

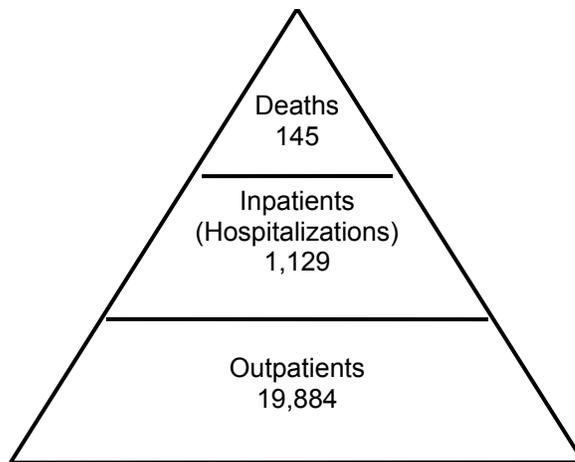
INJURY REPORT, 1999-2003

Southeast District Health Department Coverage Area Johnson, Nemaha, Otoe, Pawnee, and Richardson Counties

Summary

Injury is a public health problem in the Southeast District Health Department (SDHD) coverage area. Overall, unintentional injury is the sixth leading cause of death (*Table D1*). From 1999 to 2003, in addition to 145 injury deaths, over 1,000 residents in Johnson, Nemaha, Otoe, Pawnee, and Richardson Counties were hospitalized and more than 19,800 residents were treated at hospitals for injuries (*Figure A*). Overall, motor vehicle crashes were the leading cause of injury death. Falls were second, followed by suicide. In contrast to deaths, falls were the leading cause of injury-related hospital treatment and struck by/against injuries were second, followed by overexertion, cutting/piercing, and motor vehicle crashes.

**Figure A: Injury Pyramid, Residents of
Southeast District Health Department Coverage Area, NE, 1999-2003**



The pattern of injury varied by age and gender. Injury had a greater impact on children and young adults. Of all deaths among those age 15-24, most were due to injuries. Therefore, more years of potential life were lost due to injuries. Males were nearly twice as likely as females to die from an injury.

The following table highlights the SDHD coverage area's progress towards the 2010 Nebraska Health Goals and Objectives related to deaths due to unintentional injuries, falls, motor vehicle crashes, suicide, and homicide (*Table A*).

Table A: Injury Death Rates, Southeast District Health Department Coverage Area, NE, 2003

Cause of Death	Age-adjusted Rate 2003	2010 Nebraska Objective (rate per 100,000 population)
Unintentional Injury	37	19.4
Fall	6.4	3.5
Motor Vehicle Crash	29.3	12
Suicide	*	8.2
Homicide	*	2

Source: DHHS Death Certificate Data 2003

* Fewer than five deaths

Injury Deaths

Overall

- From 1999 to 2003, injuries, including unintentional and intentional, were the sixth leading cause of death in the SDHD coverage area (*Table D1*).

**Table D1: Five Leading Causes of Death,
Southeast District Health Department Coverage Area, Nebraska, 1999-2003**

Rank	Cause	Total Number of Death
1	Heart Disease	651
2	Cancer	559
3	Stroke	209
4	Chronic Lung Disease	159
5	Ill-Defined	145
6	Injury	115

Source: DHHS Death Certificate Data 1999-2003

- An average of 27 residents died from an injury each year in the SDHD area (*Table D2*).
- Deaths due to injuries made up 5.1% of total deaths in SDHD area, compared to Nebraska at 6%. In the SDHD area, among 15-24 year olds more than 77% of deaths were due to injuries (*Table D2*).

