



Sexual Violence Emergency Department (ED) visits

Purpose:

To obtain counts and rates for injury-related ED visits with sexual violence ICD-10-CM codes (with the exclusion of human trafficking codes added in the fourth quarter of 2018 which are considered different types of injury compared to the SV codes detailed here; further review of these codes will be necessary once these have been in use for a few years). Counts are based on visits and not unique patients. Counts will focus on incidence (initial visits for active treatment). See list of SV specific codes in the *Numerator* section below.

Value/potential use of ED data for reporting of SV and understanding the issue:

- Monitor and obtain information on SV injuries (visit-level data) requiring and seeking emergency medical care.
- Monitor trends in ED usage and health seeking behavior.
- Compare with rates of crime reporting and survey data on SV.
- Analyze trends and differences in seeking healthcare for SV injuries by subpopulations.

Background Information:

The complex nature of this injury and reporting to healthcare necessitates caution with interpretation of data:

- Not all who experience sexual violence (SV) report to healthcare settings.
- SV workgroup members provided data on hospitalizations and ED visits as a starting point for review. ED visit and hospitalization rates (age-adjusted) were calculated based on the codes in the *Numerator* section below. For ED visits, the injury subset protocol was followed (any diagnosis or external cause code with injury included in the subset). Due to small numbers of hospitalizations with SV, the hospitalization injury subset protocol was expanded and any code of injury in any field was included in the subset. A comparison of hospitalizations among four (4) states/regions participating in the workgroup revealed nonfatal hospitalization rates of approximately 1 per 100,000 population compared to nonfatal ED visit rates ranging from 16 to 32 per 100,000 population (6 states/regions reporting). The rarity of hospitalizations noting SV injury suggests that ED data may produce more stable rates and allow further analysis by subpopulations.
- Reliance on ED visit data alone will miss other sources of healthcare, such as Sexual Assault Nurse Examiner (SANE) or forensic nurse clinics, public health clinics and other similar sources of care and treatment (including hospitalization data for more severe assaults requiring admission to hospitals). Unfortunately, it is not possible to include or report on these other healthcare sources due to lack of standardization with collection, coding and reporting to a centralized agency (such as a state health department). Hospitalizations are the exception, however, as noted above, the rarity of these events would require aggregation of many years of data in order to review and analyze by subpopulations.
- The degree to which individuals or subpopulations report to the ED/hospital setting versus another health facility or none at all is unknown. Variation in healthcare-seeking behavior could be due to reasons specific to SV injury such as: stigma associated with



- SV; embarrassment seeking care; disbelief or lack of support from community, family, medical providers or others; or no physical injury requiring immediate medical attention due to circumstances of the SV. Variation could also be due to reasons associated with availability of medical care such as: existence of specialty services that may be more supportive and responsive to an SV injury (such as SANE clinics, mental health services or counseling); preference for one's personal primary physician; or lack of medical services in the area. The reasons for seeking healthcare or seeking a specific type of healthcare may vary by demographics as well, impacting some populations more than others.
- The SV workgroup reviewed additional ICD-10-CM codes thought to be associated with SV. Members reviewed the percentage of cases with an SV code (see *Numerator* section below) and an ICD-10-CM code noting a possible genital injury (S30-S39: injury to abdomen, lower back, lumbar spine, pelvis and external genitals) and those reporting an STI (Z202). If a significant percentage of cases included these codes, the workgroup would consider the use of these codes as proxies for SV. The methodology for use as proxies was not established and proved unnecessary as this did not appear appropriate based on the data. Six (6) of the participating states/regions provided data and the range of cases with a genital injury code was low (4-11%) and with an STI code even lower (1-2%). Workgroup members also reviewed coding of genital mutilation (N90.81), regardless of whether or not an SV code appeared in the record, but found that no participating state/region had more than a handful of visits indicating genital mutilation during the 3-year period of review (2016-2018).

The workgroup reviewed the use of Z04.4 (encounter for examination and observation following alleged rape). Though this code is intended for use only to rule-out rape, we reviewed data to determine if it was used in combination with any of the SV codes. Four states provided data on use with SV codes and use in injury ED visits with no other SV codes present. Of the total visits with Z04.4, the percentage where this code was used in combination with an SV code ranged from 16% to 35% (among the 4 states reporting data). These results are difficult to interpret. Z04.4 could have been used in error when an SV code was also reported (i.e. not meant to indicate a rule-out) or it could have been included and intended to supplant the SV code once examination ruled-out rape. As it is unclear why the codes may co-exist in the same record, the workgroup did not find it appropriate to exclude those with both the rule-out code and an SV code. Neither did we think it appropriate to consider Z04.4 as sufficient to add a case to the indicator count with no other SV code present. If this code is used correctly, it would indicate a rule-out and, with no other code suggesting SV, these records should not be included. If the code was not used correctly (for instance, it was meant to indicate an SV incident), without corresponding SV codes we have no other information to indicate presence of SV and cannot include in our count. In order to thoroughly understand if Z04.4 is being used according to the ICD-10-CM guidance, a medical record review would be required.

