VII. CANCER MORTALITY

Cancer age-adjusted death rates for 2011 ranged from a low of 83.0 in Faulk County to a high of 723.3 in Buffalo County. South Dakota's age adjusted death rate was 167.3 in 2011 compared to a 5-year death rate of 165.5.

In 2011, only three counties had a significantly lower rate than that of the entire state and one had a significantly higher rate. The five-year rates show nine counties having significantly lower rates and three counties with significantly higher rates. South Dakota's mortality rate for 2007-2011 was 165.5 per 100,000 persons.

The United States mortality rate for 2011 is not available. The United States mortality rate was 171.8 and the South Dakota mortality rate was 169.7 per 100,000 persons in 2010. South Dakota's mortality rate for 2011 is 167.3 per 100,000 persons.

The South Dakota 2011 mortality rates are displayed in a state map on page 15 of this report.

Table 7 : Cancer Deaths and Mortality Rates by County
South Dakota, 2011 and 2007-2011 Average

County	2011			2007-2011^		
	Deaths	Rate		Deaths	Rate	
South Dakota	1,656	167.3		1,596	165.5	
Aurora	7	176.3		6	132.2	
Beadle	45	188.9		44	178.3	
Bennett	6	177.4		6	195.1	
Bon Homme	15	149.7		18	162.5	
Brookings	39	141.2		41	150.5	
Brown	68	141.3		78	164.6	
Brule	11	135.2		11	147.5	
Buffalo	3	723.3		3	273.6	
Butte	38	296.6	▲	28	225.1	▲
Campbell	3	88.6		3	95.0	▼
Charles Mix	22	156.5		23	180.7	
Clark	15	222.4		10	148.2	
Clay	16	130.3		18	147.6	
Codington	47	136.4		57	174.8	
Corson	7	232.9		7	213.1	
Custer	20	153.0		23	186.3	
Davison	36	128.5		43	162.7	
Day	21	181.0		17	169.0	
Deuel	9	127.9		9	128.3	▼
Dewey	7	171.3		9	206.4	
Douglas	11	183.9		9	177.6	
Edmunds	12	159.7		9	139.3	
Fall River	27	195.9		27	198.6	
Faulk	4	83.1		6	120.1	▼
Grant	21	185.8		17	145.8	
Gregory	9	147.4		15	182.5	
Haakon	6	186.5		6	154.9	
Hamlin	13	157.9		12	159.6	
Hand	9	177.1		8	130.3	
Hanson	7	198.9		6	177.8	
Harding	3	169.6		*	92.9	▼
Hughes	39	196.7		32	159.5	
Hutchinson	19	146.3		22	161.3	
Hyde	2	126.6		4	153.0	
Jackson	6	186.3		5	174.2	
Jerauld	9	287.5		8	226.3	
Jones	4	211.7		3	159.8	
Kingsbury	12	126.9		16	175.6	
Lake	25	161.4		25	152.8	
Lawrence	66	194.5		53	163.3	
Lincoln	51	135.0		45	151.0	
Lyman	6	124.2		6	132.8	
McCook	16	185.5		18	214.9	▲
McPherson	7	150.8		4	68.8	▼
Marshall	17	245.9		13	178.7	
Meade	46	183.9		44	179.2	
Mellette	8	377.2		5	223.9	
Miner	9	177.8		9	195.7	
Minnehaha	326	190.5		300	170.5	
Moody	11	129.4		13	160.8	
Pennington	196	164.7		181	162.9	
Perkins	18	320.7		11	190.2	
Potter	12	184.0		10	193.3	
Roberts	29	203.7		26	196.6	
Sanborn	6	167.3		4	115.6	▼
Shannon	16	224.8		14	224.2	▲
Spink	11	94.7	▼	15	138.1	
Stanley	7	169.7		6	172.2	
Sully	3	143.5		*	126.5	
Todd	9	186.7		11	211.4	
Tripp	14	144.2		13	132.5	▼
Turner	20	161.1		20	143.3	
Union	18	99.8	▼	31	185.2	
Walworth	23	192.4		14	133.7	▼
Yankton	35	112.4	▼	42	143.1	▼
Ziebach	3	189.2		3	188.5	

