

Mortality

An Overview: 2008	
Total South Dakota Resident Deaths	7,056
Crude Death Rates per 100,000 Population	
South Dakota	934.8
United States (Provisional)	810.0
Age-Adjusted Death Rates per 100,000 Population	
South Dakota	810.0
United States	**N/A
Age-Adjusted YPLL Before Age 75 per 100,000 Population	
Whites	6,137
American Indians	21,285

In 2004, the South Dakota Department of Health implemented the new standard death certificate. Multiple races could be indicated on the certificate for the first time. Please see page 229 in the Technical Notes for a more in depth explanation.

In 1999, South Dakota along with the rest of the nation made two significant changes to the way mortality data were analyzed. These changes were the switch to using the 2000 U.S. Standard for age adjusting and using ICD-10 for disease classifications. As a result, comparison to reports prior to 1999 is not possible.

Table 52, below, displays the deaths, crude death rates, and age-adjusted death rates for the United States and South Dakota for the past 20 years.

Table 52
Resident Deaths, Crude Death Rates, and Age-Adjusted Death Rates,
South Dakota and United States, 1989-2008

Year	United States			South Dakota		
	Number	Crude Rate	Age-Adjusted Rate	Number	Crude Rate	Age-Adjusted Rate
2008	*2,453,000	*810.0	**NA	7,056	934.8	810.0
2007	*2,423,995	*803.7	*760.3	6,800	900.8	780.9
2006	2,426,264	810.4	776.5	7,038	932.4	807.5
2005	2,448,017	825.9	798.8	7,074	937.1	816.2
2004	2,397,615	816.5	800.8	6,811	902.3	783.6
2003	2,448,288	841.9	832.7	7,109	941.8	819.2
2002	2,443,387	847.3	845.3	6,886	912.2	791.0
2001	2,416,425	848.5	854.5	6,915	916.1	796.3
2000	2,403,351	854.0	869.0	7,014	929.2	804.8
1999	2,391,399	857.0	875.6	6,941	997.3	799.1
1998	2,337,256	847.3	870.6	6,850	984.2	791.1
1997	2,314,245	848.8	878.1	6,855	984.9	790.2
1996	2,314,690	859.2	894.1	6,793	976.0	788.1
1995	2,312,132	868.3	909.8	6,901	991.5	798.0
1994	2,278,994	866.1	913.5	6,724	966.1	778.5
1993	2,268,000	872.8	926.1	6,774	973.3	787.1
1992	2,175,613	848.1	905.6	6,680	959.8	777.6
1991	2,169,518	857.6	922.3	6,636	953.4	768.9
1990	2,148,463	863.8	938.7	6,320	908.0	735.1
1989	2,150,466	871.3	950.5	6,534	916.3	760.5

Note: *U.S. 2007 and 2008 data are provisional
 **U.S. data is not available
 Crude death rates are per 100,000 population.
 Age-adjusted rates are computed with the 2000 standard.

Source: National Center of Health Statistics
 South Dakota Department of Health, Office of Data, Statistics, and Vital Records

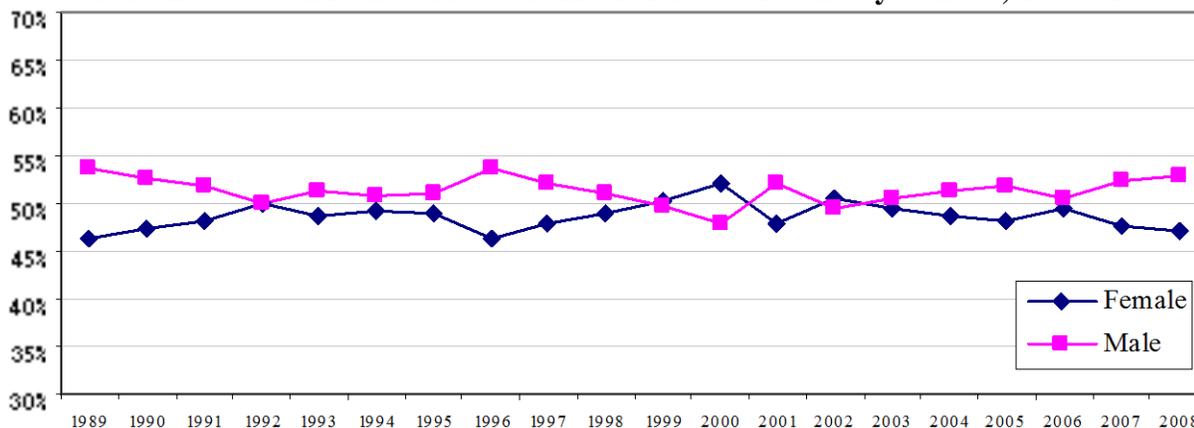
Leading Causes of Death

The five leading causes of death in 2008 for South Dakota residents were heart disease, cancer, chronic lower respiratory diseases, cerebrovascular diseases, and Alzheimer's disease.

Heart disease accounted for 23.8 percent of South Dakota's 2008 resident deaths, a decrease of 0.1 percentage point from 2007. Heart disease was the leading cause of death for all South Dakota residents, regardless of gender or race. Figure 11, below, illustrates by gender the percent of South Dakota resident heart disease deaths for the last 20 years. Over the past 20 years, the percent of deaths

due to heart disease for males usually fell between 50 to 55 percent while for the females the percent of deaths due to heart disease usually fell between 45 to 50 percent. The majority of years showed males having a higher percent of deaths due to heart disease than females. However, this was not the case in 1999, 2000, and 2002 when females had a higher percent of death due to heart disease than males. In 2008, males showed a slight increase from 2007 in the percent of deaths due to heart disease while females showed a small decrease from 2007 in the percent of deaths due to heart disease.

Figure 11
Percent of South Dakota Resident Heart Disease Deaths by Gender, 1989 - 2008



Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Cancer was the second leading cause of death and accounted for 22.6 percent of 2008 South Dakota resident deaths, a decrease of 1.0 percentage point from 2007. Trachea, bronchus, and lung cancer were the leading cause of cancer deaths during the year, accounting for 28.5 percent of cancer deaths.