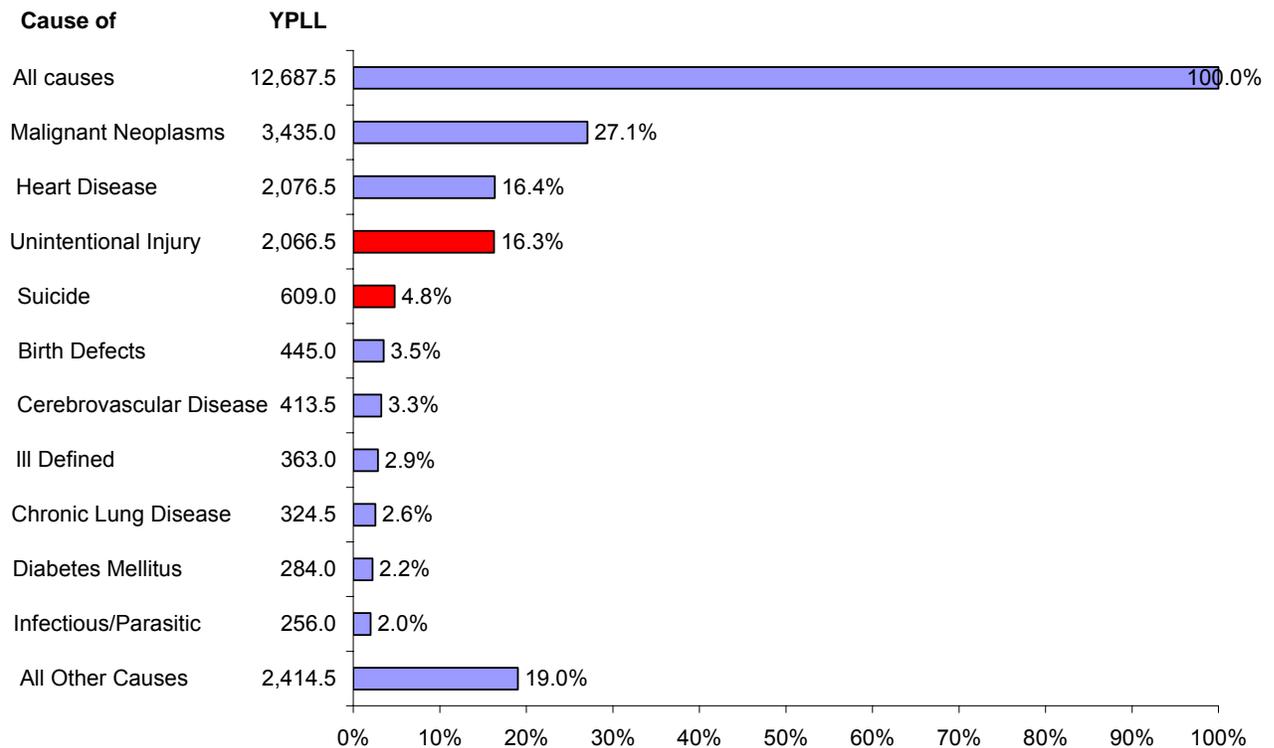
**Table D2: Injury Deaths as a Percent of All Deaths by Age,
Southeast District Health Department Coverage Area, NE, 1999-2003**

Age Group	Annual Average			Percent of Death due to Injury
	Injury Deaths	Injury Deaths	All Deaths	
<1	1	0	12	8.3
1-4	0	0	3	0.0
5-9	1	0	2	50.0
10-14	3	1	5	60.0
15-19	7	1	9	77.8
20-24	7	1	9	77.8
25-29	5	1	14	35.7
30-34	2	0	10	20.0
35-39	8	2	14	57.1
40-44	11	2	32	34.4
45-49	11	2	43	25.6
50-54	6	1	56	10.7
55-59	2	0	89	2.2
60-64	2	0	91	2.2
65-74	18	4	378	4.8
75-84	22	4	785	2.8
85+	29	6	1,091	2.7
Total	135	27	2,643	5.1

Source: DHHS Death Certificate Data 1999-2003

- Years of Potential Life Lost (YPLL) from unintentional injury ranked third (16.3%), following those from cancer (27.1%) and heart disease (16.4%). Suicide ranked 4th at 4.8% (*Figure D1*).

**Figure D1: Years of Potential Lost (YPLL) before 75 by Cause of Death
Southeast District Health Department, NE, 1999-2003**



- The SDHD area had a higher unintentional injury rate (45.4 per 100,000) and lower suicide rate (9.4 per 100,000) than Nebraska rates (33.3 and 10.6 per 100,000 respectively) (Table D3).

