SOUTH DAKOTA DEPARTMENT OF HEALTH

Alcohol-Related Deaths and Hospitalizations South Dakota

October 2023

Alcohol-Related Deaths in South Dakota

In South Dakota, the number of alcohol-related deaths has been increasing in the last ten years. Alcohol-related deaths increased by 120%, from 150 deaths in 2013 to 330 deaths in 2022 (Figure 1). South Dakota had the fifth highest crude rate for alcohol-related deaths at 19.4 per 100,000, while the United States rate was 10.6 per 100,000, 2011-2020 (Figure 2).

Figure 1: Alcohol-Related Deaths and Rates

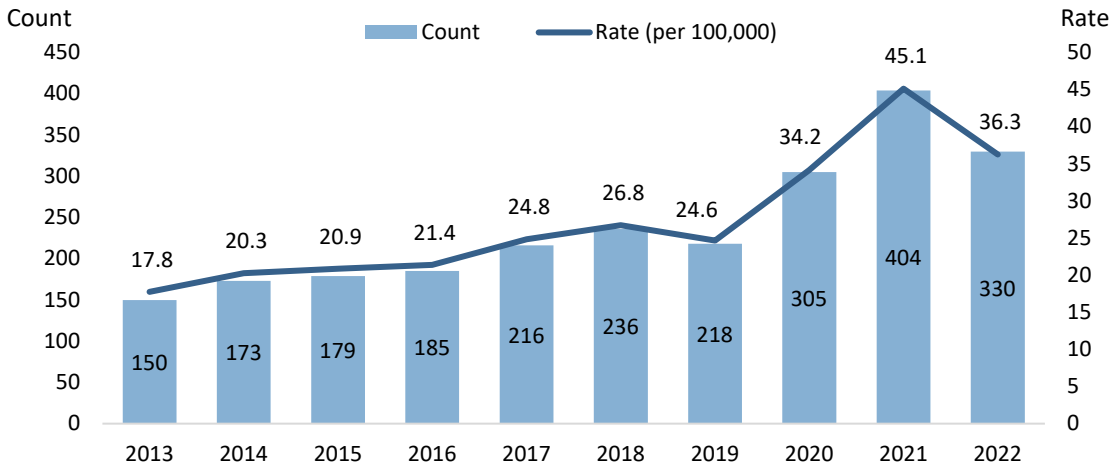
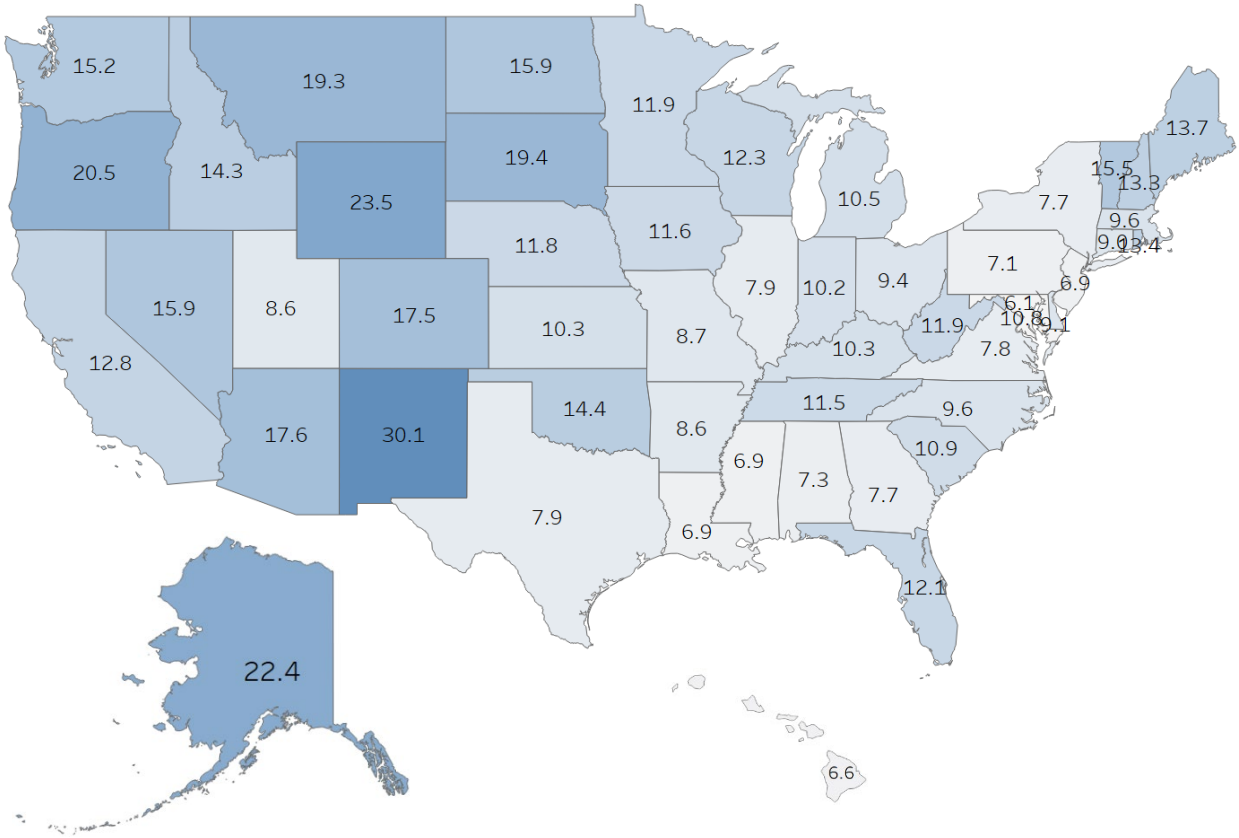


