Unintentional Falls Among Adults Aged 65 Years and Older in South Dakota

South Dakota Department of Health
January 2022

Unintentional Fall-Related Deaths

From 2011 to 2020, there were 1,494 unintentional fall-related deaths among South Dakotans aged 65 years and older. The number of fall-related deaths increased 53% from 125 deaths in 2011 to 191 deaths in 2020 (Figure 1). South Dakota had the fourth highest crude rate (106.8 per 100,000) for unintentional fall-related deaths among individuals aged 65 years and older, the national rate was 59.1 per 100,000 (Figure 2).

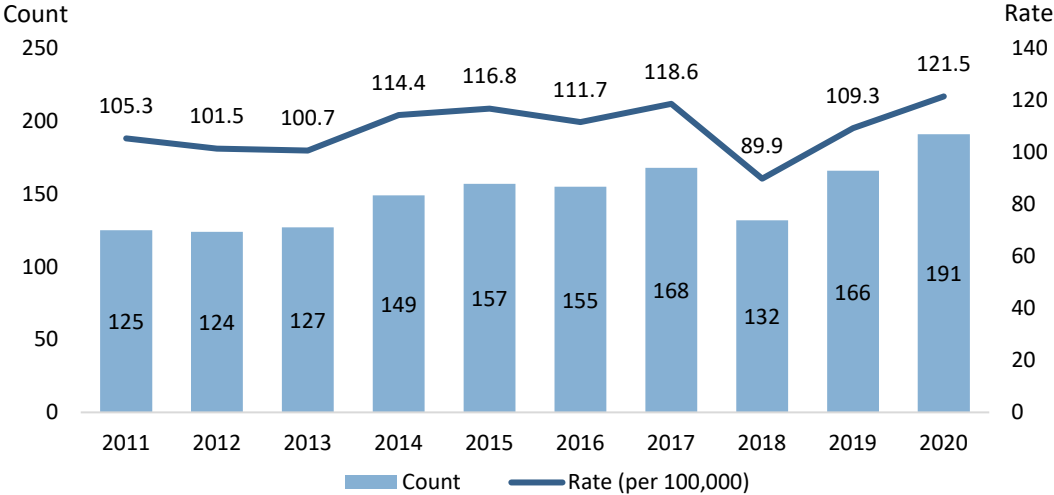Figure 1: Fall-Related Deaths and Rates, South Dakota (2011-2020)
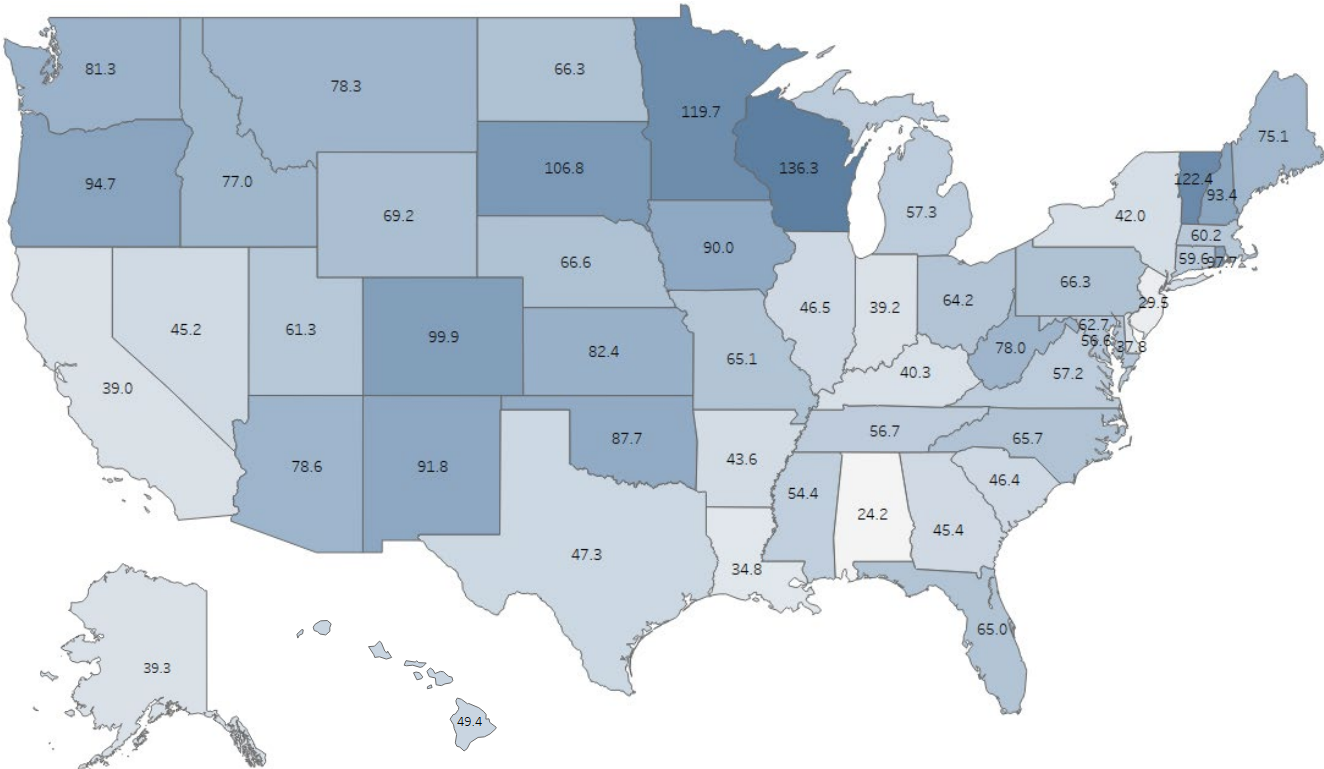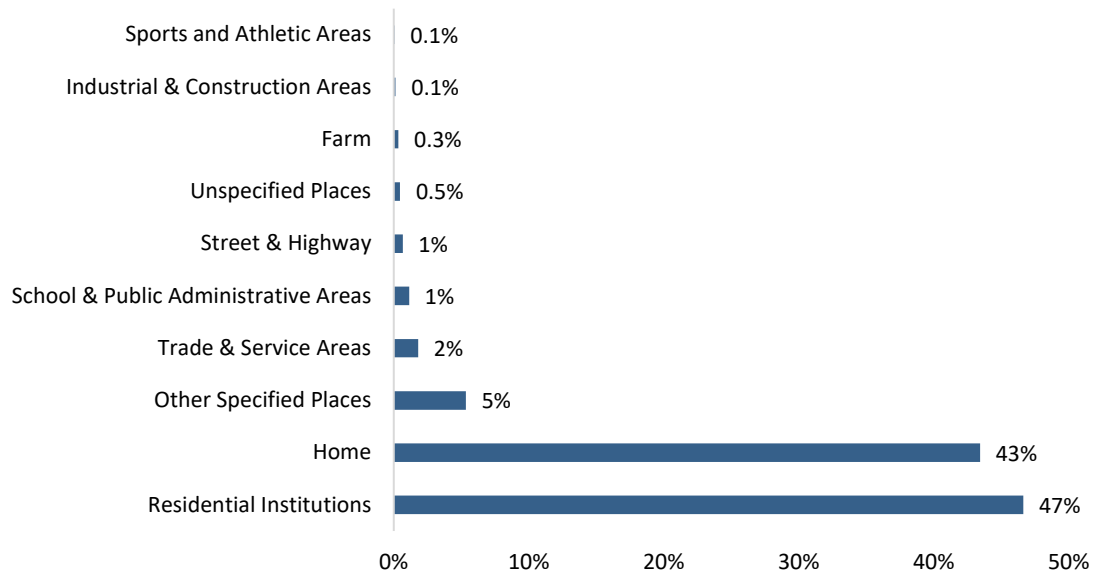