**Table D3: Injury Deaths, Percentage, and Age-adjusted Rates,
Southeast District Health Department Coverage Area, NE, 1999-2003**

Intent	Male			Female			Total			State		
	N	%	Rate	N	%	Rate	N	%	Rate	N	%	Rate
Unintentional	63	72.4	60.2	52	89.7	31.4	115	79.3	45.4	3,020	68.3	33.3
Suicide	16	18.4	17.4	2	3.4	*	18	12.4	9.4	894	20.2	10.6
Homicide	2	2.3	*	0	0.0	*	2	1.4	*	273	6.2	3.2
Undetermined	4	4.6	*	1	1.7	*	5	3.4	2.9	139	3.1	1.6
Adverse Effects	2	2.3	*	3	5.2	*	5	3.4	1.8	93	2.1	1.0
Total	87	100.0	85.8	58	100.0	36.3	145	100.0	60.4	4,419	100.0	48.9

Source: DHHS Death Certificate Data 1999-2003

* Fewer than five deaths

- More males (60%) died from all injury-related causes than females (40%) (Table D4).

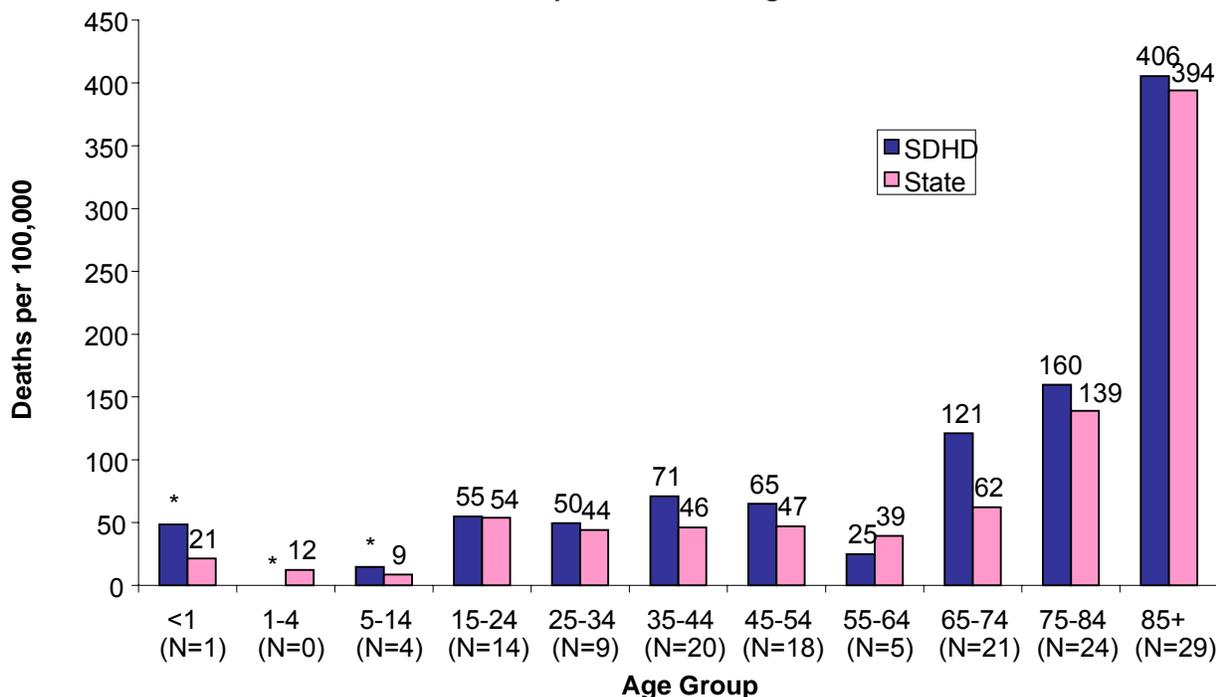
Table D4: Injury Related Deaths and Hospital Discharges by Gender, Age, and Race, Southeast District Health Department Coverage Area, NE, 1999-2003

