

Understanding Injury Surveillance Case Definitions

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

What Is a Case Definition?

A case definition is a set of rules used to determine what counts when identifying cases of a certain health problem, like injuries.

Case definitions:

- Provide consistency in data by outlining what should and should not be included.
- Ensure injuries or other health events are counted the same way in different places and overtime.
 - This allows data for different groups or places to be compared.
- Allow us to know when there are meaningful changes in the data.



National Case Definitions

The IVPB applies national case definitions to NC data to identify injuries.

- National definitions are established through a formal process with the Council of State and Territorial Epidemiologists (CSTE) with input from subject matter experts from across the country.
- Data on injuries identified with national case definitions are often reported to the Centers for Disease Control and Prevention (CDC) to be used alongside data from other states and jurisdictions.
- National case definitions need to work for every state. At times this means better or more specific case definition criteria that are available to some states will not be part of national case definitions.



NC Case Definitions

IVPB has adapted national case definitions and has worked with partners across the state to develop new case definitions that better match our state's data.

- State-developed definitions use special rules to consider nuances of NC data and more closely track injury cases.
- IVPB works to test these new definitions to make sure they correctly identify injury cases, but this can be a long and costly process.
 - Once tested, North Carolina's definitions are given priority over national ones that haven't been tested with NC data.
- IVPB uses both state and national case definitions to better understand injuries happening in NC.
 - Sometimes IVPB reports data differently on the same topic depending on their purpose.
 - For example, IVPB uses national definitions to complete reporting requirements for federal funders like CDC but uses state definitions for resources posted to the website and shared with NC partners.

To see a full list of the case definitions IVPB uses, visit [North Carolina Injury and Violence Prevention Branch Injury Case Definitions](#).

FOR MORE RESOURCES:
Visit our Injury Data Users Toolkit

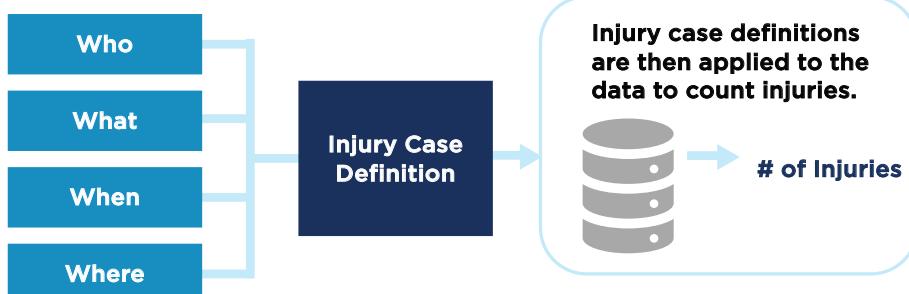


Common Components of an Injury Case Definition

There are elements included in each case definition to outline what should be counted as a case.

Injury case definitions have different criteria depending on the data source being used and what kind of injury or health outcome is being counted.

Criteria to Identify Injuries



WHO

Case definitions include criteria to identify events among specific groups of people and describe characteristics people have in common.

- Most NC injury case definitions limit data to injury cases among people who are residents of NC.
 - This includes people who are NC residents but were injured somewhere else.
- Some injury case definitions limit who is included using criteria to identify populations at increased risk of injury. For example:
 - Limiting by age group – Self-inflicted injuries and suicides are limited to those ages 10 and older.
 - Limiting by sex – Some intimate partner violence (IPV) case definitions limit cases to females since they are statistically more likely to experience certain forms of IPV-related injuries.

WHAT

Case definitions include clinical criteria to identify cases of a specific health event. For injuries, these criteria depend on the type of injury and the data source being used.

Below are ways IVPB identifies injuries in surveillance data.

Cause of Death and Diagnosis Codes

These are codes used to group diseases and conditions within health care data sets. A particular code or ranges of codes are used to identify injury-related events in death certificate and morbidity data sets.

- **Death Certificate Data** – International Classification of Diseases 10 (ICD-10) is a system used to classify and code the primary and underlying causes of death.
- **Morbidity Data** – A coding structure based on ICD-10 coding with a clinical modification (ICD-10-CM) is used to classify diagnoses and reasons for health care visits.
 - ICD-10-CM codes are intended for administrative and billing purposes, not public health surveillance. This can affect which codes are or are not assigned to a record and therefore which events are included or excluded as injury cases.

For more information on the ICD-10 and ICD-10-CM codes used to classify injuries, visit [NCHS - ICD Injury Codes](#) and [Matrices and CDC Injury Tools](#).

Keywords

Some case definitions search for keywords or phrases in free text data fields, like medical visit notes, to help identify cases. Keyword searches can include:

- Root words, abbreviations, and misspellings to ensure the case definition captures as many relevant cases as possible
- Words to exclude, or negations, to remove records that should not be considered as a case

Keywords are often included in syndromic surveillance case definitions.

- Syndromic surveillance uses near-real-time health data to detect and monitor public health threats.
- Syndromic surveillance case definitions search chief complaint fields and triage notes in ED visit data. Text fields like the narrative can be included in case definitions for EMS encounter data.
- These definitions can include a combination of keywords and diagnosis codes.
- Keywords are useful for identifying cases where ICD-10-CM codes may not have been assigned to the record yet or are not specific enough to define the case.

WHEN

Case definitions limit cases to a specific timeframe.

- Most injury case definitions include cases that occurred within a calendar year.
- Case definitions can be applied to a shorter time frame (cases in the most recent month or quarter) or over multiple years.

WHERE

Case definitions can include criteria to identify cases based on where they occurred.

- Most injury case definitions are restricted to NC residents no matter where they were injured.
- Some definitions identify cases among residents of a specific county or region of the state.

Differences Between Occurrent and Resident Injuries and Deaths

- **Data Among Residents** – Includes all resident cases, even if the injury or death occurred in another county or state in the US.
 - Limiting cases to NC residents allows us to calculate rates to better understand meaningful differences between populations.
- **Data by Occurrence** – Includes all injuries in a specific location, regardless of a person's residence status.
 - Counting cases based on where they happen helps us understand how they affect local hospital systems and services.
 - This can also be useful for areas with lots of people coming and going, including college towns, cities or counties that are common tourist destinations, or areas with large populations of people experiencing homelessness.

