

How-To Guide: Unintentional Carbon Monoxide (CO) Poisoning Hospitalizations

Provided by CDC's Environmental Public Health Tracking Program

May 2022

PURPOSE AND USE OF THIS DOCUMENT

This document describes the steps for extracting and formatting the necessary data required for the Tracking Program's Nationally Consistent Data and Measures (NCDM) for unintentional carbon monoxide (CO) poisoning hospitalizations.

HOW-TO GUIDE

	Description
Measures	Unintentional Carbon Monoxide (CO) Poisoning Hospitalizations
Data Source(s)	Inpatient Hospitalization Admissions
NCDM Data Requirements	<ul style="list-style-type: none">• Health outcome = Unintentional Carbon Monoxide (CO) poisoning• State/county of residence• Hospital admission year/month• Age group• Sex• Cause <p>Optional:</p> <ul style="list-style-type: none">• Race and ethnicity
Definitions Relevant to Indicator	<p><i>Admission Date:</i> The date of the hospital admission; month, day, and year. Month and year of admission are required in data submitted to CDC.</p> <p><i>Unintentional CO Poisoning:</i> This indicator tracks acute, unintentional carbon monoxide poisoning resulting in hospitalization. Carbon monoxide is an odorless, colorless gas that is the byproduct of combustion, which preferentially binds to hemoglobin and therefore displaces oxygen in the blood stream. Carbon monoxide is the leading cause of acute, unintentional poisoning and death (excluding alcohol and drug-related intoxication). Please see steps below and the appendix for details on the appropriate ICD-9-CM and ICD-10-CM codes.</p> <p><i>Discharge Date:</i> The date of discharge from hospital.</p>

	Description
	<p><i>Duplicate Records:</i> More than one record for the same person with the same hospital admission data (e.g., where sex, date of birth, admission date, and Zip code have exactly same information).</p> <p><i>E-Codes:</i> In ICD-9-CM, external causes of injury and poisoning (E-codes) includes the external causes of injuries and poisonings and adverse effects of drugs and substances. E-codes are supplemental to the assignment of ICD-9-CM diagnosis codes and not used as the primary or principal diagnosis.</p> <p><i>Event/Event Year:</i> A hospital admission for the health outcome of interest during specific calendar year. Event year is based only upon admission year, even when discharge year is different.</p> <p><i>Hospital Transfers:</i> Generally, a patient discharged from one facility and readmitted to a second facility on the same day (within 24 hours).</p> <p><i>Hospitalization/ Hospital Admission:</i> Condition of being placed (admission) or treated as a patient in an acute care hospital for treatment as an inpatient. Treatment as an out-patient is not considered to be hospitalization. To be considered as inpatient hospitalization, a minimum stay is required (often over 23 hours).</p> <p><i>Multiple Admissions:</i> Second or subsequent admission for the same person for the same primary discharge diagnosis code but on a different date and related to a separate event within a given year. Multiple admissions are considered separate events (generally at least 48 hours apart).</p> <p><i>Out-of-State Admissions:</i> When a resident of your county/state is admitted to a hospital located in another state (usually an abutting state).</p> <p><i>Primary Diagnosis Code:</i> The first discharge diagnosis field(s) of the coded clinical record (i.e., primary or principal discharge diagnosis).</p> <p><i>ICD-9-CM:</i> Prior to October 1, 2015, diagnosis codes are represented by ICD-9-CM codes (the International Classification of Diseases, 9th Revision, Clinical Modification).</p> <p><i>ICD-10-CM:</i> As of October 1, 2015, diagnosis codes are represented by ICD-10-CM codes (the International Classification of Diseases, 10th Revision, Clinical Modification).</p> <p><i>Resident:</i> Any person with a residential address in your county/state at the time of the hospital admission.</p>
HTG Requirements and Cautions	<ul style="list-style-type: none"> This How-to Guide provides instructions for the development of the dataset for submission to CDC and for calculating the required and optional measures. The Data Dictionary should be referred to for the standardized definitions and notations of the variables to be submitted to CDC. The data file should be converted to the .XML file format and the required header inserted into the XML file, according to the Schema found on SharePoint. Additional How-to Guide is available for instructions for calculating the measures. <i>Data Source:</i> The data source is an individual level state inpatient hospital admission data based on primary diagnosis at an acute care facility. Please consult your data

