NYS Health Connector

Suicide and Self-Harm Dashboard

Overview

Office of Health Services Quality and Analytics
Center for Applied Research and Evaluation

Office of Public Health
Center for Environmental Health

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NEW YORK STATE | Department of Health

Introduction

Suicides and self-harm injuries are a growing public health concern across New York State with serious and lasting effects on the well-being of families and communities. An important part of suicide and self-harm injury prevention efforts is understanding the trends along with regional and demographic differences. Clear and accurate data is key to supporting suicide prevention activities.

This dashboard shows suicide and self-harm injuries in different ways and can be used to drive interventions at the local, regional, and state-wide levels and assist suicide education and prevention efforts. Although the factors that contribute to suicide and self-harm injuries are largely known, this dashboard can be used to help understand more about the problems and issues that affect people living in New York State. For more data on suicide and self-inflicted injuries, please visit the New York State Department of Health's suicide and self-harm injury prevention page.

If you need immediate help, please call the Suicide Prevention Lifeline at 988

Accessibility

For any individual(s) who cannot access the visualizations or data on New York State Health Connector dashboards, please contact the Office of Health Services Quality and Analytics (OHSQA) All- Payer Database team at NYSAPD@health.ny.gov and staff will assist in sending alternative materials.

Dashboard Data Sources

This dashboard was a collaboration between the New York State Department of Health (NYSDOH) Bureau of Vital and Health Statistics, Vital Statistics Program, and Bureau of Occupational Health & Injury Prevention. The data source for the deaths by suicide dashboards is the vital statistics mortality data for 2020, 2021, and 2022. The data source for hospitalizations and emergency department visits due to self- harm is the New York Statewide Planning and Research Cooperative (SPARCS) hospital discharge data for 2022. For more information or questions about this data, please contact nysapd@health.ny.gov.

Vital Records (Vital Statistics) Vital Event Data

New York State consists of two registration areas, New York City (NYC), and New York State Exclusive of New York City (also referred to as Rest of State). NYC includes five counties: Bronx, Kings (Brooklyn), New York (Manhattan), Queens, and Richmond (Staten Island); the remaining 57 counties comprise New York State Exclusive of NYC. The NYSDOH's Bureau of Vital Records processes data from live birth, death, fetal death, and marriage certificates recorded in New York State Exclusive of NYC. Through a cooperative agreement, the NYSDOH receives data on live births, deaths, and fetal deaths recorded in NYC from the New York City Department of Health and Mental Hygiene (NYCDOHMH), and on live births and deaths recorded outside of New York State for residents of New York State from other states and Canada. In general, vital event indicators for NYC geographical areas reported by the NYSDOH and the NYCDOHMH may be different because the former includes possibly all NYC residents' events, regardless of where they took place, and the latter reports events to NYC residents that took place in NYC.

Vital statistics mortality data include up to 20 causes of death. Frequencies are based on decedents' county of residence, not the county where death occurred. This dashboard's mortality data reflects all mechanisms of suicide (See Table 1).

Table 1. Suicide Mechanism Definitions for Vital Statistics Death Data

Mechanism	ICD-10 Codes/Detailed Definition
Cut/Pierce	X78
Drowning/Submersion	X71
Fall	X80
Hot Object/Substance	X77
Fire/Flame	X76
Firearm	X72-X74
Transport	X82
Struck by/against	X79
Suffocation	X70
Other Specified, Classifiable	X75, X81
Unspecified	X84, U03.9
Other Specified, NEC	X83, Y87.0, U03.0
Poisoning**1**	X60-X69

Source**:** https://www.cdc.gov/nchs/data/ice/icd10_transcode.pdf

[1] 'Poisoning' includes both opioid and non-opioid overdoses and poisonings.

Statewide Planning and Research Cooperative System (SPARCS) Data

The New York Statewide Planning and Research Cooperative (SPARCS) is a comprehensive all- payer data reporting system established in 1979 as a result of cooperation between the health care industry and government. Initially created to collect information on discharges from hospitals, SPARCS currently collects patient level detail on patient characteristics, diagnoses and treatments, services, and charges for every hospital discharge, ambulatory surgery and emergency department visit in New York State.