Figure 2: Fall-Related Death Rates by States (2010-2019)

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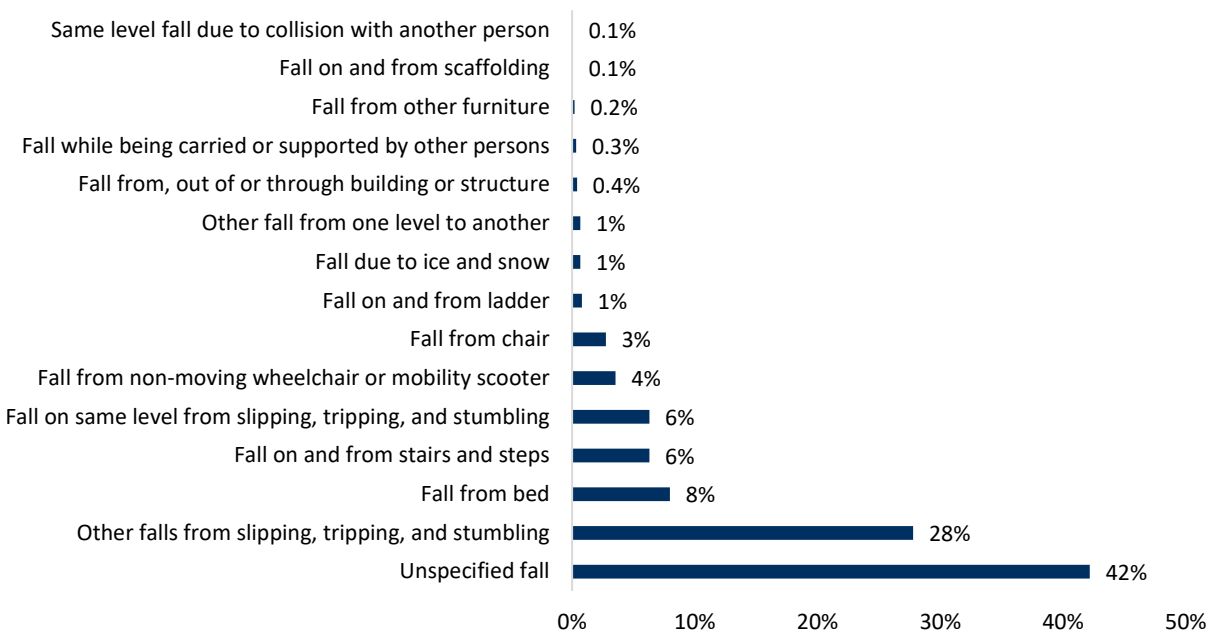
Place of Injury and Types of Falls

The most common place of injury for falls was residential institutions, accounting for 47% of fall-related deaths. The second most common place of injury was home, accounting for 43% of deaths (Figure 3).

Figure 3: Fall-Related Deaths by Place of Injury (2011-2020)

Place of Injury	Percentage
Sports and Athletic Areas	0.1%
Industrial & Construction Areas	0.1%
Farm	0.3%
Unspecified Places	0.5%
Street & Highway	1%
School & Public Administrative Areas	1%
Trade & Service Areas	2%
Other Specified Places	5%
Home	43%
Residential Institutions	47%

There are different types of falls that can lead to injury and death. The most common type of fall was listed as unspecified fall, accounting for 42% of deaths. The second most common type of fall was other falls from slipping, tripping, and stumbling, accounting for 28% of deaths (Figure 4).

Figure 4: Fall-Related Deaths by Type of Fall (2011-2020)

Type of Fall	Percentage
Same level fall due to collision with another person	0.1%
Fall on and from scaffolding	0.1%
Fall from other furniture	0.2%
Fall while being carried or supported by other persons	0.3%
Fall from, out of or through building or structure	0.4%
Other fall from one level to another	1%
Fall due to ice and snow	1%
Fall on and from ladder	1%
Fall from chair	3%
Fall from non-moving wheelchair or mobility scooter	4%
Fall on same level from slipping, tripping, and stumbling	6%
Fall on and from stairs and steps	6%
Fall from bed	8%
Other falls from slipping, tripping, and stumbling	28%
Unspecified fall	42%

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High Risk Populations

Sex

Overall, females aged 65 years and older are more likely to die from a fall-related cause of death than males. Females made up 57% of fall-related deaths and had a rate of 114.8 per 100,000, males made up 43% of deaths and had a rate of 102.6 per 100,000 (2011-2020).

Age

Adults over the age of 65 years are at an increased risk of deaths due to falls. Individuals aged 85 years and older make up the largest proportion of deaths and have the highest rate among older adults, 2011-2020 (Figure 5).