	Description
	<p>steward and data managers to understand the variables and coding system, specifically for race and ethnicity variables.</p> <ul style="list-style-type: none"> • <i>Complete Dataset Guidelines:</i> The Tracking Network's NCDM are based upon date of admission because of the goal of relating a hospitalization event with an environmental event. Most hospitalization data (inpatient and outpatient) are released in annual discharge-based datasets; sometimes quarterly files are also released. Because the NCDM is based on admission date, it is necessary to have the dataset of the year of interest as well as that for the subsequent year (or first quarter of the subsequent year) in order to capture admissions that were discharged in the subsequent year. For example, 2005 data should not be submitted prior to receipt of either the first quarter 2006 or annual 2006 discharge dataset from the data steward. Some discretion on this rule is allowed if a program can show that inclusion of the subsequent year's data does not impact the data for the year of interest to a degree that would require re-submission. Re-submission due to incomplete data should be avoided. • <i>Duplicate Records:</i> This How-to Guide presumes that the user has removed duplicate records (see definitions for more information), while keeping multiple admissions. • <i>Out-of-State Admissions:</i> Admissions of residents to out-of-state hospitals should be included when available, but are not required to be included. For states with significant out-of-state admissions, it is preferable to wait until the out-of-state data are available for inclusion so as to avoid the need for re-submission of more complete data in the future. However, some consideration of timeliness is also appropriate; if out-of-state data are overly delayed then submission without them is acceptable. It is noted that some states must include out-of-state admissions of its residents. Use the Metadata Creation Tool (MCT) to acknowledge the disposition of these admissions and provide any additional information about out-of-state data. <i>Federal Facilities:</i> Admissions to federal facilities, such as Veteran's Hospitals, are not included. Be certain to inform CDC if your state requires that your dataset includes admissions to federal facilities so that the measures can be appropriately footnoted. • <i>Transfers:</i> Hospitalizations due to transfers between acute care hospitals (for any outcome except AMI) are not excluded from the counts/measures to be generated. Use the MCT to capture if and how transfers were excluded.
Step #1	<p>From a state inpatient hospital admission data with duplicate records already removed, select all hospital records that meet the following criteria:</p> <ul style="list-style-type: none"> • Admitted during the year(s) of interest • State of residence is your state • Date of admission is not missing <p>Retain, at least, the following variables. Additional variables may be necessary depending on your state's data. The actual names of the variables may differ. Please consult your data steward and data managers to understand the variables and coding system, specifically for race and ethnicity variables.</p>

	Description														
	<ul style="list-style-type: none"> • State of residence • County of residence • Date of admission • Date of discharge • Date of birth or age at time of admission • Sex • Race • Ethnicity • Primary discharge diagnosis code • Other diagnosis fields or E-code fields <p>* County of residence data collection varies by state. These methods can include a patient self-reporting county of residence, data organizations assigning county of residence by ZIP code, or geocoding patient address. Recipients that have access to patient address and have geocoded that address have observed disagreement between the county of residence field and the geocoded county. This is likely due to data vendors assigning county by ZIP code, which can overlap county boundaries. When possible, use the geocoded county of residence for data accuracy.</p> <p>For more information, please refer to the Environmental Public Health Tracking Program - Geocoding Standards document.</p>														
Step #2a (ICD-9-CM)	<p>Complete sub-steps for each dataset from 2A – 2F</p> <p>Refer to the flow chart in Appendix A for guidance in selecting and categorizing CO poisoning events using ICD-9-CM diagnosis codes.</p> <p>Sub-Step A: Keep records of CO poisoning that have one or more of the following ICD-9-CM codes in any of the discharge diagnosis fields (primary/principal or other diagnosis fields) or E-code field (if included as a distinct field):</p> <table> <tr> <th>ICD-9-CM</th><th>Description</th></tr> <tr> <td>986</td><td>Toxic effect of carbon monoxide</td></tr> <tr> <td>E868.2</td><td>Accidental poisoning by motor vehicle exhaust gas</td></tr> <tr> <td>E868.3</td><td>Accidental poisoning by carbon monoxide from incomplete combustion of other domestic fuels</td></tr> <tr> <td>E868.8</td><td>Accidental poisoning by carbon monoxide from other sources</td></tr> <tr> <td>E868.9</td><td>Accidental poisoning by carbon monoxide, unspecified source</td></tr> <tr> <td>E982.0</td><td>Poisoning by motor vehicle exhaust gas, undetermined whether accidentally or purposefully inflicted</td></tr> </table>	ICD-9-CM	Description	986	Toxic effect of carbon monoxide	E868.2	Accidental poisoning by motor vehicle exhaust gas	E868.3	Accidental poisoning by carbon monoxide from incomplete combustion of other domestic fuels	E868.8	Accidental poisoning by carbon monoxide from other sources	E868.9	Accidental poisoning by carbon monoxide, unspecified source	E982.0	Poisoning by motor vehicle exhaust gas, undetermined whether accidentally or purposefully inflicted
ICD-9-CM	Description														
986	Toxic effect of carbon monoxide														
E868.2	Accidental poisoning by motor vehicle exhaust gas														
E868.3	Accidental poisoning by carbon monoxide from incomplete combustion of other domestic fuels														
E868.8	Accidental poisoning by carbon monoxide from other sources														
E868.9	Accidental poisoning by carbon monoxide, unspecified source														
E982.0	Poisoning by motor vehicle exhaust gas, undetermined whether accidentally or purposefully inflicted														

