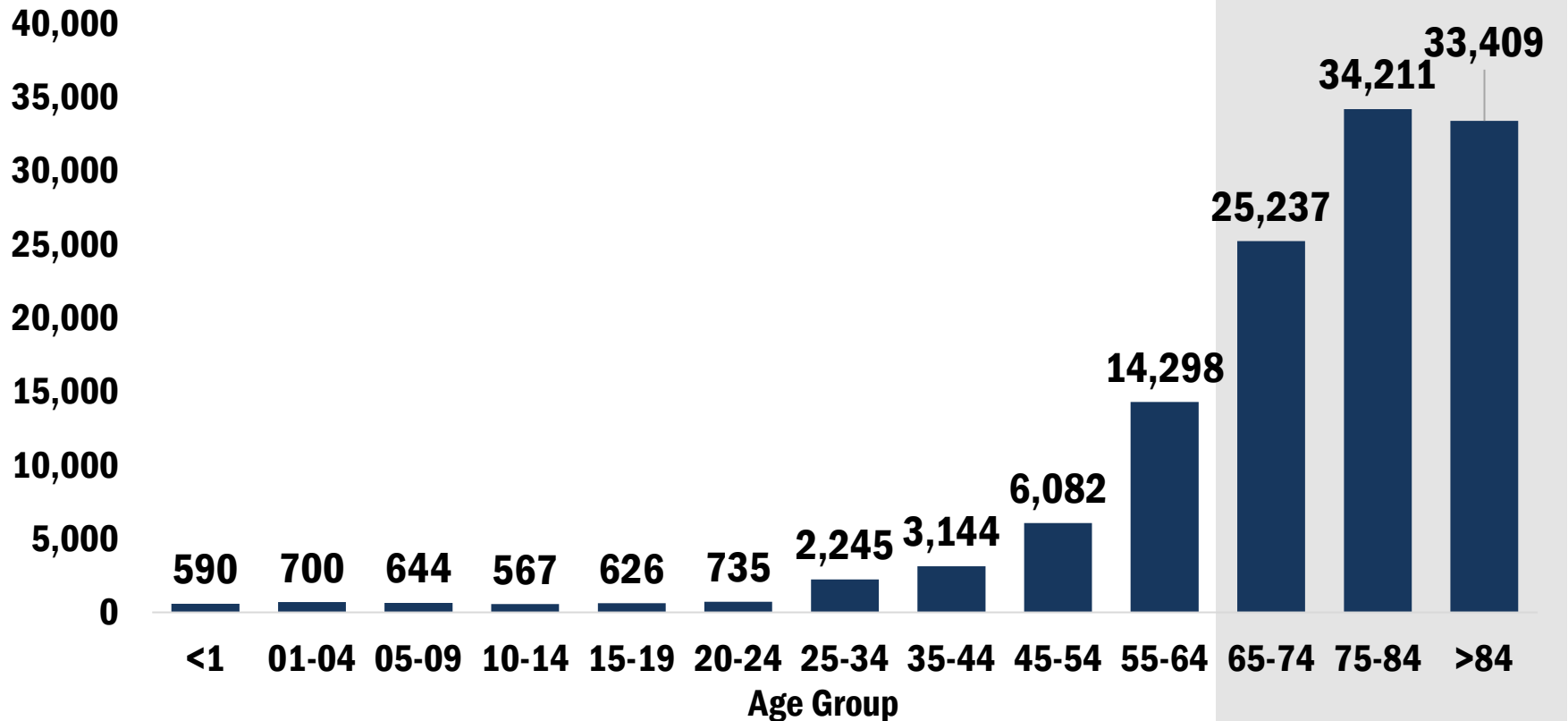
Limited to NC Residents, 2017-2021, (N=122,495)

Source: NC State Center for Health Statistics, Hospitalization Discharge Data (2017-2021)