Figure 5: Fall-Related Deaths and Rates by Age Group (2011-2020)
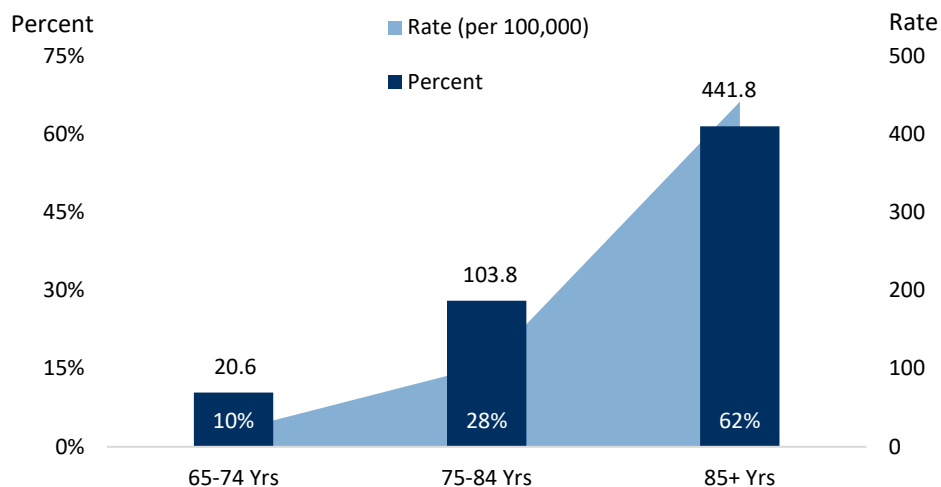
Race

From 2011-2020, 97% of fall-related deaths were White, 3% were American Indian, and 0.3% Other (Black, Asian, multiracial, and Hispanic). Whites aged 65 years and older experienced a higher fall-related death rate compared to other populations (Figure 6).

Figure 6: Fall-Related Death Rates (per 100,000) by Race (2011-2020)

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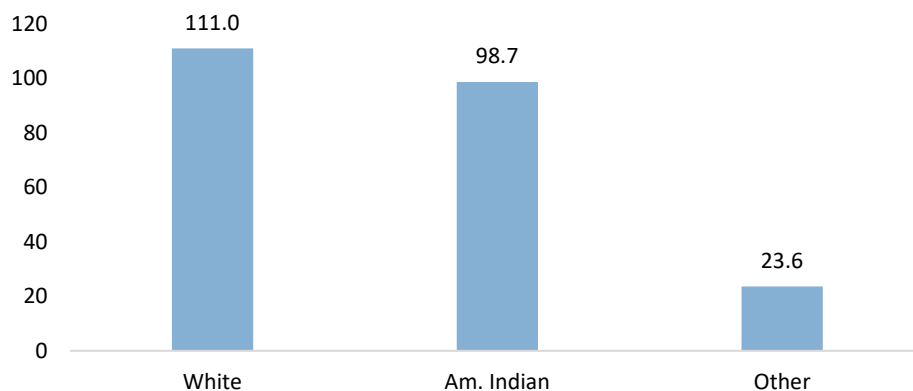
Nonfatal Unintentional Fall-Related Hospitalizations & Emergency Department (ED) Visits

