

Using Injury Data by Race and Ethnicity

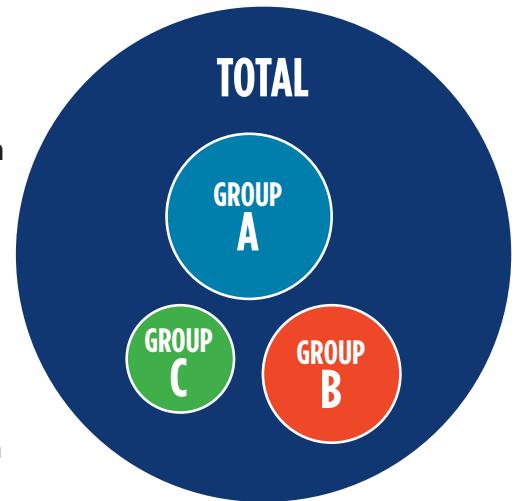
NCDHHS Division of Public Health, Injury and Violence Prevention Branch (IVPB), Epidemiology, Surveillance, and Informatics (ESI) Unit

Why IVPB Analyzes Data by Race and Ethnicity

IVPB analyzes injury data by race and ethnicity to inform and focus injury prevention activities.

Looking at data by race and ethnicity can show differences in how groups experience injuries that may not be obvious when looking at data across all groups combined.

- This allows IVPB to:
 - Identify which groups experience the greatest burden of injury in the state.
 - Track changes in injury rates over time among different groups of people.
- Reducing injuries among groups with the highest burden of injury will reduce the overall injury rate in NC.



The figure above illustrates how breaking the whole population into groups can show which groups might have more injuries than others.

Race and ethnicity do not cause a specific health problem or status.

Factors like income, education, access to care, stress, and racism, among other social factors, can contribute to poorer health.

- These factors, called social drivers of health, often impact minority populations differently due to the various structures in which we all live.
- Social drivers of health are rarely collected in the datasets IVPB uses for injury surveillance, so race and ethnicity are often used instead to understand the impacts of these social factors.

How IVPB Categorizes Race and Ethnicity

Each data system collects race and ethnicity differently.

- Each data source IVPB uses collects race and ethnicity as separate pieces of information.
 - In some data sources each person is only assigned one race category.
 - Other data sources allow multiple races to be identified for a single person.
 - Each data source collects ethnicity as Hispanic or non-Hispanic only.
- Race and ethnicity data became available at different times within each dataset.

How race and ethnicity are collected is described in more detail [below](#) for each data source.

FOR MORE RESOURCES:
Visit our Injury Data Users Toolkit



How data are collected and grouped can impact our ability to understand differences in injuries by race and ethnicity.

The most reliable way to collect information on race and ethnicity is when it is self-reported, where individuals choose the race(s) and ethnicity that describes them.

This ensures the data are accurate.

- Assigning race and ethnicity based solely on how someone looks can be inaccurate and cause misclassification (grouping someone into a different race/ethnicity group than they identify) and contribute to continued racial biases.

Federal standards for collecting, analyzing, and presenting data by race and ethnicity were updated in 2024. Not all of the data sets IVPB uses align with these [updated guidelines](#).

IVPB recategorizes race and ethnicity data for injury surveillance.

IVPB regroups race and ethnicity information within each data source. This process formats race and ethnicity data the same way so data can be compared across data sources.

- Race and ethnicity information is combined into a single category.
- One race/ethnicity category is assigned to each person using the categories below for consistency across each data source.
 - How this is done is explained for each data source in the [next section](#).

IVPB Race/Ethnicity Categories
Hispanic (of any racial group)
Non-Hispanic White
Non-Hispanic Black
Non-Hispanic American Indian/Alaskan Native (AI/AN)
Non-Hispanic Asian (includes Native Hawaiians and Pacific Islanders)
Non-Hispanic Another Race
Non-Hispanic Unknown or Missing Race

Race/Ethnicity by Data Source

DEATH CERTIFICATE DATA

Availability

Race and ethnicity are included across all years of death certificate data.

