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State of Alaska Epidemiology **Bulletin**

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AKVDRS Suicide Death Update — Alaska, 2012–2017

Background

During 2012–2017, Alaska's suicide rate was either the first or second highest in the nation.[1] Suicide was the leading cause of death among Alaskans aged 10–64 years and is the sixth leading cause of death overall in Alaska.[1] The purpose of the Alaska Violent Death Reporting System (AKVDRS) is to support development, implementation, and evaluation of programs and policies designed to reduce and prevent violent deaths. This *Bulletin* provides a summary overview of recent AKVDRS suicide death data.

Methods

AKVDRS data from 2012–2017 were analyzed using the abstractor-assigned manner of death following National Violent Death Reporting System guidelines. Deaths were counted if the decedent was fatally injured in Alaska. Unadjusted (crude) rates were calculated for 2012–2017 using the most current (v. 2017) Alaska Department of Labor's population estimates data.

Results

During 2012–2017, 1,103 suicides were identified and recorded in AKVDRS and accounted for most (1,103/1,614, 69%) of the violent deaths in Alaska. The average annual unadjusted suicide rate was 25.0 per 100,000 persons overall and 29.2 per 100,000 persons aged ≥10 years.

The highest rates by sex and age were among males aged 20–24 years and 70–74 years (85.7 and 70.3 per 100,000 persons, respectively) and females aged 20–24 years (20.6 per 100,000 persons). The highest rates by race were among American Indian/Alaska Native (AI/AN) people (46.6 per 100,000 persons), followed by Whites, Blacks, Asian/Pacific Islanders, and people of two or more races (22.4, 19.9, 7.7, and 19.0 per 100,000 persons, respectively). Rates by region were highest in the Southwest and Northern regions (50.5 and 50.1 per 100,000 persons, respectively), and lowest in the Southeast region (17.3 per 100,000 persons). The Anchorage/Mat-Su region had the largest rate increase (61%) during 2012–2017.

Of the 1,103 suicides recorded during 2012–2017,

- the most commonly documented incident characteristics included proven/suspected alcohol intoxication, current depressed mood, and intimate partner problems (Figure 1);
- 397 (36%) decedents had a documented alcohol and/or substance abuse problem;
- 668 (61%) decedents were tested for alcohol; of which, 272 (41%) tested positive and 207 (31%) had a blood alcohol concentration (BAC) ≥0.08 g/dL (range: 0.01–0.65 g/dL);
- 668 (61%) decedents were tested for opiates; of which, 103 (15%) tested positive and 29 (4%) died as a result of an opiate overdose;
- 1,065 (97%) decedents had known precipitating circumstances; the most common (besides mental health and substance use problems) were physical health problems (219, 21%), criminal/legal problems (138, 13 %), and job problems (125, 12%; Figure 1);
- 404 (37%) decedents had a documented current mental health problem (Figure 2); of these, 102 (25%) had a documented substance abuse problem and 241 (60%) were receiving treatment for mental illness;
- 403 (37%) decedents had intimate partner problems; of which, 132 (33%) had an identified crisis event within 2 weeks of their death;
- 563 (51%) decedents were never married, 287 (26%) were married, 191 (17%) were divorced, and 62 (6%) were widowed, separated, single, or of unknown marital status;
- 204 (18%) decedents were current or former U.S. military;
- 9 (<1%) decedents were involved in combination homicide-suicide incidents; and
- 691 (63%) deaths involved a firearm, 275 (25%) involved hanging/strangulation/suffocation, 97 (9%) involved poisoning, and 40 (3%) involved other weapons.

Figure 1. Incident Characteristics of Suicides (N=1,103) — Alaska, 2007–2012*

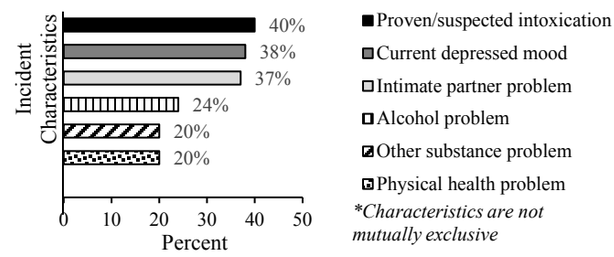
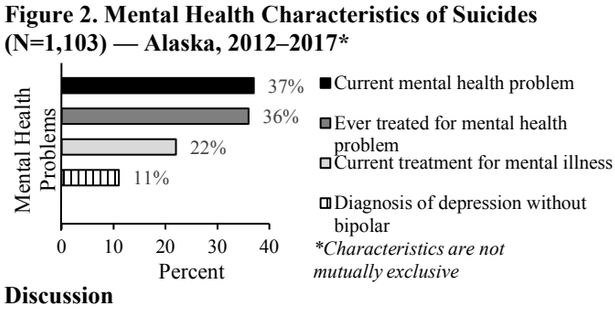


Figure 2. Mental Health Characteristics of Suicides (N=1,103) — Alaska, 2012–2017*



Discussion

Compared to 2007–2011, Alaska's average annual unadjusted suicide rate was 13% higher during 2012–2017 (increasing from 25.8 to 29.2 per 100,000 persons aged ≥10 years).[2] Suicide occurred in higher rates among males, AI/AN people, and persons aged 20–24 years. Although suicide rates remained highest in rural areas, rates increased in urban areas during 2012–2017.

Use of alcohol and other substances was frequently identified among suicide decedents, however, toxicology testing was not performed on all decedents during 2012–2014. Routine postmortem toxicology testing of all suicide decedents was initiated in 2015; the results of which are available in a separate report.[3] Alcohol use associated with suicide declined from 45% during 2007–2011 to 41% during 2012–2017; and conversely, opiate use increased from 12% to 15%.[2,3] Toxicology testing of suicide decedents helps improve our understanding of trends and our ability to characterize the role of substance use in suicides, which can be useful for developing targeted public health prevention strategies and clinical screening guidelines.[4]

The increase in postmortem forensic toxicology testing might have contributed in-part to the observed increase in opiate-positive test results and should be interpreted with caution.

References

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