* Counts less than three are suppressed. Mortality rates with counts less than 20 are generally considered unstable. ▲ Rate significantly higher; ▼ Rate significantly lower
^ Number of the cases and rates are averaged over the five-year period.
Rates per 100,000 age-adjusted to 2000 US standard population and SD 2011 estimated population. Source: South Dakota Department of Health

Table 8: Age-adjusted Mortality Rates by County for Selected Sites, 2011

	Colorectal		Lung and Bronchus		Female Breast		Prostate		Bladder		NHL	
	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate
South Dakota	**136**	**13.7**	**457**	**47.0**	**122**	**23.3**	**88**	**20.8**	**34**	**3.2**	**62**	**6.0**
Aurora	0	0.0	4	103.2	0	0.0	0	0.0	0	0.0	0	0.0
Beadle	3	11.2	11	40.2	6	45.7	*	17.2	0	0.0	*	6.3
Bennett	*	55.5	*	28.9	0	0.0	*	70.5	0	0.0	0	0.0
Bon Homme	0	0.0	8	82.6	*	32.1	*	33.8	*	9.3	0	0.0
Brookings	*	8.6	7	25.1	4	29.3	*	16.6	*	3.6	*	3.7
Brown	6	12.5	16	32.4	5	14.1	4	20.9	0	0.0	3	5.6
Brule	*	35.5	4	44.8	*	22.0	0	0.0	0	0.0	*	8.5
Buffalo	0	0.0	*	128.6	0	0.0	0	0.0	0	0.0	0	0.0
Butte	4	33.4	14	117.2	4	53.1	3	52.0	0	0.0	3	24.4
Campbell	*	27.4	0	0.0	0	0.0	*	79.4	0	0.0	0	0.0
Charles Mix	4	28.1	4	31.4	0	0.0	*	31.7	*	5.9	3	20.9
Clark	*	13.9	4	71.6	0	0.0	0	0.0	0	0.0	*	13.9
Clay	0	0.0	3	25.3	*	31.4	*	22.5	0	0.0	*	8.2
Codington	*	5.0	13	37.7	4	22.6	*	13.7	*	5.0	*	3.5
Corson	*	23.6	*	70.9	0	0.0	0	0.0	0	0.0	0	0.0
Custer	4	31.5	6	49.4	*	20.0	0	0.0	0	0.0	0	0.0
Davison	3	8.4	14	53.7	*	7.6	*	16.9	0	0.0	*	7.6
Day	3	27.3	*	8.9	3	34.0	*	42.9	*	6.5	0	0.0
Deuel	*	29.3	4	58.2	*	46.6	0	0.0	0	0.0	0	0.0
Dewey	0	0.0	3	80.8	0	0.0	0	0.0	0	0.0	0	0.0
Douglas	0	0.0	*	22.3	0	0.0	0	0.0	0	0.0	0	0.0
Edmunds	*	27.4	*	14.6	*	23.5	0	0.0	0	0.0	*	14.6
Fall River	0	0.0	10	72.7	*	31.0	3	46.1	*	7.6	*	5.6
Faulk	*	14.1	*	30.6	0	0.0	0	0.0	0	0.0	0	0.0
Grant	*	18.9	3	27.6	*	39.9	3	55.4	0	0.0	*	6.7
Gregory	*	14.8	3	67.9	0	0.0	0	0.0	0	0.0	0	0.0