Analysis by Injury Epidemiology and Surveillance Unit

# 75% of fall-related hospitalizations occurred among adults 65 and older

## Number of Hospitalizations



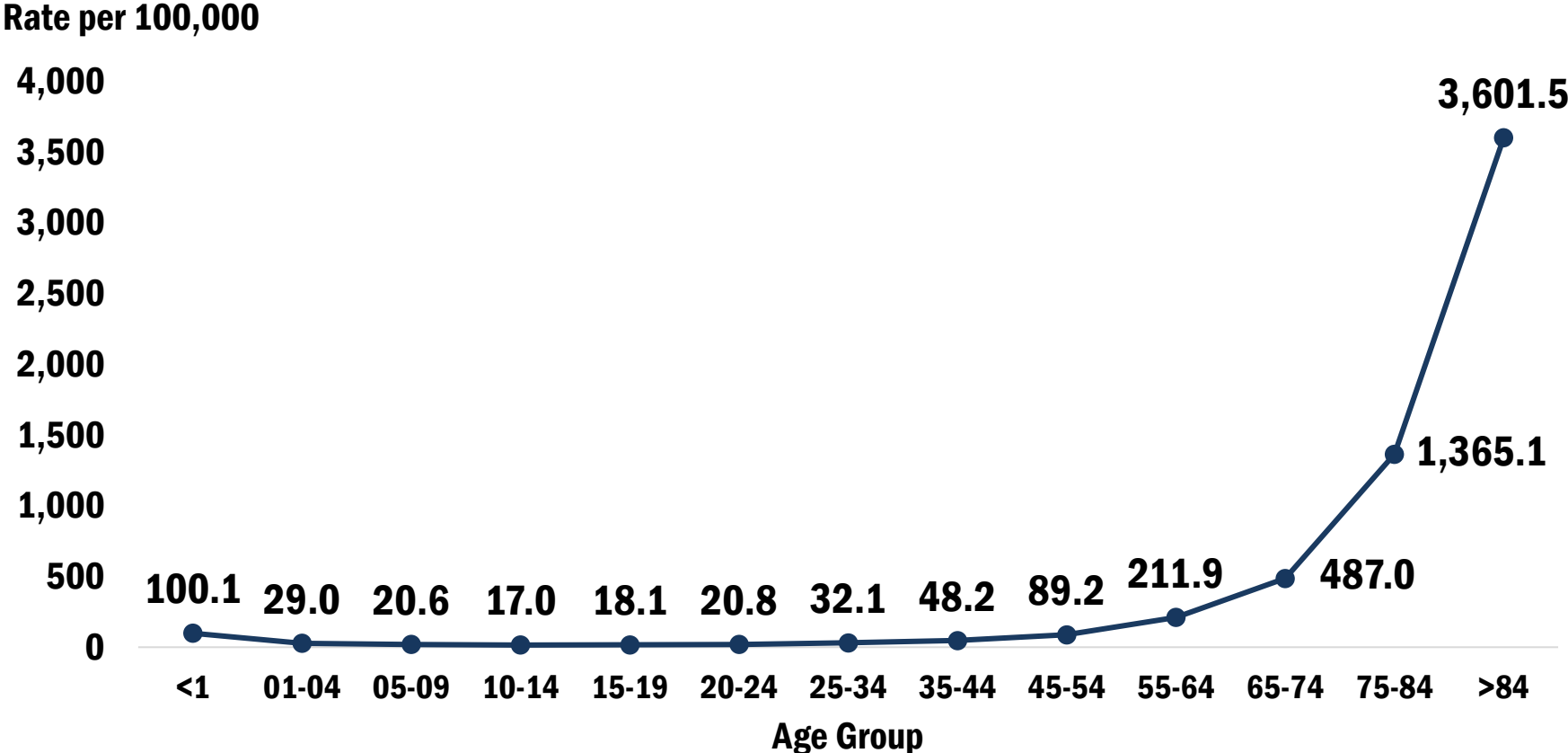
Age was unknown for 7 hospitalizations

Limited to NC Residents, 2017-2021, (N=122,495)

Source: NC State Center for Health Statistics, Hospitalization Discharge Data (2017-2021)

Analysis by Injury Epidemiology and Surveillance Unit

# Adults 75 and older have the highest rates of fall-related hospitalizations



Age was unknown for 7 hospitalizations

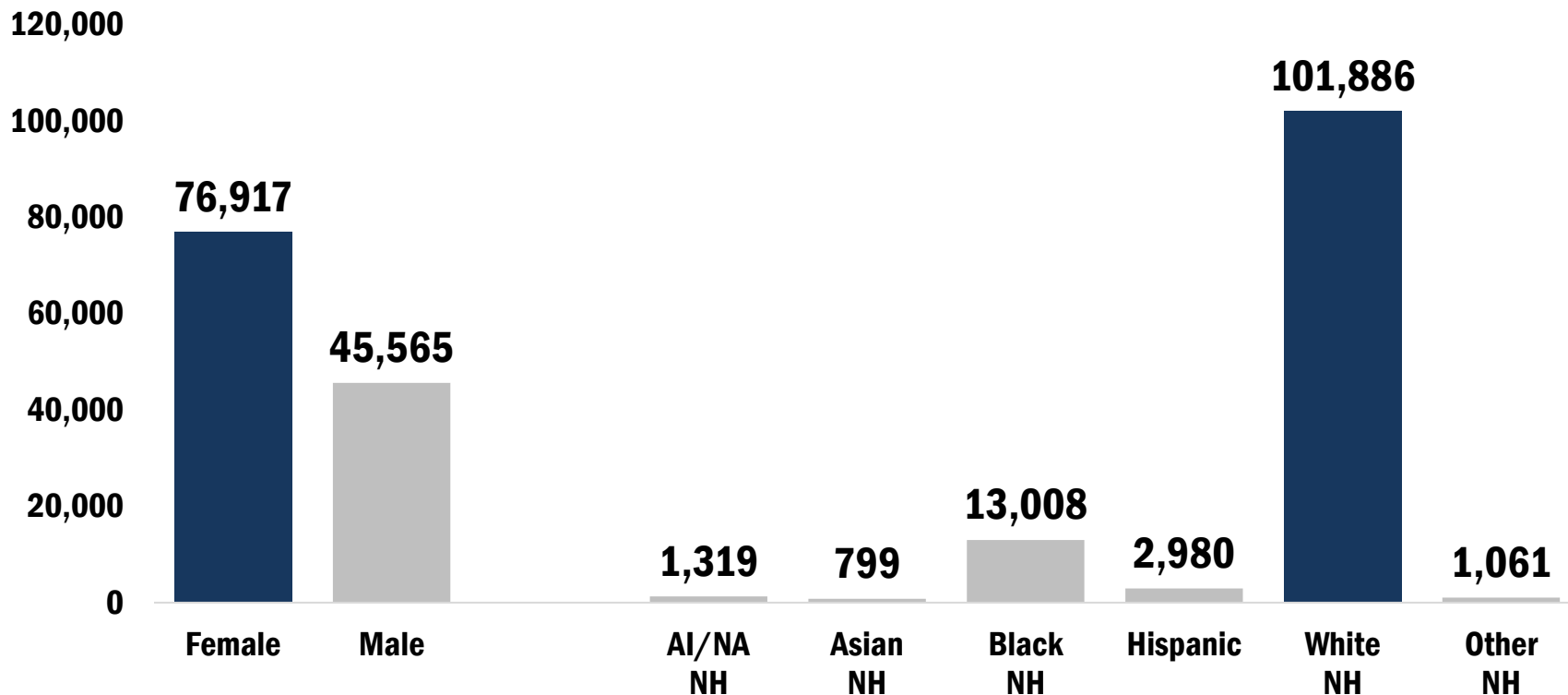
Limited to NC Residents, 2017-2021, (N=122,495)

