



# HIV Mortality 2021



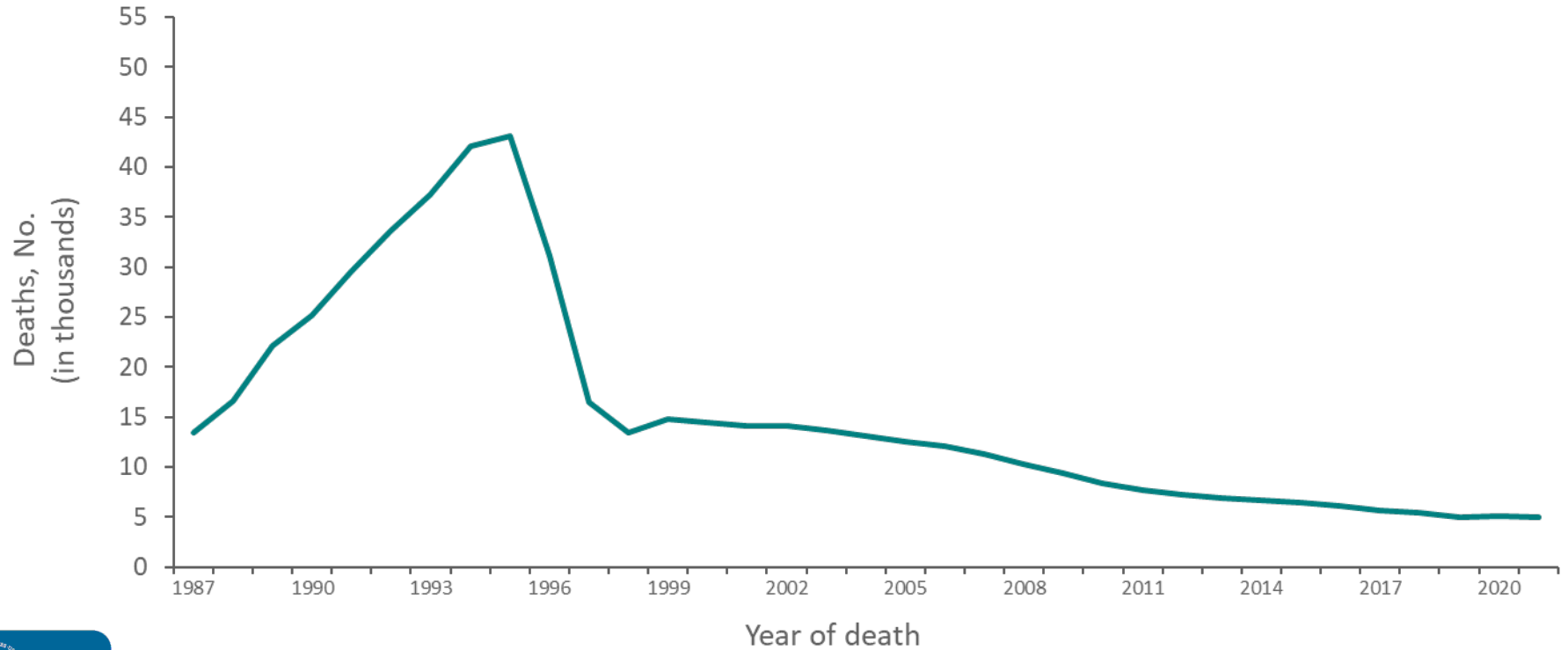
## HIV Mortality Slides

- This slide set presents analyses of trends in rates and distributions of deaths in the United States, focusing on deaths with human immunodeficiency virus (HIV) disease as the underlying cause.
- Death data for the general population were compiled from death certificates from all 50 states and the District of Columbia (DC) by the CDC's National Center for Health Statistics (NCHS) and downloaded from the CDC WONDER Online Database <https://wonder.cdc.gov/>. For more information, see the NCHS Web site: <http://www.cdc.gov/nchs/deaths.htm>.
- Data on deaths among persons with diagnosed HIV (including persons with HIV infection ever classified as stage 3 [AIDS]) in the 50 states and the District of Columbia are from the National HIV Surveillance System (NHSS).



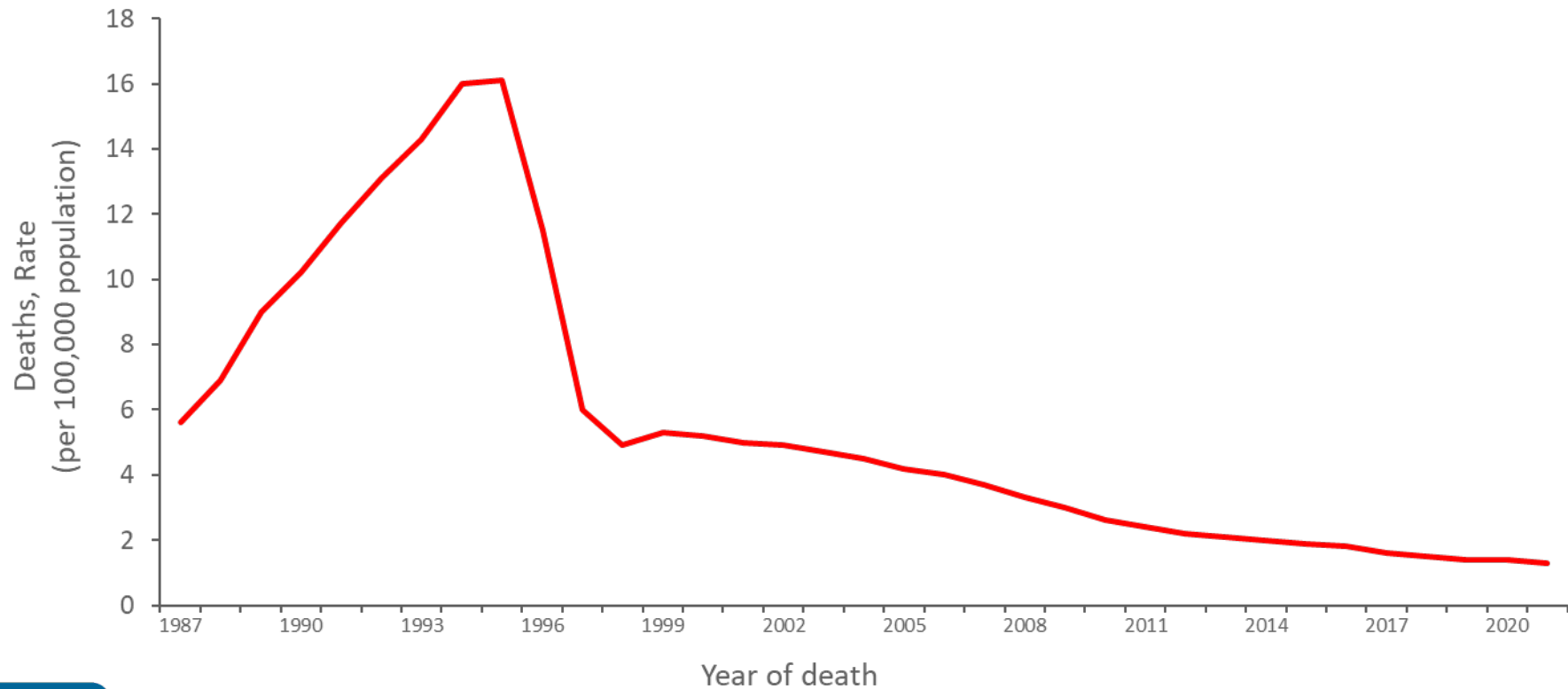


# Deaths in the General Population with HIV Disease as the Underlying Cause Reported on Death Certificates, 1987–2021—United States



Note. Data from CDC WONDER Online Database based on death certificate data compiled by the National Center for Health Statistics.

# Trends in Annual Age-Adjusted Rates of Death in the General Population with HIV Disease as the Underlying Cause, 1987–2021—United States

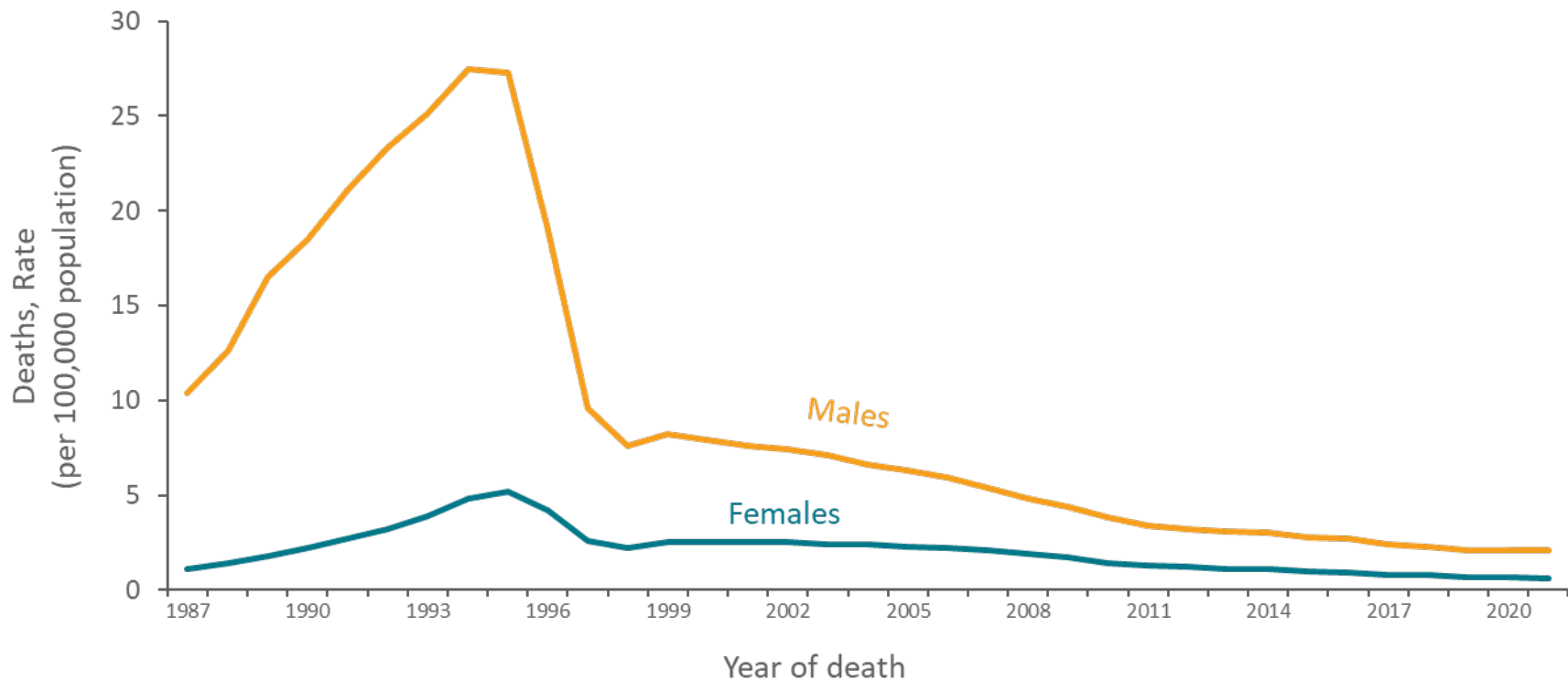


Note. Data from CDC WONDER Online Database based on death certificate data compiled by the National Center for Health Statistics.





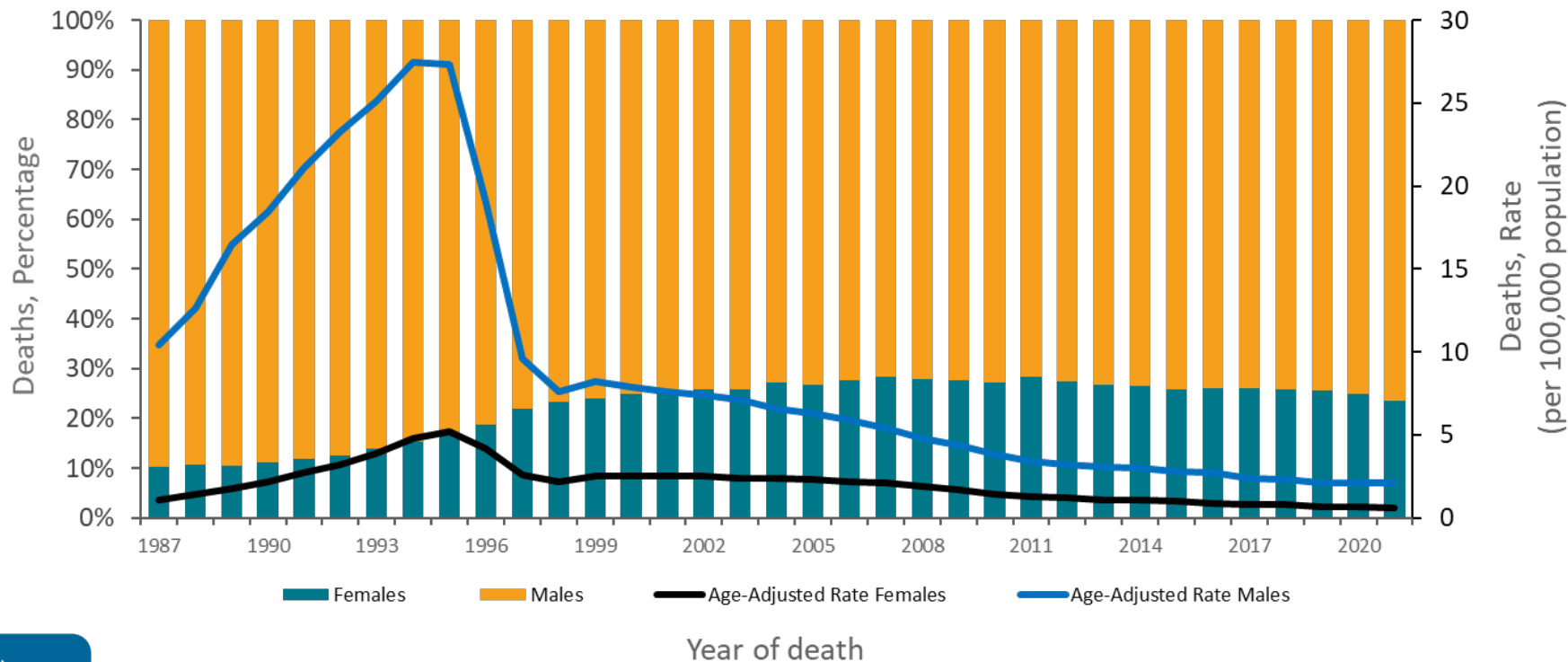
# Trends in Annual Age-Adjusted Rates of Death in the General Population with HIV Disease as the Underlying Cause, by Sex, 1987–2021—United States



Note. Data from CDC WONDER Online Database based on death certificate data compiled by the National Center for Health Statistics.



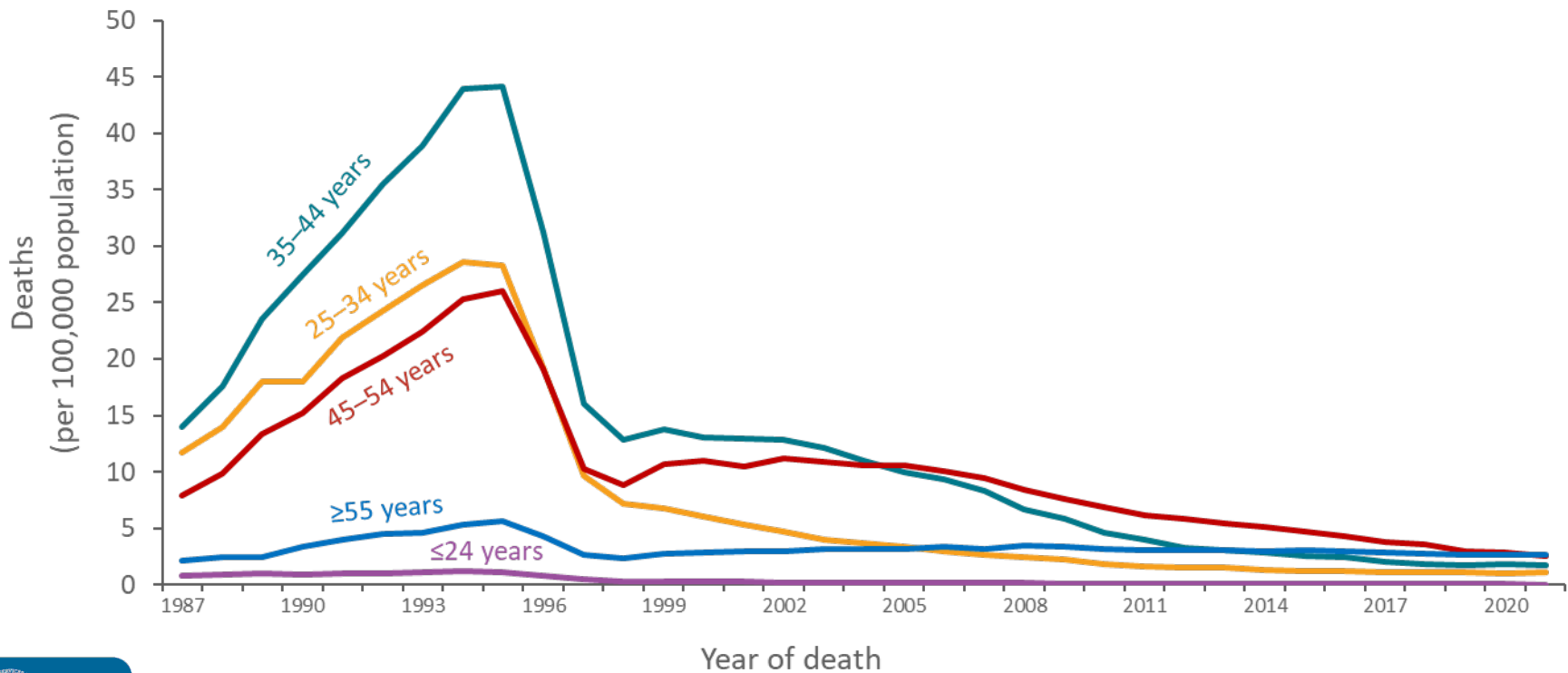
# Trends in Annual Age-Adjusted Rates of Death and the Percentage Distribution of Deaths in the General Population with HIV Disease as the Underlying Cause by Sex, 1987–2021—United States



Note. Data from CDC WONDER Online Database based on death certificate data compiled by the National Center for Health Statistics.