Haakon	0	0.0	*	31.5	*	124.4	*	81.6	0	0.0	0	0.0
Hamlin	0	0.0	*	11.7	*	18.0	*	24.2	0	0.0	0	0.0
Hand	*	8.8	*	34.9	0	0.0	0	0.0	0	0.0	*	8.8
Hanson	0	0.0	3	84.0	0	0.0	*	63.7	0	0.0	0	0.0
Harding	*	84.4	*	42.6	0	0.0	*	77.6	0	0.0	0	0.0
Hughes	5	24.7	7	36.3	*	21.4	*	14.8	*	11.5	*	8.8
Hutchinson	0	0.0	4	24.0	*	70.0	*	10.5	*	3.5	*	25.5
Hyde	0	0.0	*	47.4	0	0.0	0	0.0	0	0.0	0	0.0
Jackson	*	30.8	3	90.6	0	0.0	0	0.0	0	0.0	*	36.0
Jerauld	0	0.0	*	17.8	*	58.1	*	58.1	0	0.0	*	13.6
Jones	*	48.2	*	60.9	*	167.1	0	0.0	*	45.6	0	0.0
Kingsbury	0	0.0	5	57.1	0	0.0	0	0.0	0	0.0	*	7.8
Lake	*	14.0	5	28.3	*	25.4	0	0.0	0	0.0	*	4.7
Lawrence	4	10.7	17	53.9	4	21.0	7	46.9	4	11.3	*	3.7
Lincoln	7	20.3	18	48.8	5	21.5	3	19.6	*	2.2	0	0.0
Lyman	0	0.0	3	58.3	0	0.0	0	0.0	0	0.0	0	0.0
McCook	*	13.0	7	82.1	*	26.0	*	22.6	0	0.0	0	0.0
McPherson	*	39.2	*	55.7	0	0.0	*	56.3	0	0.0	0	0.0
Marshall	*	27.0	*	23.4	*	14.6	*	26.6	*	12.8	0	0.0
Meade	*	4.5	15	61.8	0	0.0	4	34.6	0	0.0	*	4.2
Mellette	*	54.0	5	220.5	0	0.0	*	96.4	0	0.0	0	0.0
Miner	*	28.5	*	60.3	0	0.0	*	57.4	0	0.0	0	0.0
Minnehaha	22	11.9	93	55.7	29	31.5	11	17.2	12	6.9	17	10.1
Moody	*	19.9	*	14.4	*	27.9	*	20.7	0	0.0	0	0.0
Pennington	11	9.3	60	50.2	15	24.4	9	18.2	*	1.5	8	6.1
Perkins	4	70.8	3	60.1	*	30.8	0	0.0	0	0.0	*	10.5
Potter	*	17.0	4	69.3	0	0.0	0	0.0	0	0.0	*	17.0
Roberts	*	11.4	6	41.1	*	21.9	*	33.7	*	7.5	*	6.8
Sanborn	*	60.8	0	0.0	*	68.5	0	0.0	0	0.0	0	0.0
Shannon	3	37.6	3	46.8	*	30.8	3	99.6	0	0.0	0	0.0
Spink	0	0.0	3	31.2	*	14.3	0	0.0	0	0.0	0	0.0
Stanley	*	17.4	3	77.7	*	52.1	0	0.0	0	0.0	0	0.0
Sully	0	0.0	*	47.5	0	0.0	*	108.0	0	0.0	0	0.0
Todd	0	0.0	4	79.6	*	48.9	*	59.6	*	27.0	0	0.0
Tripp	*	13.3	3	29.4	0	0.0	0	0.0	0	0.0	*	6.5
Turner	*	14.3	7	58.4	*	16.0	0	0.0	*	9.0	0	0.0
Union	*	7.3	7	40.3	*	22.4	*	20.5	0	0.0	*	4.9
Walworth	3	29.1	4	36.0	*	12.6	0	0.0	0	0.0	0	0.0
Yankton	4	15.1	10	33.6	*	10.8	*	12.9	0	0.0	*	3.2
Ziebach	0	0.0	0	0.0	*	63.3	0	0.0	0	0.0	0	0.0