	Description						
	<p>E982.1 Poisoning by other carbon monoxide source, undetermined whether accidentally or purposefully inflicted</p> <p>Sub-Step B: Exclude records of intentional or purposeful CO poisoning that have the following ICD- 9-CM codes in any of the diagnosis fields (primary/principal or other) or E-code discharge diagnosis field (if included as distinct field):</p> <table data-bbox="435 541 1356 682"> <thead> <tr> <th>E-Codes</th><th>Description</th></tr> </thead> <tbody> <tr> <td>E950.*–E979.*</td><td>Suicide and self-inflicted poisoning; homicide or poisoning inflicted by others</td></tr> <tr> <td>E990.*–E999.*</td><td>Poisoning resulting from operations of war</td></tr> </tbody> </table> <p>Note: ‘*’ includes all sub variation codes.</p> <p>Sub-Step C Flag as unintentional Fire-related Records with diagnosis code 986 <u>and</u> any E-codes between E890.* and E899.*</p> <p>Sub-Step D Flag as unintentional Non Fire-related Records with diagnosis code 986 <u>and</u> any of the following E-codes: E818.*, E825.*, E838.*, E844.*, E867, E868.* or E869.9 Or Any record with any of the following E-codes: E868.2, E868.3, E868.8, or E868.9 (regardless of the presence or absence of diagnosis code 986).</p> <p>Sub-Step E Flag as Unknown mechanism or intent Records with diagnosis code 986 but not previously assigned a Fire or Non-Fire related Or Records having E-codes E982.0 or E982.1 (regardless of the presence or absence of diagnosis code 986).</p> <p>Sub-Step F Create a variable called “Cause” to categorize the records by fire-relatedness: Unintentional Fire-related: take the value of 1, only if the flag is Fire-related (=yes); Unintentional Non Fire-related: take the value of 2, only if the flag is Non Fire-related (=yes);</p>	E-Codes	Description	E950.*–E979.*	Suicide and self-inflicted poisoning; homicide or poisoning inflicted by others	E990.*–E999.*	Poisoning resulting from operations of war
E-Codes	Description						
E950.*–E979.*	Suicide and self-inflicted poisoning; homicide or poisoning inflicted by others						
E990.*–E999.*	Poisoning resulting from operations of war						