From 2016 to 2020, there were 7,364 nonfatal unintentional fall-related hospitalizations, and 27,373 emergency department (ED) visits among South Dakotans aged 65 years and older. Over the last five years, fall-related hospitalizations increased 6% and emergency department visits increased 13% (Figure 7).
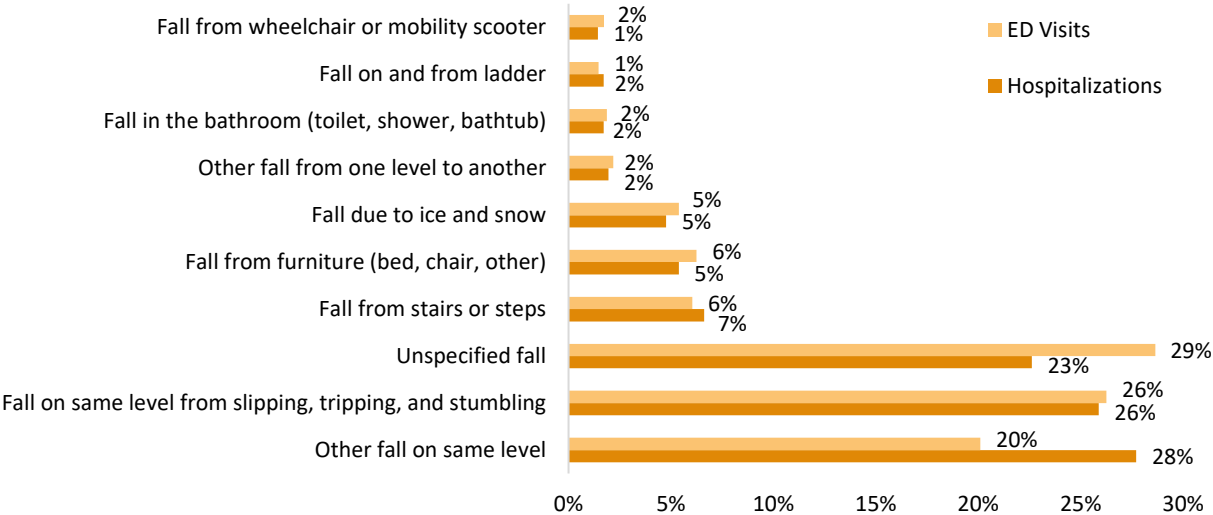
Figure 7: Fall-Related Hospitalizations and ED Visits, South Dakota (2016-2020)
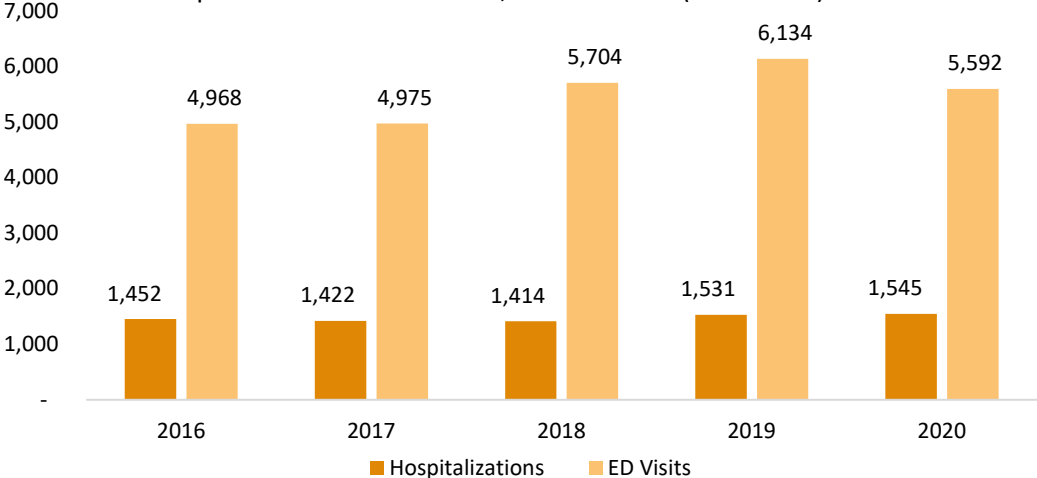
Types of Falls

There are different types of unintentional falls that can lead to injury among older adults. The top three causes of fall-related injuries include unspecified falls, falls on the same level from slipping, tripping, or stumbling, and other falls on the same level (Figure 8).

Figure 8: Fall-Related Injuries by Type of Fall (2016-2020)

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High Risk Populations

Sex

Overall, females aged 65 years and older are more likely to receive care for a fall-related injury than males. Females made up 67% of fall-related hospitalizations and 63% of fall-related ED visits from 2016-2020.

