

Method of Sampling Death Certificates for the Committee to Review Suicide Fatalities

June 2024



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Table of Contents

Acknowledgements	3
Purpose	4
Sampling methodology	4
Population and Sample	4
Sample Size Determination.....	4
Sampling Procedure	5
Cause-of-death.....	5
Technical notes	7

Acknowledgements

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Thank you to following for providing leadership, data, and technical support for this report:

The Committee to Review Suicide Fatalities

Recommended Citation:

Office of Analytics. Department of Health and Human Services. Method of Sampling Death Certificates for the Committee to Review Suicide Fatalities. Carson City, Nevada. June 2024.

Purpose

Pursuant to Nevada Revised Statutes (NRS) 439.5106, the Committee to Review Suicide Fatalities (CRSF) is tasked with reviewing suicide fatalities to identify trends, risk factors, and preventive strategies. This paper, prepared by the Nevada Department of Health and Human Services, Office of Analytics on behalf of the Division of Public and Behavioral Health, outlines the methodology for sampling death certificates for consideration in these reviews.

Sampling methodology

Population and Sample

Nevada is comprised of 17 counties, with Clark County being the most populous, housing over 70% of the state's residents. Consequently, around 70% of all deaths in Nevada also occur annually within Clark. Despite this, suicide fatalities occur in a majority of Nevada counties each year. To prevent oversampling in one county and to accurately represent Nevada's diverse population, a stratified sampling method will be employed for case selection. This method allows for more precise and reliable results by ensuring that each subgroup within the population is proportionately represented in the final sample. Two distinct groups were first identified, based on the two Nevada Medical Examiner/Coroner Offices:

- Group A: Autopsy was conducted at the Clark County Office of the Coroner/Medical Examiner located in Las Vegas, Nevada.
 - The decedent's county of death occurred in the following Nevada counties: Clark, Lincoln, southern Nye, and White Pine.
- Group B: Autopsy was conducted at the Washoe County Regional Medical Examiner's Office, located in Reno, Nevada.
 - The decedent's county of death occurred in the following Nevada counties: Carson City, Churchill, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lyon, Mineral, northern Nye, Pershing, Storey, and Washoe.

When an autopsy is conducted in Nevada, the Coroner or Medical Examiner determines the cause and manner of death. When a death certificate is completed, it is sent to Nevada's Office of Vital Statistics for registration and dissemination. The selection of cases for review will then be determined by information gathered from death certificates.

Sample Size Determination

The sample size (number of cases for review) was determined based on the goals of the committee, available resources, and the need for a manageable yet representative sample. The number of cases selected from each group by the CRSF selects will also depend on the volume of cases the committee can reasonably process and review thoroughly, with this assessment being conducted annually. To maintain proportional representation, the percent of cases from the two groups were allocated as such:

- Group A: 50% of the total cases for review
- Group B: 50% of the total cases for review

Sampling Procedure

The initial step in case selection involves identifying cases where the manner of death was suicide. Subsequently, these suicide fatalities are categorized into either Group A or Group B based on the county where the death occurred. The next step is to create a representative sample by considering various demographic variables:

- age group (0-17, 18-24, 25-64, 65+)
- sex (female, male)
- race/ethnicity (White non-Hispanic, Black non-Hispanic, American Indian or Alaska Native non-Hispanic, Asian/Pacific Islander non-Hispanic, and Hispanic, any race)
- military service (veteran, non-veteran)
- resident state (Nevada, out-of-state)
- resident county
- cause-of-death [International Classification of Diseases (ICD) code]

Each year, there are suicide fatalities among Nevada residents that occur out-of-state, and non-residents who complete suicide within Nevada. The committee may elect to review a selection of these cases, depending on the availability of will be contingent on jurisdictions providing death records for Nevada resident deaths and data completeness on out-of-state individuals who died by suicide in Nevada.

After randomly drawing the sample based on grouping and demographic profiles, the committee may draw additional cases for any unrepresented county of death or to increase the number of cases reflecting certain demographics or trends at the committee's discretion.

Cause-of-death

Finally, it is important that the committee reviews suicide fatalities caused by the full range of methods. This will provide insight into the risk factors contributing to these deaths and help identify effective preventive strategies.

Among the various methods that result in suicide fatality, Table 1 below lists possible primary causes of death that may be observed, based on the ICD-10 code listed on the death certificate. Developed by the World Health Organization (WHO), ICD codes are used to classify and code all medical diagnoses, conditions, diseases, and injuries. It is important to note that the WHO released the International Classification of Diseases 11th Revision (ICD-11) on January 1, 2022. At the time this report was written, ICD-10 codes were used in mortality coding. For more information, please visit [WHO ICD Standards](#).

Table 1. ICD-10 Codes for Suicide Fatalities, Primary Cause of Death.

ICD-10 Code	Definition
X60	Intentional self-poisoning by and exposure to nonopioid analgesics, antipyretics and antirheumatics
X61	Intentional self-poisoning by and exposure to antiepileptic, sedative-hypnotic, antiparkinsonism and psychotropic drugs, not elsewhere classified
X62	Intentional self-poisoning by and exposure to narcotics and psychodysleptics [hallucinogens], not elsewhere classified
X63	Intentional self-poisoning by and exposure to other drugs acting on the autonomic nervous system
X64	Intentional self-poisoning by and exposure to other and unspecified drugs, medicaments and biological substances
X65	Intentional self-poisoning by and exposure to alcohol
X66	Intentional self-poisoning by and exposure to organic solvents and halogenated hydrocarbons and their vapours
X67	Intentional self-poisoning by and exposure to carbon monoxide and other gases and vapours
X68	Intentional self-poisoning by and exposure to pesticides
X69	Intentional self-poisoning by and exposure to other and unspecified chemicals and noxious substances
X70	Intentional self-harm by hanging, strangulation and suffocation
X71	Intentional self-harm by drowning and submersion
X72	Intentional self-harm by handgun discharge
X73	Intentional self-harm by rifle, shotgun and larger firearm discharge
X74	Intentional self-harm by other and unspecified firearm discharge
X76	Intentional self-harm by smoke, fire and flames
X78	Intentional self-harm by sharp object
X80	Intentional self-harm by jumping from a high place
X81	Intentional self-harm by jumping or lying before moving object
X82	Intentional self-harm by crashing of motor vehicle
X83	Intentional self-harm by other specified means
X84	Intentional self-harm by unspecified means

To ensure adequate representation of causes of death, additional cases may be selected to cover any causes that are not adequately represented after the initial random sampling based on primary demographic profiles, or until the committee is satisfied with the selection.

Technical notes

The Division of Public and Behavioral Health (DPBH) Office of Vital Records (OVR) is the legal custodian of birth and death certificates issued in Nevada as well as those received from other states, districts, and territories for Nevada residents. For more information, please visit: [Nevada DPBH OVR](#)