Structure

- Race and ethnicity are captured separately.
- The death certificate form allows multiple races to be selected for a single person.
 - One person can be identified within multiple racial groups.

ETHNICITY CONSIDERATIONS

Considerations apply to IVPB race/ethnicity categories across all data sources.

- Assigning ethnicity first, regardless of race, groups people together that may have very different experiences based on their race.
- For example, the Hispanic category includes both:
 - People who are Black and Hispanic that may be perceived by others as Black.
 - People who are white and Hispanic and may be perceived by others as white.

How IVPB Assigns Race/Ethnicity in Death Certificate Data

Race and ethnicity information from the death certificate is combined.

- Ethnicity is assigned first.
 - People of Hispanic ethnicity are placed into the Hispanic category.
 - This includes all Hispanic people, regardless of their race.
- Unknown or missing ethnicity is coded as non-Hispanic.
 - If ethnicity is unknown or missing but race is known, the person is placed into one of the non-Hispanic racial groups.
- Non-Hispanic people are then classified into racial groups (White, Black, AI/AN, Asian, Another Race, Unknown)
- IVPB combines the following races from the death certificate data into the Asian group:

• Asian Indian	• Korean	• Guamanian or Chamorro
• Chinese	• Vietnamese	• Samoan
• Filipino	• Other Asian	• Other Pacific Islander
• Japanese	• Native Hawaiian	

If someone is of multiple races, they are placed into a single racial group in the following order: AI/AN, Asian, Black, and then White.

- Races are categorized in this order to help identify as many people as possible in underrepresented groups (smaller populations).
- IVPB made this change to how people of multiple races are grouped in July 2021.
 - This change was applied to historical data from before 2021 so that data for people of multiple races would be consistent across years.
 - Data IVPB shared from before July 2021 included people of multiple races in an “Other” race category.

Below are examples of how race and ethnicity are grouped by IVPB in the death certificate data.

Information from the Death Certificate	IVPB Race/Ethnicity Categories
Non-Hispanic, AI/AN, and White	Non-Hispanic AI/AN
Hispanic, AI/AN	Hispanic
Non-Hispanic, White	Non-Hispanic White
Non-Hispanic, Black, and White	Non-Hispanic Black
Non-Hispanic, Asian, and AI/AN	Non-Hispanic AI/AN
Unknown Ethnicity, Black	Non-Hispanic Black
Non-Hispanic, Unknown Race	Non-Hispanic Unknown

Considerations

- While IVPB's approach to grouping individuals of multiple races into a single race category in the death certificate data helps ensure there is representation in smaller groups, it can prevent the ability to identify important differences in populations.
 - For example:
 - Someone who is AI/AN and Asian would be placed in the AI/AN group, which may make it difficult to understand differences across subgroups within the Asian category.
 - Someone who is Black and Asian would be grouped in the Asian category and may have different experiences than someone who is Asian alone.

- IVPB may sometimes group multiple races differently than outlined above when using death certificate data for CDC reporting, special projects, or other analyses.
- For death certificates, race and ethnicity are normally collected from the decedent's next-of-kin (spouse, parent, child, other relative or other knowledgeable person).
 - In cases where there is not an available next-of-kin or knowledgeable person to share this information, race and ethnicity may be assigned by a physician or medical examiner. This may result in misclassification of race and ethnicity.

To learn more about death certificate data, visit [Data Sources IVPB Uses for Injury Surveillance](#).

Hospital Discharge Data (HDD)

Availability

Race and ethnicity are available in the HDD starting in 2014.

Structure

- Race and ethnicity information is captured separately.
- Only one race is assigned to each person.

How IVPB Assigns Race/Ethnicity in the HDD

The race and ethnicity information in the HDD is combined into a single category.

- Ethnicity is assigned first.
 - People of Hispanic ethnicity are placed into the Hispanic category.
 - This includes all Hispanic people, regardless of their race.
- Unknown or missing ethnicity is coded as non-Hispanic
 - If ethnicity is unknown or missing but race is known, the person is placed into one of the non-Hispanic racial groups.
- Non-Hispanic people are then classified into racial groups (White, Black, AI/AN, Asian, Another Race, Unknown).
 - Hawaiian and Pacific Islanders are grouped into the Asian category.