	Southeast District HD				State			
	Deaths		Hospital Discharges		Deaths		Hospital Discharges	
	N	%	N	%	N	%	N	%
Gender								
Male	87	60.0	10,826	51.5	2,848	64.3	386,563	53.1
Female	58	40.0	10,187	48.5	1,581	35.7	341,506	46.9
Total	145	100.0	21,013	100.0	4,429	100.0	728,069	100.0
Age								
<1	1	0.7	146	0.7	26	0.6	7,142	1.0
1-4	0	0.0	1,378	6.6	58	1.3	59,764	8.2
5-14	4	2.8	3,394	16.2	107	2.4	122,382	16.8
15-24	14	9.7	3,825	18.2	699	15.8	144,001	19.8
25-34	9	6.2	1,737	8.3	486	11.0	84,574	11.6
35-44	20	13.8	2,124	10.1	593	13.4	84,445	11.6
45-54	18	12.4	1,837	8.7	547	12.4	66,321	9.1
55-64	5	3.5	1,244	5.9	292	6.6	39,540	5.4
65-74	21	14.5	1,672	8.0	355	8.0	40,555	5.6
75-84	24	16.6	2,064	9.8	575	13.0	45,135	6.2
85+	29	20.0	1,592	7.6	691	15.6	34,222	4.7
Total	145	100.0	21,013	100.0	4,429	100.0	728,081	100.0
Race								
Asian	3	2.1			29	0.7		
African American					194	4.4		
Native American	1	0.7			72	1.6		
White	141	97.2			4,123	93.1		
Other					11	0.3		
Total	145	100.0			4,429	100.0		

Note: Hospital discharges include hospital inpatients, outpatients, and ER visits.

- Injury death rates were the highest for the oldest age group, 85 and older. Persons in this age group had a higher injury death rate of 406 per 100,000 than the Nebraska rate of 394 per 100,000 (*Figure D2*).

Figure D2: All Injury Death Rates by Age, Southeast District Health Department Coverage Area, NE, 1999-2003



* Fewer than five deaths
Source: DHHS Death Certificate Data 1999-2003

Leading causes

- Motor vehicle crashes were the leading cause of injury death with an age-adjusted rate of 20.9 per 100,000. The rate was higher than the Nebraska rate (13.6 per 100,000) (Figure D3).
- Falls were the second leading cause of injury death. The age-adjusted death rate due to falls (9.6 per 100,000) was higher than the Nebraska rate (7.0 per 100,000) (Figure D3).
- Suicide was the third leading cause of injury death at a rate of 9.4 per 100,000 (Figure D3).

Age

- Of 41 motor vehicle crash deaths, the most were among persons age 45-54 years (24.4%), followed by those in the 15-24 and 35-44 year age groups (22.0%, 22.0%) (Table D5).

Table D5: Deaths Due to Motor Vehicle Crash by Age and Gender, Southeast District Health Department Coverage Area, 1999-2003

Age	Male		Female		Total	
	N	%	N	%	N	%
5-14	0	0.0	1	6.7	1	2.4
15-24	8	30.8	1	6.7	9	22.0
25-34	2	7.7	2	13.3	4	9.8
35-44	7	26.9	2	13.3	9	22.0
45-54	4	15.4	6	40.0	10	24.4
65-74	2	7.7	1	6.7	3	7.3
75-84	3	11.5	1	6.7	4	9.8
85+	0	0.0	1	6.7	1	2.4
Total	26	100.0	15	100.0	41	100.0

Source: DHHS Death Certificate Data 1999-2003

- Eighty percent of deaths due to fall injuries (N=28) were among persons 75 years and older (*Table D6*).

**Table D6: Deaths Due to Fall by Age and Gender,
Southeast District Health Department Coverage Area, 1999-2003**

Age	Male		Female		Total	
	N	%	N	%	N	%
45-54	1	8.3	0	0.0	1	2.9
65-74	3	25.0	3	13.0	6	17.1
75-84	3	25.0	8	34.8	11	31.4
85+	5	41.7	12	52.2	17	48.6
Total	12	100.0	23	100.0	35	100.0

Source: DHHS Death Certificate Data 1999-2003

- The most suicide deaths were among those in the 35-44 year age group (33.3%) (*Table D7*).