The workgroup also considered codes that might be used *in place of* SV codes. One state conducted interviews with healthcare staff and these staff indicated that other diagnosis codes may be used instead of SV codes, such as “emergency contraception”, “STI prophylaxis”, or “PTSD or anxiety”. Possible reasons given for using these codes in place



of the SV codes included privacy and/or safety of the patient. The degree to which this is done (replacement coding) within or across health systems and states is unknown. It may be different for each healthcare organization or it may be based on needs and desires of the patient. With no clear indication of which codes may be used in place of the SV codes or how widespread this is, the workgroup determined it was not appropriate to consider adding additional codes for case determination.

- Perpetrator data is collected by use of ICD-10-CM code Y07. However, analysis by perpetrator, and determination if the violence was committed by an intimate partner, is difficult to assess using health care data (ED visits and hospitalizations in particular). Guidance around the use of the Y07 code is restricted to confirmed cases of SV only (T74.21 or T74.22) which limits how frequently this code is used based on the distribution of suspected versus confirmed codes (though some states reported minimal use of Y07 code for suspected SV as well). There were significant differences between states regarding use of confirmed versus suspected SV codes. The proportion of confirmed SV codes among 6 states/regions ranged from 29% to 51%. This may reflect differences across states in the collecting, documenting, and coding of SV. Additionally, a scan of health systems in one state revealed that these differences may also be seen across healthcare systems within the same state or geographic region.
- Based on the above listed limitations of healthcare data as an indicator of SV, ED visits (and hospitalization data as well) cannot be used to determine the scope of burden of SV incidence. Instead, it can be used to understand the population seeking medical care for an SV injury and differences by demographics. Even so, it is likely an undercount of SV injuries and should be understood as such. A call to action for healthcare providers suggests the need to look for signs of sexual violence among their patients, ask questions in a sensitive manner, and provide assistance. Such a response may lead to an increase in health-seeking behaviors resulting in an increase rate that more accurately reflects the impact of SV on health and the population.

Methods:

Numerator:

- Nonfatal ED visits (treated and released only) with any of the ICD-10-CM diagnosis or external cause of injury codes listed in the table below in any field.
- This indicator will follow the same guidance as other injury ED indicators. The inclusive nature of the ED injury subset captures all mention of SV except for subsequent (D in the 7th character) and sequelae (S in the 7th character) encounter types. The exclusion of the D and S 7th character codes proved to have minimal impact; four (4) of the states/regions participating in the SV workgroup provided data on subsequent and sequelae encounters which revealed an average of no more than 5 cases per year per state/region for the time period of 2016-2018.

Codes* for Nonfatal sexual violence Emergency Department Visits

Code	Description
T74.21	Adult sexual abuse, confirmed
T74.22	Child sexual abuse, confirmed



T76.21	Adult sexual abuse, suspected
T76.22	Child sexual abuse, suspected
O9A.4	Sexual abuse complicating pregnancy, childbirth, and the puerperium

*7th character of A or missing (reflects initial encounter, active treatment).

Denominator:

- Midyear population for the calendar year under surveillance obtained from the U.S. Census Bureau or suitable alternative.

Measures of frequency:

- Annual number of ED visits, by age group and sex.
- Annual age-adjusted rates, overall and by sex, standardized by the direct method to the year 2000 standard U.S. population

Period for case definition:

- Calendar year based on date of discharge.

Indicator notes:

- See notes throughout this document.

Limitations of ED visit data:

- It is unknown how many people with SV injuries seek emergency care or how well these injuries are documented in the medical records or how much detail is provided by the patient.
- Differences in healthcare processes for interviewing, documenting, and follow-up are unknown and may affect quality and completeness of ED data.
- According to coding guidelines, perpetrator data (Y07 codes) are only recorded if the sexual violence code indicates “confirmed.”
- The percentage of SV injuries reporting to emergency care versus another type of medical care (SANE clinics, primary physicians or other options) is unknown.
- Differences in health care usage by demographics is also unknown though it is assumed that certain populations may be less likely to present in healthcare settings based on income, accessibility, insurance status, cultural barriers, shame, distrust, and/or the existence of or proximity to alternative services. Lower counts/rates among subpopulations should be interpreted with caution as these may not reflect lower incidence but rather other personal or institutional differences in healthcare-seeking behavior.

Alternative Data Sources:

Other sources of data should be considered, reviewed and analyzed in combination with ED data. An important aspect to keep in mind while reviewing other sources is whether the data represent incidence or prevalence. Survey data focuses on prevalence. Most widely available from survey data is lifetime prevalence though some surveys report previous 12-month

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prevalence (this is sometimes understood as incidence as it refers to a specific time-period and not presence/absence of an event or condition). ED and hospitalization data are likely best used for incidence only (prevalence, whether a patient had ever experienced SV, is not uniformly reported, collected or coded in health care settings).