Age

South Dakotans over the age of 65 years are at an increased risk for fall-related injuries. Fall-related ED visits are most common among adults aged 65-74 years. The risk for severe injuries resulting in hospitalizations increased with age and are most common among adults aged 85-94 years (Figure 9).
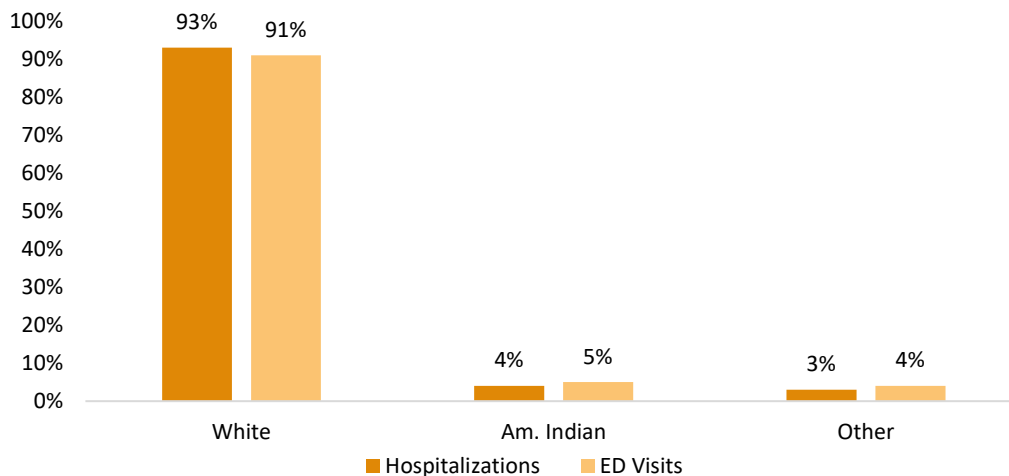
Figure 9: Fall-Related Injuries by Age Group (2016-2020)
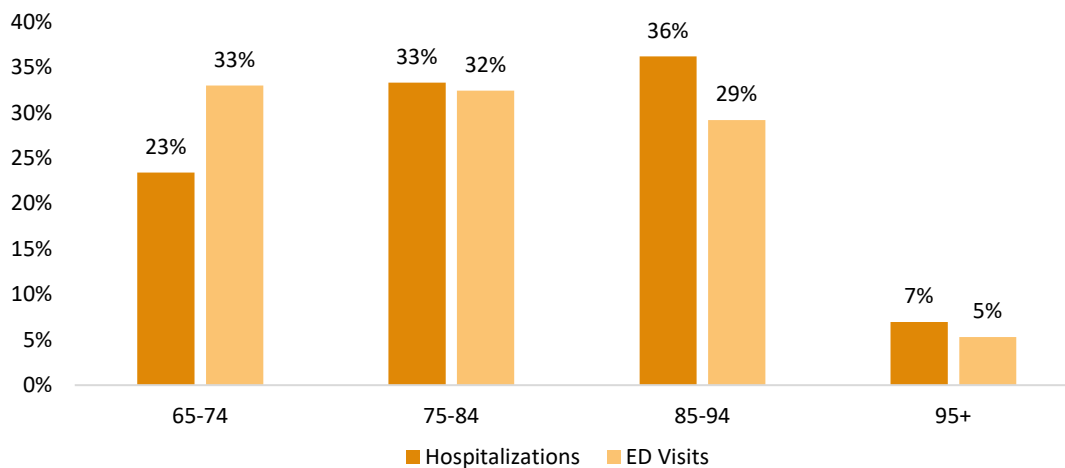
Race

From 2016-2020, the largest proportion of fall-related hospitalizations and ED visits were among the White population (Figure 10).

Figure 10: Fall-Related Injuries by Race (2016-2020)

Data Sources and Methods

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

Data Sources:

Mortality data used in this report comes from the South Dakota Department of Health (DOH) Vital Statistics. Mortality data is representative of South Dakota residents. Data from the Center for Disease Control and Prevention (CDC) Web-based Injury Statistics Query and Reporting System (WISQARS) is utilized for national and state comparisons.

Hospital and Emergency Department (ED) data comes from the South Dakota Association of Healthcare Organizations (SDAHO). This data does not include cases from Indian Health Services hospitals or Veteran Affairs medical centers. Hospital and ED data in this report is representative of South Dakota residents and reflects nonfatal visits by year of discharge.

Methods:

Death records are analyzed for the presence of unintentional fall-related death codes in the cause of death field. Injury fatality ICD-10 codes used in the report include W00-W19.

Hospitalization and ED data was analyzed from the injury discharge subset for non-fatal unintentional fall-related injury codes in any field. Injury ICD-10-CM codes used include the following codes with a 7th character of A or missing: V00.11-V00.89 (with 6th character=1), W00-W15, W16 (with 6th character=2, except 16.4 and 16.9 with 5th character=2), W17, W18.1, W18.2, W18.3, and W19. Injury subset and unintentional fall methods can be found here: https://resources.cste.org/Injury-Surveillance-Methods-Toolkit/Home/GeneralInjuryIndicators.

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