	Description						
	<p>Unknown mechanism or intent: take the value of 3, only if the flag is Unknown mechanism or intent (=yes) or any flag were previously assigned more than once (Fire related and Non Fire-related, or Fire related and Unknown etc.).</p> <table><tr><th>1=Unintentional, fire-related</th><th>2=Unintentional, non fire-related</th><th>3=Unknown mechanism or intent</th></tr><tr><td>Records with diagnosis code 986 and any E-codes in ranges of from E890.*-E899.*</td><td>Any of the following: Records with diagnosis code 986 and any of the following E-codes: E818.*, E825.*, E838.*, E844.*, E867, E868.*, or E869.9 Or Records with any of the following E-codes E868.2, E868.3, E868.8, E868.9 (regardless of presence or absence of 986)</td><td>Any of the following: Records with diagnosis code 986 and not previously categorized as either unintentional fire or non-fire. Or E982.0 or E982.1 regardless of previous category assigned. Or Records with both unintentional fire-related and unintentional non fire-related cause</td></tr></table> <p><i>‘*’ includes all sub variations</i></p>	1=Unintentional, fire-related	2=Unintentional, non fire-related	3=Unknown mechanism or intent	Records with diagnosis code 986 and any E-codes in ranges of from E890.*-E899.*	Any of the following: Records with diagnosis code 986 and any of the following E-codes: E818.*, E825.*, E838.*, E844.*, E867, E868.*, or E869.9 Or Records with any of the following E-codes E868.2, E868.3, E868.8, E868.9 (regardless of presence or absence of 986)	Any of the following: Records with diagnosis code 986 and not previously categorized as either unintentional fire or non-fire. Or E982.0 or E982.1 regardless of previous category assigned. Or Records with both unintentional fire-related and unintentional non fire-related cause
1=Unintentional, fire-related	2=Unintentional, non fire-related	3=Unknown mechanism or intent					
Records with diagnosis code 986 and any E-codes in ranges of from E890.*-E899.*	Any of the following: Records with diagnosis code 986 and any of the following E-codes: E818.*, E825.*, E838.*, E844.*, E867, E868.*, or E869.9 Or Records with any of the following E-codes E868.2, E868.3, E868.8, E868.9 (regardless of presence or absence of 986)	Any of the following: Records with diagnosis code 986 and not previously categorized as either unintentional fire or non-fire. Or E982.0 or E982.1 regardless of previous category assigned. Or Records with both unintentional fire-related and unintentional non fire-related cause					
Step #2b	<p>Complete sub-steps for each dataset from 2A – 2F.</p> <p>Refer to the flow chart in Appendix B for guidance in selecting and categorizing CO poisoning events using ICD10-CM diagnosis codes. In ICD-10-CM, exposure to smoke, fire, and flames (X00-X08) are included under the chapter ‘external cause of morbidity.’ <i>Injury, poisoning and certain other consequences of external causes</i> are included in chapter 19 (S00-T88). The toxic effect of carbon monoxide (T58) has an associated intent as their 5th or 6th character (accidental, intentional, self-harm, assault, and undermined) and most of codes have a 7th character requirement for each applicable code (A: initial encounter, D: subsequent encounter, S: sequela).</p> <p>Sub-Step A: Keep records of CO poisoning that have one or more of the following ICD-10-CM codes in any of the principal/primary diagnosis or other diagnosis fields:</p> <table><tr><th>ICD-10-CM</th><th>Description</th></tr><tr><td>T58.01*</td><td>Toxic effect of carbon monoxide from motor vehicle exhaust, accidental</td></tr></table>	ICD-10-CM	Description	T58.01*	Toxic effect of carbon monoxide from motor vehicle exhaust, accidental		
ICD-10-CM	Description						
T58.01*	Toxic effect of carbon monoxide from motor vehicle exhaust, accidental						