- NISVS (National Intimate Partner and Sexual Violence Survey): this is a random digit dial phone survey of individuals 18 and older. Lifetime and 12-month prevalence estimates of sexual violence victimization can be obtained from this data source, including data on the perpetrator. NISVS estimates that 44% of women and 25% of men have experienced physical contact SV in their lifetime; overall, approximately 5% of women and 3% of men reported contact SV in the past 12 months. National-level data and reports provide information by racial and ethnic groups and there is also a separate report by sexual orientation. These same data points by prevalence (lifetime and previous 12-months) and person characteristics are not available for every state and the state-level reports are often a few years behind the national report. More information can be found at the following link:
<https://www.cdc.gov/violenceprevention/datasources/nisvs/index.html>
- YRBS (Youth Risk Behavior Survey): this survey is based on a representative sample of public high school students conducted in each state every 2 years. These survey data provide information on lifetime reports of forced sex, as well as exposure to sexual violence by any perpetrator, and sexual and physical dating violence in the past 12 months. Some states also collect data on other risk and protective factors such as social connection, presence/absence of an adult to talk to, bullying, sense of belonging in school, unsafe school environment, sexual behaviors, and alcohol and other drug use. Furthermore, some states have their own youth surveys with similar questions as the YRBS. The following sites provide links to the national YRBS questionnaires and reports:
<https://www.cdc.gov/healthyyouth/data/yrbs/index.htm>;
<https://www.cdc.gov/healthyyouth/data/yrbs/questionnaires.htm>
- Behavioral Risk Factor Surveillance System (BRFSS): this survey is based on a representative sample of adults 18+ conducted every year. A Sexual Violence module was developed by the CDC and included on the BRFSS in 2005, 2006, and 2007. States have included or modified this module, as funds or priorities have allowed. The module includes both 12-month and lifetime prevalence questions. There is no standardized or recent and consistent use of this module, however, states may consider including it as an optional module to their yearly BRFSS: <https://www.cdc.gov/brfss/questionnaires/modules/state2007.htm>
- Uniform Crime Reporting (UCR): this dataset provides law enforcement crime statistics reported to the FBI. The national database reports counts of offenses, not unique victims. One caveat to UCR data involves differences between the National Summary-Based Reporting (SBR) System version of UCR and the National Incident-Based Reporting System (NIBRS) version of UCR. Depending on the state, some agencies report via the SBR system and others report via NIBRS. For those agencies using NIBRS, sexual offense counts are based on number of victims for each type of offense (there are 6 different types of sexual offenses). For instance, there may be 2 victims associated with the same type of offense (in NIBRS this would count as 2 offenses). Alternatively, there may be 3 separate sexual offenses (during a single



crime event) with one victim (in NIBRS this would count as 3 offenses). For states using SBR, only one offense (sexual or non-sexual) is counted per crime event based on the most severe offense type. In the above examples (assuming no other types of offense, such as murder, involved in the incident), 2 victims of the same sexual offense would count as 2 (same as NIBRS). However, the 3 separate sexual offenses for the single victim would count as 1. Additionally, SBR reports fewer types of sexual offenses (rape only defined as rape, sodomy or sexual assault with object) while NIBRS separately reports on 6 different sexual offenses. It is useful to understand the system your agency/state uses and reports to UCR before analyzing the data. However, as of January 2021, only the NIBRS version will be accepted by the FBI.

If you have access to your state analytic files, you may have more flexibility analyzing SV data. For example, you may be able to review data by number of victims/survivors instead of number of offenses.

Another caveat for reviewing these data is that sexual assaults are one of the most underreported crimes and changes in rates may be difficult to interpret. The Bureau of Justice Statistics reports that more than three-quarters of sexual assaults (defined more broadly than the UCR to include threatened attacks involving unwanted sexual contact) are not reported to the police (2018 National Crime Victimization Survey). Changes could be based on increased reporting and not an increase in incidence. Or changes could be the result of improved community relationship or perception of law enforcement (especially in terms of how SV reports are classified, documented and processed) which could lead to better reporting and understanding of the scope of the issue. [UCR data may be missing assaults that occur on university campuses: universities are required to report SV data to the U.S. Department of Education but in some cases these reports will not be known to law enforcement or have enough information for campus law enforcement to include in their UCR data.] <https://www.fbi.gov/services/cjis/ucr>

- Service/program data for survivors of SV: if states have access to these data, it is likely not standardized across locations but may provide additional information on numbers receiving services (at minimum for a specific community or geographic region). Additionally, it may be useful to analyze the demographic characteristics of those receiving services compared to those seeking healthcare and those reporting to law enforcement.

Corresponding death indicator:

- NVDRS (National Violent Death Reporting System) may have information on intimate partner and/or sexual violence (there is an IPV module in the NVDRS). However, detail of past sexual assault/violence may not be shared by interviewed family members or recorded by coroners/medical examiners, especially if this was not immediately relevant to the death. Additionally, NVDRS was not funded in all states and territories until 2019. Sexual-violence-related homicides are possible to count using NVDRS--see the following for an example analysis: <https://journals.sagepub.com/doi/abs/10.1177/1088767911406236>

**Future work/considerations:****The SV workgroup suggests the following for documenting SV in health records:**

- Training professionals in recognition, documentation and coding for SV in healthcare settings.
- Establishing standardized guidelines/best practices for how and when to code for SV in health records.