Figure 2: Alcohol-Related Death Rates by State (2011-2020)

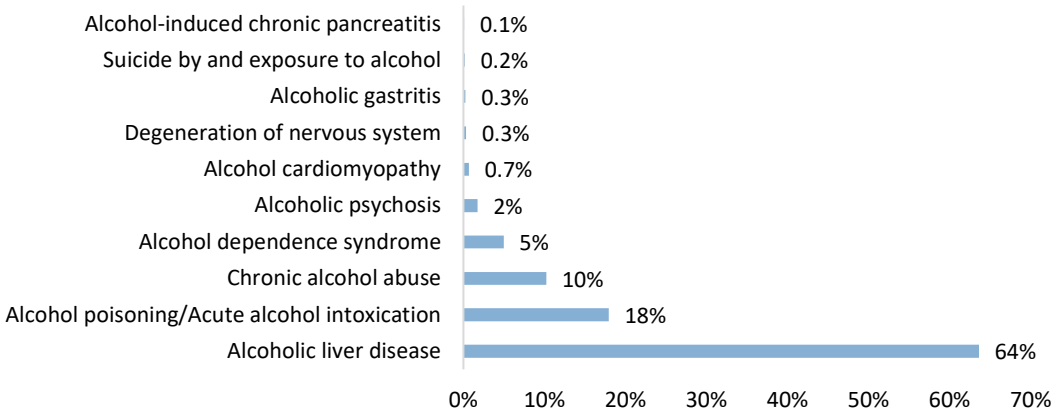
Includes codes: F10.0-10.9, G32.1, G62.1, G72.1, I42.6, K29.2, K70.0-70.4, K70.9, K86.0, O35.4, P04.3, Q86.0, R78.0, X45, X65, Y15



Common Causes of Alcohol-Related Deaths

Alcohol-related deaths can be broken down into two primary groups, acute and chronic causes of death. Acute causes of death include alcohol poisoning and other causes, such as injury, where alcohol was a contributing factor. Chronic causes include alcohol abuse, liver disease, and other alcohol induced chronic conditions. Alcoholic liver disease was the most common cause, accounting for 64% of all alcohol-related deaths in South Dakota. Deaths related to alcoholic liver disease increased by 146% in the last ten years, from 91 deaths in 2013 to 224 deaths in 2022. The second most common cause of alcohol-related deaths was alcohol poisoning/acute alcohol intoxication, followed by chronic alcohol abuse. Deaths related to chronic alcohol abuse increased 760% from 2013 to 2022.