Source: NC State Center for Health Statistics, Hospitalization Discharge Data (2017-2021)

Analysis by Injury Epidemiology and Surveillance Unit

# Most fall-related hospitalizations occurred among women and non-Hispanic whites

## Number of Hospitalizations



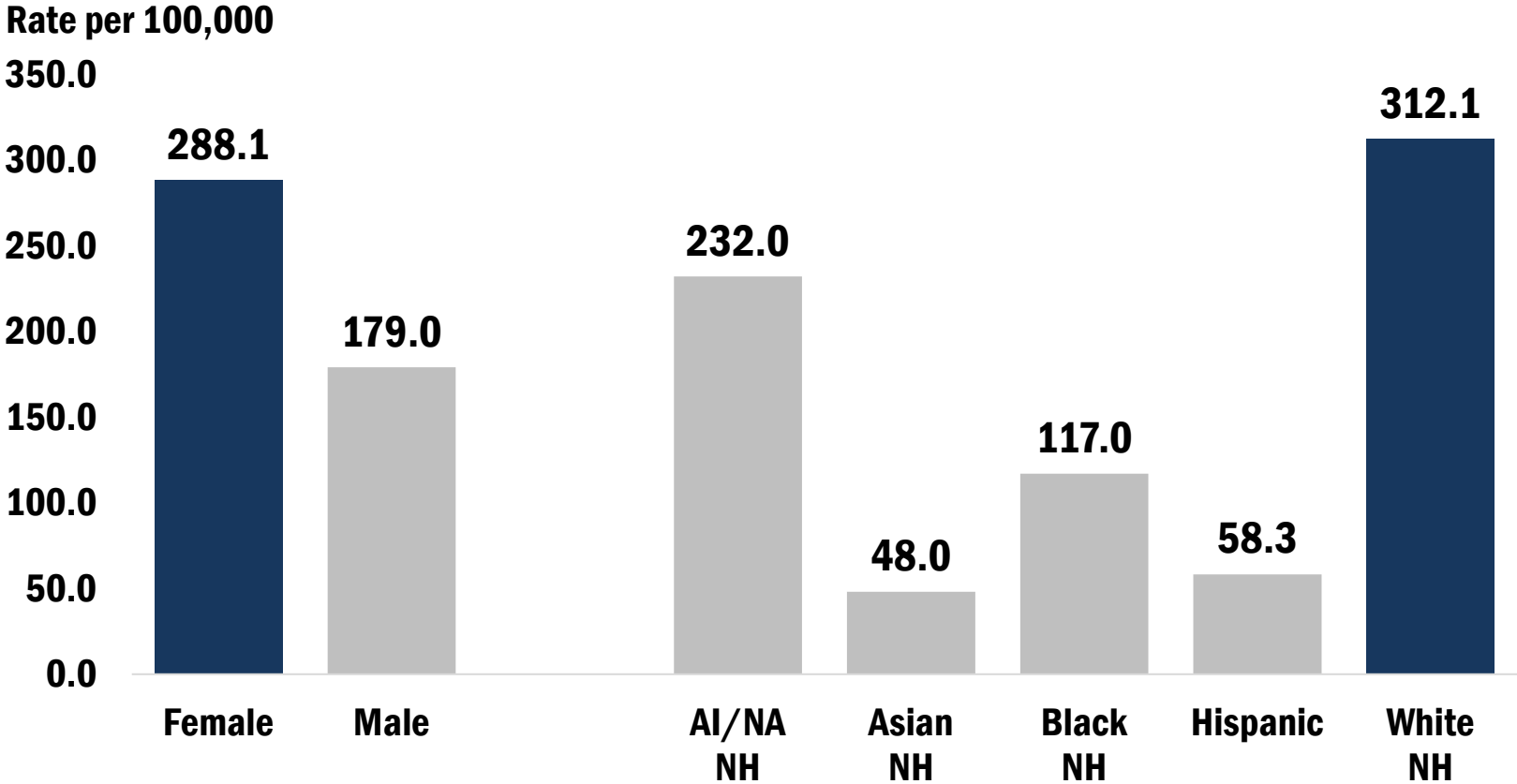
NH – non-Hispanic

Sex was unknown for 13 (<0.1%) injury hospitalizations and race/ethnicity was unknown for 1,442 (0.5%) injury hospitalizations. Limited to NC Residents, 2017-2021, (N=122,495)