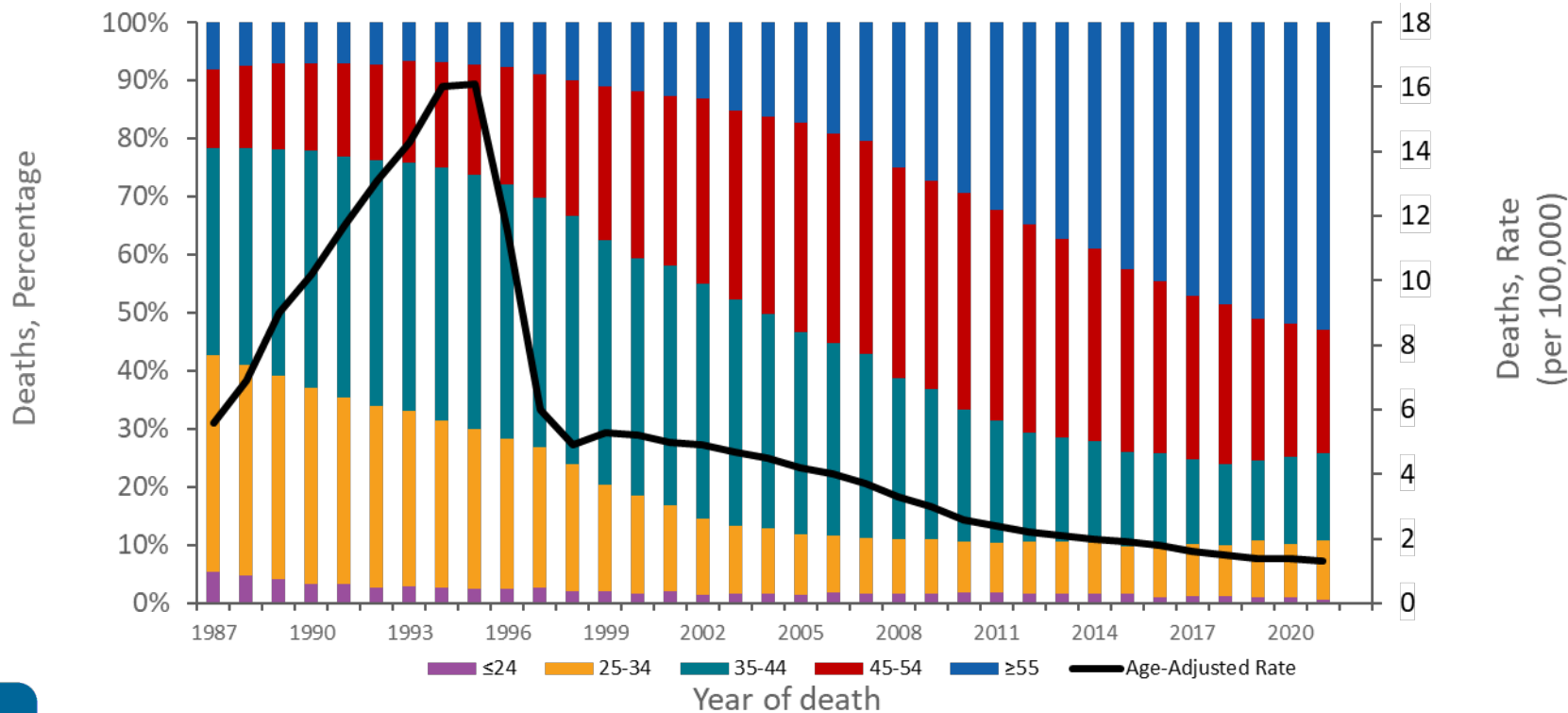
# Trends in Annual Rates of Death in the General Population with HIV Disease as the Underlying Cause, by Age Group, 1987–2021—United States



Note. Data from CDC WONDER Online Database based on death certificate data compiled by the National Center for Health Statistics.



# Trends in Annual Age-Adjusted Rates of Death and the Percentage Distribution of Deaths in the General Population with HIV Disease as the Underlying Cause by Age Group, 1987–2021—United States

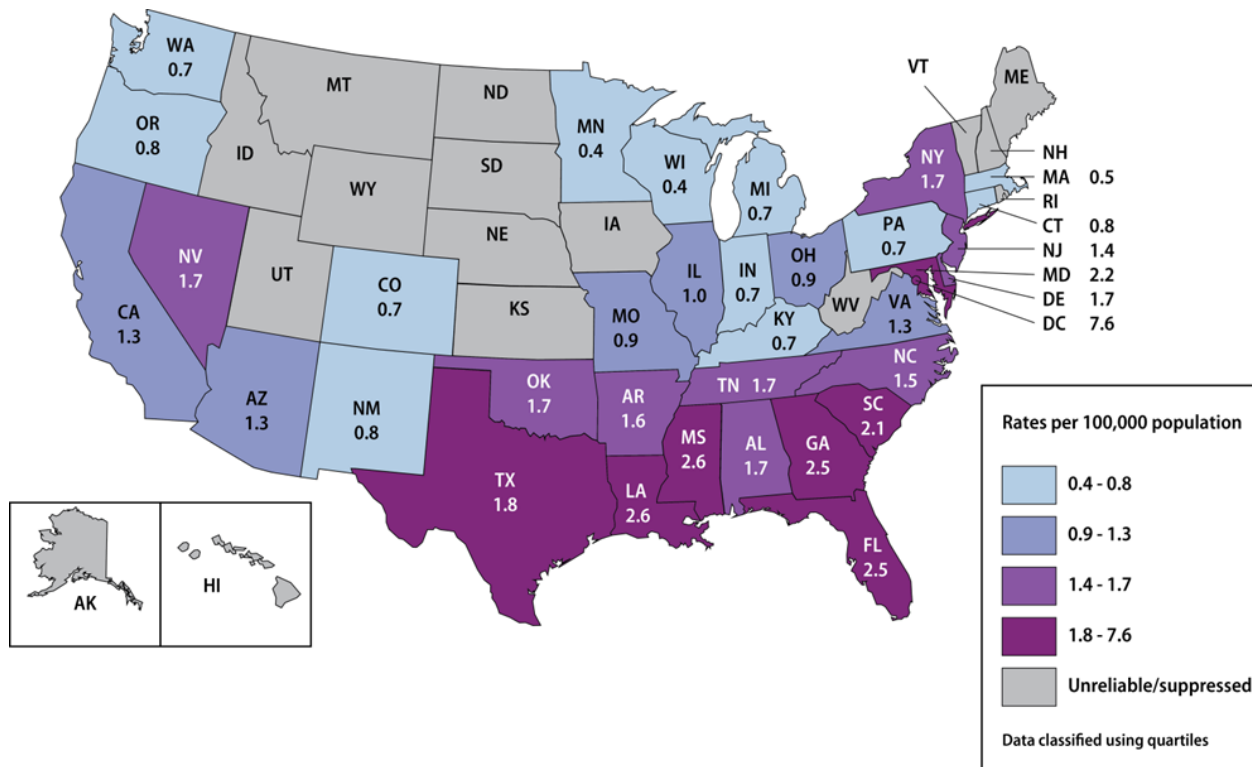


Note. Data from CDC WONDER Online Database based on death certificate data compiled by the National Center for Health Statistics.





# Age-Adjusted Rates\* of Death in the General Population with HIV Disease as the Underlying Cause in the General Population, by State, 2021—United States



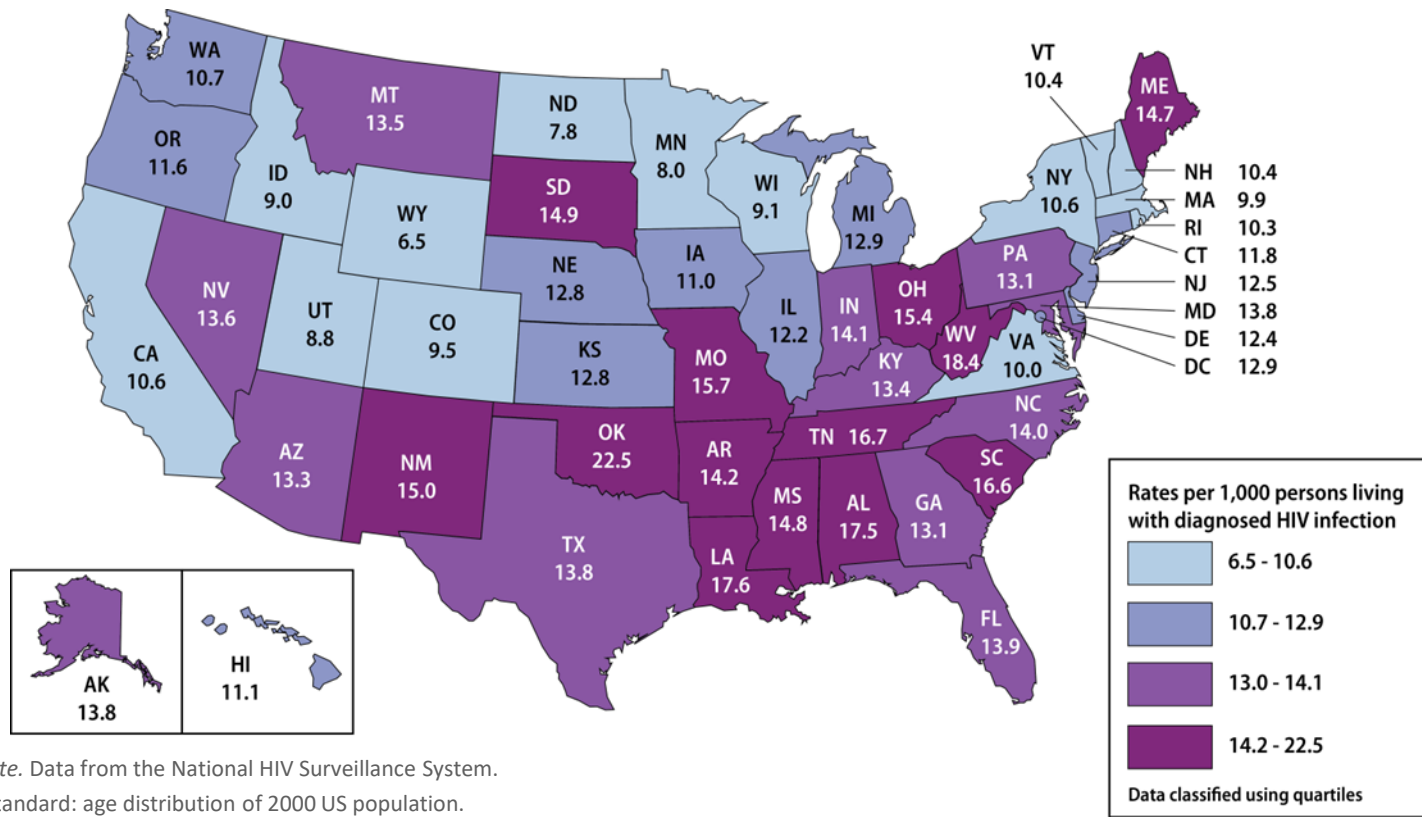
Note. Data from CDC WONDER Online Database based on death certificate data compiled by the National Center for Health Statistics.

\*Per 100,000 population.

†Death rates are not shown when unreliable (rate is calculated with a numerator of 20 or less) or suppressed (the data meet the criteria for confidentiality constraints).



# Age-Adjusted\* Rates† of Death (any cause) among Persons with diagnosed HIV by State, 2021—United States



Note. Data from the National HIV Surveillance System.

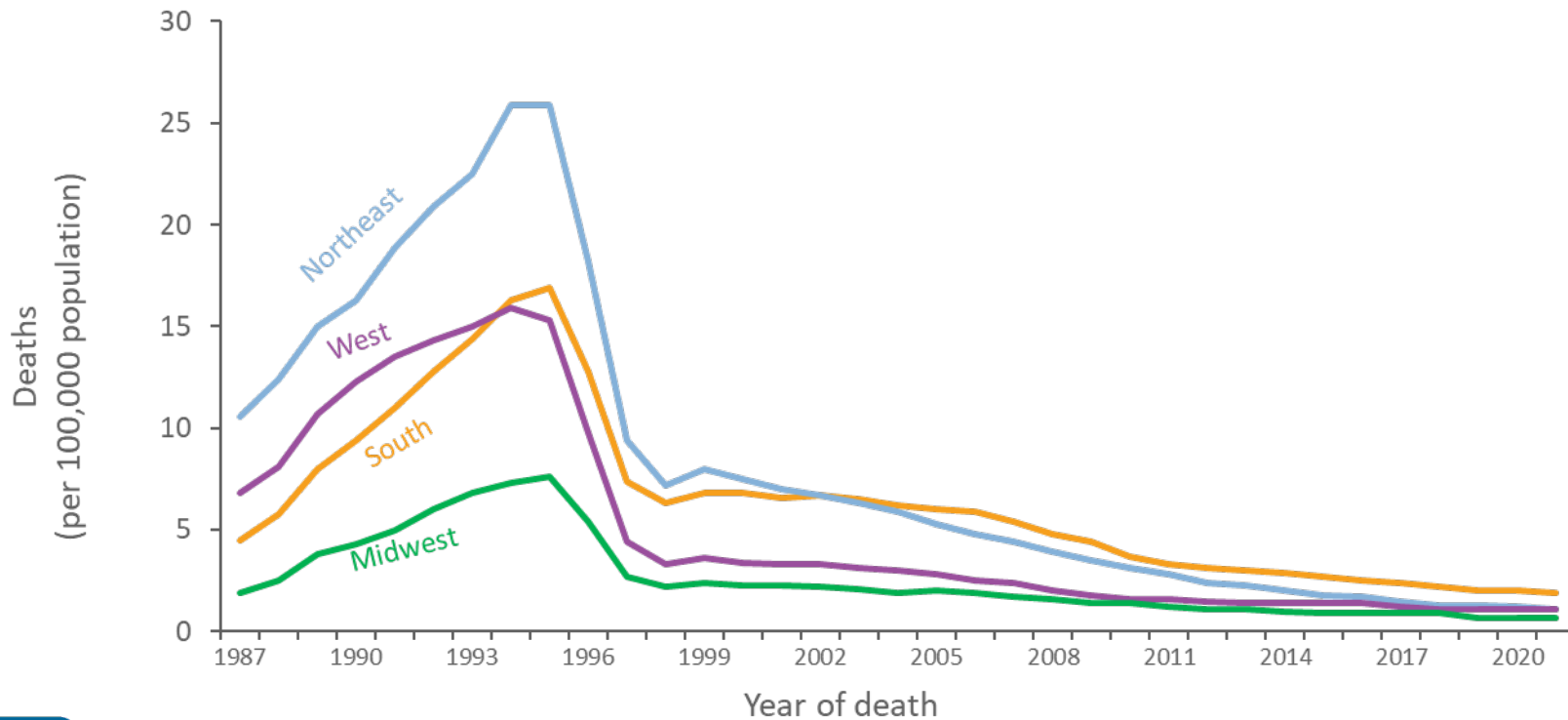
\*Standard: age distribution of 2000 US population.

†Per 1,000 persons living with diagnosed HIV infection.





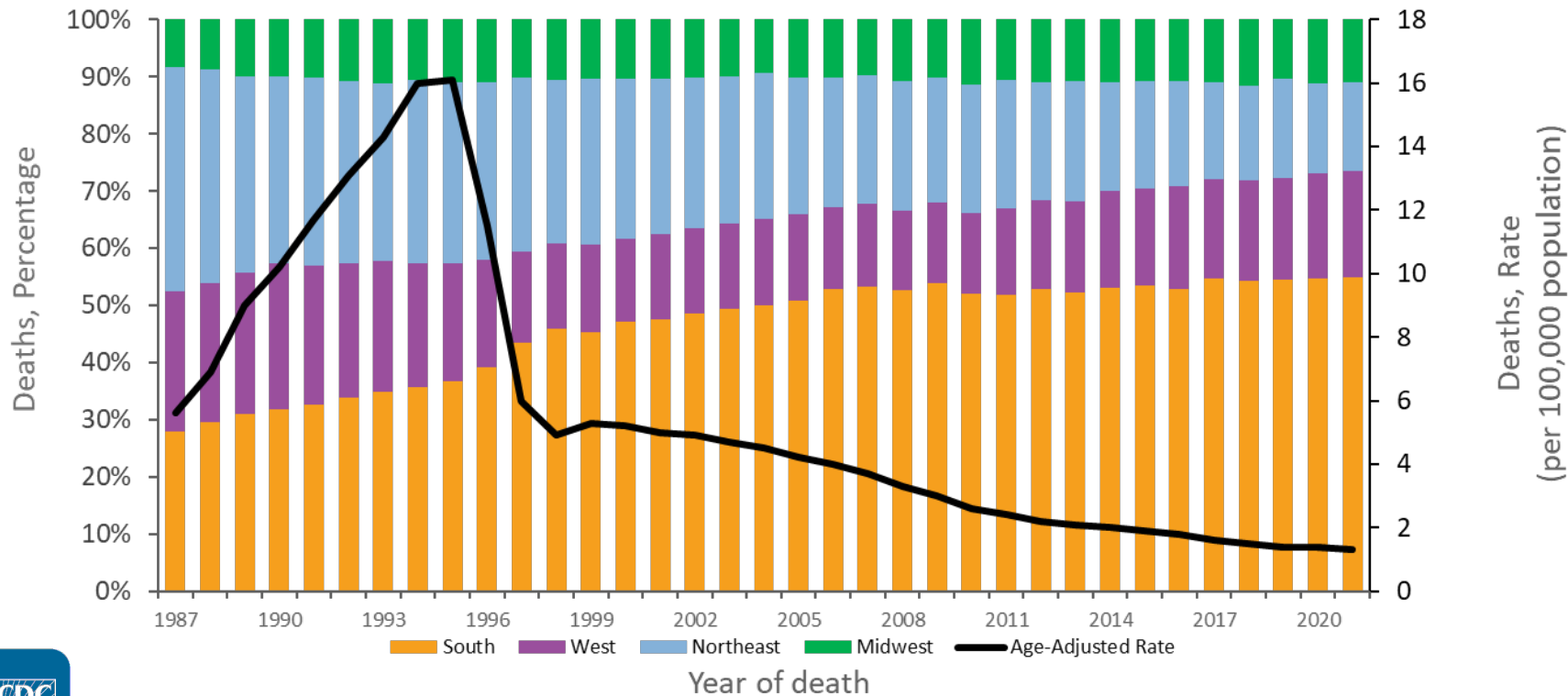
# Trends in Age-Adjusted Annual Rates of Death in the General Population with HIV Disease as the Underlying Cause, by Region, 1987–2021—United States



Note. Data from CDC WONDER Online Database based on death certificate data compiled by the National Center for Health Statistics.