Figure 3: Alcohol-Related Deaths by Cause



High-Risk Populations

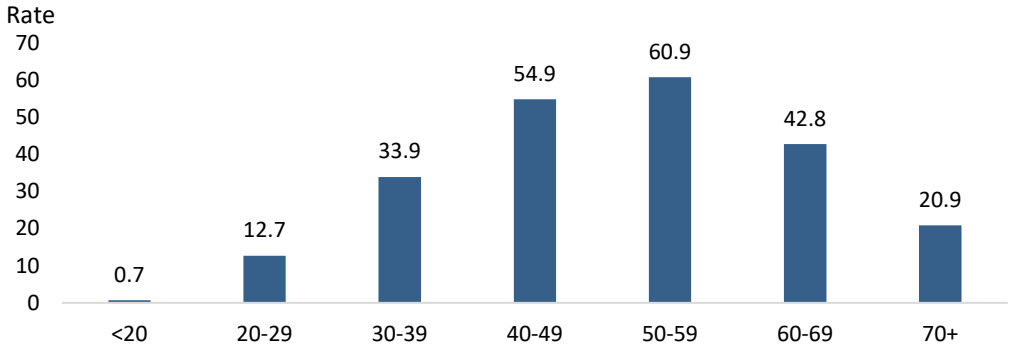
Sex

Overall, males were more likely to die from an alcohol-related cause of death than females. Males made up 66% of all alcohol-related deaths from 2013-2022. The rate of alcohol-related deaths among males was almost two times higher than the female rate (35.6 vs 18.9 per 100,000).

Age

Although alcohol-related deaths can affect all ages of South Dakotans, individuals between the ages of 40-59 are at the highest risk compared to all the other age groups (Figure 4).

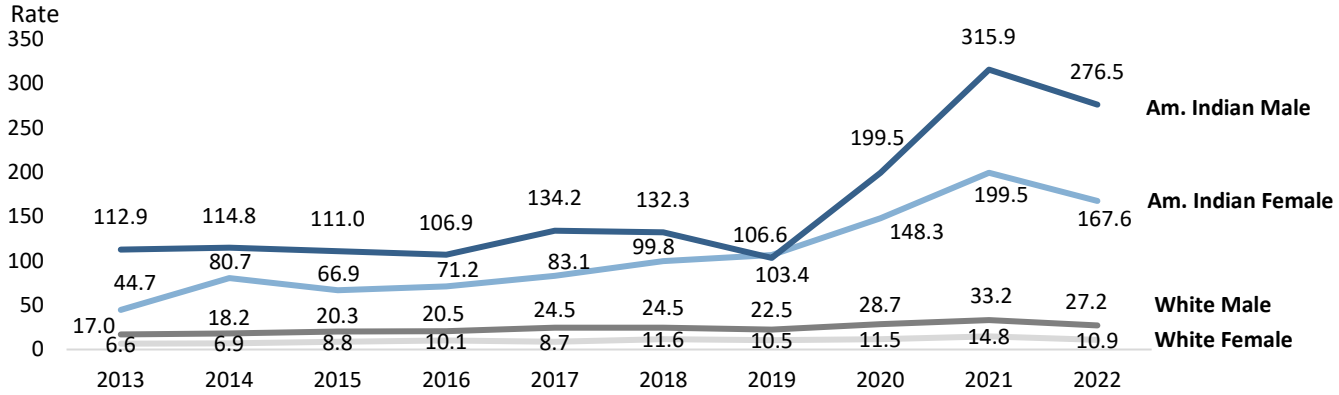
Figure 4: Alcohol-Related Death Rates (per 100,000) by Age Group



Race

From 2013-2022, 53% of alcohol-related deaths were White, 44% were American Indian, and 4% Other (Black, Asian, multiracial, and unknown). American Indian alcohol-related death rates were eight times higher than White death rates (134.2 vs. 17.0 per 100,000). American Indian males and females experienced higher rates than White males and females (Figure 5).