Note: * Counts less than 3 are suppressed. Mortality rates with counts less than 20 are generally considered unstable.
Rates per 100,000 age-adjusted to the 2000 US standard population and 2011 SD estimated population.
Source: South Dakota Department of Health

Table 9: Age-adjusted Mortality Rates by Site, Gender, and Race, South Dakota, 2011

	TOTAL		MALE		FEMALE		WHITE		AMERICAN INDIAN	
	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate
Total	**1,656**	**167.3**	**838**	**192.5**	**818**	**149.5**	**1,561**	**165.6**	**81**	**240.5**
Oral Cavity	**19**	**1.9**	**12**	**2.7**	**7**	**1.3**	**17**	**1.8**	**2**	**4.0**
Lip	1	0.1	1	0.2	0	0.0	1	0.1	0	0.0
Tongue	3	0.4	2	0.5	1	0.2	3	0.4	0	0.0
Salivary Gland	2	0.2	1	0.2	1	0.2	2	0.2	0	0.0
Floor of Mouth	1	0.1	0	0.0	1	0.2	0	0.0	1	1.7
Gum and Other Mouth	6	0.6	4	1.1	2	0.2	6	0.6	0	0.0
Nasopharynx	1	0.1	1	0.2	0	0.0	1	0.1	0	0.0
Hypopharynx	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Tonsil	4	0.4	2	0.3	2	0.4	3	0.3	1	2.3
Oropharynx	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Other Oral Cavity and Pharynx	1	0.1	1	0.2	0	0.0	1	0.1	0	0.0
Digestive System	**377**	**38.2**	**205**	**46.2**	**172**	**29.9**	**348**	**36.1**	**23**	**65.2**
Esophagus	57	5.5	45	10.1	12	1.9	54	5.5	2	5.5
Stomach	27	2.7	17	3.9	10	1.9	26	2.7	0	0.0
Small Intestine	6	0.6	5	1.1	1	0.2	6	0.6	0	0.0
Colorectal	136	13.9	68	15.9	68	11.2	124	13.0	11	33.6
Colon Excluding Rectum	105	10.5	46	10.8	59	9.6	97	10.1	7	21.8
Rectum and Rectosigmoid	31	3.2	22	5.1	9	1.6	27	2.9	4	11.8
Anus, Anal Canal and Anorectum	2	0.2	1	0.3	1	0.2	1	0.1	1	1.8
Liver and Intrahepatic Bile Duct	41	4.0	23	4.9	18	3.3	37	3.9	2	4.0
Gallbladder	5	0.6	3	0.7	2	0.5	4	0.5	1	3.1
Other Biliary	8	0.8	3	0.6	5	0.9	8	0.8	0	0.0
Pancreas	95	9.4	40	8.7	55	9.8	88	9.1	6	17.2
Retroperitoneum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Peritoneum, Omentum and Mesentery	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Respiratory	**467**	**48.8**	**242**	**55.4**	**225**	**42.6**	**437**	**47.1**	**27**	**83.6**
Nose, Nasal Cavity and Middle Ear	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Larynx	10	1.0	9	2.0	1	0.1	10	1.0	0	0.0
Lung and Bronchus	457	47.0	233	53.4	224	42.5	427	46.1	27	83.6
Pleura	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mediastinum and Other Resp Organs	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Bones and Joints	**2**	**0.2**	**1**	**0.3**	**1**	**0.2**	**2**	**0.2**	**0**	**0.0**
Soft Tissue	**10**	**1.2**	**4**	**1.0**	**6**	**1.4**	**10**	**1.3**	**0**	**0.0**
Skin	**32**	**3.4**	**17**	**3.9**	**15**	**2.7**	**30**	**3.4**	**2**	**6.3**
Melanomas Skin	25	2.7	13	2.9	12	2.4	25	2.9	0	0.0
Other Nonepithelial Skin	7	0.7	4	1.0	3	0.3	5	0.5	2	6.3
Breast	**124**	**13.0**	**2**	**0.4**	**122**	**23.3**	**116**	**12.7**	**6**	**16.6**
Breast, Female	122	23.3			122	23.3	114	23.2	6	29.8
Breast, Male	2	0.4	2	0.4			2	0.5	0	0.0
Female	**83**	**14.8**			**83**	**14.8**	**80**	**15.0**	**3**	**10.1**
Vulva	5	0.8			5	0.8	5	0.8	0	0.0
Vagina	2	0.3			2	0.3	2	0.3	0	0.0
Cervix Uteri	5	0.9			5	0.9	3	0.6	2	7.1
Corpus and Uterus, NOS	31	5.7			31	5.7	30	5.9	1	3.0
Corpus Uteri	19	3.5			19	3.5	19	3.7	0	0.0
Uterus, NOS	12	2.2			12	2.2	11	2.2	1	3.0
Ovary	40	7.0			40	7.0	40	7.3	0	0.0
Other Female Genital Organs	0	0.0			0	0.0	0	0.0	0	0.0