# Trends in Annual Age-Adjusted Rates of Death and the Percentage Distribution of Deaths in the General Population with HIV Disease as the Underlying Cause by Region, 1987–2021—United States

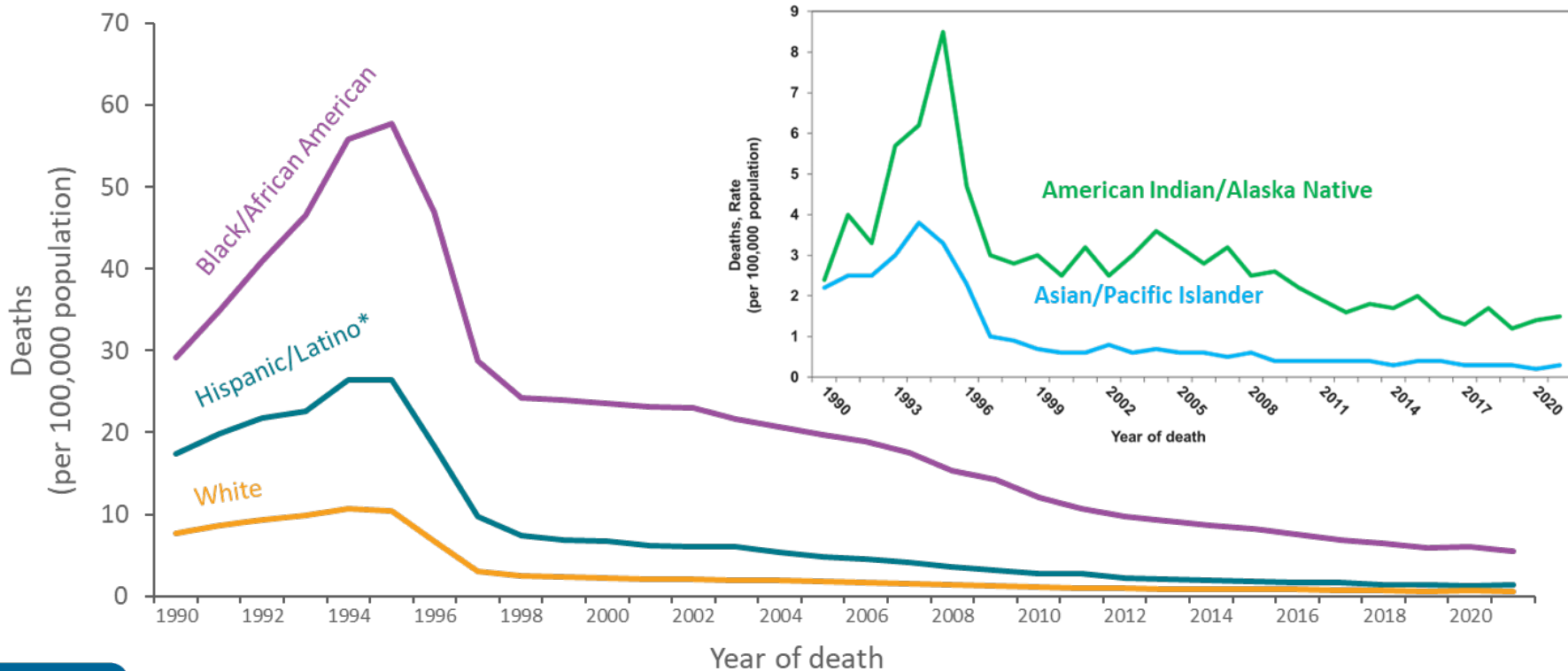


Note. Data from CDC WONDER Online Database based on death certificate data compiled by the National Center for Health Statistics.





# Trends in Age-Adjusted Annual Rates of Death in the General Population with HIV Disease as the Underlying Cause, by Race/Ethnicity, 1990–2021—United States



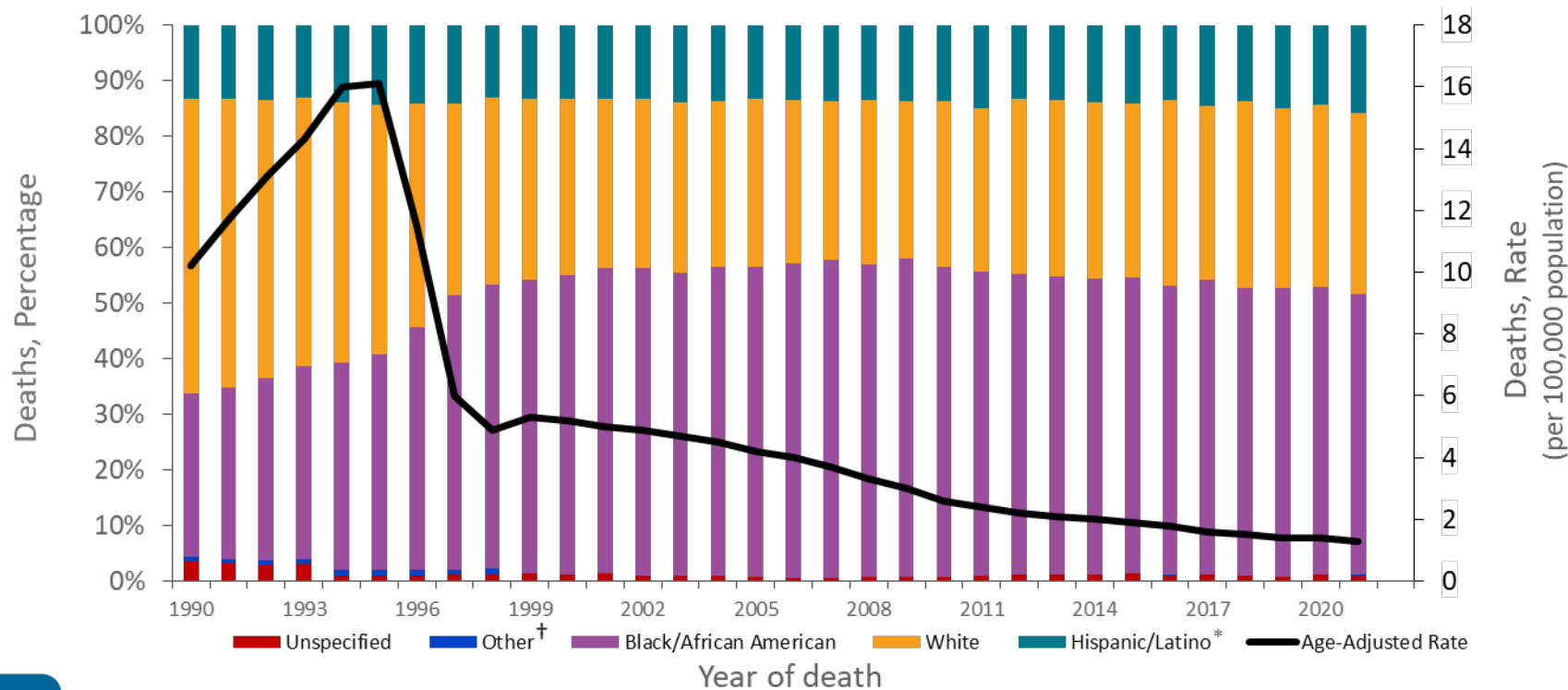
Note. Data from CDC WONDER Online Database based on death certificate data compiled by the National Center for Health Statistics.

\*Hispanic/Latino persons can be of any race.





# Trends in Annual Age-Adjusted Rates of Death and the Percentage Distribution of Deaths in the General Population with HIV Disease as the Underlying Cause by Race/Ethnicity, 1990–2021—United States

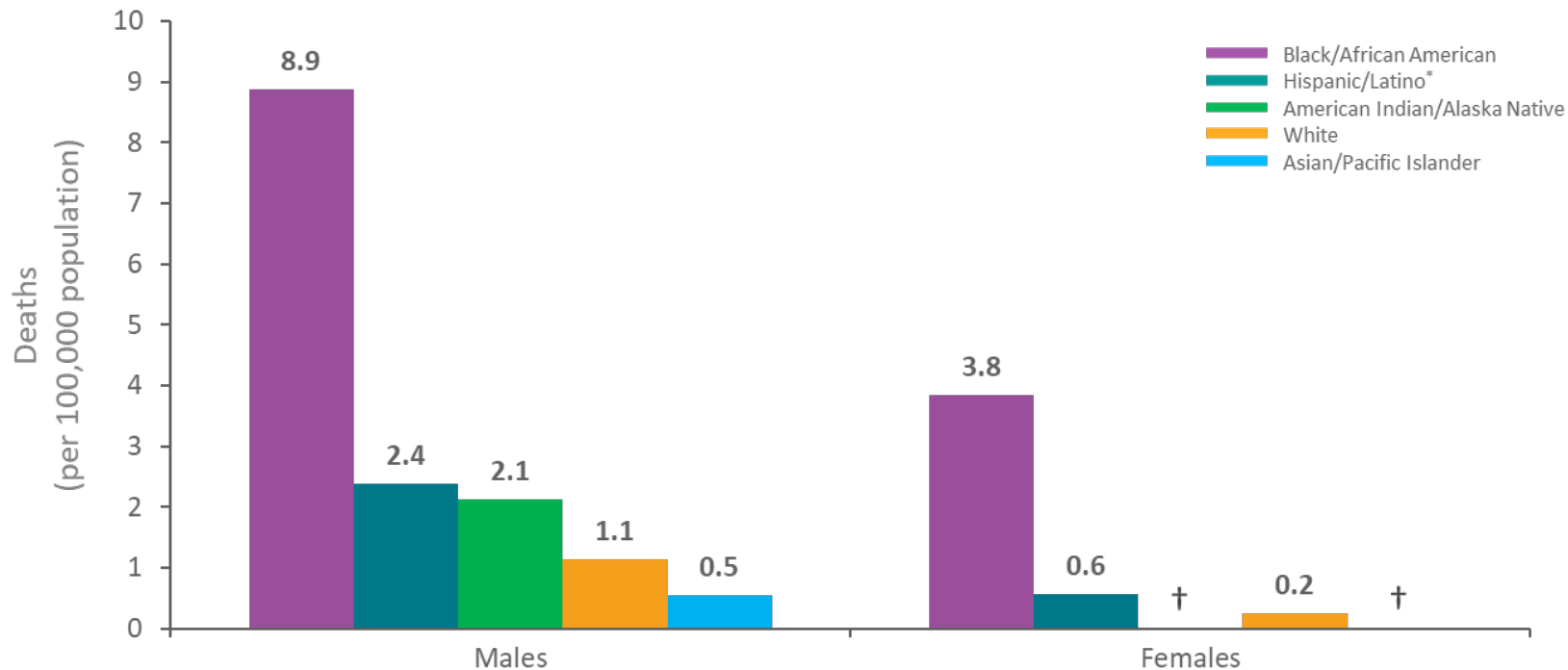


Note. Data from CDC WONDER Online Database based on death certificate data compiled by the National Center for Health Statistics.

\* Hispanic/Latino persons can be of any race.

† Asian/Pacific Islander persons and American Indian/Alaska Native persons.

# Age-Adjusted Average Annual Rate of Death in the General Population with HIV Disease as the Underlying Cause by Sex and Race/Ethnicity, 2017–2021—United States



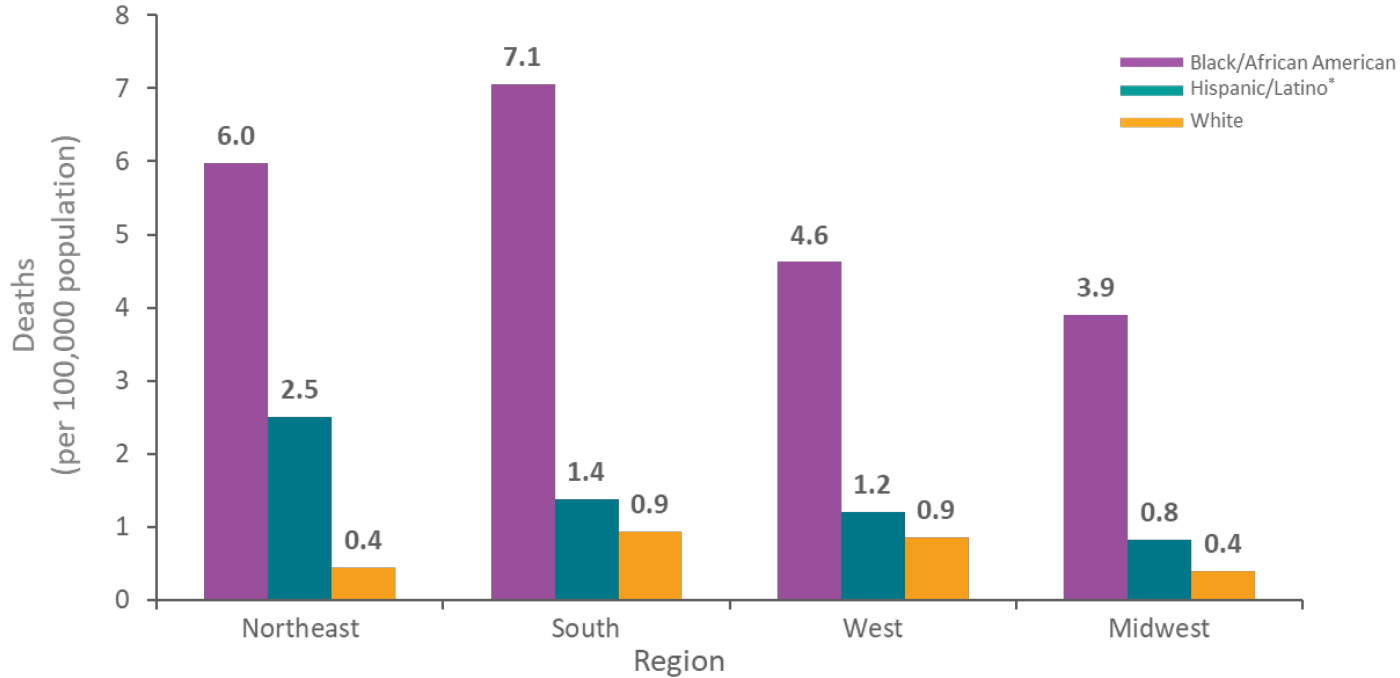
Note. Data from CDC WONDER Online Database based on death certificate data compiled by the National Center for Health Statistics.

\*Hispanic/Latino persons can be of any race.

† Unreliable rate due to a numerator of less than 20 deaths.



# Age-Adjusted Average Annual Rate of Death in the General Population with HIV Disease as the Underlying Cause by Race/Ethnicity and Region, 2017–2021—United States

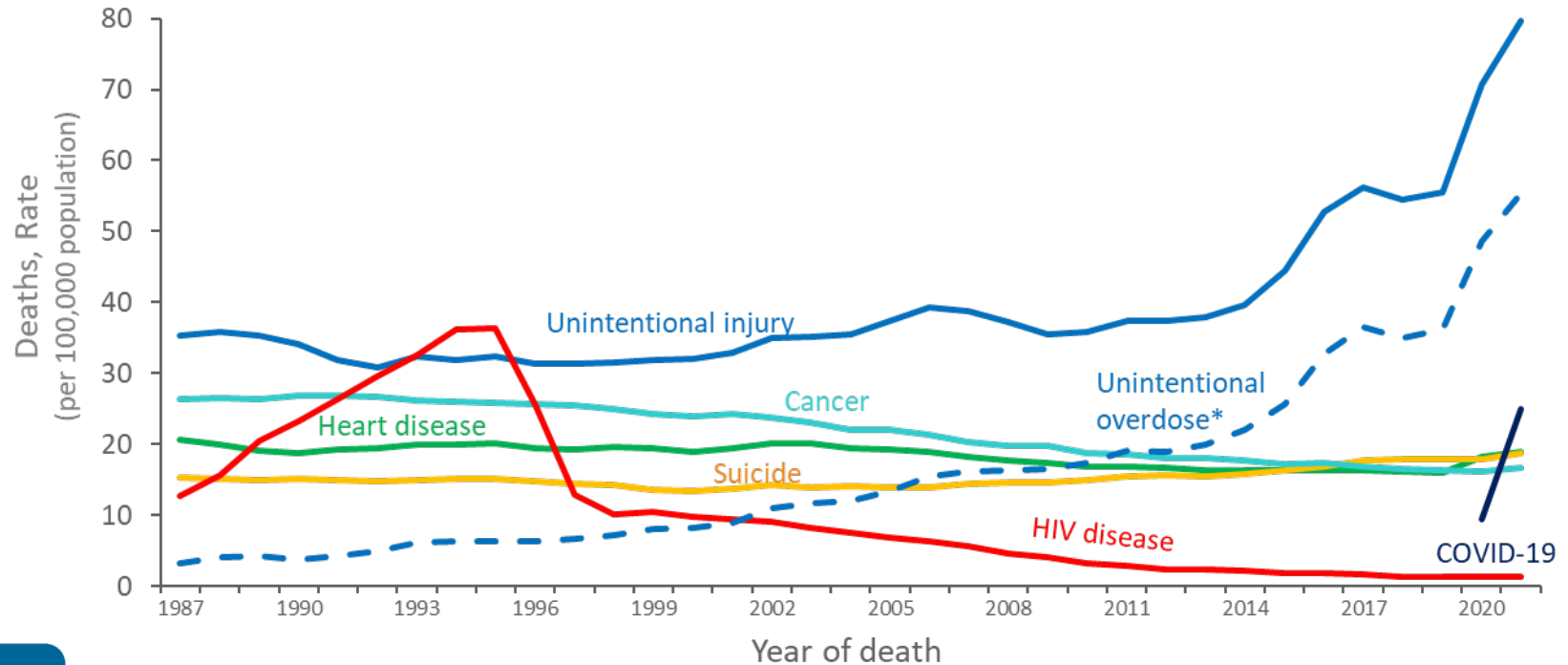


Note. Data from CDC WONDER Online Database based on death certificate data compiled by the National Center for Health Statistics.  
\*Hispanic/Latino persons can be of any race.