Emergency department visits are events that did not result in admission to the hospital. An individual can have more than one hospitalization or ED visit during the reporting time frame. Numbers and rates are based on the number of discharges and not on the number of individuals seen. The frequency is based on patients' county of residence, not the county where the incident occurred. County of residence assigned based on ZIP code for cases in which patient county of residence listed as unknown or missing, but a valid NY ZIP code was present.

Each hospitalization and outpatient ED visit receives an ICD-10-CM code at discharge that indicates the primary reason for the occurrence. There is also a first-listed cause, external cause of injury, and up to 24 other diagnosis codes recorded to further describe the hospitalization or ED visit. Statistics in these dashboards are based on the primary diagnosis and first-listed cause of injury unless otherwise noted (Table 2).

Table 2. Self-Harm Mechanism Definitions for SPARCS Data

Mechanism	ICD-10-CM Codes/Detailed Definition2
Cut/Pierce	X78
Drowning/Submersion	X71
Fall	X80
Hot Object/Substance Hot	X77, T54.1X2, T54.2X2, T54.3X2, T54.92
Fire/Flame	X76
Firearm	X72, X73, X74.8, X74.9
Motor Vehicle Traffic, Occupant	X82, X82.1
Motor Vehicle Traffic, Other	X81.0
Other Land Transport	X81.1
Other Transport	X83.0
Bites and Stings, Venomous	T63.0-T63.6 with a 6th character of "2", T68.8 with a 6th character of "2", T63.92.
Natural Environmental, Other	T63.712, T63.792, T65.822, X83.2
Struck by/against	X79
Suffocation	T71.1 with a 6th character of "2", T71.222, T71.232
Other Specified, Classifiable	X74.0, X75, X81.8, X83.1
Unspecified	T14.91
Other Specified, NEC	X83.8
Poisoning, Drug**3**	T36-T50 with a 6th character of "2", Except for any of the following which can have a 5th Character of "2": T36.9, T37.9, T39.9, T41.4, T42.7, T43.9, T45.9, T47.9, and T49.9.
Poisoning, non-drug	T51.0X2; T51.1X2; T51.2X2; T51.3X2; T51.8X2; T51.92X; T52.0X2; T52.1X2; T52.2X2; T52.3X2; T52.4X2; T52.8X2; T52.92X; T53.0X2; T53.1X2; T53.2X2; T53.3X2; T53.4X2; T53.5X2; T53.6X2; T53.7X2; T53.92X; T54.0X2; T55.0X2; T55.1X2; T56.0X2; T56.1X2; T56.2X2; T56.3X2; T56.4X2; T56.5X2; T56.6X2; T56.7X2; T56.812; T56.892; T56.92X; T57.0X2; T57.1X2; T57.2X2; T57.3X2; T57.8X2; T57.92X; T58.02X; T58.12X; T58.2X2; T58.8X2; T58.92X; T59.0X2; T59.1X2; T59.2X2; T59.3X2; T59.4X2; T59.5X2; T59.6X2; T59.7X2; T59.812; T59.892; T59.92X; T60.0X2; T60.1X2; T60.2X2; T60.3X2; T60.4X2; T60.8X2; T60.92X; T61.02X; T61.12X; T61.772; T61.782; T61.8X2; T61.92X; T62.0X2; T62.1X2; T62.2X2; T62.8X2; T62.92X; T64.02X; T64.82X; T65.0X2; T65.1X2; T65.212; T65.222; T65.292; T65.3X2; T65.4X2; T65.5X2; T65.6X2; T65.812; T65.832; T65.892; T65.92X

2 Only cases where a listed code has a 7th character of A, B, or C indicating an initial encounter, or cases where encounter type is not specified based on the Centers for Medicare and Medicaid Services coding guidelines, are included. Source: https://www.cdc.gov/nchs/data/nhsr/nhsr136-508.pdf

3 'Poisoning, Drug' includes both opioid and non-opioid overdoses and poisonings.

Population Data Files

Population metrics used for 'Death by Suicide' and 'Death by Suicide by County' for 2020 are derived from the National Center for Health Statistics bridged-race population estimates of the resident population of the United States. For 2021 and 2022 the source is a Special Tabulation from the **US Census Population and Housing Unit Estimates Program** derived from the Vintage 2023 Estimates of the Resident Population.