Description	
	(unintentional).
T58.04*	Toxic effect of carbon monoxide from motor vehicle exhaust, undetermined.
T58.11*	Toxic effect of carbon monoxide from utility gas, accidental (unintentional).
T58.14*	Toxic effect of carbon monoxide from utility gas, undetermined.
T58.2X1*	Toxic effect of carbon monoxide from incomplete combustion of other domestic fuels, accidental (unintentional).
T58.2X4*	Toxic effect of carbon monoxide from incomplete combustion of other domestic fuels, undetermined.
T58.8X1*	Toxic effect of carbon monoxide from other source, accidental (unintentional).
T58.8X4*	Toxic effect of carbon monoxide from other source, undetermined.
T58.91*	Toxic effect of carbon monoxide from unspecified source, accidental (unintentional).
T58.94*	Toxic effect of carbon monoxide from unspecified source, undetermined.
** includes all sub variations	
Sub-Step B: Exclude records of intentional or purposeful CO poisoning that have the following ICD-10-CM codes in any of the principal/primary diagnosis or other diagnosis fields:	
ICD-10-CM	Description
T58.02*	Toxic effect of carbon monoxide from motor vehicle exhaust, intentional self-harm
T58.03*	Toxic effect of carbon monoxide from motor vehicle exhaust, assault
T58.12*	Toxic effect of carbon monoxide from utility gas, intentional self-harm
T58.13*	Toxic effect of carbon monoxide from utility gas, assault
T58.2X2*	Toxic effect of carbon monoxide from incomplete combustion of other domestic fuels, intentional self-harm
T58.2X3*	Toxic effect of carbon monoxide from incomplete combustion of other domestic fuels, assault
T58.8X2*	Toxic effect of carbon monoxide from other source, intentional self-harm
T58.8X3*	Toxic effect of carbon monoxide from other source, assault
T58.92*	Toxic effect of carbon monoxide from unspecified source, intentional self-harm

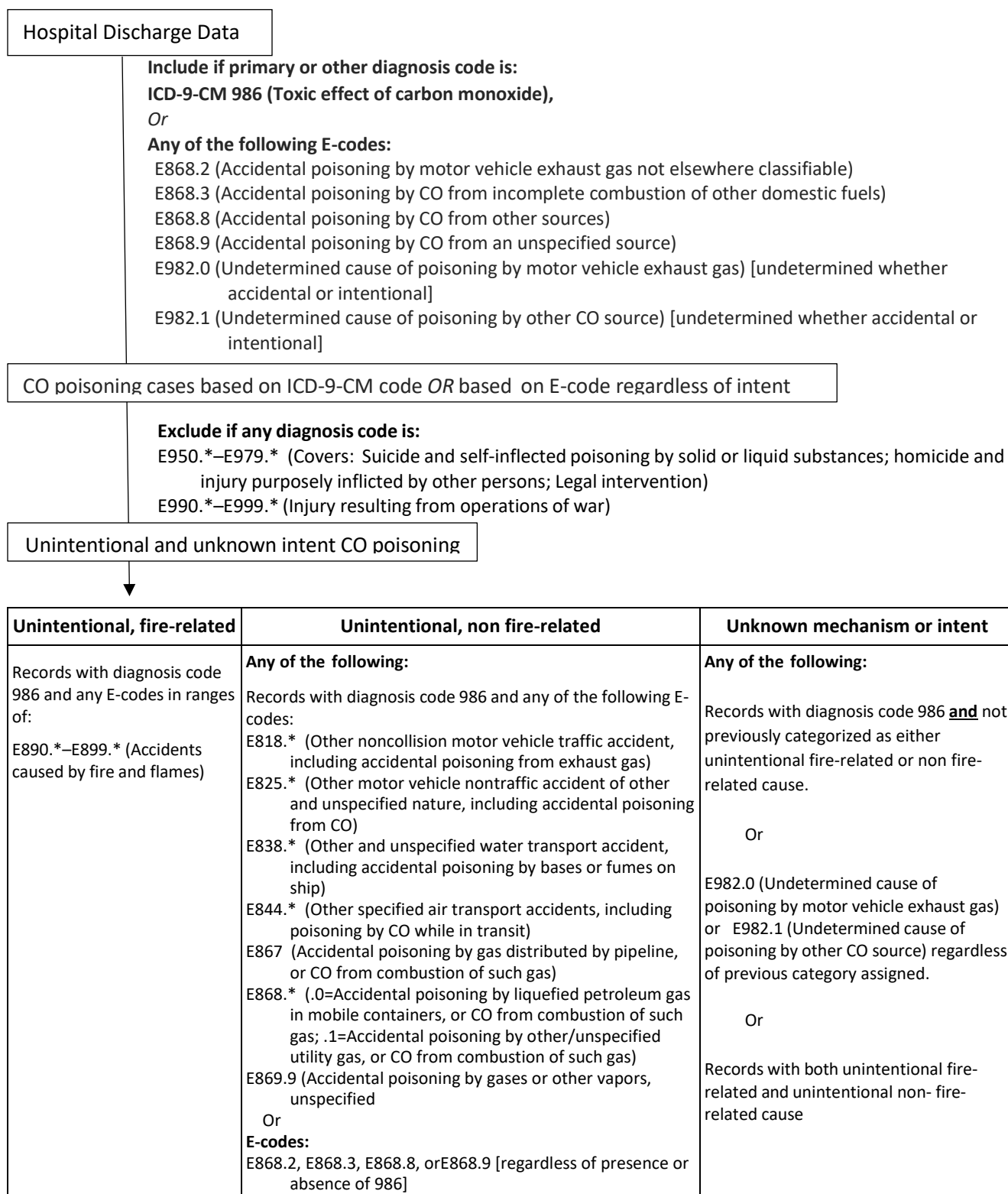
	Description
	T58.93* Toxic effect of carbon monoxide from unspecified source, assault <i>Note: “*” includes all sub variations</i>
	Sub-Step C Flag as unintentional Fire-related Records from sub-step A and B that have any discharge diagnosis code between X00.* to X08.*
	Sub-Step D Flag as unintentional Non Fire-related Records with any of the following: T58.01*, T58.11*, T58.2X1, T58.8X1, T58.91* unless the record also has one of the following accompanying diagnosis codes: X00.*-X08.*
	Sub-Step E Flag as Unknown Mechanism or Intent : Records with any of the following diagnosis codes: T58.04*, T58.14*, T58.2X4, T58.8X4, T58.94* unless the record also has one of the accompanying diagnosis codes: X00.*-X08.*
	Sub-Step F Create a variable called “ Cause ” to categorize the records by fire-relatedness: Unintentional Fire-related: take the value of 1, only if the flag is unintentional Fire-related (=yes); Unintentional Non Fire-related: take the value of 2, only if the flag is unintentional Non Fire-related (=yes); Unknown mechanism or intent: take the value of 3, only if the flag is Unknown mechanism or intent (=yes) or any flag were previously assigned more than once (Fire-related and Non Fire-related, or Fire-related and Unknown etc.).