**Table D7: Deaths Due to Suicide by Age and Gender,
Southeast District Health Department Coverage Area, 1999-2003**

Age	Male		Female		Total	
	N	%	N	%	N	%
15-24	4	25.0	0	0.0	4	22.2
25-34	2	12.5	0	0.0	2	11.1
35-44	5	31.3	1	50.0	6	33.3
45-54	2	12.5	0	0.0	2	11.1
55-64	1	6.3	0	0.0	1	5.6
65-74	2	12.5	1	50.0	3	16.7
Total	16	100.0	2	100.0	18	100.0

Source: DHHS Death Certificate Data 1999-2003

Gender

- More males (N=26) died from motor vehicle crashes than females (N=15) (*Table D5*).
- More females (N=23) died from fall-related injuries than males (N=12) (*Table D6*).
- More males (N=16) died from suicide than females (N=2) (*Table D7*).

Hospital Discharges

Overall

- The SDHD area had a higher unintentional injury hospital discharge rate (9,524 per 100,000), suicide attempt rate (92 per 100,000), and assault rate (250 per 100,000) than Nebraska rates (7,610, 75, and 204 per 100,000 respectively) (*Table H1*).

Table H1: Injury Hospital Discharges, Percentage, and Age-adjusted Rates, Southeast District Health Department Coverage Area, NE, 1999-2003

Intent	Males			Females			Total			State		
	N	%	Rate	N	%	Rate	N	%	Rate	N	%	Rate
Unintentional	10,026	96.7	10,562.0	9,349	96.7	8,542.3	19,375	96.7	9,523.8	665,407	95.9	7,609.6
Suicide	52	0.5	60.1	111	1.1	123.0	163	0.8	92.4	6,379	0.9	75.0
Homicide	245	2.4	281.5	184	1.9	220.7	429	2.1	250.2	17,720	2.6	203.9
Undetermined	33	0.3	36.3	22	0.2	23.1	55	0.3	29.5	4,181	0.6	48.3
Other	9	0.1	9.9	1	0.0	*	10	0.0	5.4	404	0.1	4.7
Total	10,365	100.0	10,950.0	9,667	100.0	8,910.1	20,032	100.0	9,901.3	694,091	100.0	7,941.5

Source: NE Hospital Discharge Data 1999-2003

Rates per 100,000 population are age-adjusted to the 2000 U.S. standard population

* Fewer than five discharges

- More males (51.5%) than females (48.5%) were treated at a hospital for all injury-related causes (*Table D4*).

Leading causes

- Falls were the leading cause of injury-related hospital discharge for all age groups combined, with an age-adjusted rate of 2,904 per 100,000. The rate was higher than the Nebraska rate (2,184 per 100,000) (*Table H2 & Figure H1*).
- Struck by/against was the second leading cause of injury-related hospital discharge for all age groups combined. The age-adjusted hospital discharge rate for struck by/against was higher than the Nebraska rate (1,435 and 1,132 per 100,000 respectively) (*Table H2 & Figure H1*).
- Overexertion was the third leading cause of injury-related hospital discharge. The age-adjusted rate was higher than the Nebraska rate (955 and 679 per 100,000) (*Table H2 & Figure H1*).
- Cutting/piercing (883 per 100,000) and motor vehicle crashes (670 per 100,000) were the 4th and 5th leading cause of injury-related hospital discharge (*Table H2 & Figure H1*).