# Trends in Annual Rates of Death in the General Population with HIV Disease as the Underlying Cause versus the 5 Leading Causes among Persons Aged 25–44 Years, 1987–2021—United States

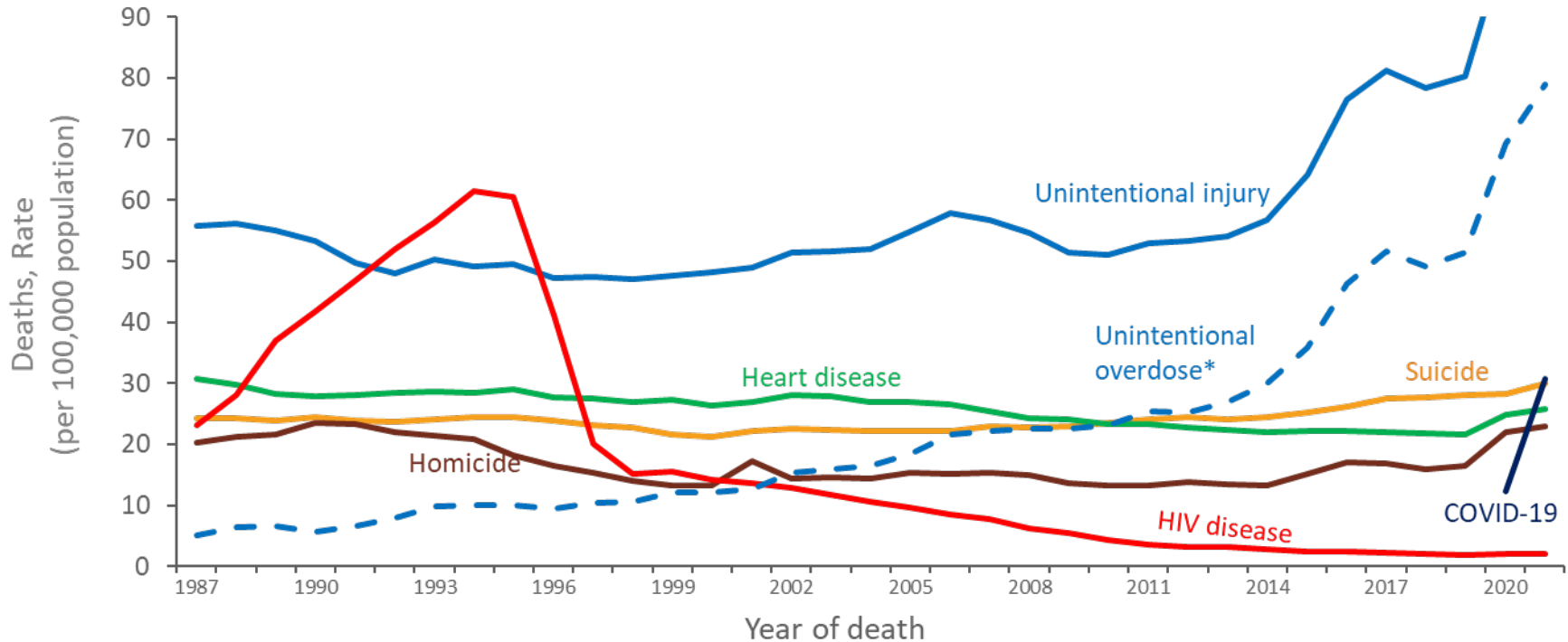


Note. Data from CDC WONDER Online Database based on death certificate data compiled by the National Center for Health Statistics.

\* Deaths with an underlying cause of unintentional overdose are a subset of deaths with an underlying cause of unintentional injury.



# Trends in Annual Rates of Death in the General Population with HIV Disease as the Underlying Cause versus the 5 Leading Causes among Males Aged 25–44 Years, 1987–2021—United States

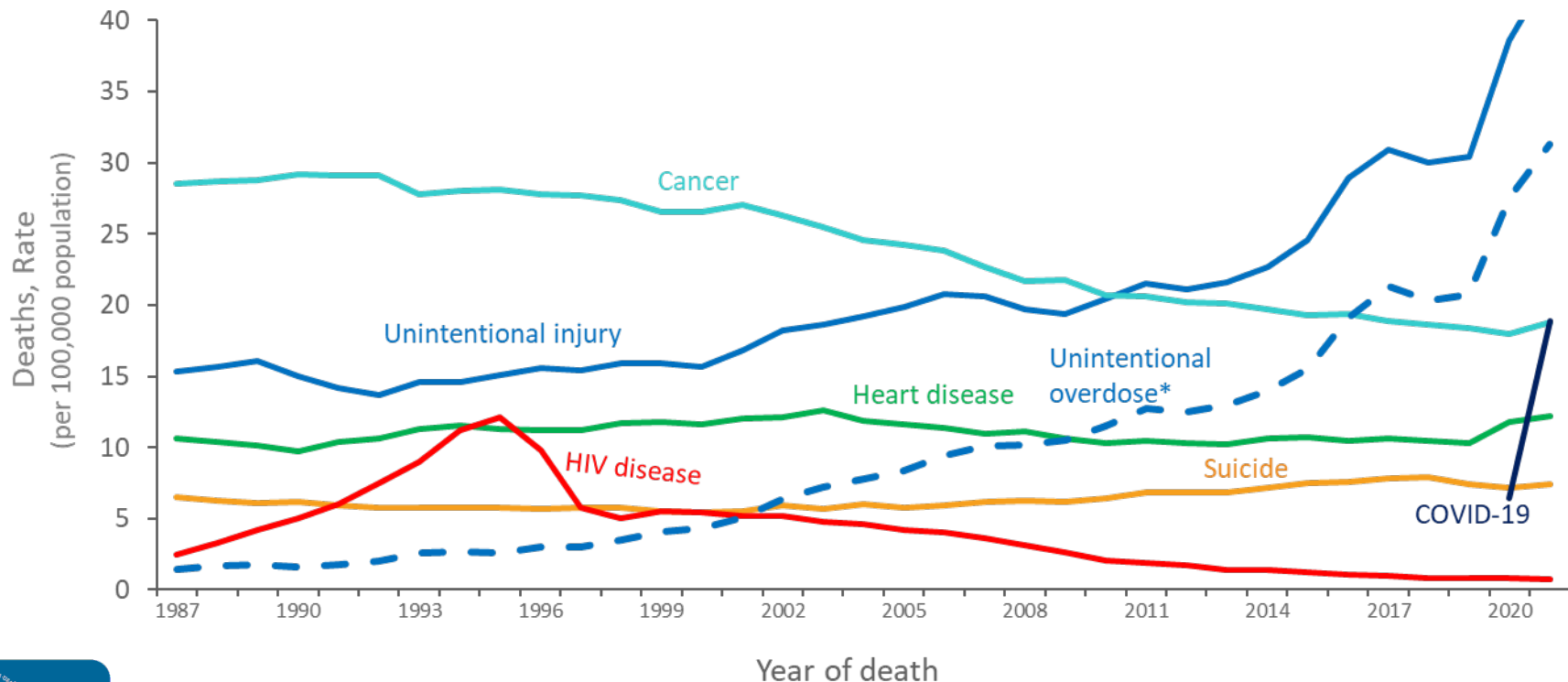


Note. Data from CDC WONDER Online Database based on death certificate data compiled by the National Center for Health Statistics.

\*Deaths with an underlying cause of unintentional overdose are a subset of deaths with an underlying cause of unintentional injury.



# Trends in Annual Rates of Death in the General Population with HIV Disease as the Underlying Cause versus the 5 Leading Causes among Females Aged 25–44 Years, 1987–2021—United States

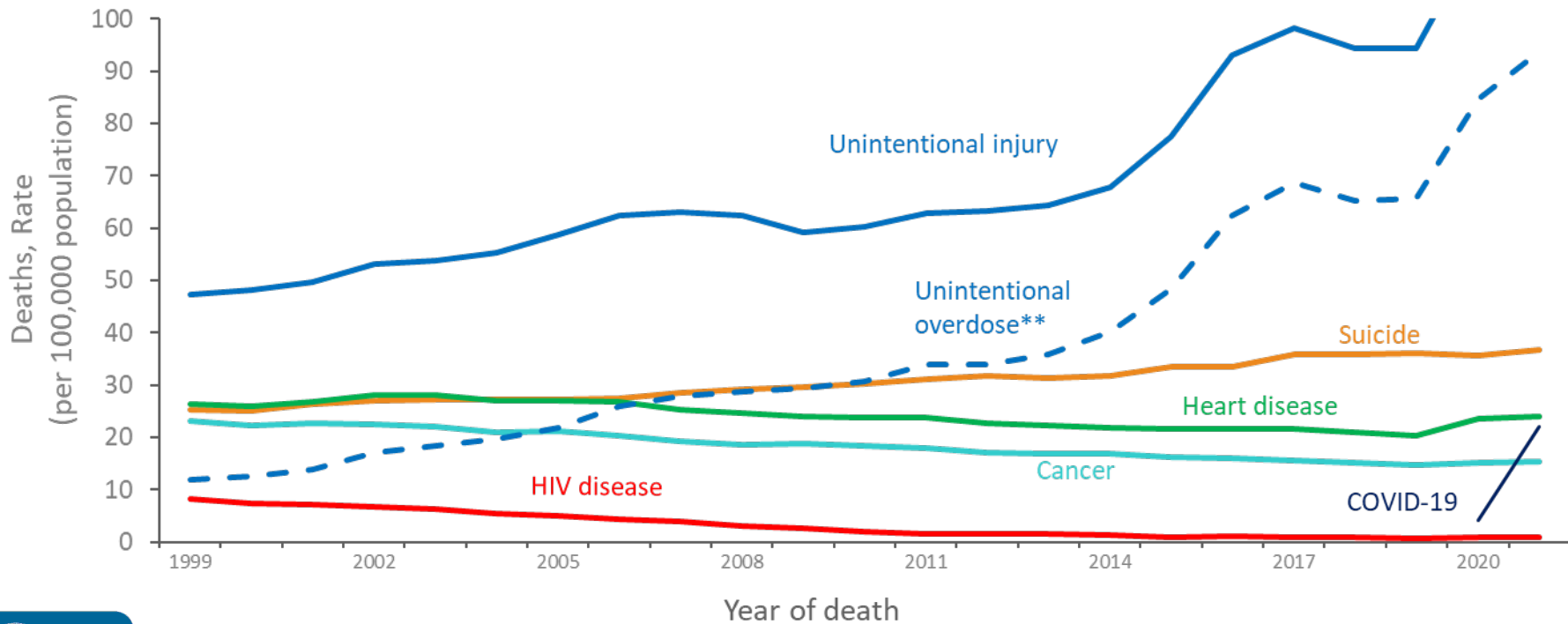


Note. Data from CDC WONDER Online Database based on death certificate data compiled by the National Center for Health Statistics.

\* Deaths with an underlying cause of unintentional overdose are a subset of deaths with an underlying cause of unintentional injury.



# Trends in Annual Rates of Death in the General Population with HIV Disease as the Underlying Cause versus the 5 Leading Causes among White\* Males Aged 25–44 Years 1999–2021—United States



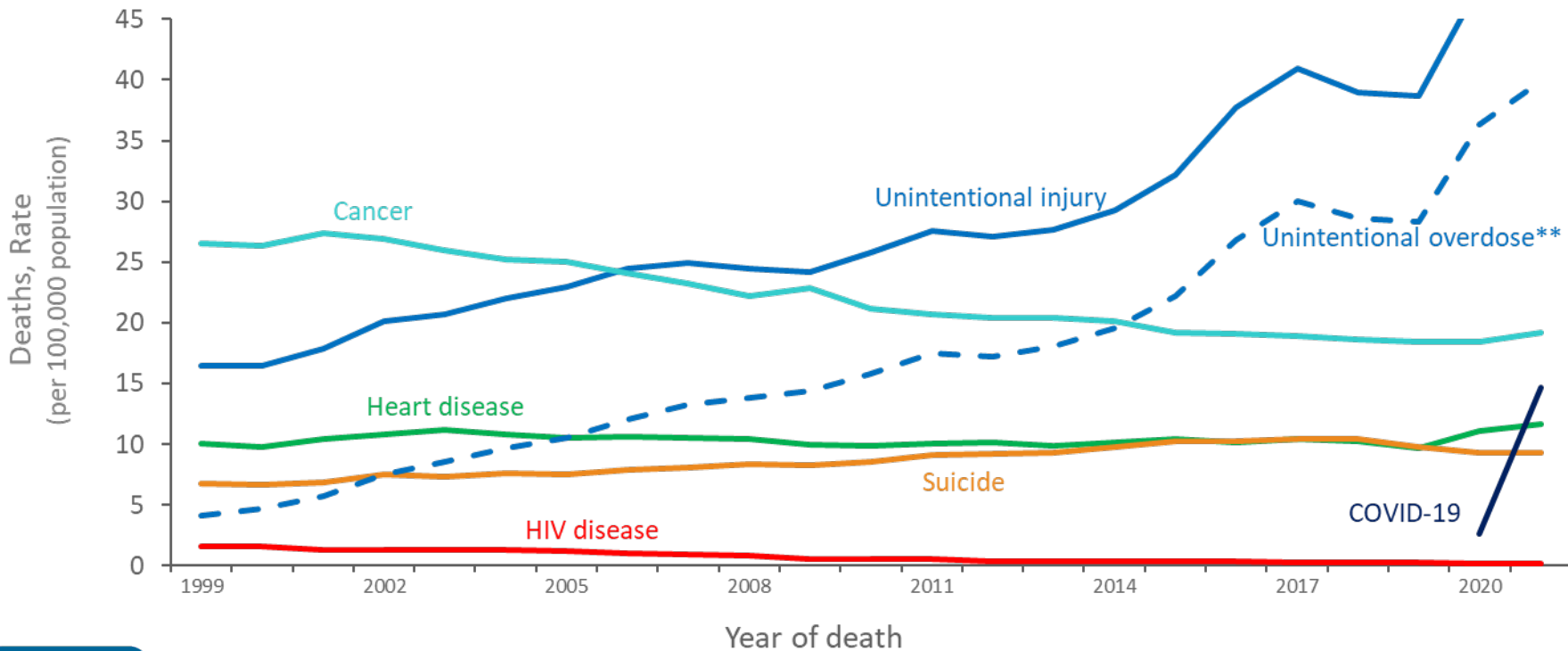
Note. Data from CDC WONDER Online Database based on death certificate data compiled by the National Center for Health Statistics.

\*Does not include persons of Hispanic/Latino ethnicity.

\*\* Deaths with an underlying cause of unintentional overdose are a subset of deaths with an underlying cause of unintentional injury.



# Trends in Annual Rates of Death in the General Population with HIV Disease as the Underlying Cause versus the 5 Leading Causes among White\* Females Aged 25–44 Years, 1999–2021—United States



Note. Data from CDC WONDER Online Database based on death certificate data compiled by the National Center for Health Statistics.