Table 9: Age-adjusted Mortality Rates by Site, Gender, and Race, South Dakota, 2011 (continued)

	TOTAL		MALE		FEMALE		WHITE		AMERICAN INDIAN	
	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate
Male	**88**	**20.8**	**88**	**20.8**			**82**	**20.1**	**6**	**53.6**
Penis	0	0.0	0	0.0			0	0.0	0	0.0
Prostate	88	20.8	88	20.8			82	20.1	6	53.6
Testis	0	0.0	0	0.0			0	0.0	0	0.0
Other Male Genital Organs	0	0.0	0	0.0			0	0.0	0	0.0
Urinary	**89**	**9.0**	**58**	**13.3**	**31**	**5.6**	**87**	**9.0**	**2**	**7.0**
Bladder	34	3.3	24	5.6	10	1.7	33	3.2	1	3.9
Kidney and Renal Pelvis	51	5.3	31	7.0	20	3.7	50	5.4	1	3.1
Ureter	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Other Urinary Organs	4	0.4	3	0.7	1	0.2	4	0.4	0	0.0
Eye and Orbit	**2**	**0.2**	**2**	**0.4**	**0**	**0.0**	**2**	**0.2**	**0**	**0.0**
Brain and CNS	**54**	**5.8**	**27**	**6.1**	**27**	**5.5**	**53**	**5.9**	**1**	**0.9**
Brain	52	5.5	26	5.9	26	5.3	51	5.7	1	0.9
Meninges and CNS	2	0.2	1	0.2	1	0.2	2	0.2	0	0.0
Endocrine	**7**	**0.7**	**4**	**0.9**	**3**	**0.6**	**6**	**0.6**	**0**	**0.0**
Thyroid	7	0.7	4	0.9	3	0.6	6	0.6	0	0.0
Other Endocrine	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Lymphomas	**65**	**6.5**	**43**	**9.8**	**22**	**3.4**	**62**	**6.4**	**2**	**6.3**
Hodgkin's Disease	3	0.4	2	0.6	1	0.2	3	0.4	0	0.0
Non-Hodgkin's Lymphomas	62	6.1	41	9.3	21	3.3	59	6.0	2	6.3
Multiple Myeloma	**39**	**3.8**	**17**	**3.9**	**22**	**3.6**	**39**	**3.8**	**0**	**0.0**
Leukemia	**77**	**7.9**	**51**	**11.6**	**26**	**4.6**	**75**	**8.0**	**2**	**5.6**
Acute Lymphocytic	3	0.3	2	0.4	1	0.1	3	0.3	0	0.0
Chronic Lymphocytic	23	2.3	13	3.0	10	1.6	23	2.3	0	0.0
Other Lymphocytic	1	0.1	1	0.3	0	0.0	1	0.1	0	0.0
Acute Myeloid	25	2.7	16	3.6	9	1.7	24	2.7	1	1.7
Acute Monocytic	1	0.1	0	0.0	1	0.2	1	0.1	0	0.0
Chronic Myeloid	4	0.4	4	0.9	0	0.0	4	0.4	0	0.0
Other Myeloid/Monocytic	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Other Acute Leukemia	12	1.2	9	2.1	3	0.5	12	1.2	0	0.0
Other Leukemia	8	0.8	6	1.4	2	0.4	7	0.8	1	3.9
Mesothelioma	**6**	**0.6**	**5**	**1.2**	**1**	**0.2**	**6**	**0.7**	**0**	**0.0**
Immunoproliferative Diseases	**1**	**0.1**	**0**	**0.0**	**1**	**0.2**	**1**	**0.1**	**0**	**0.0**
Ill-Defined and Unspecified Sites	**114**	**11.8**	**60**	**14.4**	**54**	**9.8**	**108**	**11.5**	**5**	**19.5**

Rates per 100,000 age-adjusted to the 2000 US standard population and 2011 SD estimated population.
Source: South Dakota Department of Health

Table 9 shows death and age-adjusted death rates by SEER recode primary sites (Appendix D), gender and race. Approximately 1,600 persons die from cancer in South Dakota each year with little or no change in counts. Overall more males than females die from cancer, but that is starting to change as recent years of data have started to show.