**Source: NC State Center for Health Statistics, Hospitalization Discharge Data (2017-2021)**

Analysis by Injury Epidemiology and Surveillance Unit

# Fall-related hospitalization rates were highest among women and non-Hispanic whites



Sex was unknown for 13 (<0.1%) injury hospitalizations and race/ethnicity was unknown for 1,442 (0.5%) injury Limited to NC Residents, 2017-2021, (N=122,495), NH – non-Hispanic, Rate not calculated for Other NH

**Source: NC State Center for Health Statistics, Hospitalization Discharge Data (2017-2021)**

Analysis by Injury Epidemiology and Surveillance Unit

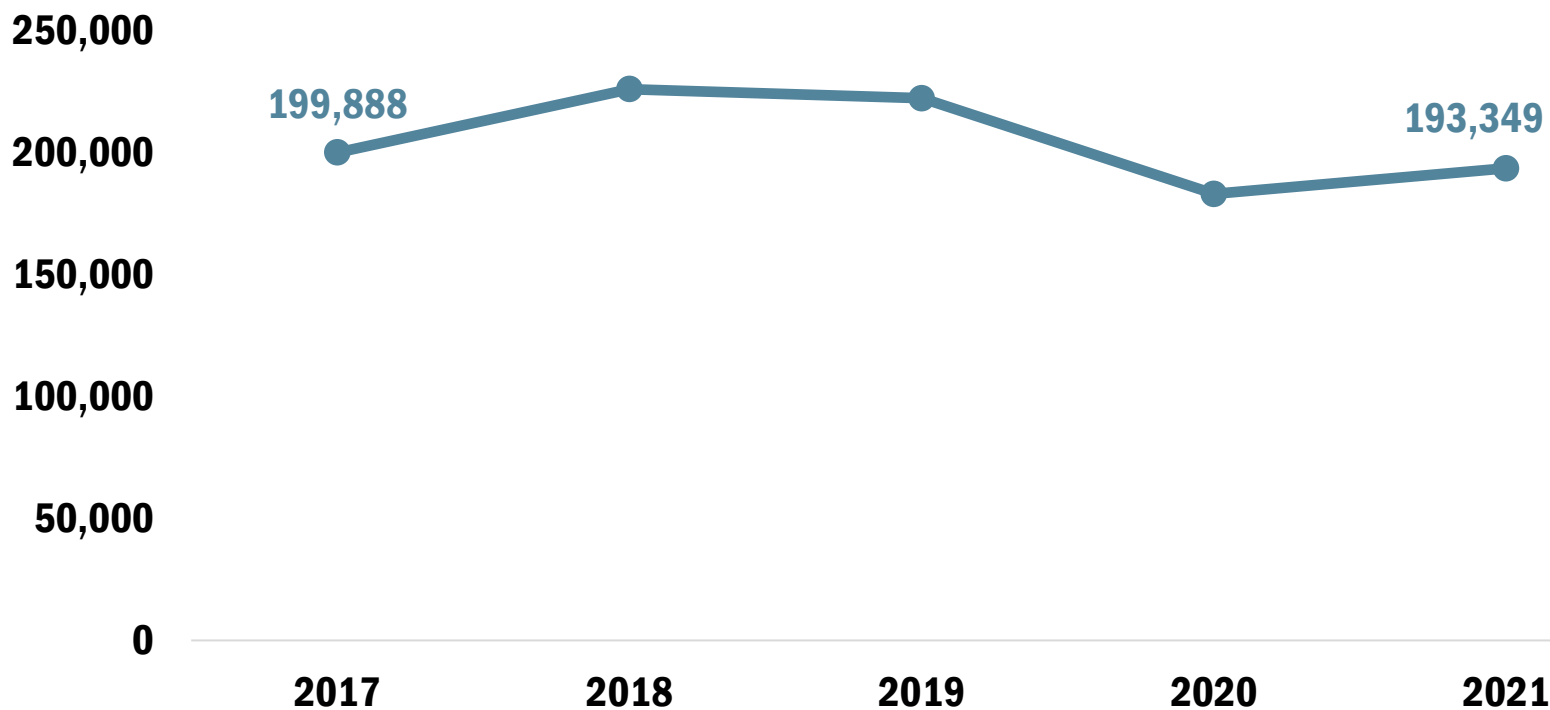


# Unintentional Fall Emergency Department Visits



# Unintentional fall-related ED visits remain high but decreased 3% over the last five years

Number of ED Visits



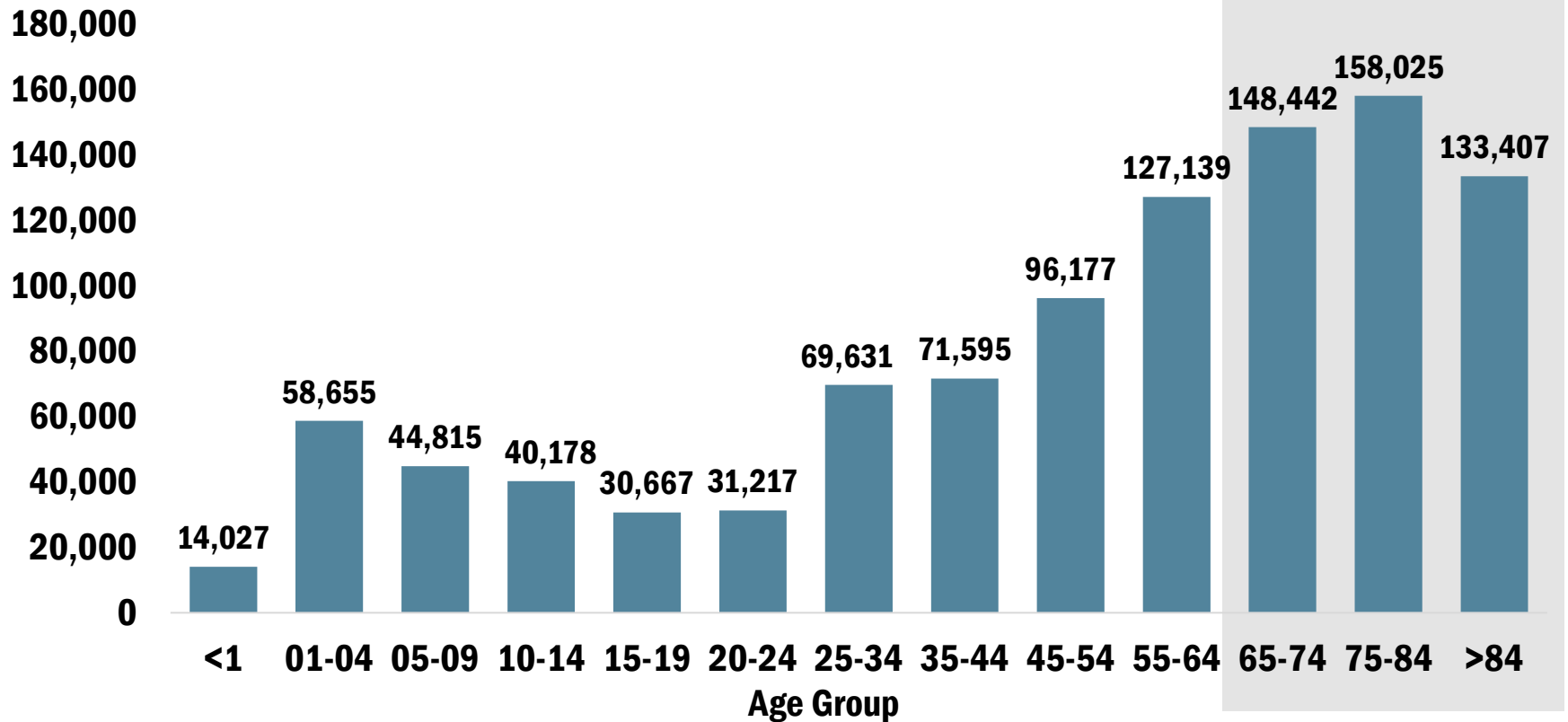
Limited to NC Residents, 2017-2021 (N=1,024,096)

Source: NC DETECT (2017-2021)

