

BOX. Syndrome definition description and chief complaint search terms, diagnosis codes, and negations included in syndrome definition for emergency department visits for firearm injuries

<p>Syndrome definition (outcome)</p>	<p>Firearm injury*</p>
<p>Syndrome definition</p>	<p>The syndromic surveillance definition to detect initial visits for a firearm injury uses both discharge diagnosis codes and chief complaint free text with exclusions of specific keywords and diagnosis codes to increase specificity. If discharge diagnosis codes indicate a firearm injury occurred, the emergency department visit is automatically included in the syndrome. If there is no discharge diagnosis code, the visit is only included if the chief complaint text has a firearm injury-related term. In addition, the exclusions are only applied to the chief complaint text when a discharge diagnosis code is not present.</p>
<p>Diagnosis codes†</p>	
<p>ICD-9-CM codes</p>	<ul style="list-style-type: none"> •E922(.0–.3, .8–.9) = Accident cause by firearm •E955(.0–.4, .9) = Suicide and self-inflicted injury by firearms •E965(.0–.4) = Assault by firearms •E970 = Injury due to legal intervention by firearms •E979.4 = Terrorism involving firearms •E985(.0–.4) = Injury by firearms, undetermined intent
<p>ICD-10-CM codes</p>	<ul style="list-style-type: none"> •W32 = Accidental handgun discharge and malfunction <ul style="list-style-type: none"> ◦W32.0 = accidental handgun discharge ◦W32.1 = accidental handgun malfunction •W33 = Accidental rifle, shotgun and larger firearm discharge, and malfunction <ul style="list-style-type: none"> •W33.0 = Accidental rifle, shotgun, and larger firearm discharge <ul style="list-style-type: none"> ◦W33.00 = accidental discharge of unspecified larger firearm ◦W33.01 = accidental discharge of shotgun ◦W33.02 = accidental discharge of hunting rifle ◦W33.03 = accidental discharge of machine gun ◦W33.09 = accidental discharge of other larger firearm •W33.1 = Accidental rifle, shotgun, and larger firearm malfunction <ul style="list-style-type: none"> ◦W33.10 = accidental malfunction of unspecified larger firearm ◦W33.11 = accidental malfunction of shotgun ◦W33.12 = accidental malfunction of hunting rifle

<ul style="list-style-type: none">◦W33.13 = accidental malfunction of machine gun◦W33.19 = accidental malfunction of other larger firearm •W34 = Accidental discharge and malfunction from other and unspecified firearms and guns<ul style="list-style-type: none">◦W34.0 = accidental discharge from other and unspecified firearms and guns◦W34.00 = accidental discharge from unspecified firearms or gun◦W34.09 = accidental discharge from other specified firearms •W34.1 = Accidental malfunction from other and unspecified firearms and guns<ul style="list-style-type: none">◦W34.10 = accidental malfunction from unspecified firearms or gun◦W34.19 = accidental malfunction from other specified firearms •X72 = Intentional self-harm by handgun discharge •X73 = Intentional self-harm by rifle, shotgun, and larger firearm discharge<ul style="list-style-type: none">◦X73.0 = intentional self-harm by shotgun discharge◦X73.1 = intentional self-harm by hunting rifle discharge◦X73.2 = intentional self-harm by machine gun discharge◦X73.8 = intentional self-harm by other larger firearm discharge◦X73.9 = intentional self-harm by unspecified larger firearm discharge •X74 = Intentional self-harm by other and unspecified firearm and gun discharge<ul style="list-style-type: none">◦X74.8 = intentional self-harm by other firearm discharge◦X74.9 = intentional self-harm by unspecified firearm discharge •X93 = Assault by handgun discharge •X94 = Assault by rifle, shotgun, and larger firearm discharge<ul style="list-style-type: none">◦X94.0 = assault by shotgun◦X94.1 = assault by hunting rifle◦X94.2 = assault by machine gun◦X94.8 = assault by other larger firearm discharge
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- X94.9 = assault by unspecified larger firearm discharge
- X95 = Assault by other and unspecified firearm and gun discharge
- X95.8 = assault by other firearm discharge
- X95.9 = assault by unspecified firearm discharge

