

Data Details - Carbon Monoxide

Unintentional Exposure

Interpreting the data

What these data tell us

- These data can be used to identify trends and patterns in the occurrence of carbon monoxide (CO) poisoning exposures among South Carolina residents over time.
- One measure presented is incidence, which means the number of CO poisoning exposures reported to the Palmetto Poison Center during a specified time among residents of the state.
- Another measure presented is rate, which means the number of CO poisoning exposures reported to the Palmetto Poison Center during a specified time expressed per population.

What these data do not tell us:

- These data do not describe the prevalence of CO poisoning exposure which means they do not tell us the total number of people who suffered from CO poisoning as some exposures go unreported.

Limitations of the data

It does not include all CO poisoning exposure cases. Reporting rates at the state and county level is a broad measure. These data will not show the true CO poisoning exposure burden at a more local level, such as the neighborhood level.

Emergency Department Visits/Hospitalizations

Interpreting the data

What these data tell us:

- These data can be used to identify trends and patterns in the occurrence of carbon monoxide (CO) poisoning hospitalizations and emergency department visits among South Carolina residents over time.
- These data present incidence, which means the number of hospitalizations and emergency department visits due to CO poisoning occurring during a specified time among residents of the state.
- These data present rate, which means the number of hospitalizations and emergency department visits due to CO poisoning occurring during a specified time among those of a specified age and residents of the state expressed per population.
- These data separates the occurrence and rate of carbon monoxide (CO) poisoning hospitalizations and emergency department visits into three groups (Fire-Related, Non-Fire-Related and Unknown Intent).

What these data do not tell us:

- These data do not describe the prevalence of CO poisoning which means they do not tell us the number of people who suffered from CO poisoning.

Numerator/Denominator Information

Event/numerator data:

CO hospital discharges, Hospital Discharge Dataset, Emergency Department visits (Source: South Carolina Revenue and Fiscal Affairs Office)

Population/denominator data:

Each year's mid-year resident population estimates (i.e., Census estimates)

Limitations of the data

It does not include all CO poisoning cases. Hospitalization data does not include CO poisoning among individuals who are not hospitalized for at least one night. Those who do not receive medical care, receive medical treatment in outpatient settings, or expire without being admitted to a hospital are not included in this data.

Multiple admissions are not identified so the true number of people hospitalized for CO poisoning may be overestimated.

Difference in rates by year may reflect difference or changes in diagnostic techniques, changes in coding of CO poisoning for hospital admissions, or changes in access to medical care. Although duplicate records are excluded, the measures are based upon events, not individuals. So if a person is admitted to the hospital for CO, then admitted for CO poisoning again later, those would be counted as two separate events even though it was the same person.

It does not take into account many factors affecting hospitalization rates. Rates may differ due to socio-demographic characteristics and associated behaviors. Factors such as access to medical care can affect the likelihood of a person being hospitalized for CO poisoning.

Reporting rates at the state and county level is a broad measure. These data will not show the true CO poisoning burden at a more local level such as the neighborhood level.

Mortality

Interpreting the data

What these data tell us:

- These data can be used to identify trends and patterns in the occurrence of carbon monoxide (CO) poisoning deaths among South Carolina residents over time.
- These data present the number of deaths due to CO poisoning that occurred during a specified time among residents of the state.
- These data present rate, which means the number of deaths due to CO poisoning that occurred during a specified time among residents of the state expressed per population. The age-adjusted rate allows for comparisons among populations with different age distributions.
- These data separates the occurrence and rate of carbon monoxide (CO) poisoning deaths into three groups (Fire-Related, Non-Fire-Related and Unknown Intent).

What these data do not tell us:

- These data do not tell us the incidence or prevalence of CO poisoning.

Numerator/Denominator information

Event/numerator data:

CO poisoning related deaths (Source: Division of Biostatistics)

Population/denominator data:

Each year's mid-year resident population estimates (i.e., Census estimates)

Limitations of the data

Small number of occurrences (e.g., <20) used to calculate rates should be interpreted with caution as it becomes difficult to distinguish random fluctuation from true changes in the underlying risk of injury. Therefore, comparisons over time or between geographic areas that are based on unstable rates can lead to misleading conclusions about differences in risk which may or may not be valid.