Chronic lower respiratory disease accounted for 6.9 percent of 2008 South Dakota resident deaths, an increase of 0.2 percentage point from 2007. Chronic lower respiratory diseases include emphysema, asthma, and bronchitis.

Alzheimer's caused 5.7 percent of all South Dakota resident deaths in 2008. Alzheimer's surpassed cerebrovascular diseases and accidents as the fourth leading cause of death in 2008.

Cerebrovascular diseases accounted for 5.5 percent of 2008 South Dakota resident deaths, a decrease of 0.5 percentage points from 2007. Stroke, not specified as hemorrhage or infarction, caused the majority of the deaths for this type of disease.

Table 53, below, displays the breakdown of accidental deaths, which were the sixth leading cause of deaths among South Dakotans. In 2008, 372 or 5.3 percent of deaths were due to accidents.

The highest type of motor vehicle death in 2008 was car occupant with 66 deaths. The highest death in the other causes of accidental death in 2008 was falls with 124 deaths.

Table 53
South Dakota Resident Leading Causes of Death Due to Accidents, 2004-2008

	Total	Year of Death				
		2008	2007	2006	2005	2004
Total Deaths	1,975	372	357	443	396	407
Motor Vehicle Accidents	822	125	145	186	181	185
Car Occupant.....(V40-V49)	437	66	68	99	93	111
Occupant of Pick-Up Truck or Van.....(V50-V59)	147	16	26	39	33	33
Pedestrian.....(V01-V09)	77	15	17	12	20	13
Motorcycle Rider.....(V20-V29)	60	9	16	12	11	12
Occupant of Special All-Terrain Vehicle.....(V86)	28	6	7	4	5	6
Occupant of Heavy Transport Vehicle.....(V60-V69)	14	1	2	6	3	2
All Other Motor Vehicle Accidents	59	12	9	14	16	8
Other Causes of Accidental Death	1,153	247	212	257	215	222
Falls.....(W00-W19)	625	124	130	141	116	114
Accidental Poisoning.....(X40-X49)	142	41	20	29	21	31
Exposure to Smoke, Fire, and Flames.....(X00-X09)	66	16	8	12	16	14
Accidental Threats to Breathing (excl. drowning).....(W75-W84)	65	11	9	19	13	13
Accidental Drowning and Submersion.....(W65-W74, V90, V92)	45	8	7	12	10	8
Exposure to Excessive Natural Cold.....(X31)	35	9	6	6	9	5
Accidental Discharge of Firearms.....(W32-W34)	14	3	2	2	3	4
Air Transport Accidents...(V95.0-V95.3, V95.8-V95.9, & V96-V97)	10	1	3	1	2	3
Contact with Agricultural Machinery.....(W30)	7	1	1	3	1	1
Exposure to Excessive Natural Heat.....(X30)	6	0	4	1	1	0
Water Transport Accident (excl. drowning).....(V91, V93, V94)	1	1	0	0	0	0
All Other Causes of Accidents	137	32	22	31	23	29

Table 54, on the next page, lists South Dakota resident leading causes of death for the last five years. Heart disease and cancer have been the first and second cause of death for the past five years. In both 2007 and 2008, chronic lower respiratory diseases have been in the number three spot; it was previously fourth or fifth in past years. In 2008, Alzheimer's deaths surpassed cerebrovascular disease as the fourth leading cause of death.

There has been an increase in deaths due to Alzheimer's disease since 2004, when there were 255 deaths, compared to 401 in 2008. Cerebrovascular disease was the fifth leading cause of death, followed by accidents in sixth. Diabetes mellitus was the seventh leading cause of death in 2008, followed by influenza and pneumonia, suicide, and chronic liver disease and cirrhosis.

Table 54
South Dakota Resident Leading Causes of Death, 2004-2008

Cause of Death	Total			2008			2007			2006			2005			2004		
	Rank	Deaths	Percent	Rank	Deaths	Percent	Rank	Deaths	Percent	Rank	Deaths	Percent	Rank	Deaths	Percent	Rank	Deaths	Percent
South Dakota (All Deaths)		34,779	100.0		7,056	100.0		6,800	100.0		7,038	100.0		7,074	100.0		6,811	100.0
Heart Disease(I00-I09, I11, I13, I20-I51)	1	8,582	24.7	1	1,677	23.8	1	1,623	23.9	1	1,743	24.8	1	1,764	24.9	1	1,775	26.1
Malignant Neoplasms (cancer).....(C00-C97)	2	7,897	22.7	2	1,561	22.1	2	1,606	23.6	2	1,561	22.2	2	1,610	22.8	2	1,559	22.9
Cerebrovascular Diseases(I60-I69)	3	2,210	6.4	5	391	5.5	4	408	6.0	4	437	6.2	3	511	7.2	3	463	6.8
Chronic Lower Respiratory Diseases.....(J40-J47)	4	2,152	6.2	3	486	6.9	3	458	6.7	5	375	5.3	4	440	6.2	5	393	5.8
Accidents(V01-X59, Y85-Y86)	5	1,975	5.7	6	372	5.3	5	357	5.3	3	443	6.3	5	396	5.6	4	407	6.0
Alzheimer's Disease(G30)	6	1,620	4.7	4	401	5.7	6	345	5.1	6	330	4.7	6	289	4.1	6	255	3.7
Diabetes Mellitus(E10-E14)	7	1,189	3.4	7	216	3.1	7	246	3.6	7	261	3.7	8	239	3.4	7	227	3.3
Influenza and Pneumonia(J10-J18)	8	970	2.8	8	186	2.6	8	189	2.8	8	173	2.5	7	242	3.4	8	180	2.6
Intentional Self-Harm (suicide)(*U03, X60-X84, Y87.0)	9	586	1.7	9	123	1.7	9	101	1.5	9	125	1.8	9	123	1.7	9	114	1.7
Chronic Liver Disease and Cirrhosis.....(K70 & K73-K74)	10	457	1.3	10	100	1.4	10	94	1.4	10	83	1.2	10	83	1.2	10	97	1.4
Essential (primary) Hypertension and Hypertensive Renal Disease(I10 & I12)	*	*	*	*	*	*	*	*	*	*	*	*	10	83	1.2	*	*	*
All Other Causes		7,141	20.5		1,543	21.9		1,373	20.2		1,507	21.4		1,294	18.3		1,341	19.7

Note: Letter/number combinations following cause of death are ICD-10 codes.