The table below shows how the HDD race and ethnicity categories are re-grouped by IVPB.

HDD Race Categories	IVPB Race/Ethnicity Categories*
AI/AN	Non-Hispanic AI/AN*
Asian	Non-Hispanic Asian*
Native Hawaiian/Pacific Islander	Non-Hispanic Asian*
Black/African American	Non-Hispanic Black*
White	Non-Hispanic White*
Other, Non-White	Non-Hispanic Other*
Patient Declined/Unavailable	Non-Hispanic Unknown*
HDD Ethnicity Categories	IVPB Race/Ethnicity Categories*
Hispanic	Hispanic
Non-Hispanic	Assigned to a category based on race (see above)
Unknown or Missing Ethnicity	(see above)

* when ethnicity is Non-Hispanic or unknown/missing

Below are examples of how race and ethnicity are grouped by IVPB in the HDD.

Information from the HDD	IVPB Race/Ethnicity Category
Non-Hispanic, AI/AN	Non-Hispanic AI/AN
Hispanic, AI/AN	Hispanic

Considerations

- In some cases, race and ethnicity may not be self-reported and may instead be assigned based on someone's name and/or their appearance.
 - This is especially true if the person was unresponsive upon admission to the hospital.
 - This can result in misclassification of race and ethnicity in the HDD.

To learn more about HDD, visit [Data Sources IVPB Uses for Injury Surveillance](#).

Emergency Department (ED) Visit Data from North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT)

Availability

ED visit data from [NC DETECT](#) first included race and ethnicity in 2016.

- The first year of data on race/ethnicity is incomplete. Data from 2017 forward are used.

Structure

- Race and ethnicity information is captured separately.
- Only one race is assigned to each person in NC DETECT.
 - Multiple races are collected in the ED, but if more than one race is captured in a record the race is reported as "Other" to NC DETECT.

How IVPB Assigns Race/Ethnicity in ED Visit Data

Race and ethnicity information is combined into a single category.

- Ethnicity is assigned first.
 - People of Hispanic ethnicity are placed into the Hispanic category.
 - This includes all Hispanic people, regardless of their race.
- Unknown or missing ethnicity is coded as non-Hispanic
 - If ethnicity is unknown or missing but race is known, the person is placed into one of the non-Hispanic racial groups.
- Non-Hispanic people are then classified into racial groups (White, Black, AI/AN, Asian, Another Race, Unknown).
 - The racial groups in NC DETECT ED Visit data align with the IVPB racial groups.

The table below shows how the NC DETECT race and ethnicity categories are re-grouped by IVPB.

ED Visit Data Race Categories		IVPB Race/Ethnicity Categories*
Detailed Categories	Summary Categories	
AI/AN or American Indian		
Mexican American Indian		
Cherokee	American Indian	Non-Hispanic AI/AN*
Alaska Indian		

ED Visit Data Race Categories		IVPB Race/Ethnicity Categories*
Asian		
Asian Indian		
Burmese		
Cambodian		
Chinese		
Filipino		
Hmong		
Japanese	Asian	Non-Hispanic Asian
Korean		
Laotian		
Pakistani		
Thai		
Vietnamese		
Nepalese		
Pacific Islander		
Samoan	Pacific Islander	
Guamanian or Chamorro		
Black or African American		
African		
Liberian		
Nigerian	Black	Non-Hispanic Black
Haitian		
Jamaican		
West Indian		
White		
European		
English		
French		
German		
Italian	White	Non-Hispanic White
Polish		
Middle Eastern or North African		
Egyptian		
Iranian		
Arab		
Multi-race	Other	Other
Other		
Hispanic or Latino	Unknown/Missing	Unknown
Unknown/Missing	Unknown/Missing	
ED Visit Data Ethnicity Categories		IVPB Race/Ethnicity Categories*
Hispanic		Hispanic
Non-Hispanic		Assigned to a category based on race (see above)
Unknown or Missing Ethnicity		

* when ethnicity is non-Hispanic or unknown/missing

Below are examples of how race and ethnicity are grouped by IVPB in the ED visit data.