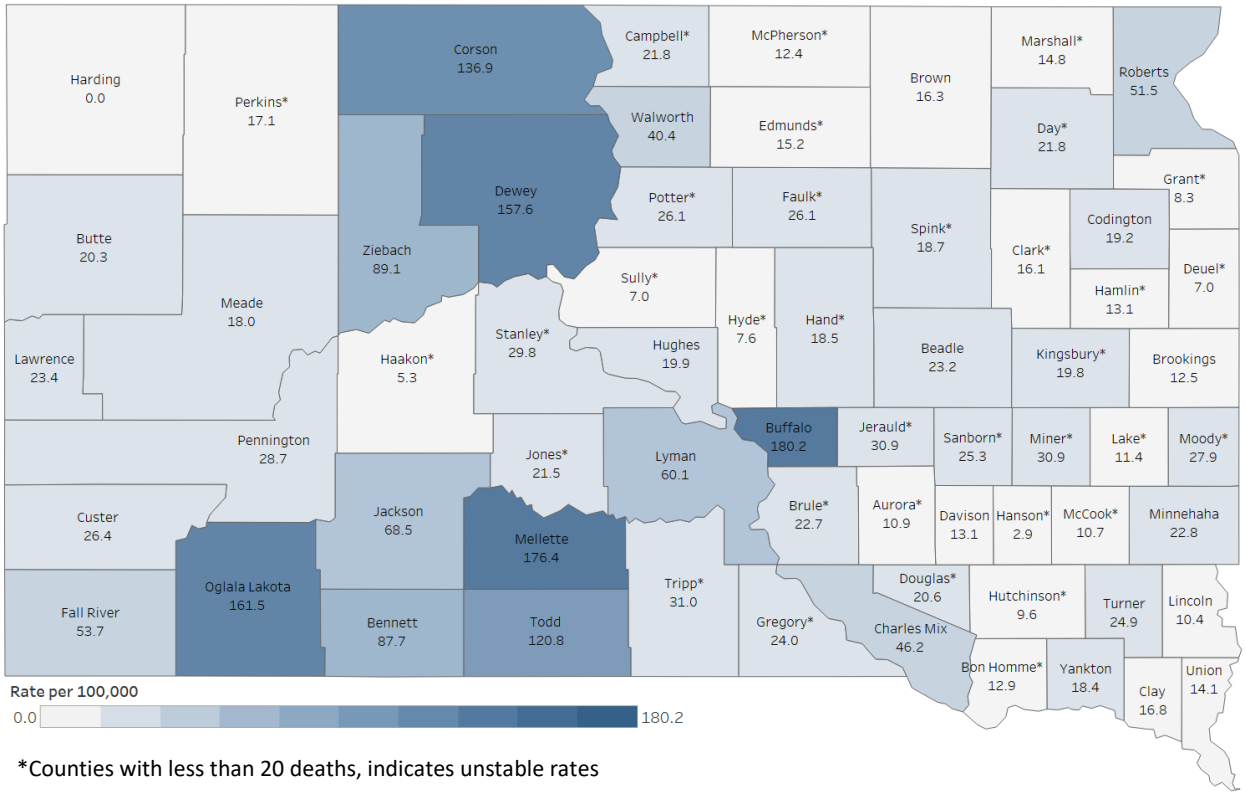
Figure 5: Alcohol-Related Death Rate (per 100,000) by Sex and Race



Alcohol-Related Deaths by County

Among counties with stable rates for comparison (≥20 deaths), the top five counties included Buffalo (180.2 per 100,000), Mellette (176.4), Oglala Lakota (161.5), Dewey (157.6), and Corson (136.9).