Due to rounding disease-specific death rates may not sum to state death rate.

*This cause was not one of the ten leading causes of death for that year.

The asterisks (*) preceding the cause-of-death codes indicate that they are not part of the International Classification of Diseases, Tenth Revision.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Race

Table 55, below, presents South Dakota resident leading causes of death by race. In 2008, patterns for the 10 leading causes of death varied by race. Eight of the 10 leading causes were the same for whites and American Indians, but they differed by rank. For example, accidents were the sixth leading cause of death at 4.8 percent for the white population, but the third leading cause of death for the American Indian population at 11.1 percent.

Alzheimer's disease was in the 10 leading causes of death for the white population, but not the American Indian population. Among the 10 leading causes of death for the American Indian population, but not for the white population were chronic liver disease and cirrhosis and certain conditions originating in the perinatal period.

Table 55
South Dakota Resident Leading Causes of Death by Race, 2008

Cause of Death	All Races			White			American Indian		
	Rank	Deaths	Percent	Rank	Deaths	Percent	Rank	Deaths	Percent
South Dakota (All Deaths)		7,056	100.0		6,487	100.0		531	100.0
Heart Disease.....(I00-I09, I11, I13, I20-I51)	1	1,677	23.8	1	1,596	24.6	1	75	14.1
Malignant Neoplasms (cancer)....(C00-C97)	2	1,561	22.1	2	1,479	22.8	2	71	13.4
Chronic Lower Respiratory Diseases(J40-J47)	3	486	6.9	3	455	7.0	6	27	5.1
Alzheimer's Disease.....(G30)	4	401	5.7	4	394	6.1	*	*	*
Cerebrovascular Diseases.....(I60-I69)	5	391	5.5	5	374	5.8	8	16	3.0
Accidents..... (V01-X59, Y85-Y86)	6	372	5.3	6	310	4.8	3	59	11.1
Diabetes Mellitus.....(E10-E14)	7	216	3.1	7	182	2.8	5	33	6.2
Influenza and Pneumonia.....(J10-J18)	8	186	2.6	8	170	2.6	8	16	3.0
Intentional Self-Harm (suicide)(*U03, X60-X84, Y87.0)	9	123	1.7	9	96	1.5	6	27	5.1
Chronic Liver Disease and Cirrhosis(K70 & K73-K74)	10	100	1.4	*	*	*	4	40	7.5
Nephritis, Nephrotic Syndrome, and Nephrosis...(N00-N07, N17-N19, N25-N27)	*	*	*	10	82	1.3	*	*	*
Certain conditions originating in the perinatal period..... (P00-P96)	*	*	*	*	*	*	10	11	2.1
All Other Causes	-	1,543	21.9	-	1,349	20.8	-	156	29.4

Note: Letter / number combinations following cause of death are ICD-10 codes.

Due to rounding, disease-specific death rates may not sum to state death rate.

* This cause was not one of the ten leading causes of death for this race group.

The asterisks (*) preceding the cause-of-death codes indicate that they are not part of the International Classification of Diseases, Tenth Revision.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Gender

In 2008, patterns for the 10 leading causes of death also varied by gender in South Dakota (Table 56, on the next page). Eight of the 10 leading causes were the same for South Dakota's men

and women, but they differed in rank. Intentional self-harm (suicide) and chronic liver disease and cirrhosis were among the 10 leading causes of death for South Dakota's men, but not for women.

Likewise, unspecified dementia, and nephritis, nephrotic syndrome, and nephrosis were among the 10 leading causes of death for South Dakota's women, but not for South Dakota's men. Men were also more likely to die in accidents than women were, while women were more likely to die from

Alzheimer's disease than men. When ranked together, intentional self-harm (suicide) and chronic liver disease and cirrhosis were in the top 10 but when broken out by gender they were not included in women's top 10 leading causes of death.

Table 56
South Dakota Resident Leading Causes of Death by Gender, 2008

Cause of Death	Total			Male			Female		
	Rank	Deaths	Percent	Rank	Deaths	Percent	Rank	Deaths	Percent
South Dakota (All Deaths)		7,056	100.0		3,540	100.0		3,516	100.0
Heart Disease.....(I00-I09, I11, I13, I20-I51)	1	1,677	23.8	1	889	25.1	1	788	22.4
Malignant Neoplasms (cancer)....(C00-C97)	2	1,561	22.1	2	815	23.0	2	746	21.2
Chronic Lower Respiratory Diseases(J40-J47)	3	486	6.9	3	274	7.7	5	212	6.0
Alzheimer's Disease.....(G30)	4	401	5.7	6	123	3.5	3	278	7.9
Cerebrovascular Diseases.....(I60-I69)	5	391	5.5	5	166	4.7	4	225	6.4
Accidents..... (V01-X59, Y85-Y86)	6	372	5.3	4	238	6.7	6	134	3.8
Diabetes Mellitus.....(E10-E14)	7	216	3.1	8	89	2.5	7	127	3.6
Influenza and Pneumonia.....(J10-J18)	8	186	2.6	9	82	2.3	8	104	3.0
Intentional Self-Harm (suicide)(*U03, X60-X84, Y87.0)	9	123	1.7	7	101	2.9	*	*	*
Chronic Liver Disease and Cirrhosis(K70 & K73-K74)	10	100	1.4	10	65	1.8	*	*	*
Unspecified Dementia.....(F03)	*	*	*	*	*	*	9	61	1.7
Nephritis, Nephrotic Syndrome, and Nephrosis... (N00-N07, N17-N19, N25-N27)	*	*	*	*	*	*	10	51	1.5
All Other Causes	-	1,543	21.9	-	698	19.7	-	790	22.5

Note: Letter / number combinations following cause of death are ICD-10 codes.
 Due to rounding, disease-specific death rates may not sum to state death rate.
 * This cause was not one of the ten leading causes of death for this gender.
 The asterisks (*) preceding the cause-of-death codes indicate that they are not part of the International Classification of Diseases, Tenth Revision.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Age

Table 57, on the next page, lists the five leading causes of death by age group. Excluding infants, accidents were the leading cause of death through age 34. Accidents were tied with malignant

neoplasms (cancer) for the 35-44 age group. The leading cause of death for persons 45-84 was cancer. Heart disease was the leading cause of death for persons aged 85 and older.