Information from the HDD	IVPB Race/Ethnicity Category
Non-Hispanic, AI/AN	Non-Hispanic AI/AN
Hispanic, AI/AN	Hispanic

Considerations

- In some cases, race and ethnicity may not be self-reported and may instead be assigned based on someone's name and/or their appearance.
 - This is especially true if the person was unresponsive upon arrival to the ED.
 - This can result in misclassification of race and ethnicity in the ED visit data.

To learn more about ED visit data, visit [Data Sources IVPB Uses for Injury Surveillance](#).

NC Violent Death Reporting System (NC-VDRS)

NC-VDRS race/ethnicity is processed the same way as it is for death certificate data since death certificate data are one of the main sources for NC-VDRS.

- If race and ethnicity are documented differently for the same person across the data sources that feed into NC-VDRS (death certificate data, medical examiner data, and law enforcement reports), abstractors use the race and ethnicity listed on the death certificate.

To learn more about NC-VDRS data, visit [Data Sources IVPB Uses for Injury Surveillance](#).

NC State Unintentional Drug Overdose Reporting System (NC-SUDORS)

NC-SUDORS race/ethnicity is processed the same way as it is for death certificate data since death certificate data are one of the main sources for NC-SUDORS.

- If race and ethnicity are documented differently for the same person in the medical examiner data than it is in the death certificate data, abstractors use the race and ethnicity listed on the death certificate.

To learn more about NC-SUDORS data, visit [Data Sources IVPB Uses for Injury Surveillance](#).

Population Data

IVPB receives a specialty file with estimates of the NC resident population annually.

This file is created by National Center for Health Statistics (NCHS) using the U.S. Census Bureau data and shared with the NCDHHS Division of Public Health.

- These estimates are used as the denominator to calculate rates of injury in NC by race/ethnicity and other demographic groups.

How IVPB Assigns Race/Ethnicity in Population Data

Race and ethnicity information is combined into a single category.

- Population data do not include estimates for unknown race or ethnicity.
 - Everyone is assigned to one of the included race and ethnicity categories.

- Ethnicity is assigned first.
 - People of Hispanic ethnicity are placed into the Hispanic category.
 - This includes all Hispanic people, regardless of their race.
- Non-Hispanic people are then classified into racial groups (White, Black, AI/AN, Asian, Multi-Race)
 - IVPB includes Hawaiian and Pacific Islanders in the Asian category.
- Categories for race alone or in combination are not currently being used by IVPB.
 - Since there is not a multi-race category in the other datasets IVPB uses, the multi-race group in the population data currently is not used when calculating rates of injury by race/ethnicity.
 - The multi-race category is included in IVPB rate calculations for the state or a county as a whole.

The table below shows how race and ethnicity in the population data are re-grouped by IVPB.

HDD Race Categories	IVPB Race/Ethnicity Categories*
American Indian/Alaskan Native Alone	Non-Hispanic AI/AN*
Asian Alone	Non-Hispanic Asian*
Hawaiian/Pacific Islander Alone	
Black Alone	Non-Hispanic Black*
White Alone	Non-Hispanic White*
Two or More Races (Multi-Race)	Non-Hispanic Multi-Race*
White Alone or in Combination	Not currently being used by IVPB
Asian Alone or in Combination	
Native Hawaiian and Other Pacific Islander Alone or in Combination	
Black Alone or in Combination	
White Alone or in Combination	
Population Data Ethnicity Categories	IVPB Race/Ethnicity Categories*
Hispanic	Hispanic
Non-Hispanic	Assigned to a category based on race (see above)

* when ethnicity is non-Hispanic

Below are examples of how race and ethnicity are grouped by IVPB in the population data.

Information from the HDD	IVPB Race/Ethnicity Category
Non-Hispanic, AI/AN, Black	Non-Hispanic Multi-Race
Hispanic, AI/AN	Hispanic
Non-Hispanic, Hawaiian/Pacific Islander	Non-Hispanic Asian

To learn more about population data, visit [Data Sources IVPB Uses for Injury Surveillance](#).