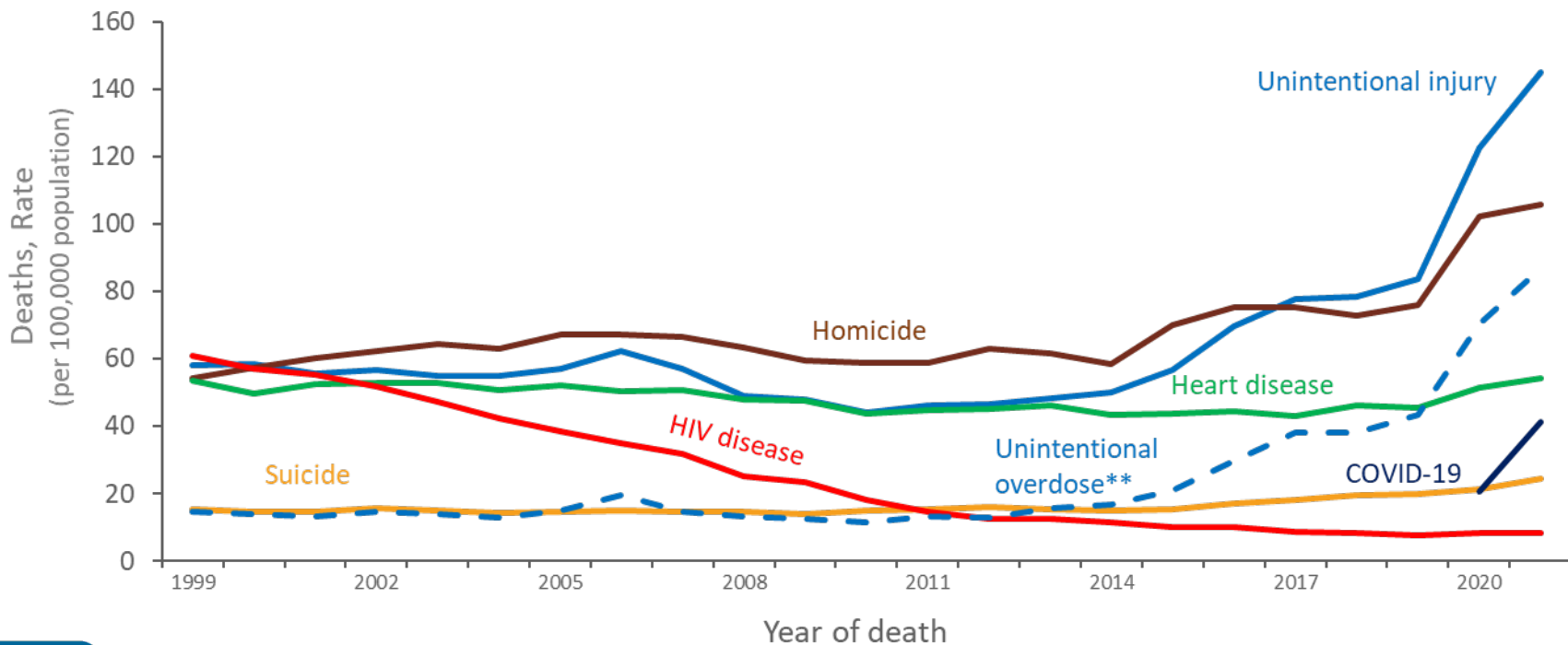
\*Does not include persons of Hispanic/Latino ethnicity.

\*\* Deaths with an underlying cause of unintentional overdose are a subset of deaths with an underlying cause of unintentional injury.





# Trends in Annual Rates of Death in the General Population with HIV Disease as the Underlying Cause versus the 5 Leading Causes among Black/African American\* Males Aged 25–44 Years, 1999–2021—United States

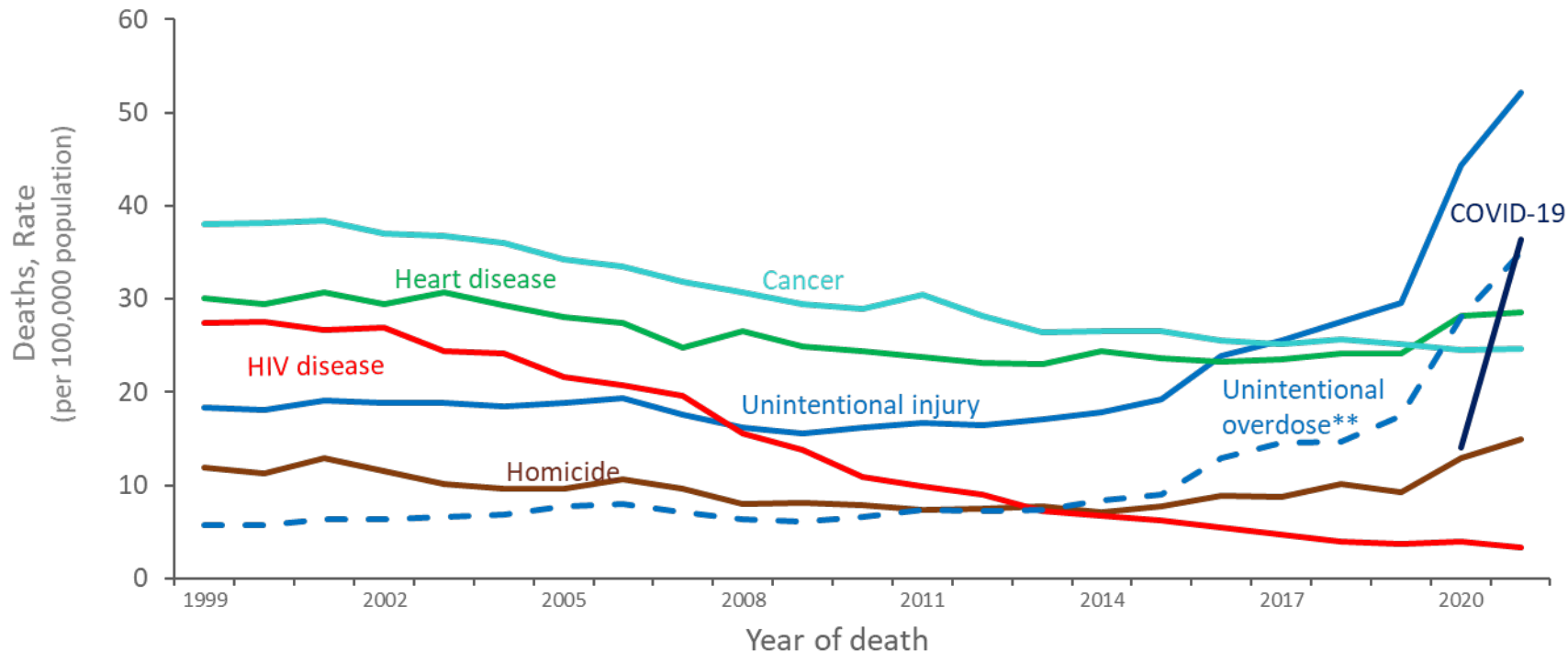


Note. Data from CDC WONDER Online Database based on death certificate data compiled by the National Center for Health Statistics.

\*Does not include persons of Hispanic/Latino ethnicity.

\*\* Deaths with an underlying cause of unintentional overdose are a subset of deaths with an underlying cause of unintentional injury.

# Trends in Annual Rates of Death in the General Population due to HIV Disease as the Underlying Cause versus the 5 Leading Causes among Black/African American\* Females Aged 25–44 Years, 1999–2021—United States



Note. Data from CDC WONDER Online Database based on death certificate data compiled by the National Center for Health Statistics.

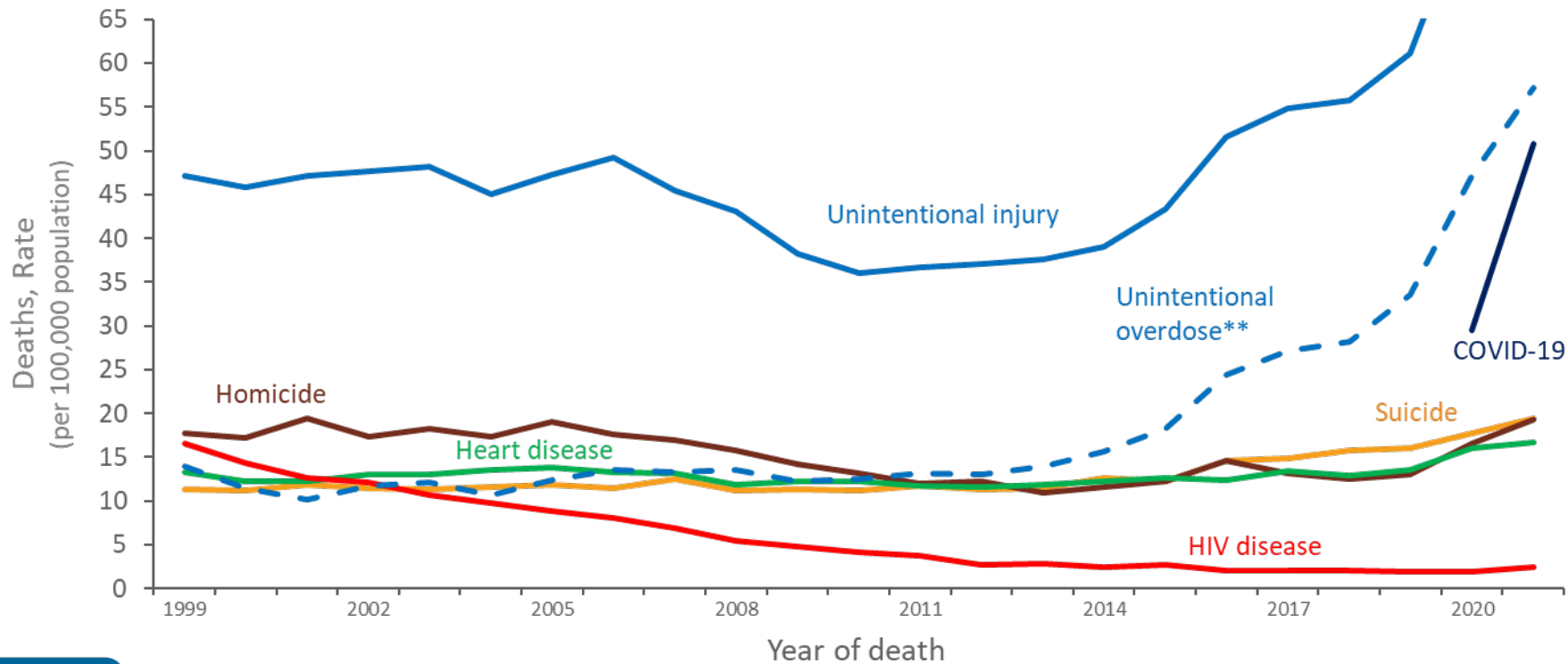
\*Does not include persons of Hispanic/Latino ethnicity.

\*\*Deaths with an underlying cause of unintentional overdose are a subset of deaths with an underlying cause of unintentional injury.





# Trends in Annual Rates of Death in the General Population with HIV Disease as the Underlying Cause versus the 5 Leading Causes among Hispanic/Latino\* Males Aged 25–44 Years, 1999–2021—United States



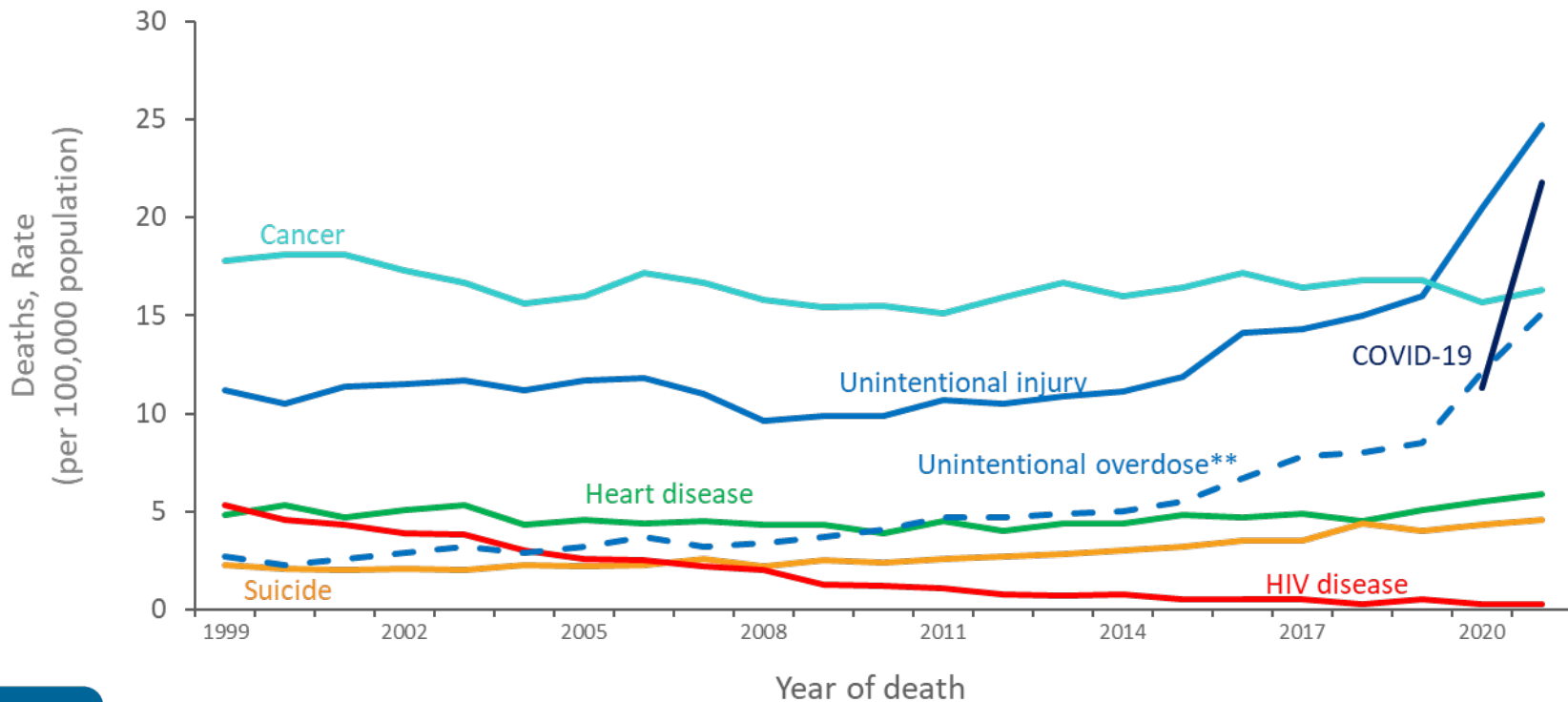
Note. Data from CDC WONDER Online Database based on death certificate data compiled by the National Center for Health Statistics.

\*Hispanic/Latino persons can be of any race.

\*\* Deaths with an underlying cause of unintentional overdose are a subset of deaths with an underlying cause of unintentional injury



# Trends in Annual Rates of Death in the General Population due to HIV Disease as the Underlying Cause versus the 5 Leading Causes among Hispanic/Latino\* Females, Aged 25–44 Years, 1999–2021—United States



Note. Data from CDC WONDER Online Database based on death certificate data compiled by the National Center for Health Statistics.

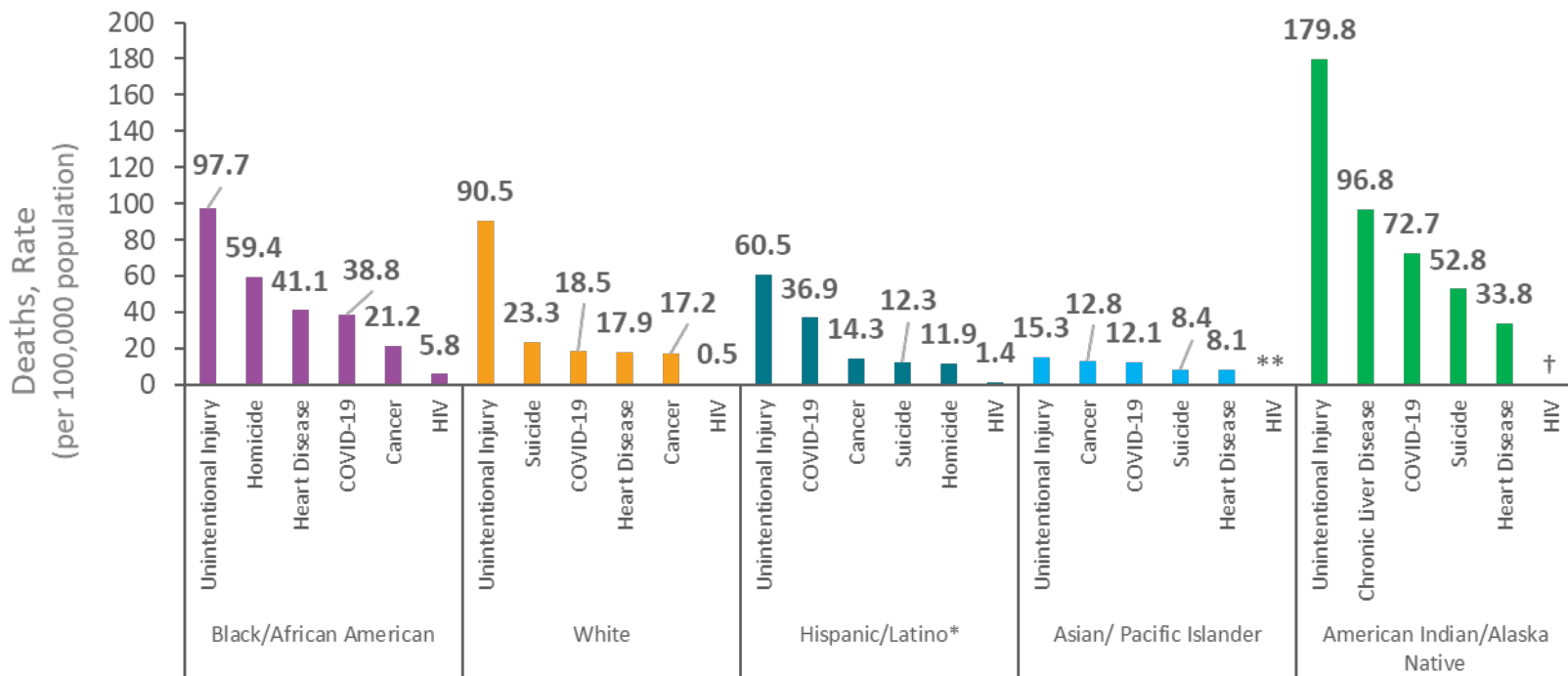
\*Hispanic/Latino persons can be of any race.