Table 57
South Dakota Resident Five Leading Causes of Death by Age Group, 2008

Rank	All Ages	1-24	25-34	35-44	45-54	55-64	65-74	75-84	85& Over
1	Heart Disease 1,677	Accidents 66	Accidents 34	Accidents 31	Malignant Neoplasms (cancer) 106	Malignant Neoplasms (cancer) 238	Malignant Neoplasms (cancer) 382	Malignant Neoplasms (cancer) 485	Heart Disease 771
2	Malignant Neoplasms (cancer) 1,561	Intentional Self-Harm (suicide) 36	Intentional Self-Harm (suicide) 18	Malignant Neoplasms (cancer) 31	Heart Disease 68	Heart Disease 149	Heart Disease 214	Heart Disease 440	Malignant Neoplasms (cancer) 307
3	Chronic lower respiratory diseases 486	Assault (homicide) 5	Malignant Neoplasms (cancer) 10	Heart Disease 24	Accidents 39	Chronic lower respiratory diseases 36	Chronic lower respiratory diseases 96	Chronic lower respiratory diseases 180	Alzheimer's Disease 263
4	Alzheimer's Disease 401	Congenital malformation deformations and Chromosomal abnormalities 5	Heart Disease 8	Intentional Self-Harm (suicide) 21	Chronic liver disease and cirrhosis 31	Accidents 35	Cerebro-vascular Disease 39	Alzheimer's Disease 127	Cerebro-vascular disease 189
5	Cerebro-vascular disease 391	Diabetes Mellitus 3	Assault (homicide) 4	Chronic liver disease and cirrhosis 13	Intentional Self-Harm (suicide) 21	Diabetes Mellitus 35	Accidents/ Diabetes Mellitus 37	Cerebro-vascular disease 126	Chronic lower respiratory diseases 162

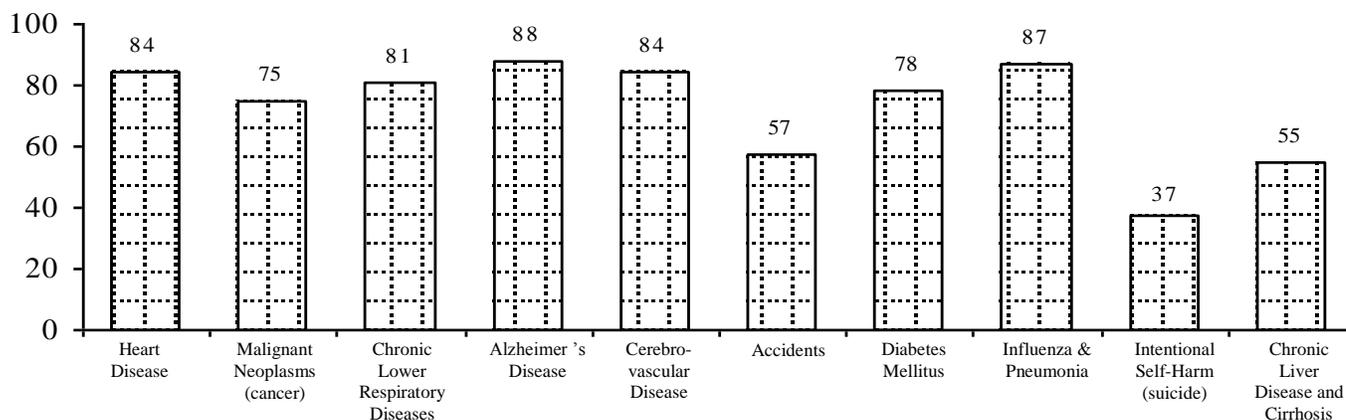
Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Median Age

Figure 12, below, presents data on the median age at death for the 10 leading

causes of death for South Dakota residents in 2008.

Figure 12
Median Age at Death for South Dakota Residents for the Leading Causes of Death, 2008



Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Table 58, below, shows the median age at death for South Dakota residents from the leading causes of death by race and gender. In 2008, the median age at death was 80 for all South Dakotans; for white residents the median age was 81, compared to 58 for American Indians. The overall median age at death stayed the same for whites and decreased by one

for American Indians when compared to their overall median age at death in 2007. The median age at death in 2008 for South Dakota resident males and females was 77 and 83, respectively. There was no change among males and females when compared to 2007 data.

Table 58
Median Age at Death for South Dakota Residents for the Leading Causes of Death by Race and Gender, 2008

Cause of Death	Median Age at Death in Years				
	All	Race		Gender	
	Total Deaths	White	American Indian	Male	Female
South Dakota (All Deaths)	80	81	58	77	83
Heart Disease (I00-I09, I11, I13, I20-I51)	84	84	68	80	87
Malignant Neoplasms (cancer) (C00-C97)	75	76	67	74	76
Chronic Lower Respiratory Diseases (J40-J47)	81	81	73	80	81
Alzheimer's Disease (G30)	88	88	*	86	90
Cerebrovascular Diseases (I60-I69)	84	84	71	82	87
Accidents (V01-X59, Y85-Y86)	57	64	33	51	71
Diabetes Mellitus (E10-E14)	78	81	64	76	81
Influenza and Pneumonia (J10-J18)	87	88	56	84	89
Intentional Self-Harm (suicide) (*U03, X60-X84, Y87.0)	37	42	22	37	*
Chronic Liver Disease and Cirrhosis (K70 & K73-K74)	55	*	53	57	*
Nephritis, Nephrotic Syndrome, and Nephrosis (N00-N07, N17-N19, N25-N27)	*	85	*	*	83
Unspecified Dementia (F03)	*	*	*	*	91
Certain Conditions Originating in the Perinatal Period (P00-P96)	*	*	0	*	*

Note: Letter / number combinations following cause of death are ICD-10 codes.