Population metrics used for 'Self-Harm Hospitalizations by County' and 'Self-Harm Emergency Department Visits by County' dashboards are derived from Claritas New York State small-area population data. Discharges for which patient data indicated an unknown or out-of-state county were excluded from county-level and statewide population rates due to a lack of population denominators.

Race and Ethnicity

For the 'Death by Suicide' and 'Death by Suicide by County' dashboards, Hispanic counts represent all Hispanics regardless of race. Every remaining race and ethnicity category specified represents non- Hispanics only and only decedents with a single race category listed on their death certificate. For example, 'White Non-Hispanic' represents Non-Hispanic White Alone. Where more than one race was listed, the case is categorized into 'Multi/Other.'

For the 'Self-Harm Hospitalizations by County' and 'Self-Harm Emergency Department Visits by County' dashboards, Hispanic counts represent all Hispanics regardless of race. Counts in race categories include both Hispanic and non-Hispanic ethnicities. 'White' represents White Alone. Where more than one race was listed, the case is categorized into 'Multi Race.'

Deidentification

The New York State Department of Health adheres to all applicable federal and state rules, regulations, and standards for the de-identification of protected health information. To ensure the published data is de-identified, a team of statistical analysts engaged in an expert determination process. The expert determination method is recognized by the U.S. Department of Health & Human Services as one of two methods approved for achieving de-identification in accordance with the Health Insurance Portability and Accountability Act of 1996 (HIPAA) Privacy Rule. For more information on de-identification methods, please visit:

https://www.hhs.gov/hipaa/for-professionals/special-topics/de-identification/index.html#standard

Suicides by County Dashboard

The expert determination method required that figures be suppressed for demographic characteristics where there are 6 or fewer total county deaths, 10 or fewer deaths and suicides make up 50% or more of the total deaths, or where suicide deaths make up 100% of the reported deaths for that demographic characteristic in the county.

Self-Harm Hospitalizations by County Dashboard

The expert determination method required that figures be suppressed for demographic characteristics where there are 10 or fewer total county injury hospitalizations, self-harm hospitalizations make up at least 90% of the reported injury hospitalizations, or the total population with that demographic characteristic in the county is less than 20.

Self-Harm Emergency Department Visits by County Dashboard
The expert determination method required that figures be suppressed for demographic characteristics where there are 10 or fewer total county injury ED visits, self-harm ED visits make up 100% of the reported injury visits, or the total population with that demographic characteristic in the county is less than 20.

Limitations

Suicide and self-harm statistics presented on the dashboards reflect data only for the New York State residents. Suicide and self-harm events by out-of-state residents are not part of these visualizations.

Limitations related to the use and interpretation of hospitalizations and emergency department visits (SPARCS Data) due to self-harm data:

- Race statistics presented for the hospitalizations and ED self-harm events indicate high number of patients with race in the category of "Other." Race and ethnicity are self-reported by a patient and reflect a patient's preference for reporting race as well as hospital's reporting practices.
- Identified cases do not necessarily reflect suicide attempts, as they include all cases where a person's intent was to injure themselves.
- This data reflects the number of visits, and not the number of individuals. Individuals may have multiple occurrences of self-harm throughout the year. Additionally, these numbers may include facility transfers, and therefore individual self-harm events may be counted multiple times.
- The identification of self-harm hospitalization and emergency department cases is based on ICD- 10-CM codes identified in administrative data. This information may be subject to coding errors, and the biases of medical documentation and coding practices.
- Cases are defined based on the principal diagnosis code or first-listed valid external cause code in the medical record. The sensitivity and specificity of these indicators may vary by year and hospital location.
- The SPARCS data do not include discharges by people who sought care from facilities outside of New York State, which may lower numbers and rates for some counties, especially those which border other states.
- Patients with no age reported are excluded from all counts and rates. Patients with an unknown gender, race, or ethnicity are excluded from rate calculations and count distributions of the unknown attribute.

Limitations related to the use and interpretation of deaths by suicide data: (Vital Statistics)

- The identified suicide cases are based on ICD-10 codes derived from the death certificate information recorded by county coroners or medical examiners. Because suicide is a sensitive topic, and findings by the coroner or medical examiner may be subjective or be under investigation, there may be under-reporting of suicide involved cases.
- The data may not include deaths among people who died outside the state.

Contact Information

For more information or questions about this data, please contact nysapd@health.ny.gov.