Analysis by Injury Epidemiology and Surveillance Unit

# 43% of fall-related ED visits occurred among adults 65 and older

Number of ED Vistis



Age was unknown for 121 ED Visits

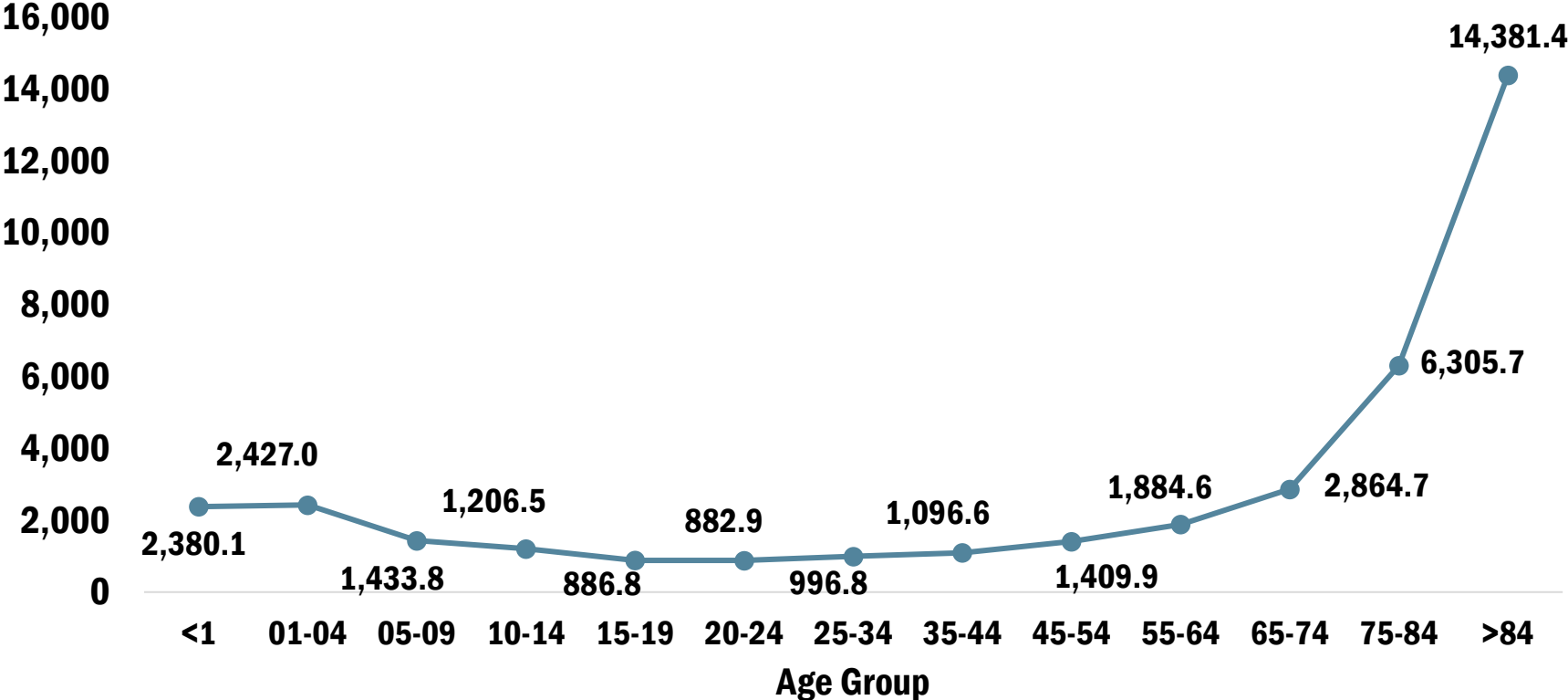
Limited to NC Residents, 2017-2021 (N=1,024,096)

Source: NC DETECT (2017-2021)

Analysis by Injury Epidemiology and Surveillance Unit

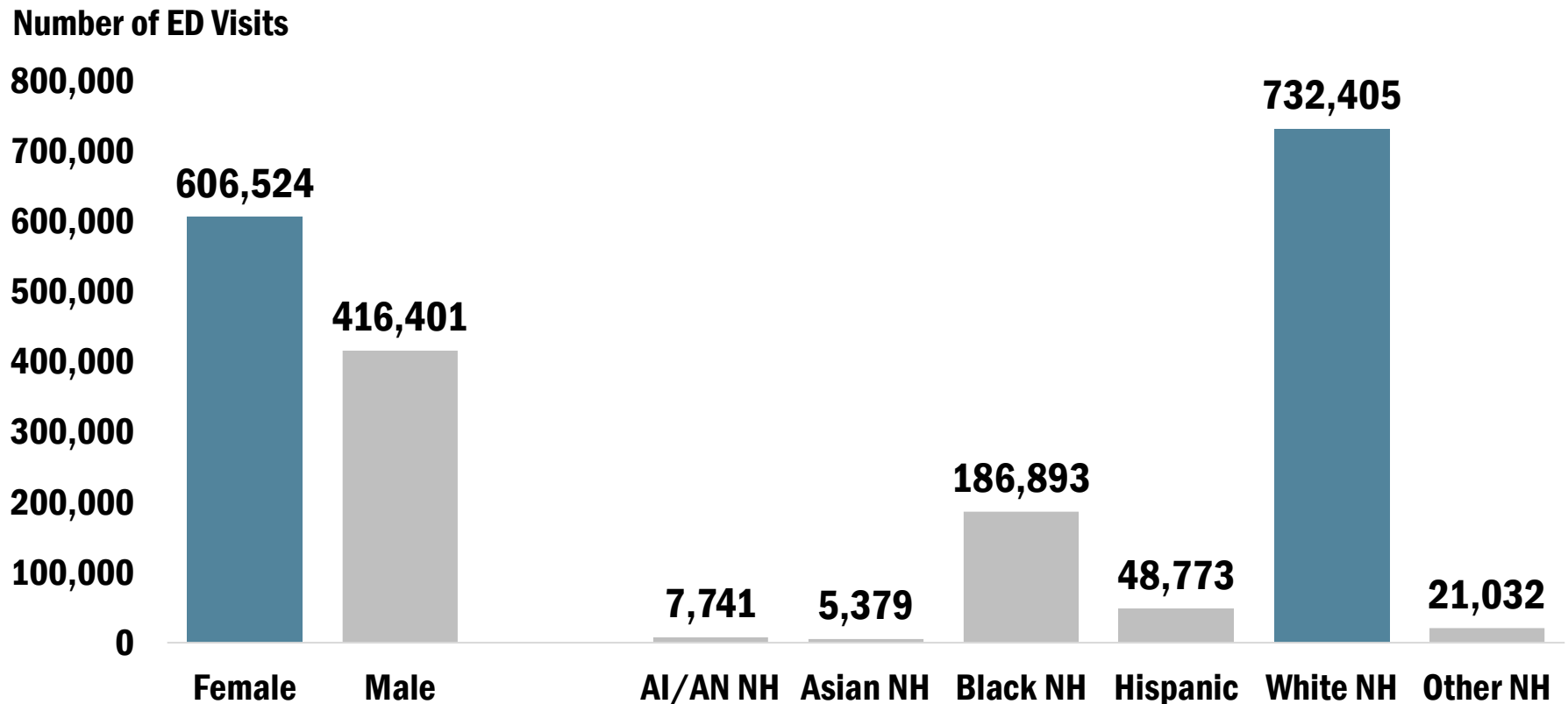
# Adults 75 and older have the highest rates of fall-related ED Visits