*This cause was not one of the ten leading causes of death for this race or gender.

The asterisks (*) preceding the cause-of-death codes indicate that they are not part of the International Classification of Diseases, Tenth Revision.

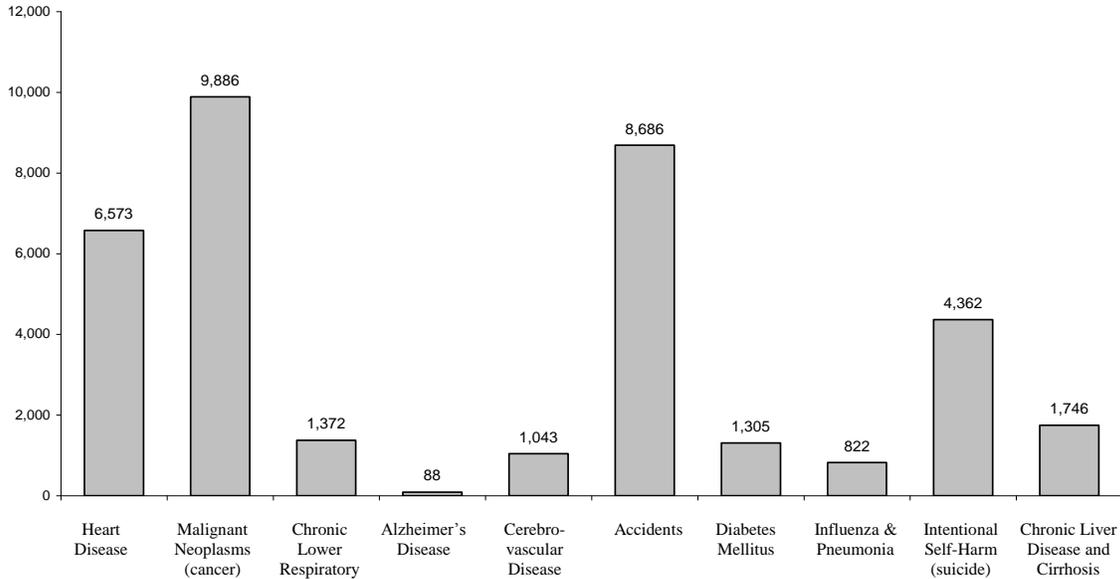
Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Years of Potential Life Lost

Figure 13, on the next page, depicts the years of potential life lost (YPLL) before age 75 for each of these causes. Please refer to page 232 of the technical notes section for an explanation of how

YPLL before age 75 is calculated. Cancer led in YPLL (9886 years) because many of the decedents were at a relatively young age at the time of death.

Figure 13
South Dakota Resident Years of Potential Life Lost (YPLL)
Before Age 75 for the Leading Causes of Death, 2008



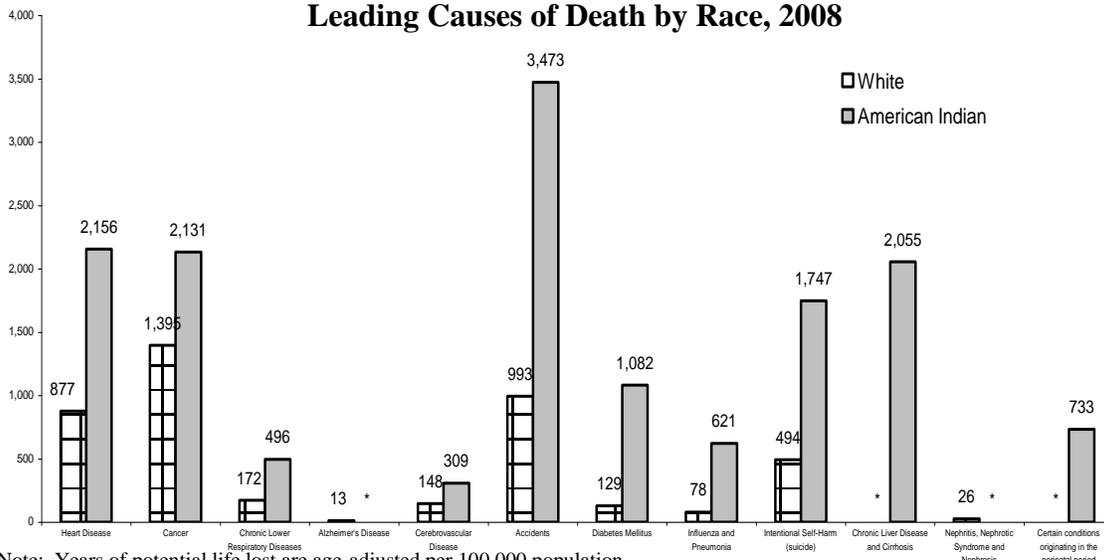
Note: The data is not comparable to the age-adjusted data in Figure 14 below.
 Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Figure 14, below, illustrates the years of potential life lost (YPLL) before the age 75 per 100,000 population for the top 10 causes of death by race. When comparing YPLL by race, American Indians exceed whites substantially in YPLL for the leading causes of death.

American Indians' largest YPLL was accidents with 3,473 years while whites' largest YPLL was cancer with 1,395 years. Whites' second largest

YPLL was accidents with 993 years while American Indians' second largest YPLL was heart disease with 2,156 years. Whites' third largest YPLL was heart disease with 877 years. Cancer was the third largest YPLL for American Indians with 2,131 years, which still exceeded whites' largest YPLL (cancer with 1,395 years).