Figure 6: Alcohol-Related Death Rates by County, 2013-2022

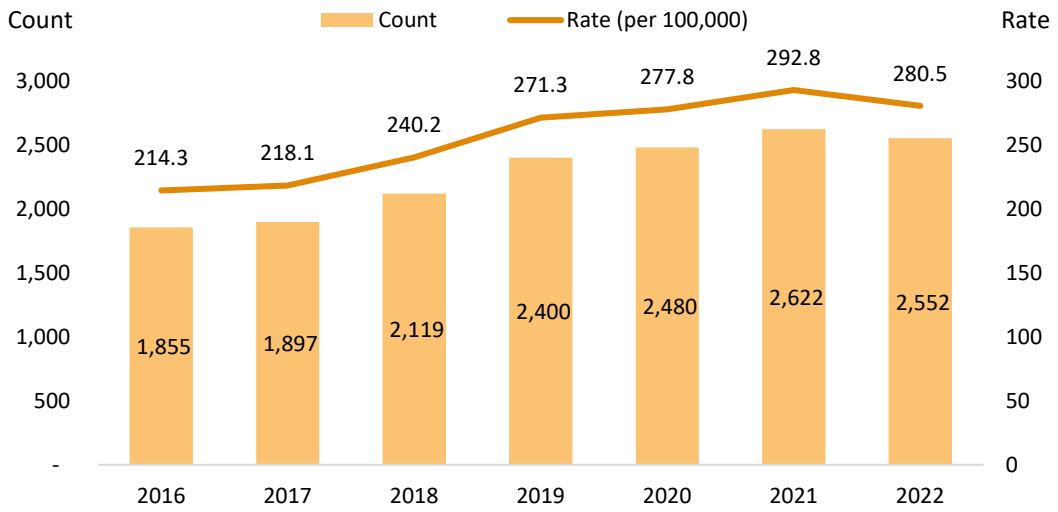


*Counties with less than 20 deaths, indicates unstable rates

Alcohol-Related Hospitalizations in South Dakota

The number of nonfatal alcohol-related hospitalizations has increased by 20% over the last five years, from 2,119 hospitalizations in 2018 to 2,552 in 2022 (Figure 7).