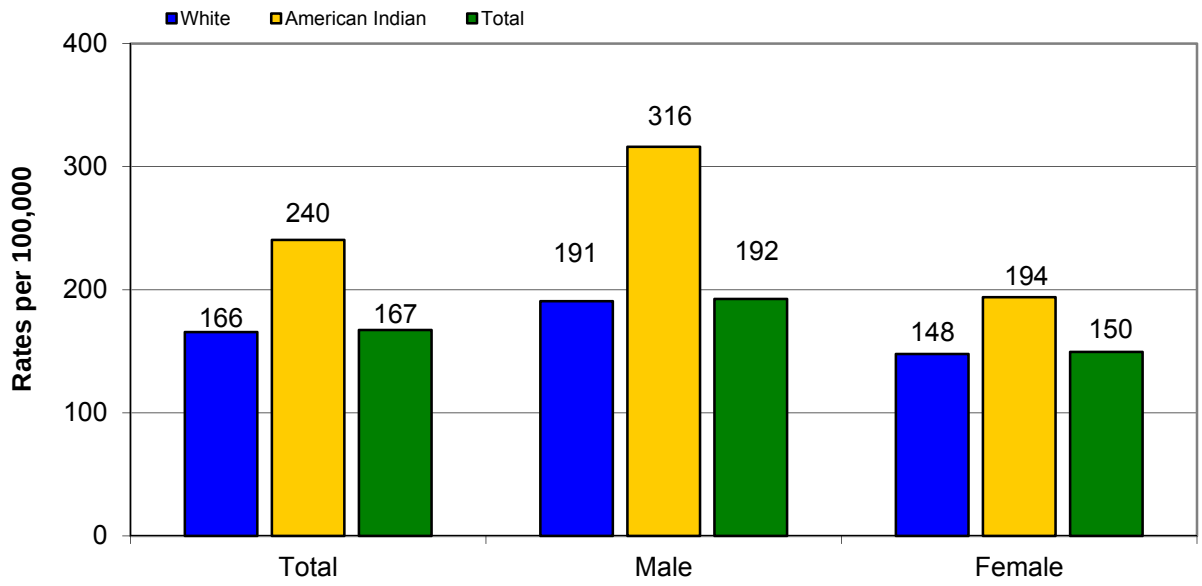
Table 10: Percentage of Cancer Deaths by Age Groups and Selected Primary Sites, South Dakota, 2011

Age Group	0-19	20-34	35-49	50-64	65-74	75-84	85+
All Sites	0%	0%	4%	20%	22%	31%	22%
Bladder	0%	0%	0%	15%	15%	29%	41%
Female Breast	0%	0%	7%	25%	25%	25%	17%
Colorectal	0%	0%	4%	13%	24%	33%	27%
Corpus and Uterus, NOS	0%	0%	10%	19%	19%	19%	32%
Meninges, Brain and CNS	4%	0%	7%	31%	19%	28%	11%
Kidney and Renal Pelvis	0%	0%	2%	20%	33%	25%	20%
Leukemia	4%	0%	3%	22%	16%	34%	22%
Lung and Bronchus	0%	0%	2%	22%	26%	36%	14%
Melanoma of the Skin	0%	0%	20%	20%	20%	20%	20%
Non-Hodgkin's Lymphoma	2%	2%	2%	16%	23%	24%	32%
Pancreas	0%	0%	3%	20%	21%	28%	27%
Prostate	0%	0%	1%	13%	17%	40%	30%

Source: South Dakota Department of Health

Overall, in 2011 more persons 75 to 84 years of age died from cancer in South Dakota than any other age group (Table 10). However, there would be cause for concern if too many people die from cancer at a young age.

Figure 8: All Sites Cancer Mortality Rates by Race, and Gender, South Dakota, 2011



Note: Rates per 100,000 age-adjusted to 2000 US standard population and 2011 SD estimated population.
Source: South Dakota Department of Health

Figure 8 illustrates that males had higher death rates than females. American Indian males and females had higher death rates than whites.