Figure 14
Age-Adjusted Years of Potential Life Lost (YPLL) Before Age 75 for the
Leading Causes of Death by Race, 2008



Note: Years of potential life lost are age-adjusted per 100,000 population.
 *This cause was not one of the ten leading causes of death for this race group.
 Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Place of Death

Table 59, below, displays the 10 leading causes of death by place where death occurred in 2008. Overall, nursing home, long term

care, and hospice facility had the highest occurrence of deaths with 39.6 percent. Hospital followed closely with 38.8 percent.

Table 59
South Dakota Resident Deaths by Cause of Death and Place of Death, 2008

Cause of Death	Total		Hospital		Nursing Home/Long Term Care/Hospice Facility		Residence		All Other Reported Entries	
	Num	%	Num	%	Num	%	Num	%	Num	%
South Dakota (All Deaths)	7,056	100.0	2,736	38.8	2,797	39.6	1,250	17.7	272	3.9
Heart Disease.....(I00-I09, I11, I13, I20-I51)	1,677	100.0	605	36.1	615	36.7	401	23.9	55	3.3
Malignant Neoplasms (cancer).....(C00-C97)	1,561	100.0	551	35.3	606	38.8	382	24.5	22	1.4
Chronic Lower Respiratory Diseases.....(J40-J47)	486	100.0	210	43.2	194	39.9	78	16.0	4	0.8
Alzheimer's Disease.....(G30)	401	100.0	40	10.0	350	87.3	11	2.7	0	0.0
Cerebrovascular Diseases.....(I60-I69)	391	100.0	173	44.2	190	48.6	25	6.4	3	0.8
Accidents.....(V01-X59, Y85-Y86)	372	100.0	160	43.0	47	12.6	54	14.5	111	29.8
Diabetes Mellitus.....(E10-E14)	216	100.0	80	37.0	90	41.7	40	18.5	6	2.8
Influenza and Pneumonia(J10-J18)	186	100.0	103	55.4	79	42.5	3	1.6	1	0.5
Intentional Self-Harm (suicide).....(*U03, X60-X84, Y87.0)	123	100.0	19	15.4	0	0.0	72	58.5	32	26.0
Chronic Liver Disease and Cirrhosis.....(K70 & K73-K74)	100	100.0	60	60.0	16	16.0	22	22.0	2	2.0
All Other Causes	1,543	100.0	735	47.6	610	39.5	162	10.5	36	2.3

Note: The asterisks (*) preceding the cause-of-death codes indicate that they are not part of the International Classification of Diseases, Tenth Revision.
Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records.

Tobacco Use

On the death certificate, the certifier was instructed to check “yes” or “probably” if in their opinion, the use of tobacco contributed to death or check “no” if in their clinical judgment tobacco use did not contribute to the death. There was also the option of “unknown” if the certifier was unsure if tobacco use contributed to death. On 1,275

deaths, or 18.1 percent, the certifier indicated “yes” or “probably” that tobacco use contributed to the death. Conversely, on 4,075 deaths, or 57.8 percent, the certifier indicated that tobacco use did not contribute to the death.

In the remaining 1,706 deaths, or 24.2 percent, the certifier was unsure if tobacco use contributed to the death.

Table 60, below, displays the 10 leading causes of death where the certifier said “yes” or “probably” that tobacco use contributed to the death. Tobacco use contributed to death in 69 percent, or 307 out of the 445 trachea, bronchus, and lung deaths in

2008. In 69.3 percent, or 337 chronic lower respiratory disease deaths the certifier said “yes” or “probably” that tobacco use contributed to the death.

Table 60
South Dakota Resident Leading Causes of Death as They Relate to Tobacco Use, 2008
(Did Tobacco Use Contribute to Death)

Cause of Death	Yes/Probably		Total Deaths	
	Number	Percent	Number	Percent
Total	1,275	18.1	7,056	100.0
Malignant Neoplasms (cancer).....(C00-C97)	435	27.9	1,561	100.0
Trachea, Bronchus, and Lung.....(C33-C34)	307	69.0	445	100.0
Bladder.....(C67)	14	29.8	47	100.0
Colon, rectum, anus.....(C18-C21)	14	9.2	152	100.0
Esophagus.....(C15)	13	32.5	40	100.0
Female breast.....(C50)	7	5.9	118	100.0
Lip, Oral Cavity, and Pharynx.....(C00-C14)	7	43.8	16	100.0
Chronic Lower Respiratory Diseases.....(J40-J47)	337	69.3	486	100.0
Emphysema.....(J43)	33	89.2	37	100.0
Heart Disease.....(I00-I09, I11, I13, I20-I51)	253	15.1	1,677	100.0
Acute Myocardial Infarction.....(I21-I22)	97	17.0	569	100.0
Atherosclerotic Heart Disease.....(I25.1)	80	15.2	527	100.0
Atherosclerotic Cardiovascular Disease.....(I25.0)	11	19.0	58	100.0
Heart Failure.....(I50)	11	10.8	102	100.0
Hypertensive heart disease.....(I11)	4	8.2	49	100.0
Cerebrovascular Diseases.....(I60-I69)	46	11.8	391	100.0
Diabetes Mellitus.....(E10-E14)	27	12.5	216	100.0
Chronic Liver Disease and Cirrhosis....(K70 & K73-K74)	14	14.0	100	100.0
Alcoholic Liver Disease.....(K70)	13	20.0	65	100.0
Alzheimer’s disease.....(G30)	13	3.2	401	100.0
Influenza and Pneumonia.....(J10-J18)	12	6.5	186	100.0
Pneumonia.....(J12-J18)	8	4.7	169	100.0
Influenza.....(J10-J11)	4	23.5	17	100.0
Accidents(V01-X59, Y85-Y86)	10	2.7	372	100.0
Aortic Aneurysm and Dissection.....(I71)	9	23.7	38	100.0
Paralytic ileus and intestinal obstruction without hernia (K56)	9	19.6	46	100.0

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Method of Disposition

Table 61, on the next page, displays the different methods of disposition for the last 10 years. The top disposition in 2008 was burial with 4,857 deaths. The second highest method of disposition in 2008 was cremation with 1,662 deaths.