\*\* Deaths with an underlying cause of unintentional overdose are a subset of deaths with an underlying cause of unintentional injury





# Annual Rate of Death in the General Population with HIV Disease as the Underlying Cause versus the 5 Leading Causes among Persons Aged 25–44 Years, By Race/Ethnicity 2021—United States



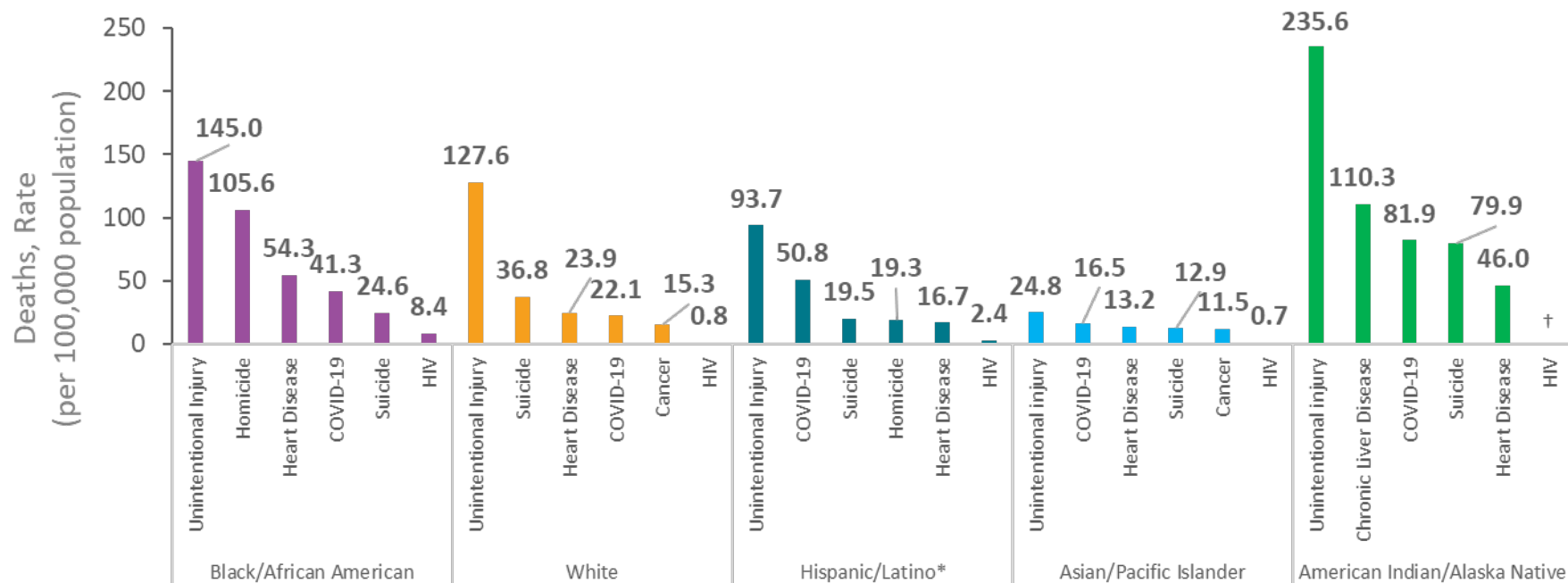
Note. Data from CDC WONDER Online Database based on death certificate data compiled by the National Center for Health Statistics.

- \*Hispanic/Latino persons can be of any race.
- \*\*Rate of death is less than 0.5 deaths per 100,000 persons.
- † Unreliable rate due to a numerator of less than 20 deaths.





# Annual Rate of Death in the General Population with HIV Disease as the Underlying Cause versus the 5 Leading Causes among Males Aged 25–44 Years, By Race/Ethnicity, 2021—United States



Note. Data from CDC WONDER Online Database based on death certificate data compiled by the National Center for Health Statistics.

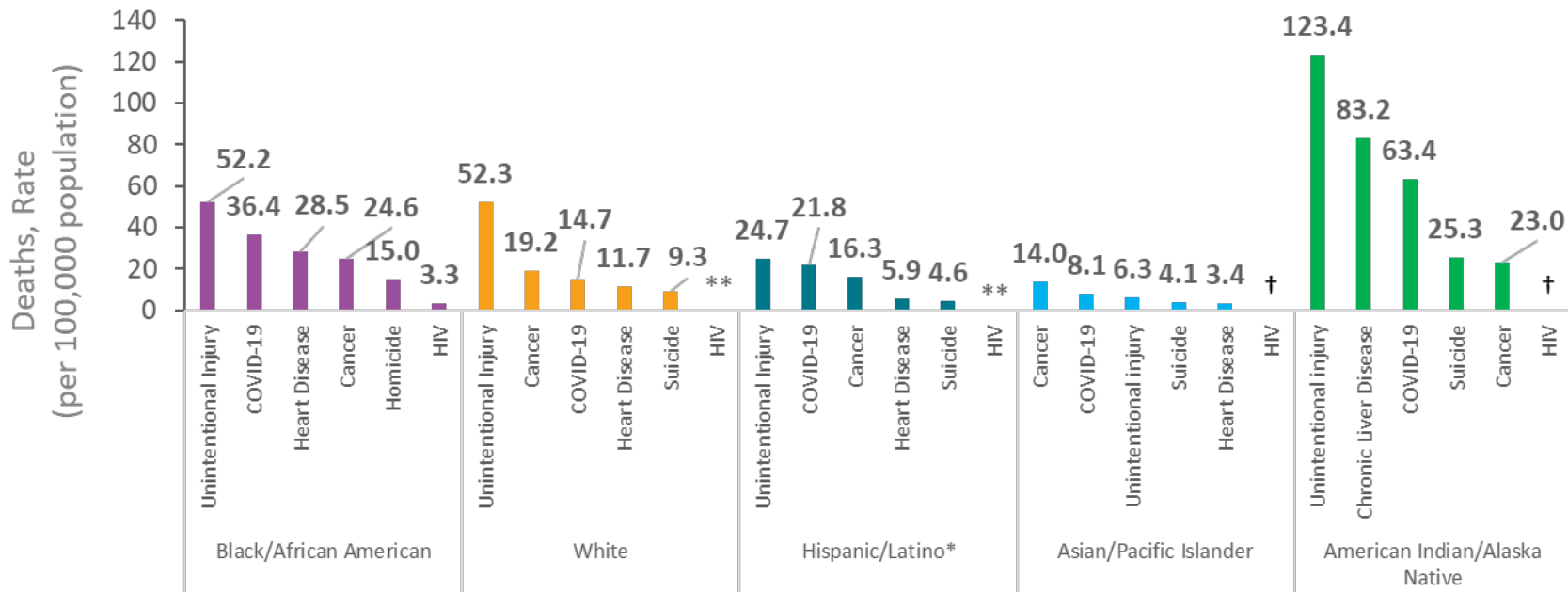
\*Hispanic/Latino persons can be of any race.

† Unreliable rate estimate due to a numerator of less than 20 deaths.





# Annual Rate of Death in the General Population with HIV Disease as the Underlying Cause versus the 5 Leading Causes among Females Aged 25–44 Years, By Race/Ethnicity, 2021—United States



Note. Data from CDC WONDER Online Database based on death certificate data compiled by the National Center for Health Statistics.

\*Hispanic/Latino persons can be of any race.

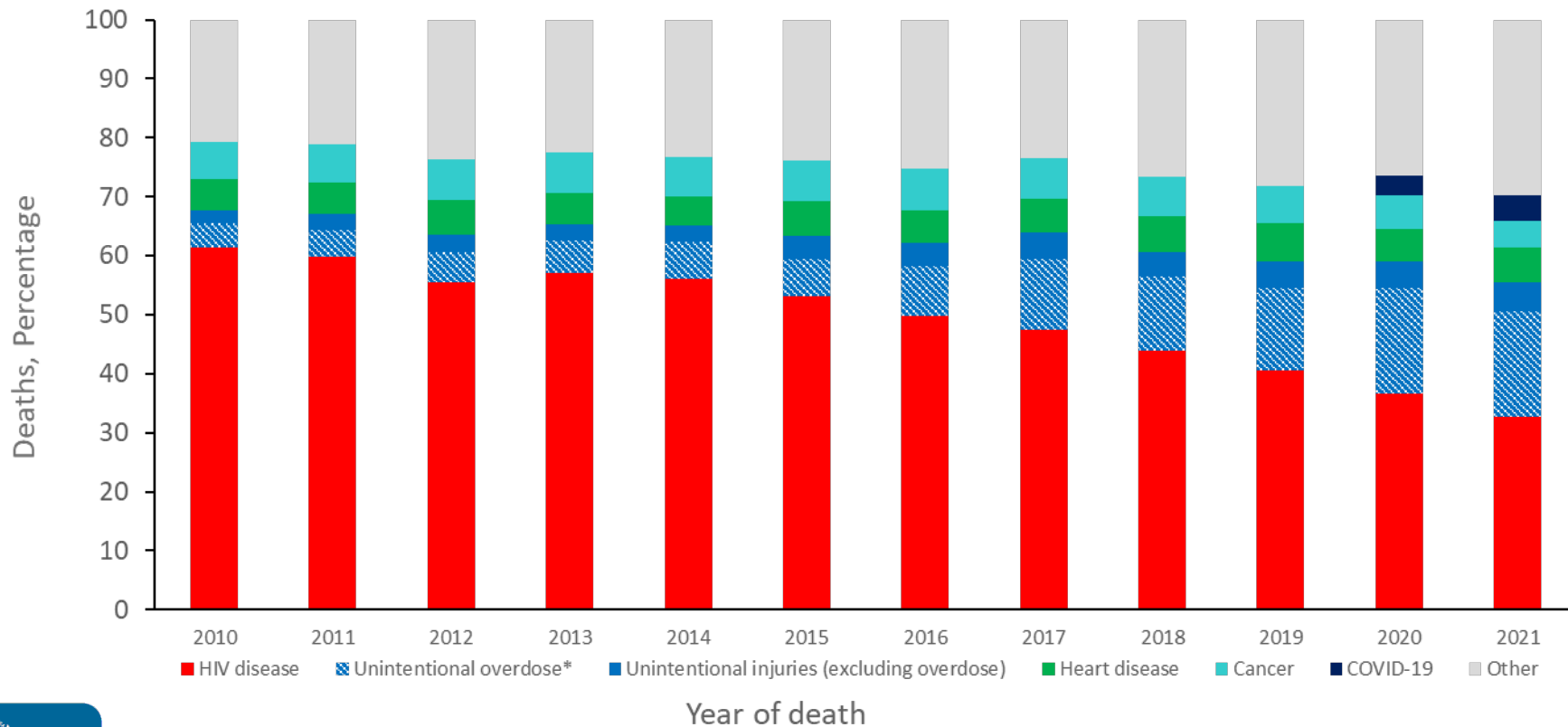
\*\*Rate of death is less than 0.5 deaths per 100,000 persons.

† Unreliable rate due to a numerator of less than 20 deaths.





# Percentages of 5 Leading Causes of Death among Persons Aged 25–44 Years with Diagnosed HIV Infection, 2010–2021—United States



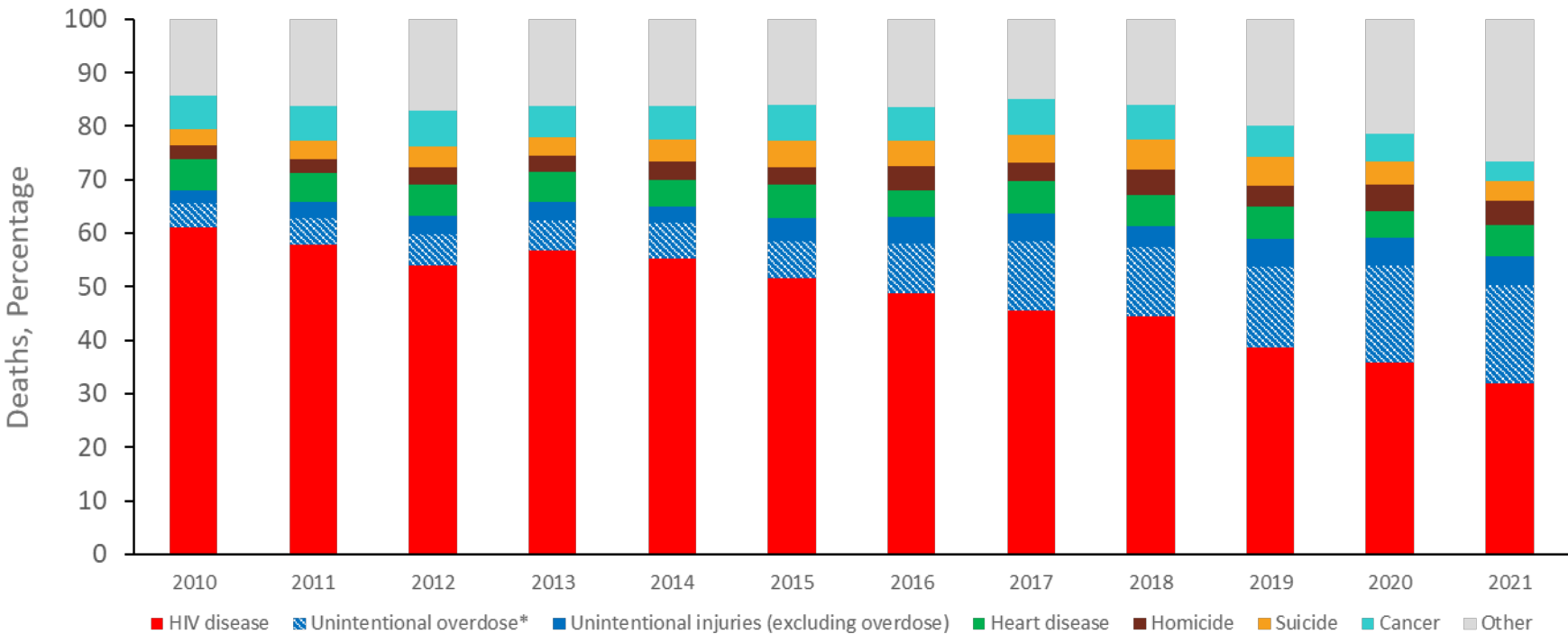
Note. Data on cause of death among persons with diagnosed HIV infection are from the National HIV Surveillance System (NHSS) and presented for persons with a known cause of death.

\*Deaths with an underlying cause of unintentional overdose are a subset of deaths with an underlying cause of unintentional injury.





# Percentages of 5 Leading Causes of Death among Males Aged 25-44 Years with Diagnosed HIV Infection, Based on Assigned Sex at Birth, 2010–2021—United States



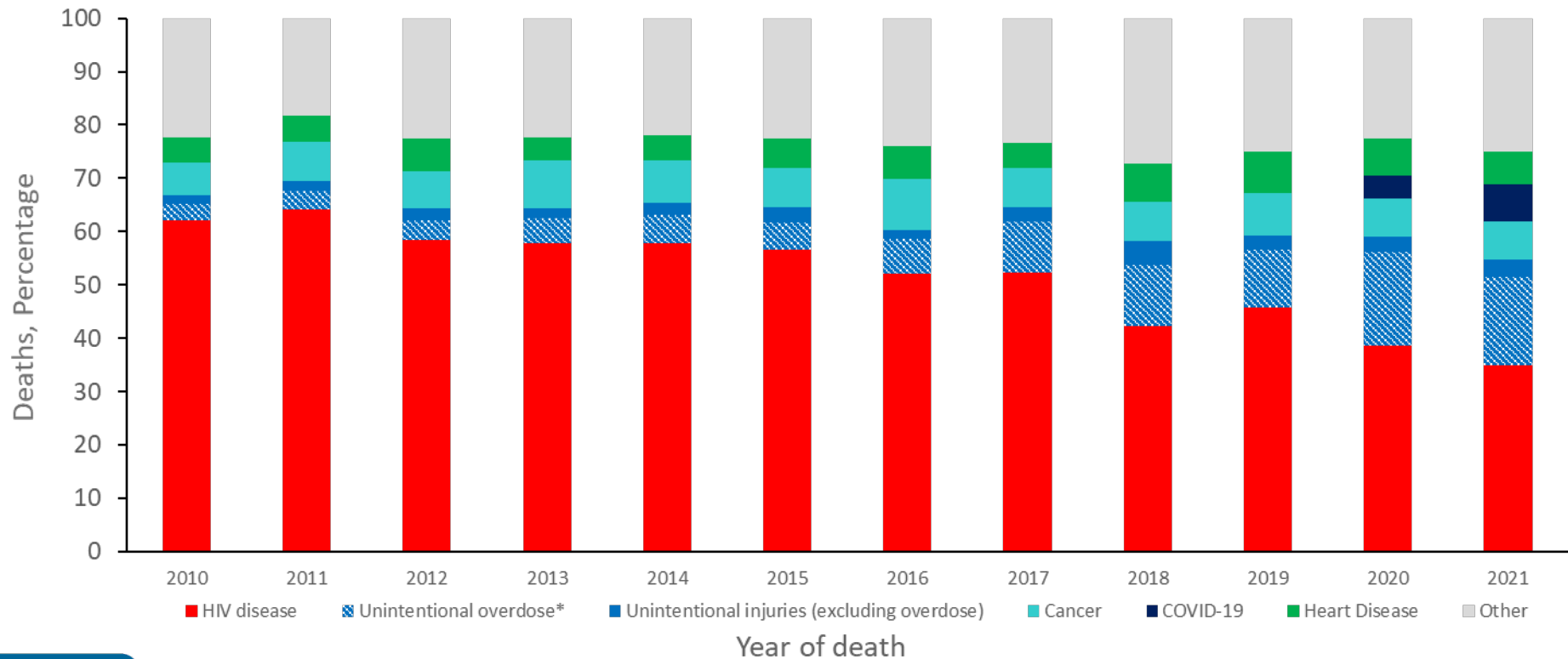
Note. Data on cause of death among persons with diagnosed HIV infection are from the National HIV Surveillance System (NHSS) and presented for persons with a known cause of death.

\*Deaths with an underlying cause of unintentional overdose are a subset of deaths with an underlying cause of unintentional injury.