	Description		
	<p>X03 – Exposure to controlled fire, not in building or structure;</p> <p>X04 – Exposure to ignition of highly flammable material;</p> <p>X05 – Exposure to ignition or melting of nightwear;</p> <p>X06 – Exposure to ignition or melting of other clothing and apparel;</p> <p>X08 – Exposure to other specified smoke, fire and flames.</p>	<p>incomplete combustion of other domestic fuels, accidental (unintentional);</p> <p>T58.8X1* - Toxic effect of carbon monoxide from other source, accidental (unintentional);</p> <p>T58.91* – Toxic effect of carbon monoxide from unspecified source, accidental (unintentional).</p> <p>Without accompanying diagnosis codes between X00.*-X08.*</p>	<p>of other domestic fuels, undetermined;</p> <p>T58.8X4* - Toxic effect of carbon monoxide from other source, undetermined;</p> <p>T58.94* - Toxic effect of CO from unspecified source, undetermined</p> <p>Without accompanying diagnosis codes between X00.*-X08.*</p> <p>Or</p> <p>Records with both unintentional fire-related and Unintentional non fire-related.</p>
	<i>** includes all sub variations</i>		
Step #3	<p>Create demographic variables:</p> <p><u>AgeGroup</u></p> <p>Create AgeGroup variable using either patient’s date of birth and date of admission or age at time of admission. The base format for AgeGroup is by 5-year age groups beginning 0-4 and ending with 85+ resulting in 18 age groups plus one for unknown. Hospitalization counts must be submitted to CDC by these 5-year age groups coded from 1 to 19 (see Data Dictionary).</p> <p><u>Race and Ethnicity (optional)</u></p> <p>Race and ethnicity variables are optional for submission to CDC. If race and ethnicity data is being provided, be sure that the coding structure conforms to that laid out in the Data Dictionary. Counts and measures may be generated for recipient portals without specifying race or ethnicity if these data are missing or considered unreliable/inaccurate.</p> <p>Note: For Race and ethnicity, the code ‘W’ includes White alone. The code ‘B’ includes Black alone. The code ‘O’ includes American Indian or Alaskan Native or Asian or Pacific Islander or two or more races. The code ‘H’ includes those who are ‘Hispanic alone’ and those who are both ‘Hispanic and non-Hispanic’.</p>		
Step #4a	<p>Select all records where the cause was categorized as unintentional, fire-related.</p> <p>Create variable “IncidentCountFire” and summarize data by the following variables coded according to data dictionary:</p> <ul style="list-style-type: none"> • AdmissionMonth • AgeGroup 		