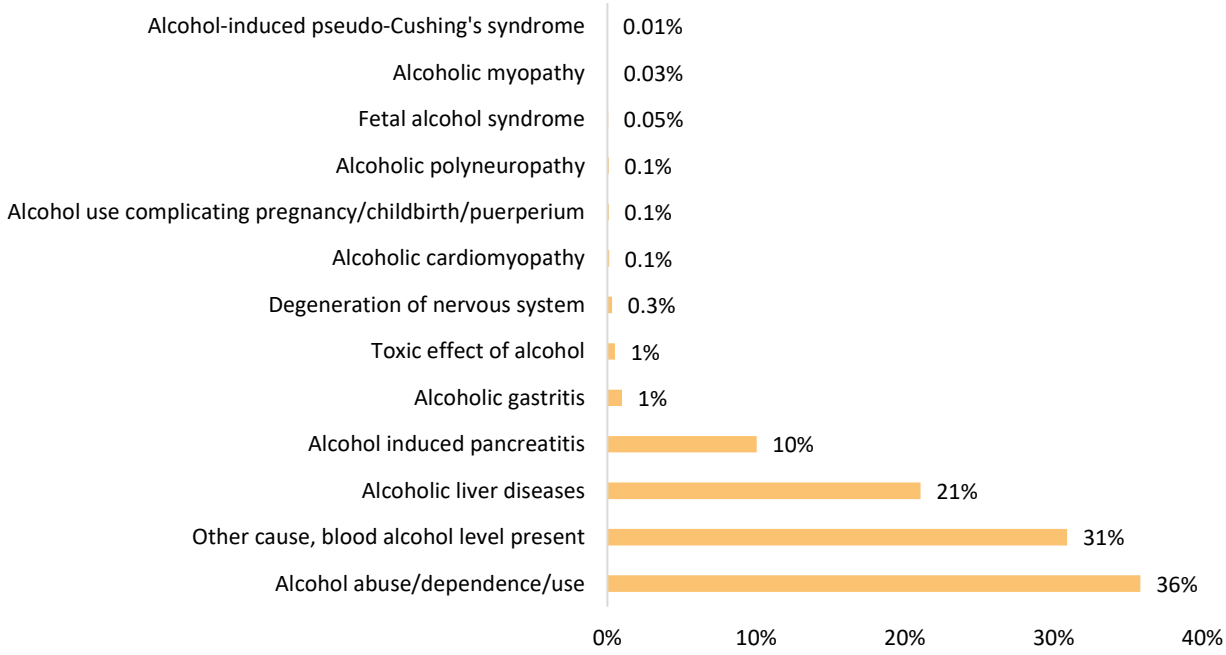
Figure 7: Alcohol-Related Hospitalizations and Rates



Common Causes of Alcohol-Related Hospitalizations

Alcohol abuse/dependence/use was the most common cause of alcohol-related hospitalizations. The second most common cause was non-alcohol-related diagnoses with blood alcohol level present (Figure 8).

Figure 8: Alcohol-Related Hospitalizations by Cause



High-Risk Populations

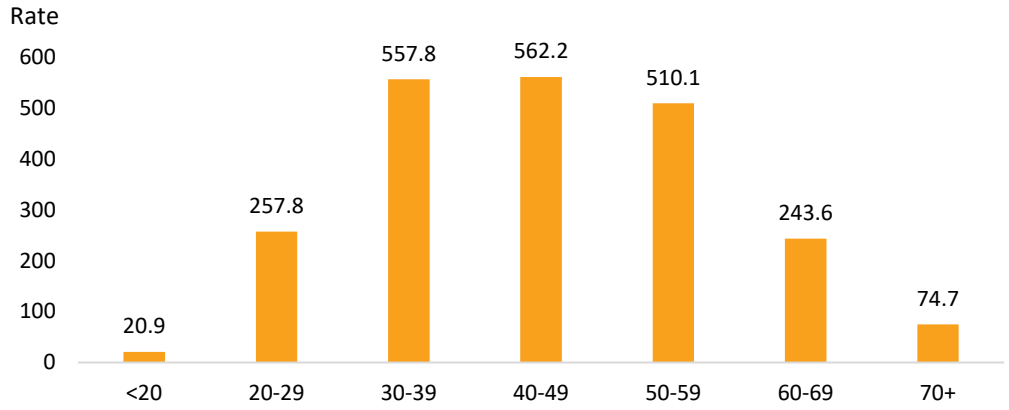
Sex

Overall, males are more likely to be hospitalized from an alcohol-related cause than females. Males made up 67% of all alcohol-related hospitalizations from 2018-2022. The rate of alcohol-related hospitalizations among males is two times higher than the female rate (361.3 vs. 181.7 per 100,000).

Age

Compared to other age groups, individuals between the ages of 30-59 years are at the highest risk for alcohol-related hospitalizations (Figure 9).