# Percentages of 5 Leading Causes of Death among Females Aged 25-44 Years with Diagnosed HIV Infection, Based on Assigned Sex at Birth, 2010–2021—United States

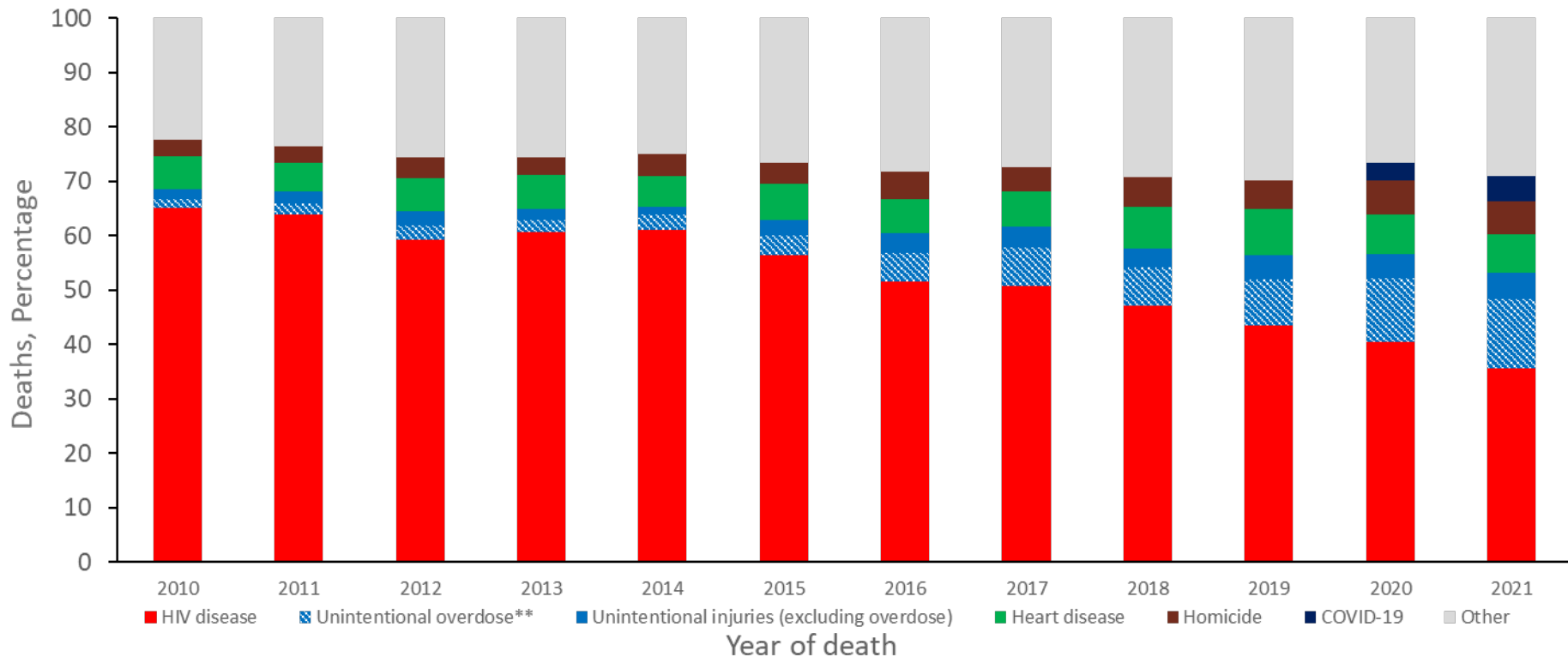


*Note.* Data on cause of death among persons with diagnosed HIV infection are from the National HIV Surveillance System (NHSS) and presented for persons with a known cause of death.

\*Deaths with an underlying cause of unintentional overdose are a subset of deaths with an underlying cause of unintentional injury.



# Percentages of 5 Leading Causes of Death among Black/African American\* Persons Aged 25-44 Years with Diagnosed HIV Infection, 2010–2021—United States



*Note.* Data on cause of death among persons with diagnosed HIV infection are from the National HIV Surveillance System (NHSS) and presented for persons with a known cause of death.

\*Does not include persons of Hispanic/Latino ethnicity.

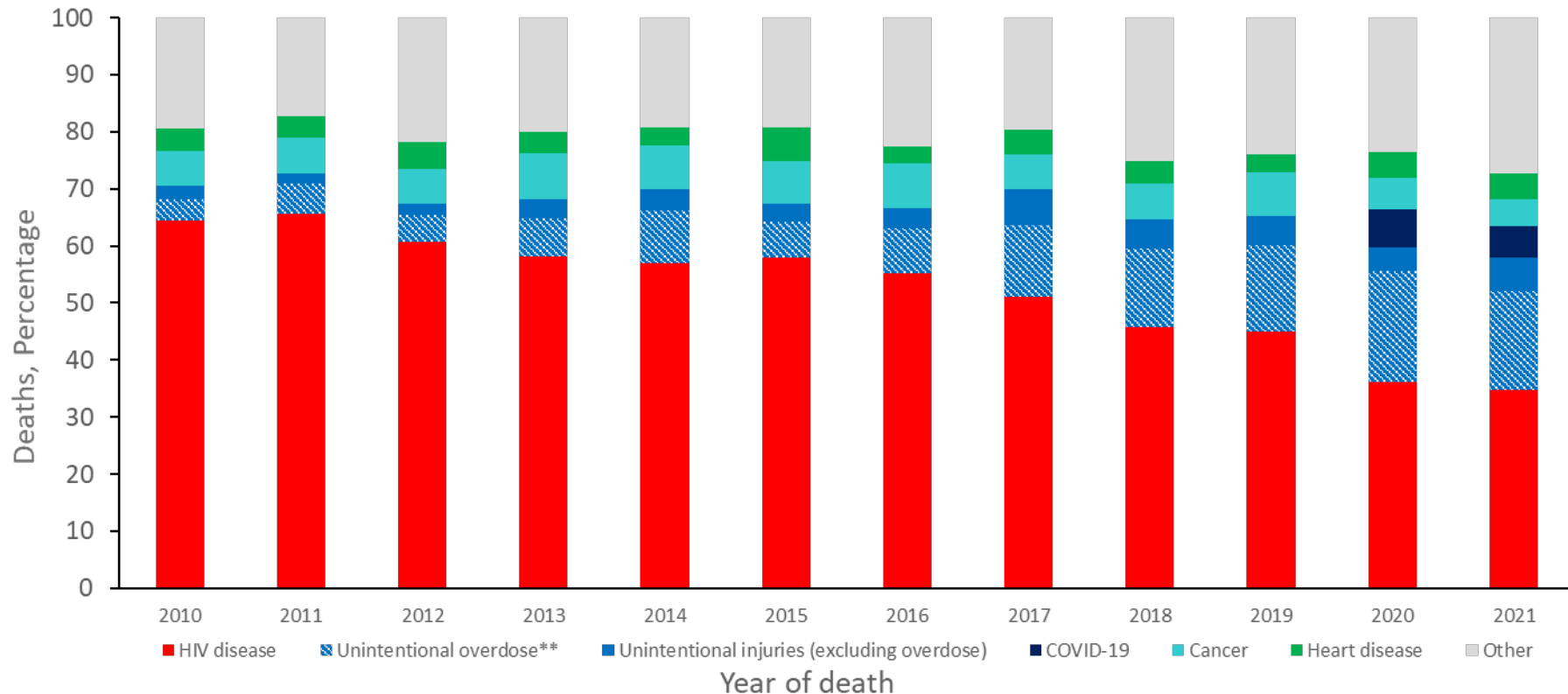
\*\*Deaths with an underlying cause of unintentional overdose are a subset of deaths with an underlying cause of unintentional injury.







# Percentages of 5 Leading Causes of Death among Hispanic/Latino\* Persons Aged 25-44 Years with Diagnosed HIV Infection, 2010–2021—United States



Note. Data on cause of death among persons with diagnosed HIV infection are from the National HIV Surveillance System (NHSS) and presented for persons with a known cause of death.

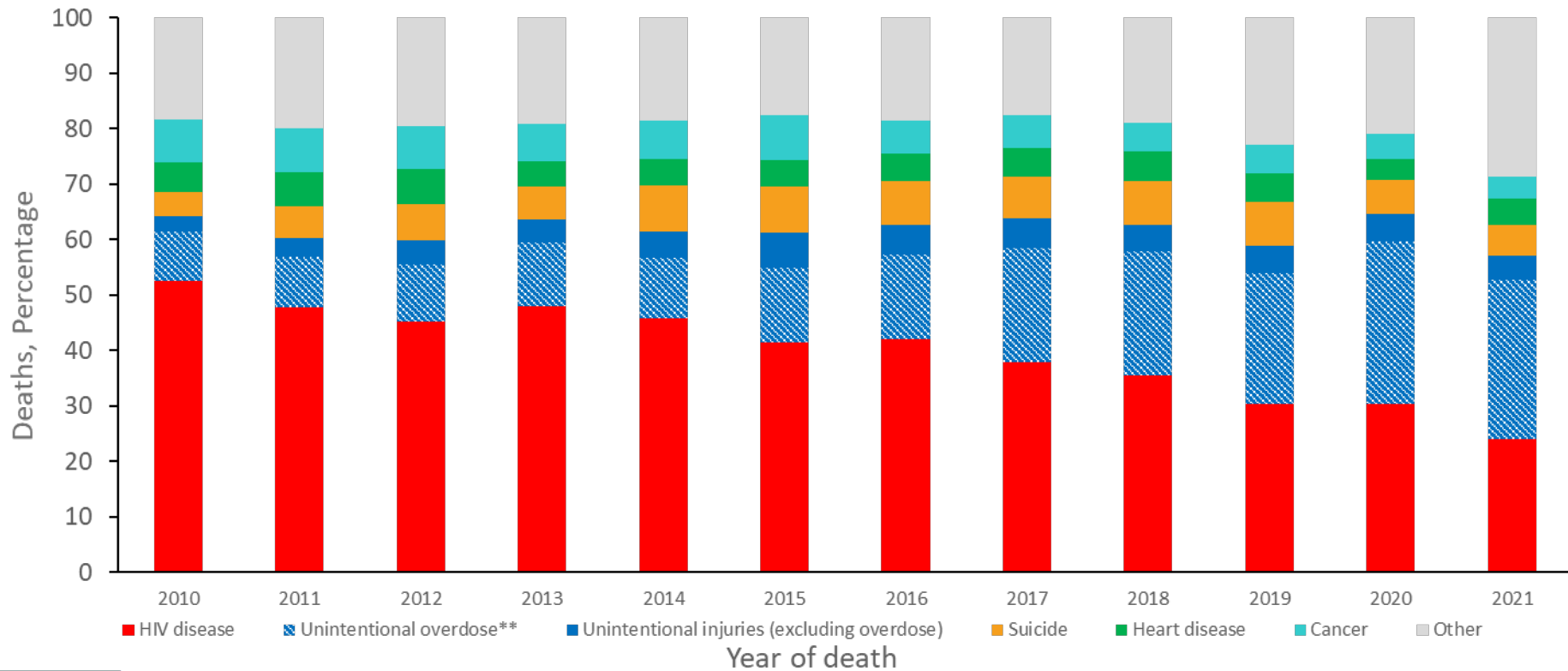
\*Hispanic/Latino persons can be of any race.

\*\*Deaths with an underlying cause of unintentional overdose are a subset of deaths with an underlying cause of unintentional injury.





# Percentages of 5 Leading Causes of Death among White\* Persons Aged 25–44 Years with Diagnosed HIV Infection, 2010–2021—United States



Note. Data on cause of death among persons with diagnosed HIV infection are from the National HIV Surveillance System (NHSS) and presented for persons with a known cause of death.

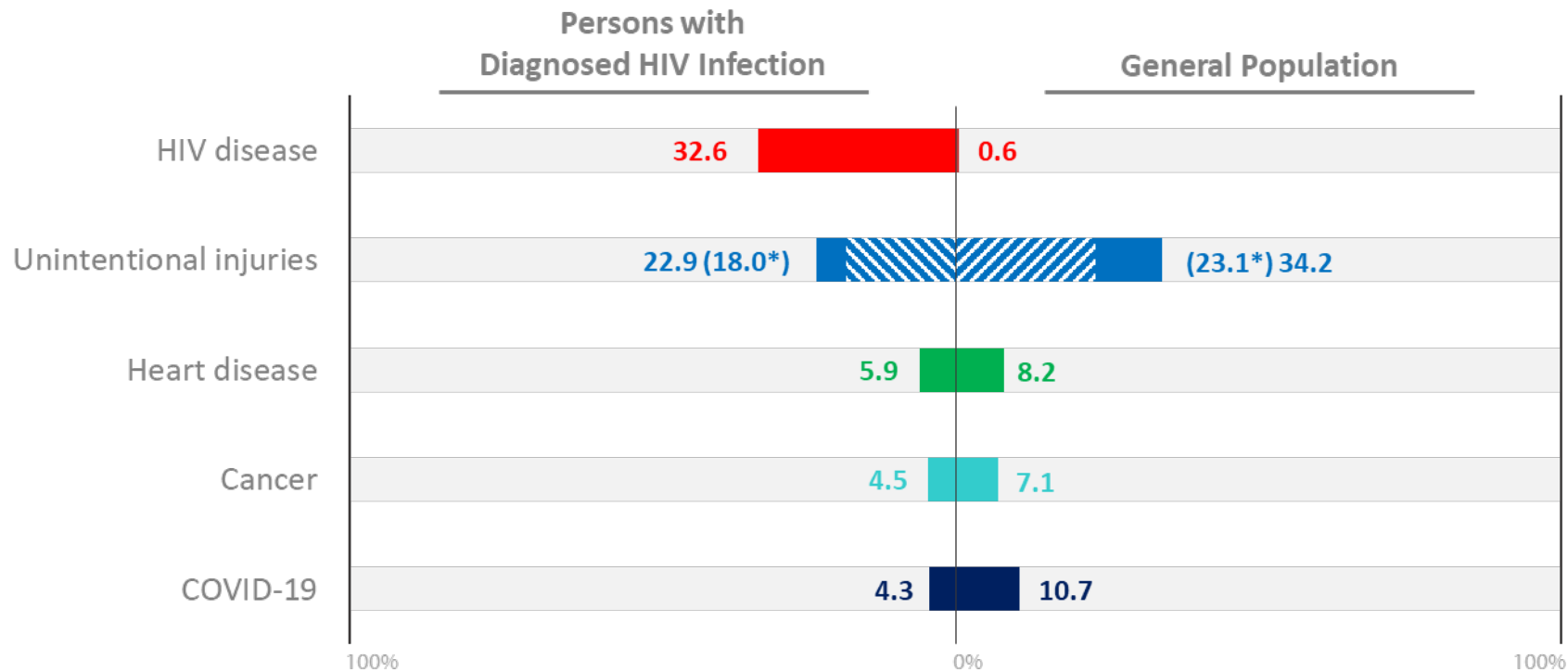
\*Does not include persons of Hispanic/Latino ethnicity.

\*\*Deaths with an underlying cause of unintentional overdose are a subset of deaths with an underlying cause of unintentional injury.





# Percentages of 5 Leading Causes of Death among Persons Aged 25–44 Years with Diagnosed HIV Infection Compared to the General Population, 2021—United States



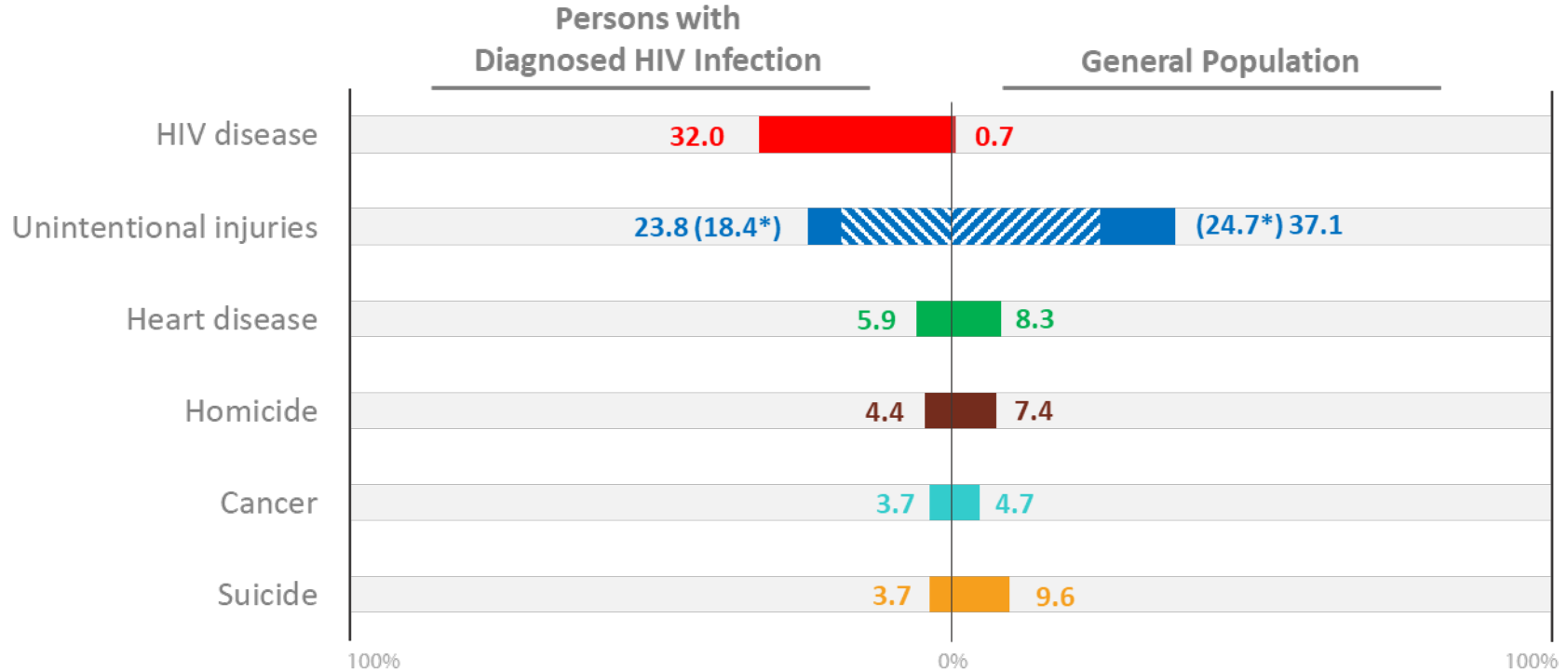
*Note.* Data on cause of death among persons with diagnosed HIV infection are from the National HIV Surveillance System (NHSS) and presented for persons with a known cause of death. Data on cause of death among the general population are from CDC WONDER.