Table H2: Five Leading Causes of Hospital Discharges for Injury by Age, Southeast District Health Department Coverage Area, NE, 1999-2003

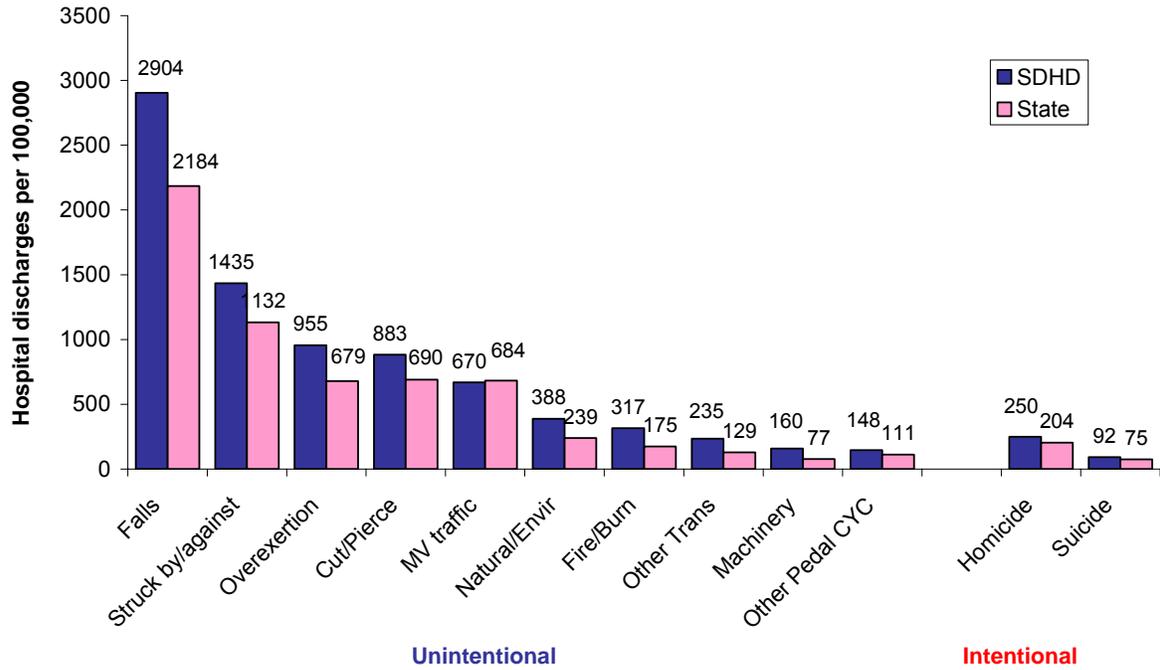
Rank	<1	1-4	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	84+	All Ages
1	Falls N=51	Falls N=481	Falls N=510	Falls N=505	Struck by/against N=835	Falls N=294	Falls N=403	Falls N=442	Falls N=376	Falls N=738	Falls N=1241	Falls N=1171	Falls N=6,825
2	Struck by/against N=18	Struck by/against N=216	Struck by/against N=262	Struck by/against N=432	Falls N=613	Overexertion N=219	Overexertion N=283	Overexertion N=233	Overexertion N=138	Overexertion N=142	Natural/Envir N=78	Struck by/against N=59	Struck by/against N=2,686
3	Fire/Burn N=13	Natural/Envir N=89	Cut/Pierce N=141	Overexertion N=179	MV traffic N=462	Struck by/against N=205	Cut/Pierce N=267	Struck by/against N=181	Cut/Pierce N=106	Cut/Pierce N=92	Overexertion N=77	Overexertion N=40	Overexertion N=1,812
4	Suffocation N=12	Cut/Pierce N=85	Other Pedal CYC N=101	Cut/Pierce N=156	Overexertion N=422	Cut/Pierce N=193	Struck by/against N=220	Cut/Pierce N=162	Struck by/against N=100	Struck by/against N=92	Struck by/against N=66	Cut/Pierce N=25	Cut/Pierce N=1,644
5	Natural/Envir N=6	Poisoning N=76	Natural/Envir N=91	Other Pedal CYC N=95	Cut/Pierce N=351	MV traffic N=145	MV traffic N=153	MV traffic N=129	MV traffic N=86	MV traffic N=73	Cut/Pierce N=61	Natural/Envir N=17	MV traffic N=1,247

Hospital visits includes visits as inpatient, ER and non-ER patient

Note: Causes coded as "other specified" and "unspecified" are excluded from this matrix

Source: NE Hospital Discharge Data, 1999-2003

**Figure H1: Age-adjusted Injury Hospital Discharge Rates by Cause
Southeast District Health Department Coverage Area, NE, 1999-2003**