	Description
	<ul style="list-style-type: none"> • County (patient's county of residence as 5 digit FIPS code) • Ethnicity (if using) • Race (if using) • Sex • YearAdmitted <p>Do not expand dataset to include all combinations of these variables where IncidentCountFire equals zero. CDC will expand data and fill in zeros after data are validated. If missing combinations of these variables should not be interpreted as zero (for example, county X didn't report data in year Y), then please include this information in your metadata.</p>
Step #4b	<p>Select all records where the cause was categorized as unintentional, non fire-related.</p> <p>Create variable "IncidentCountNonFire" and summarize data by the following variables coded according to data dictionary:</p> <ul style="list-style-type: none"> • AdmissionMonth • AgeGroup • County (patient's county of residence as 5 digit FIPS code) • Ethnicity (if using) • Race (if using) • Sex • YearAdmitted <p>Do not expand dataset to include all combinations of these variables where IncidentCountNonFire equals zero. CDC will expand data and fill in zeros after data are validated. If missing combinations of these variables should not be interpreted as zero (for example, county X didn't report data in year Y), then please include this information in your metadata.</p>
Step #4c	<p>Select all records where the cause was categorized as Unknown mechanism or intent</p> <p>Create variable "IncidentCountUnknown" and summarize data by the following variables coded according to data dictionary:</p> <ul style="list-style-type: none"> • AdmissionMonth • AgeGroup • County (patient's county of residence as 5 digit FIPS code) • Ethnicity (if using) • Race (if using) • Sex • YearAdmitted <p>Do not expand dataset to include all combinations of these variables where IncidentCountUnknown equals zero. CDC will expand data and fill in zeros after data are validated. If missing combinations of these variables should not be interpreted as zero (for example, county X didn't report data in year Y), then please include this information in your metadata.</p>