Since 1999, burial has been the highest method of disposition chosen and cremation has been the second highest method of disposition chosen.

Table 61
South Dakota Resident Deaths by Disposition, 1999-2008

Year	Type of Disposition						
	Total Deaths	Burial	Cremation	Removal from State	Donation	Entombment	Other
2008	7,056	4,857	1,662	485	35	9	0
2007	6,800	4,775	1,474	481	46	18	0
2006	7,038	5,127	1,440	431	30	6	0
2005	7,074	5,373	1,515	151	27	7	0
2004	6,811	5,305	1,348	120	22	12	0
2003	7,109	5,675	1,321	76	26	**	8
2002	6,886	5,627	1,148	72	24	**	11
2001	6,915	5,700	1,102	79	20	**	10
2000	7,014	5,859	1,038	86	20	**	8
1999	6,941	5,825	938	141	21	**	11

Note: Failure of deaths to add to total is due to not stated disposition.
 ** Prior to 2004 entombment was included in the other category.
 Sharp increase in removal from state from 2005 to 2006 due to clarification of reporting process.
 Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Leading Causes and Selected Components

Table 62, pages 69 through 71, displays South Dakota resident deaths, the crude death rate, and the age-adjusted death rate for 15 leading causes and selected components from 2004 to 2008.

The crude and age-adjusted rate for all causes in 2008 were 934.8 and 810.0 respectively, which are up from the crude and age-adjusted rates in 2007 of 900.8 and 780.9, respectively.

Table 62

South Dakota Resident Deaths, Crude, and Age-Adjusted Death Rates for 15 Leading Causes and Selected Components, 2004-2008

Cause of Death	Number						Crude Death Rates						Age-Adjusted Death Rates					
	Total	2008	2007	2006	2005	2004	Total	2008	2007	2006	2005	2004	Total	2008	2007	2006	2005	2004
All Causes	34,779	7,056	6,800	7,038	7,074	6,811	921.5	934.8	900.8	932.4	937.1	902.3	799.6	810.0	780.9	807.5	816.2	783.6
Heart Disease	8,582	1,677	1,623	1,743	1,764	1,775	227.4	222.2	215.0	230.9	233.7	235.1	191.2	186.8	180.3	194.6	196.9	197.3
Acute Myocardial Infarction	2,996	569	550	636	610	631	79.4	75.4	72.9	84.3	80.8	83.6	68.6	65.3	62.9	73.1	70.2	71.6
Atherosclerotic Heart Disease**	2,741	527	511	567	591	545	72.6	69.8	67.7	75.1	78.3	72.2	60.6	57.8	56.4	63.1	65.3	60.3
Atherosclerotic Cardiovascular Disease	442	102	83	92	117	92	11.7	7.7	11.0	12.2	15.5	12.2	9.3	6.0	8.9	9.7	12.5	9.6
Heart Failure	426	58	63	62	54	145	11.3	13.5	8.3	8.2	7.2	19.2	9.0	10.9	6.8	6.5	5.5	15.2
All Other Forms of Chronic Ischemic Heart Disease	366	59	80	83	75	69	9.7	7.8	10.6	11.0	9.9	9.1	7.9	6.4	8.4	8.9	8.1	7.6
Hypertensive Heart Disease	237	49	48	52	53	35	6.3	6.5	6.4	6.9	7.0	4.6	4.8	5.1	4.8	5.3	5.4	3.7
Acute Rheumatic Fever & Chronic Rheumatic Heart Diseases	66	7	17	18	8	16	1.7	0.9	2.3	2.4	1.1	2.1	1.5	0.7	1.9	2.1	0.8	1.9
Hypertensive Heart and Renal Disease	37	8	10	9	9	1	1.0	1.1	1.3	1.2	1.2	0.1	0.8	0.8	1.1	0.9	0.9	0.1
Acute and Subacute Endocarditis	13	2	3	2	4	2	0.3	0.3	0.4	0.3	0.5	0.3	0.3	0.2	0.3	0.3	0.4	0.3
Diseases of Pericardium and Acute Myocarditis	11	3	2	2	2	2	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.2	0.2
Malignant Neoplasms (cancer)	7,897	1,561	1,606	1,561	1,610	1,559	209.2	206.8	212.8	206.8	213.3	206.5	189.3	187.0	192.2	186.1	194.9	186.4
Trachea, Bronchus, and Lung	2,195	445	425	435	467	423	58.2	59.0	56.3	57.6	61.9	56.0	53.5	53.9	51.9	52.9	57.2	51.7
Colon, Rectum, and Anus	794	152	165	150	176	151	21.0	20.1	21.9	19.9	23.3	20.0	18.7	18.2	19.4	17.5	20.8	17.4
Female Breast	548	118	113	95	117	105	28.8	31.0	29.7	25.0	30.8	27.6	24.1	26.4	23.3	21.3	25.8	23.4
Prostate	471	78	94	103	94	102	25.1	20.8	25.1	27.5	25.1	27.2	27.5	22.7	28.0	30.0	27.2	29.7
Pancreas	461	87	93	89	90	102	12.2	11.5	12.3	11.8	11.9	13.5	11.1	10.4	11.2	10.5	11.1	12.2
Leukemia	336	60	76	66	63	71	8.9	7.9	10.1	8.7	8.3	9.4	7.8	7.0	8.9	7.7	7.4	8.2
Non-Hogkin's Lymphoma	323	68	69	63	56	67	8.6	9.0	9.1	8.3	7.4	8.9	7.5	7.7	8.1	7.4	6.6	7.9
Kidney and Renal Pelvis	210	33	43	46	43	45	5.6	4.4	5.7	6.1	5.7	6.0	5.1	4.0	5.2	5.7	5.3	5.3
Meninges, Brain, and Other Parts of Central Nervous System	206	42	44	36	34	50	5.5	5.6	5.8	4.8	4.5	6.6	5.2	5.3	5.6	4.5	4.3	6.3
Esophagus	206	40	43	44	39	40	5.5	5.3	5.7	5.8	3.7	6.0	5.1	4.8	5.4	5.3	4.9	4.9
Ovary	201	33	43	49	42	34	10.6	8.7	11.3	12.9	11.0	8.9	8.8	7.2	9.6	10.4	9.3	7.5