Rate per 100,000



Age was unknown for 121 ED Visits  
Limited to NC Residents, 2017-2021 (N=1,024,096)  
**Source: NC DETECT (2017-2021)**  
Analysis by Injury Epidemiology and Surveillance Unit

# Most fall-related ED visits occurred among women and Non-Hispanic whites



NH - non-Hispanic

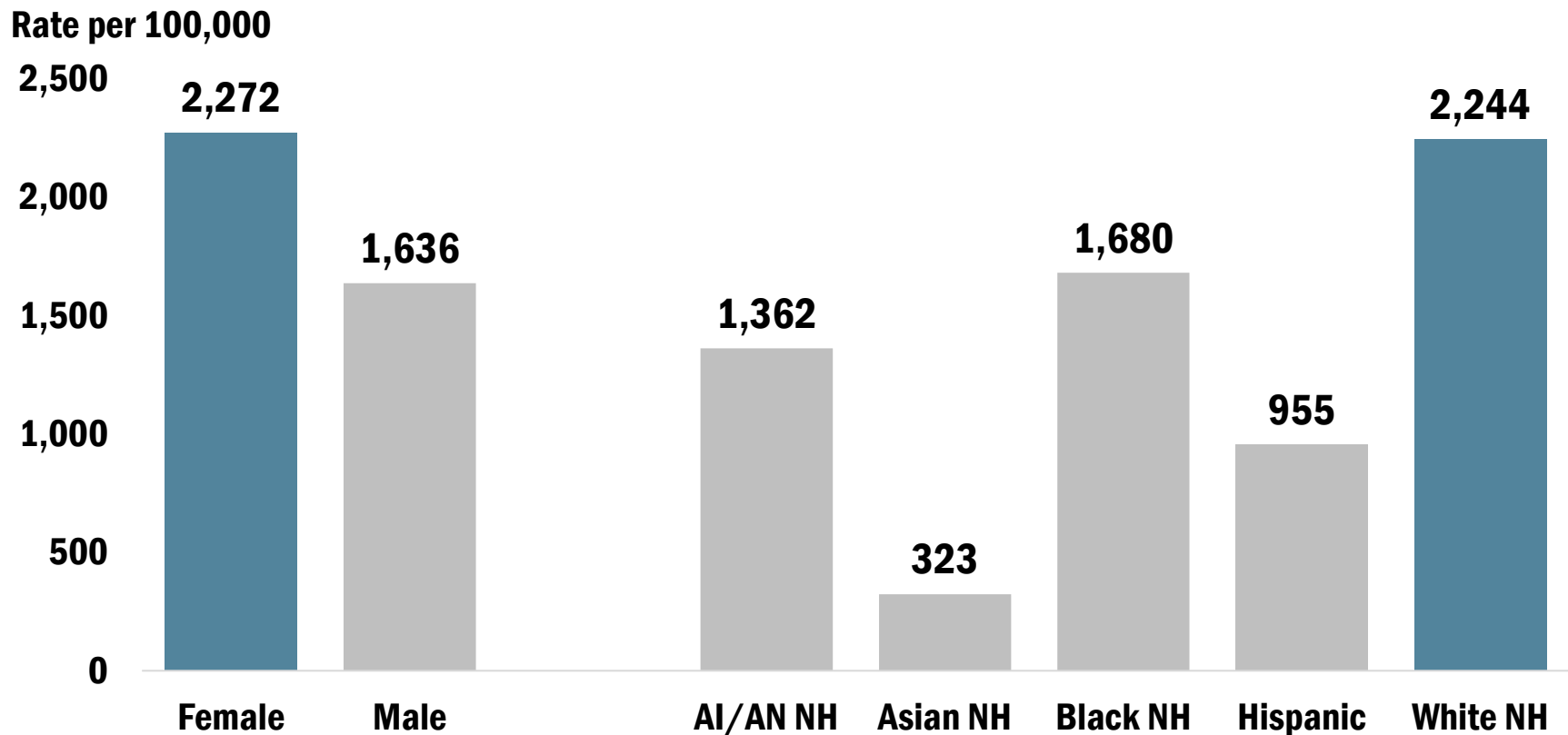
Sex was unknown for 1171 (<0.1%) injury ED visits and race/ethnicity was unknown for 21,873 (<0.1%) injury ED visits