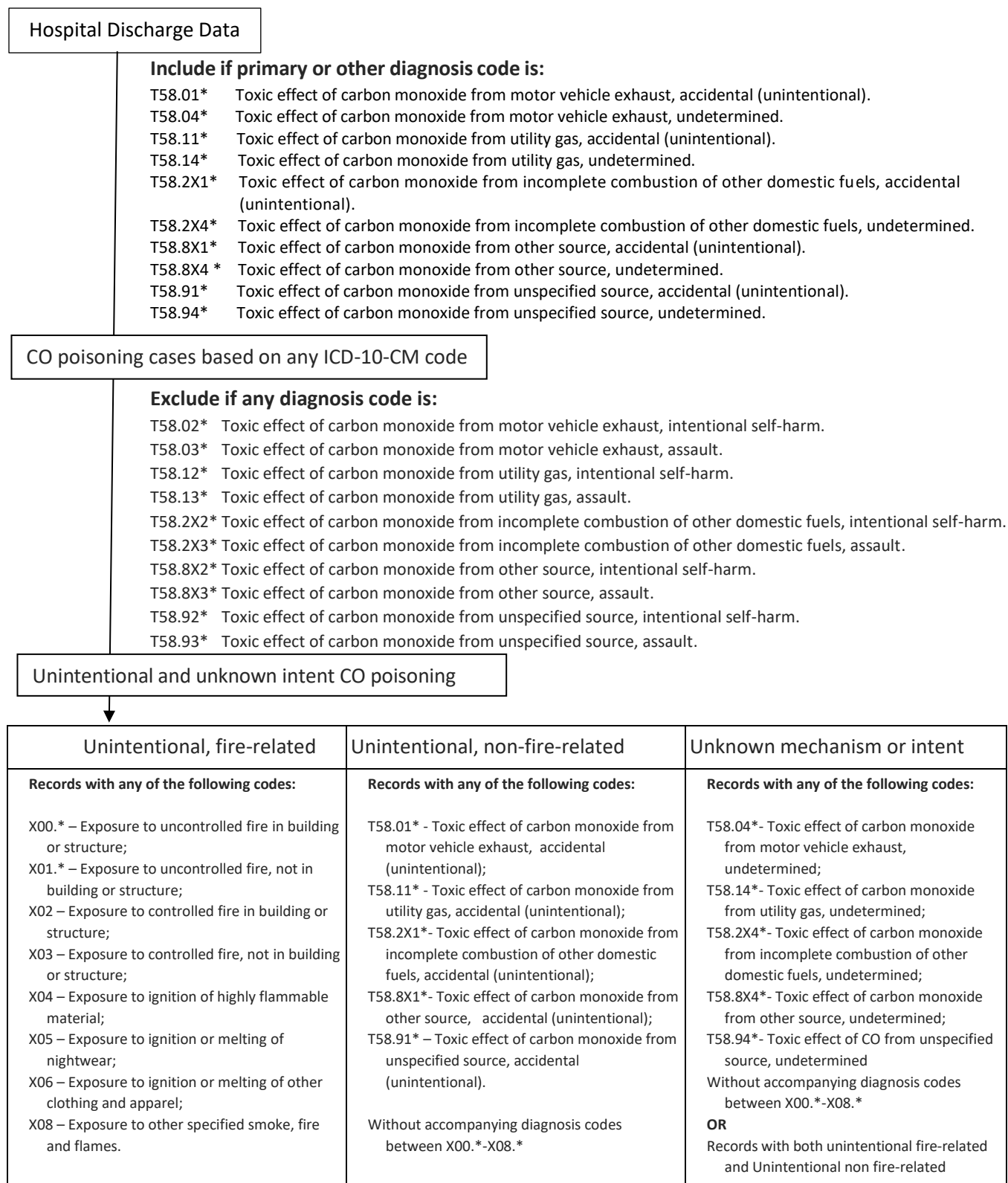
	Description
Step #5	<p>Merge data files created in steps 4a – 4c by:</p> <ul style="list-style-type: none"> • AdmissionMonth • AgeGroup • County (patient’s county of residence as 5 digit FIPS code) • Ethnicity (if using) • Race (if using) • Sex • YearAdmitted <p>Add zeros to any missing values in IncidentCountFire, IncidentCountNonFire, and IncidentCountUnknown.</p>
Step #6	<p>Create the following variables and code according to data dictionary:</p> <ul style="list-style-type: none"> • HealthOutcomeID
Step #7	<p>Create a variable called “MonthlyHosp” and set it to zero for all rows.</p> <p>This is a required variable in the schema but is not used by CO poisoning.</p>
Step #8	<p>Create new variable called “RowIdentifier”.</p> <p>RowIdentifier should be a sequence of numbers from 1 to the number of rows in your dataset.</p>
Step #9	<p>Order the variables according to the schema</p> <ul style="list-style-type: none"> • RowIdentifier • AdmissionMonth • AgeGroup • County • Ethnicity (optional) • HealthOutcomeID • IncidentCountFire • IncidentCountNonFire • IncidentCountUnknown • MonthlyHosp • Race (optional) • Sex • YearAdmitted
Step #10	<p>Convert to XML</p> <p>Before converting to XML, create separate data files for each year of data. The data file should be converted to the .XML file format and the required header inserted into the XML file, according to the Schema found on SharePoint. Insert your state FIPS code in the XML header.</p> <p>This completes the required steps for data submission.</p>

APPENDIX A – CARBON MONOXIDE (CO) POISONING NCDM CASE DEFINITION AND CLASSIFICATION FLOWCHART – ICD-9-CM



‘*’ includes all sub variations

APPENDIX B. Carbon Monoxide (CO) Poisoning NCDM Case Definition and Classification Flowchart – ICD-10-CM



*' includes all sub variations



CDC'S ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM

Contact us: trackingsupport@cdc.gov

Visit the Tracking Network today: www.cdc.gov/ephtracking

Follow us on social media:

- Twitter (@CDC_EPHTracking)
- Facebook (facebook.com/CDCEPHTracking)