Table 62 (continued)
South Dakota Resident Deaths, Crude, and Age-Adjusted Death Rates for 15 Leading Causes and Selected Components, 2004-2008

Cause of Death	Number						Crude Death Rates						Age-Adjusted Death Rates					
	Total	2008	2007	2006	2005	2004	Total	2008	2007	2006	2005	2004	Total	2008	2007	2006	2005	2004
Bladder	201	47	33	40	46	35	5.3	6.2	4.4	5.3	6.1	4.6	4.6	5.3	3.8	4.5	5.2	4.1
Liver and Intrahepatic Bile Ducts	181	35	36	32	43	35	4.8	4.6	4.8	4.2	5.7	4.6	4.4	4.2	4.5	3.9	5.3	4.2
Multiple Myeloma and Immunoproliferative	166	33	24	36	28	45	4.4	4.4	3.2	4.8	3.7	6.0	3.9	4.0	2.8	4.3	3.2	5.2
Stomach	154	30	35	37	35	17	4.1	4.0	4.6	4.9	4.6	2.3	3.7	3.6	4.1	4.4	4.3	2.0
Melanoma of Skin	112	23	34	23	16	16	3.0	3.0	4.5	3.0	2.1	2.1	2.8	2.9	4.3	2.9	2.2	1.9
Corpus Uteri and Uterus, Part Unspecified	104	23	25	19	18	19	5.5	6.0	6.6	5.0	4.7	5.0	4.5	4.9	5.2	4.0	3.9	4.2
Lip, Oral Cavity, and Pharynx	85	16	16	20	21	12	2.3	2.1	2.1	2.6	2.8	1.6	2.1	1.9	2.0	2.3	2.7	1.4
Cervix Uteri	39	15	9	1	7	7	2.1	3.9	2.4	0.3	1.8	1.8	1.9	3.3	2.2	0.3	1.9	1.9
Larynx	34	9	13	3	4	5	0.9	1.2	1.7	0.4	0.5	0.7	0.9	1.1	1.6	0.4	0.5	0.7
Hodgkin's Disease	14	2	3	2	3	4	0.4	0.3	0.4	0.3	0.4	0.5	0.4	0.2	0.4	0.3	0.4	0.5
Ill-Defined, Secondary, and Unspecified Sites	402	79	76	86	74	87	10.7	10.5	10.1	11.4	9.8	11.5	9.6	9.4	8.8	10.2	8.8	10.5
Cerebrovascular Diseases	2,210	391	408	437	511	463	58.6	51.8	54.1	57.9	67.7	61.3	48.0	42.8	44.2	47.0	56.0	50.1
Chronic Lower Respiratory Diseases	2,152	486	458	375	440	393	57.0	64.4	60.7	49.7	58.3	52.1	49.0	55.0	52.0	42.8	50.4	44.6
Accidents	1,975	372	357	443	396	407	52.3	49.3	47.3	58.7	52.5	53.8	49.3	46.0	44.5	55.4	49.5	51.3
Motor Vehicle Accidents	822	125	145	186	181	185	21.8	16.6	19.2	24.6	24.0	24.5	21.7	16.5	18.9	24.6	23.4	24.4
Alzheimer's Disease	1,620	401	345	330	289	255	42.9	53.1	45.7	43.7	38.3	33.8	33.3	41.4	35.3	33.7	29.9	26.2
Diabetes Mellitus	1,189	216	246	261	239	227	31.5	28.6	32.6	34.6	31.7	30.1	27.5	25.2	28.7	29.8	27.7	26.2
Influenza and Pneumonia	970	186	189	173	242	180	25.7	24.6	25.0	22.9	32.1	23.8	20.7	20.1	20.3	18.3	25.8	19.2
Intentional Self-Harm (suicide)	586	123	101	125	123	114	15.5	16.3	13.4	16.6	16.3	15.1	15.6	16.4	13.5	16.7	16.2	15.3
Chronic Liver Disease and Cirrhosis	457	100	94	83	83	97	12.1	13.2	12.5	11.0	11.0	12.9	12.2	13.3	12.7	11.1	11.0	12.8
Nephritis, Nephrotic Syndrome, and Nephrosis	371	90	74	60	54	93	9.8	11.9	9.8	7.9	7.2	12.3	8.3	9.9	8.2	6.8	6.0	10.4

Table 62 (continued)

South Dakota Resident Deaths, Crude, and Age-Adjusted Death Rates for 15 Leading Causes and Selected Components, 2004-2008

Cause of Death	Number						Crude Death Rates						Age-Adjusted Death Rates					
	Total	2008	2007	2006	2005	2004	Total	2008	2007	2006	2005	2004	Total	2008	2007	2006	2005	2004
Essential (primary) Hypertension and Hypertensive Renal Disease	352	65	70	79	83	55	9.3	8.6	9.3	10.5	11.0	7.3	7.5	7.1	7.5	8.2	8.7	5.9
Unspecified Dementia	339	80	70	74	30	85	9.0	10.6	9.3	9.8	4.0	11.3	6.9	8.1	7.1	7.5	3.0	8.6
Parkinson's Disease	331	69	62	75	60	65	8.8	9.1	8.2	9.9	7.9	8.6	7.2	7.5	6.7	8.1	6.6	7.0
Septicemia	277	54	64	65	*	*	7.3	7.2	8.5	8.6	*	*	6.4	6.2	7.4	7.7	*	*

Note: *This cause was not one of the fifteen leading causes or death for that year.
 **Atherosclerotic Heart Disease is now broken out from Other Acute Ischemic Heart Disease.
 Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records.