Limited to NC Residents, 2017-2021 (N=1,024,096)

**Source: NC DETECT (2017-2021)**

Analysis by Injury Epidemiology and Surveillance Unit

# Rates of fall-related ED visits were highest among women and non-Hispanic whites



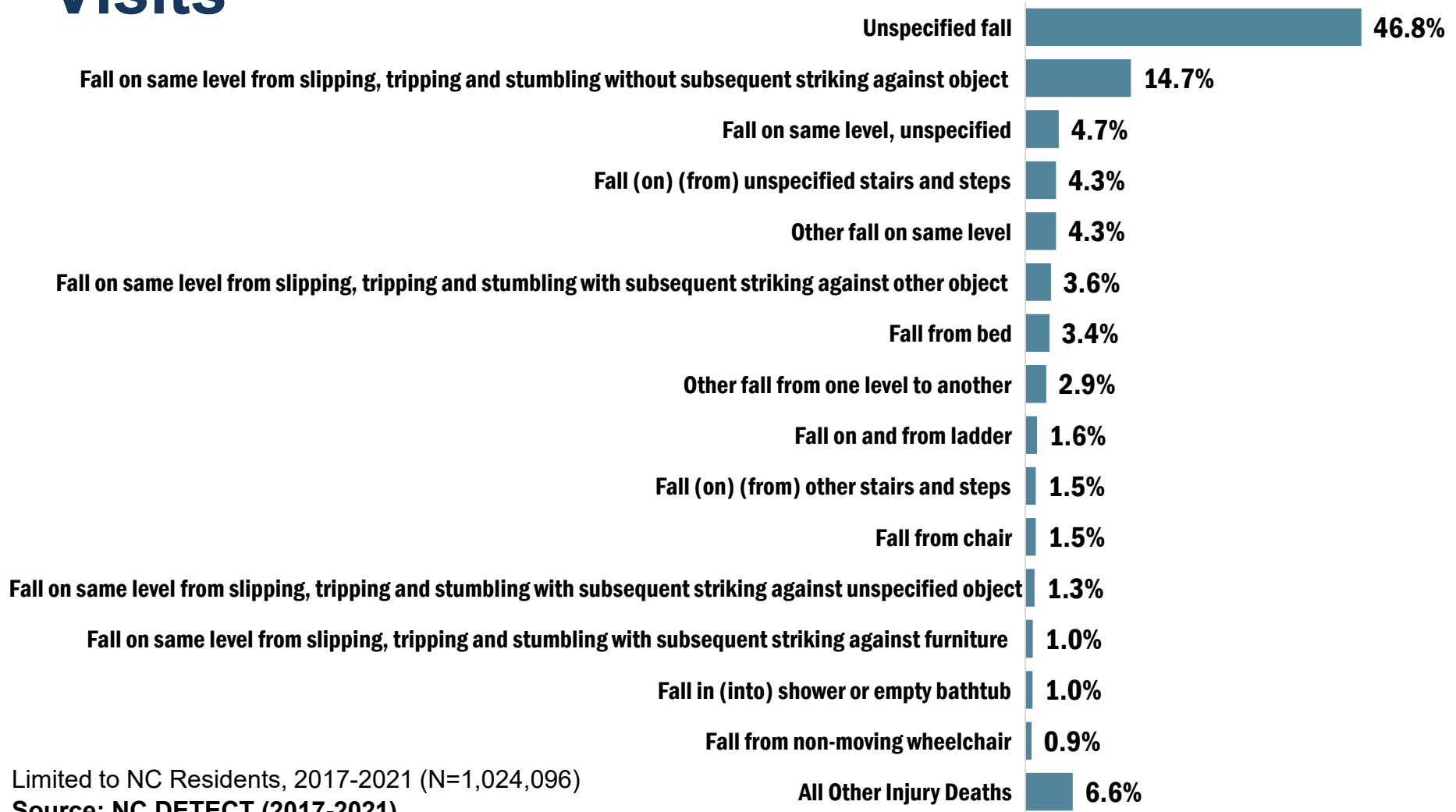
Sex was unknown for 1171 (<0.1%) injury ED visits and race/ethnicity was unknown for 21,873 (<0.1%) injury ED visits

Limited to NC Residents, 2017-2021 (N=1,024,096); NH = Non-Hispanic; Rate not calculated for Other NH

**Source: NC DETECT (2017-2021)**

Analysis by Injury Epidemiology and Surveillance Unit

# Leading diagnosis codes for fall-related ED Visits



Limited to NC Residents, 2017-2021 (N=1,024,096)

Source: NC DETECT (2017-2021)

Analysis by Injury Epidemiology and Surveillance Unit

# Summary of unintentional fall-related injuries in North Carolina

- From 2017-2021, unintentional fall-related injuries resulted in:
  - Over **7,000** deaths
  - Nearly **122,500** hospitalizations
  - Almost **1,025,000** emergency department visits
- Most falls occur among **females** and **Non-Hispanic whites**
- Rates of fall-related injuries are highest in the **75-84** and **85 and older age groups**