- Y22 = Handgun discharge, undetermined intent

- Y23 = Rifle, shotgun, and larger firearm discharge, undetermined intent
- Y23.0 = shotgun discharge, undetermined intent
- Y23.1 = hunting rifle discharge, undetermined intent
- Y23.2 = military firearm discharge, undetermined intent
- Y23.3 = machine gun discharge, undetermined intent
- Y23.8 = other larger firearm discharge, undetermined intent
- Y23.9 = unspecified larger firearm discharge, undetermined intent

- Y24 = Other and unspecified firearm discharge, undetermined intent
- Y24.8 = other firearm discharge, undetermined intent
- Y24.9 = unspecified firearm discharge, undetermined intent

- Y35.0 = Legal intervention involving firearm discharge
- Y35.00 = Legal intervention involving unspecified firearm discharge
- Y35.001 = legal intervention involving unspecified firearm discharge, law enforcement official injured
- Y35.002 = legal intervention involving unspecified firearm discharge, bystander injured
- Y35.003 = legal intervention involving unspecified firearm discharge, suspect injured

- Y35.01 = Legal intervention involving injury by machine gun
- Y35.011 = legal intervention involving injury by machine gun, law enforcement official injured
- Y35.012 = legal intervention involving injury by machine gun, bystander injured
- Y35.013 = legal intervention involving injury by machine gun, suspect injured
- Y35.02 = Legal intervention involving injury by handgun

	<ul style="list-style-type: none"> ◦Y35.021 = legal intervention involving injury by handgun, law enforcement official injured ◦Y35.022 = legal intervention involving injury by handgun, bystander injured ◦Y35.023 = legal intervention involving injury by handgun, suspect injured •Y35.09 = Legal intervention involving other firearm discharge ◦Y35.091 = legal intervention involving other firearm discharge, law enforcement official injured ◦Y35.092 = legal intervention involving other firearm discharge, bystander injured ◦Y35.093 = legal intervention involving other firearm discharge, suspect injured •Y38.4 = Terrorism involving firearms •Y38.4X = Terrorism involving firearms ◦Y38.4X1 = terrorism involving firearms, public safety official injured ◦Y38.4X2 = terrorism involving firearms, civilian injured ◦Y38.4X3 = terrorism involving firearms, terrorist injured
SNOMED codes	<p>41430008, 56768003, 63409001, 69861004, 77301004, 86122002, 111050005, 219257002, 283545005, 218081007, 218086002, 218082000, 218087006, 218088001, 269796009, 242869008, 219199009, 219200007, 219201006, 219204003, 219205002, 219203009, 219198001, 219142001, 219143006, 219144000, 219145004, 219146003, 287184008, 287193009</p>
Chief complaint search terms	<ul style="list-style-type: none"> •GSW •Gunshot (and common spellings and misspellings) •Buckshot •Revolver •Rifle •Shotgun •Firearm •Pistol •Handgun •Been shot •I was shot •I got shot •Combination of hit, ricochet, or graze with bullet

	<ul style="list-style-type: none"> •Gun and wound
Negations	<ul style="list-style-type: none"> •Z51.89 or Z5189 •Encounter for other specified after care •No gun •Remove gun •Heard or hearing gun •Hit head •Kickback •Water gun •Pellet •BB gun (and common spellings and misspellings) •Rubber bullet •Paint ball gun •Nerf gun •Air gun •Spring gun •Pistol whip •Nail gun •Staple gun •Stun, laser, or taser gun •Struck or hit with, in combination with gun or pistol •Bloodshot •Scope •Fake •Allergy shot •Injection •Follow up •Chronic •Wound check, care, recheck, or infection •Drainage •Gswel or Gswol •GSW, gunshot, or bullet and history, ago, past, prior, previous, or old

Abbreviations: ICD-9-CM = *International Classification of Diseases, Ninth Revision, Clinical Modification*; ICD-10-CM = *International Classification of Diseases, Tenth Revision, Clinical Modification*; ESSENCE = Electronic Surveillance System for the Early Notification of Community-based Epidemics; GSW = gunshot wound; NSSP = National Syndromic Surveillance Program; SNOMED = Systematized Nomenclature of Medicine.

* Emergency department visits for firearm injuries were identified by using a syndrome definition developed by CDC in partnership with state and local health departments to query NSSP data.

† Also includes diagnosis codes with no period (e.g., “W340”). ICD-9 codes were included to collect any facilities or hospital systems that continued to use ICD-9-CM codes after release of ICD-10 codes.