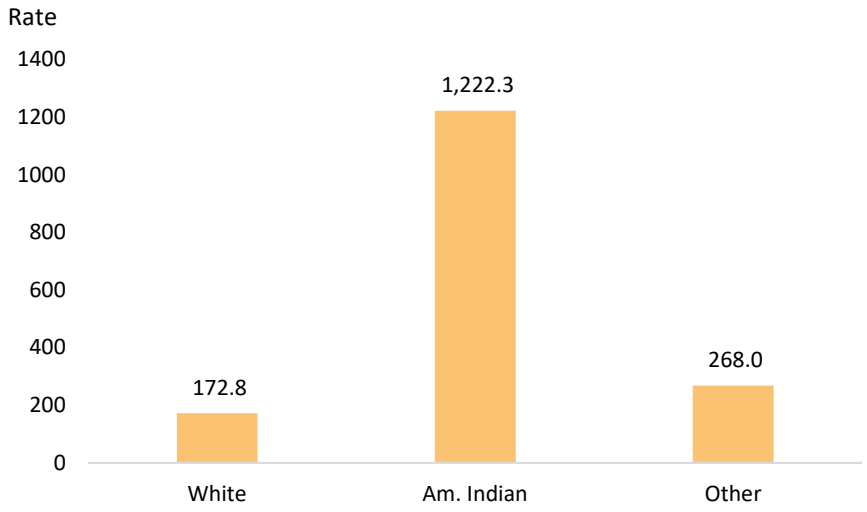
Figure 9: Alcohol-Related Hospitalization Rates (per 100,000) by Age Group



Race

From 2018-2022, 53% of alcohol-related hospitalizations were White, 40% were American Indian, and 7% Other (Black, Asian, Native Hawaiian/Pacific Islander, multiracial, Hispanic, and unknown). American Indians were hospitalized at rates seven times higher than Whites (1,222.3 vs. 172.8 per 100,000) (Figure 10).

Figure 10: Alcohol-Related Hospitalization Rates (per 100,000) by Race



Case Definitions and Data Sources

Data in this report may differ from other reports due to how the data was analyzed. See below for case definitions and data sources.

Case Definitions:

Acute causes of death: alcohol poisoning and acute alcohol intoxication (X45, Y15, T51.0-T51.1, T51.9), suicide by and exposure to alcohol (X65), and excessive blood level of alcohol (R78.0). Chronic causes of death: alcoholic psychosis (F10.3-10.9), alcohol abuse (F10.0-F10.1), alcohol dependence syndrome (F10.2), alcohol polyneuropathy (G62.1), degeneration of nervous system due to alcohol (G31.2), alcoholic myopathy (G72.1), alcohol cardiomyopathy (I42.6), alcoholic gastritis (K29.2), alcoholic liver disease (K70.0-K70.4, K70.9), fetal alcohol syndrome (Q86.0), fetus and newborn affected by maternal use of alcohol (P04.3, O35.4), and alcohol-induced chronic pancreatitis (K86.0).

Alcohol-related hospitalization causes include alcohol-induced pseudo-Cushing's syndrome (E24.4), alcohol use/abuse/dependence (F10.1[0-2,4-5,8-9], F10.2, F10.9[2,4-9]), degeneration of nervous system due to alcohol (G31.2), alcoholic polyneuropathy (G62.1), alcoholic myopathy (G72.1), alcoholic cardiomyopathy (I42.6), alcoholic liver disease (K70.0, K70.1[0-1], K70.2, K70.3[0-1], K70.4[0-1], K70.9), alcohol induced pancreatitis (K85.2[0-2]), K86.0), maternal care for (suspected) damage to fetus from alcohol (O35.4XX[0-5,9]), alcohol use complicating pregnancy/childbirth/puerperium (O99.31[0-5]), newborn affected by maternal use of alcohol (P04.3), fetal alcohol syndrome (Q86.0), toxic effect of alcohol (T51.0X[1A-4S], T51.9[1-4,XA-XS]), and other cause listed in diagnoses field, but blood alcohol level present (Y90.4-.8).

Data Sources:

South Dakota Department of Health (DOH) Vital Statistics
South Dakota Association of Healthcare Organizations (SDAHO)
WONDER, Center for Disease Control and Prevention