\*Deaths with an underlying cause of unintentional overdose, denoted with blue stripes, are a subset of deaths with an underlying cause of unintentional injury, denoted with solid and striped blue.





# Percentages of 5 Leading Causes of Death among Males Aged 25–44 Years with Diagnosed HIV Infection Compared to the General Population, 2021—United States

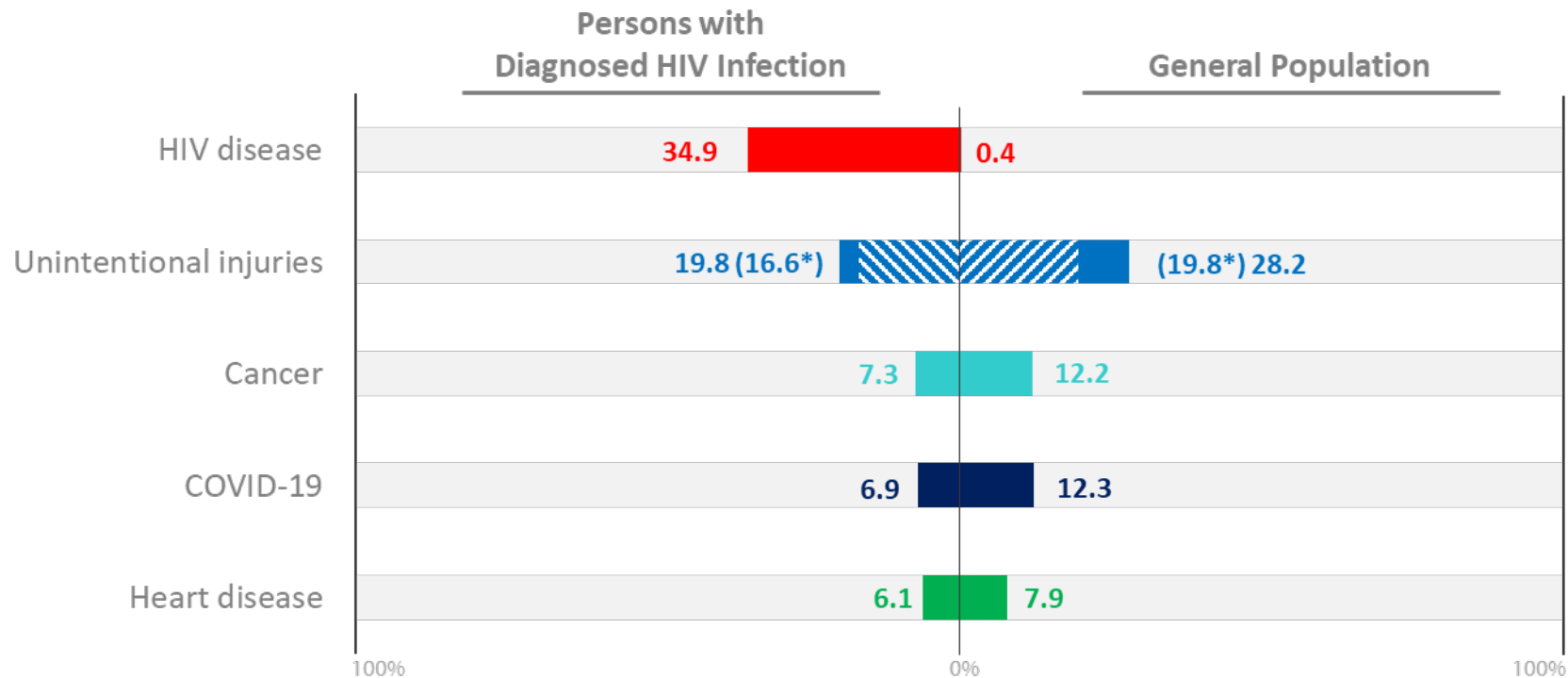


Note. Data on cause of death among persons with diagnosed HIV infection are from the National HIV Surveillance System (NHSS) and presented for persons with a known cause of death. Data on cause of death among the general population are from CDC WONDER.

\*Deaths with an underlying cause of unintentional overdose, denoted with blue stripes, are a subset of deaths with an underlying cause of unintentional injury, denoted with solid and striped blue.



# Percentages of 5 Leading Causes of Death among Females Aged 25–44 Years with Diagnosed HIV Infection Compared to the General Population, 2021—United States

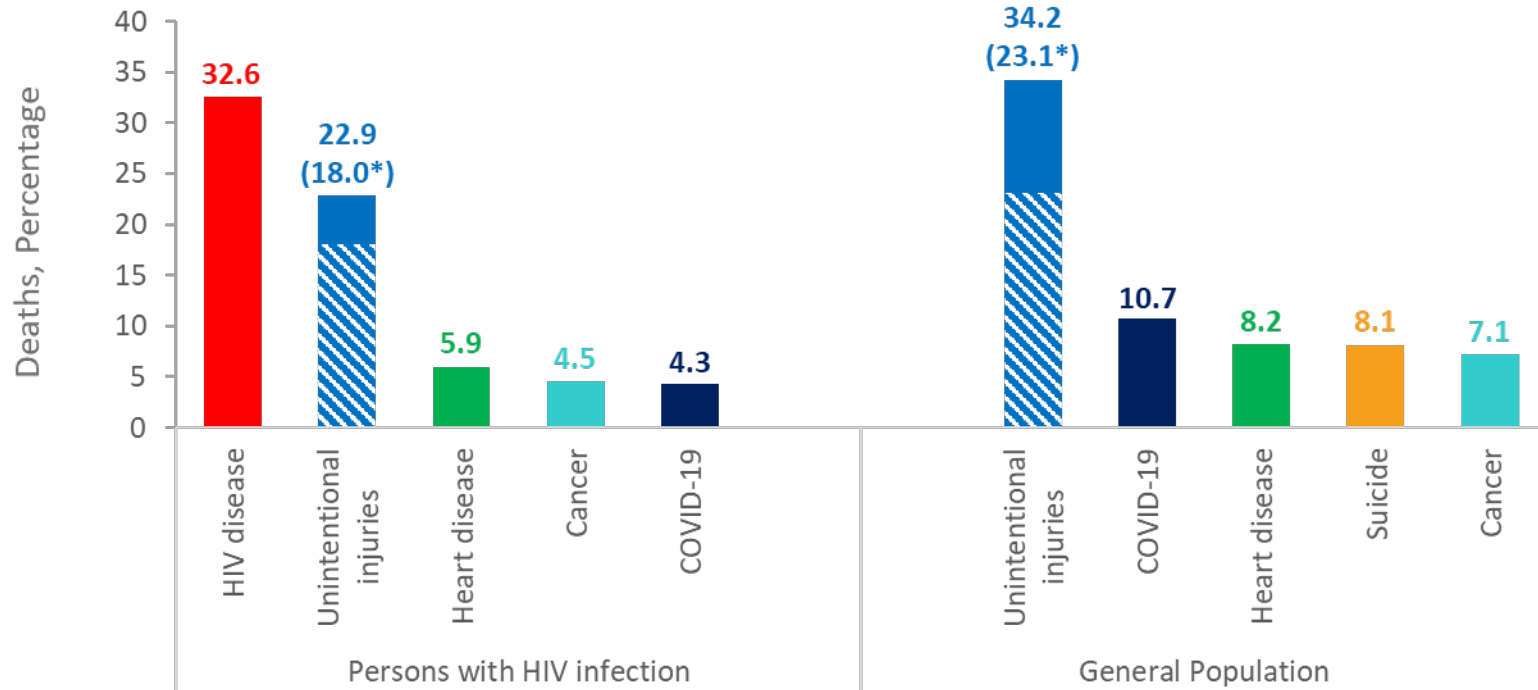


*Note.* Data on cause of death among persons with diagnosed HIV infection are from the National HIV Surveillance System (NHSS) and presented for persons with a known cause of death. Data on cause of death among the general population are from CDC WONDER.

\*Deaths with an underlying cause of unintentional overdose, denoted with blue stripes, are a subset of deaths with an underlying cause of unintentional injury, denoted with solid and striped blue.



# Percentages of 5 Leading Causes of Death among Persons Aged 25–44 Years with Diagnosed HIV Infection Compared to the 5 Leading Causes of Death among Persons Aged 25–44 Years the General Population, 2021—United States



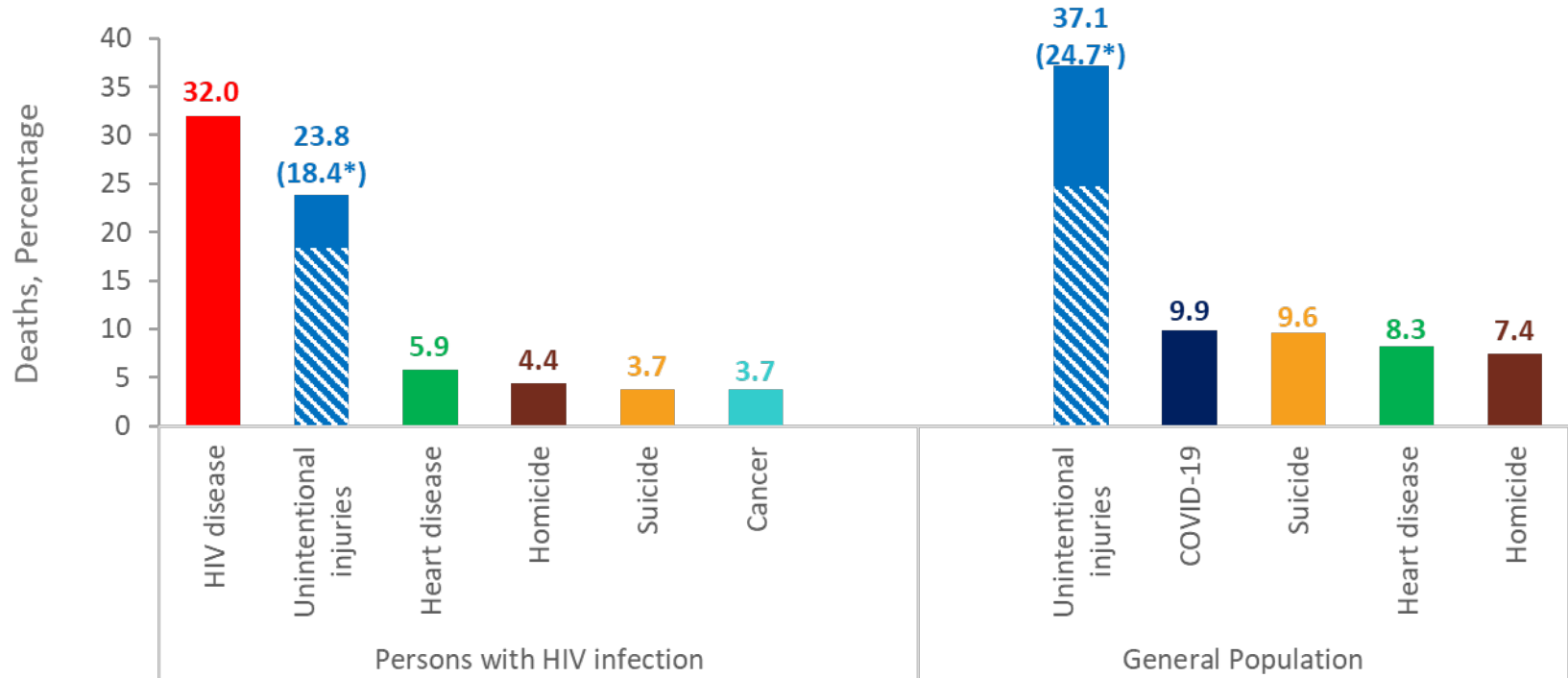
Note. Data on cause of death among persons with diagnosed HIV infection are from the National HIV Surveillance System (NHSS) and presented for persons with a known cause of death. Data on cause of death among the general population are from CDC WONDER.

\* Deaths with an underlying cause of unintentional overdose, denoted with blue stripes, are a subset of deaths with an underlying cause of unintentional injury, denoted with solid and striped blue.





# Percentages of 5 Leading Causes of Death among Males Aged 25–44 Years with Diagnosed HIV Infection Compared to the 5 Leading Causes of Death among Males Aged 25–44 Years in the General Population, 2021—United States



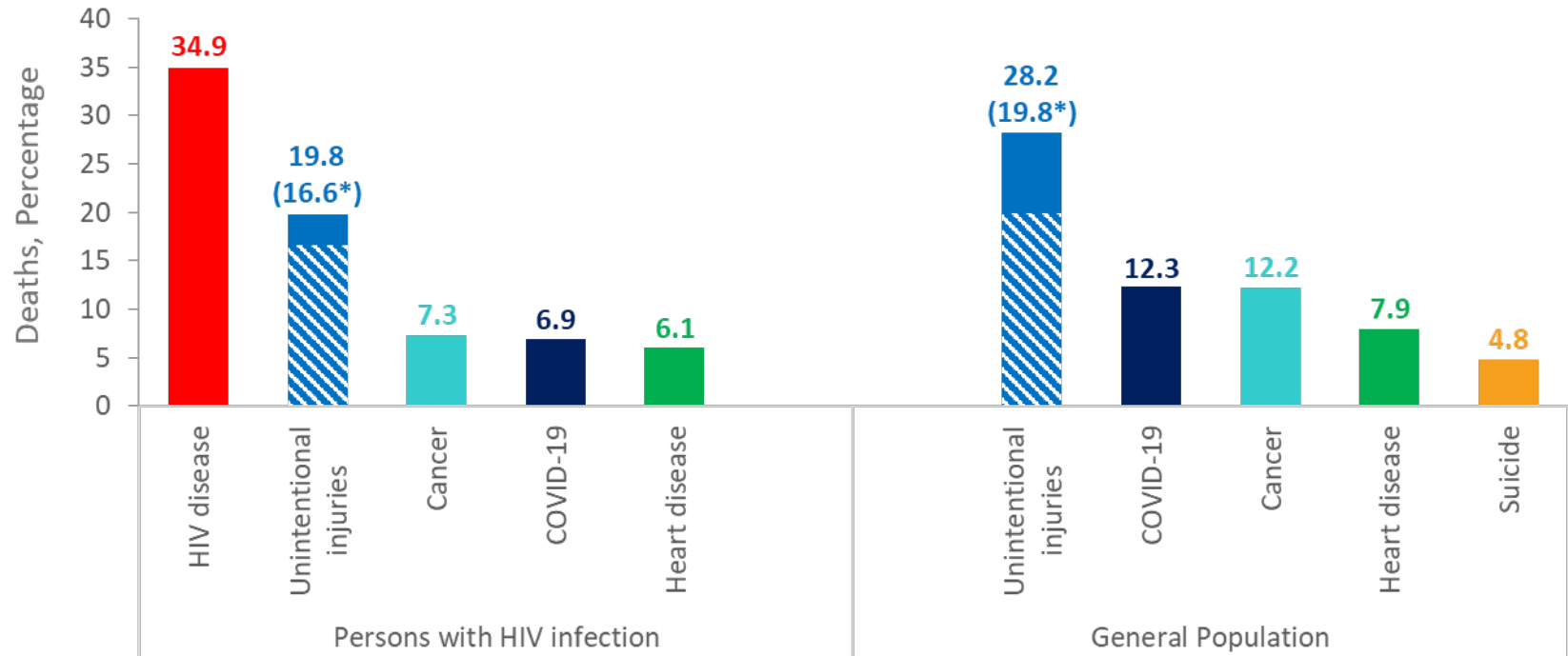
Note. Data on cause of death among persons with diagnosed HIV infection are from the National HIV Surveillance System (NHSS) and presented for persons with a known cause of death. Data on cause of death among the general population are from CDC WONDER.

\*Deaths with an underlying cause of unintentional overdose, denoted with blue stripes, are a subset of deaths with an underlying cause of unintentional injury, denoted with solid and striped blue.





# Percentages of 5 Leading Causes of Death among Females Aged 25–44 Years with Diagnosed HIV Infection Compared to the 5 Leading Causes of Death among Females Aged 25–44 Years in the General Population, 2021—United States



Note. Data on cause of death among persons with diagnosed HIV infection are from the National HIV Surveillance System (NHSS) and presented for persons with a known cause of death. Data on cause of death among the general population are from CDC WONDER.

\*Deaths with an underlying cause of unintentional overdose, denoted with blue stripes, are a subset of deaths with an underlying cause of unintentional injury, denoted with solid and striped blue.



# Conclusions

- After rapidly increasing since the 1980s, the annual rate of death due to HIV disease peaked around 1994, then decreased rapidly through 1997. In recent years, the rate of death due to HIV disease continues to slowly decline, decreasing from 2.6 deaths per 100,000 in 2010 to 1.3 deaths per 100,000 in 2021.
- Among the general population in 2021, persons dying of HIV disease increasingly consist of:
  - males (76%)
  - Black/African American persons (49%)
  - residents of the South (55%)
  - persons 45 years of age or older (73%)
- Among persons aged 25 to 44 with diagnosed HIV who died in 2021 and have a known cause of death:
  - 36% of Black/African American persons died due to HIV disease compared to 24% of White persons
  - 35% of females died due to HIV disease compared to 32% of males
- HIV disease continues to remain among the leading causes of death among all persons aged 25 to 44 years, ranking 13<sup>th</sup> in 2021.
  - HIV disease as an underlying cause of death is particularly high among Black/African American persons aged 25 to 44 years, ranking the 7<sup>th</sup> leading cause among Black males and the 12<sup>th</sup> leading cause among Black females in 2021.