Source: NE Hospital Discharge Data 1999-2003

Age

- The injury hospital discharge rate due to falls was the highest for persons age 85 and older, with an age-adjusted rate of 16,375 per 100,000. Among children age 14 and under, the 1-4 year age group had the highest fall injury rate (5,416 per 100,000), which was higher than the Nebraska rate (4,310 per 100,000). This age group had the third highest fall injury rate after the 75-84 and 85 and older age groups (*Table H3*).
- The 15-24 year age group had the highest injury hospital discharge rate (3,282 per 100,000) for struck by/against, which was higher than the Nebraska rate (2,135.8 per 100,000). Children age 5-14 had the second highest rate at 2,563 per 100,000 (*Table H3*).
- The 15-24 year age group had the highest injury hospital discharge rate due to overexertion (1,659 per 100,000), cutting/piercing (1,380 per 100,000), and motor vehicle crash (1,816 per 100,000) (*Table H3*).

Gender

- Females had higher injury hospital discharge rates for falls and motor vehicle crashes than males (3,176 and 689 per 100,000 vs. 2,616 and 650 per 100,000) (*Table H3*).
- The injury hospital discharge rates for struck by/against and cutting/piercing for males were nearly twice those for females (1,860 and 1,123 vs. 1,034 and 656 per 100,000) (*Table H3*).
- Male overexertion injury hospital discharge rates were also higher than female rates (996 vs. 916 per 100,000) (*Table H3*).

Table H3: Five Leading Causes of Injury Hospital Discharges, Rates by Gender and Age, Southeast District Health Department Coverage Area, NE, 1999-2003

Cause	Age	Southeast District HD									State		
		Male			Female			Total			Rate		
		N	%	Rate	N	%	Rate	N	%	Rate	Male	Female	Total
Falls	<1	32	1.2	3016	19	0.5	1903.8	51	0.7	2476.9	2298.5	2139.4	2220.8
Falls	1-4	278	10.6	6195.7	203	4.8	4619.9	481	7	5416.1	4871.2	3721.2	4309.7
Falls	5-14	553	21.1	3970.4	462	11	3512.5	1015	14.9	3748	2855.0	2404.1	2634.8
Falls	15-24	364	13.9	2782.4	249	5.9	2014.9	613	9	2409.6	1570.9	1323.5	1449.9
Falls	25-34	115	4.4	1258.2	179	4.3	1988.4	294	4.3	1620.5	1048.4	1303.4	1173.8
Falls	35-44	165	6.3	1166.8	238	5.7	1693.1	403	5.9	1429.2	1084.2	1357.6	1220.2
Falls	45-54	191	7.3	1358.9	251	6	1840	442	6.5	1595.9	1116.0	1610.3	1364.2
Falls	55-64	160	6.1	1611.3	216	5.1	2107.7	376	5.5	1863.4	1337.7	1976.8	1664.3
Falls	65-74	194	7.4	2474.8	544	12.9	5733.6	738	10.8	4259.2	2151.5	3581.0	2926.8
Falls	75-84	297	11.3	4908.3	944	22.4	10522	1241	18.2	8260.7	4355.2	7355.0	6138.2
Falls	85+	270	10.3	12906	901	21.4	17810	1171	17.2	16375	10070.0	14640.0	13320.0
Total		2619	100.0	2615.9	4206	100.0	3176.0	6825	100.0	2904.0	2013.8	2349.3	2184.0
Struck by/against	<1	10	0.6	942.5	8	0.8	801.6	18	0.7	874.2	836	692.9	766.1
Struck by/against	1-4	120	7	2674.4	96	10	2184.8	216	8	2432.2	2812.4	1729.5	2283.7
Struck by/against	5-14	437	25.4	3137.6	257	26.7	1953.9	694	25.8	2562.7	2919.3	1521.6	2236.7
Struck by/against	15-24	598	34.7	4571.2	237	24.6	1917.8	835	31.1	3282.2	3069.3	1161.5	2135.8
Struck by/against	25-34	132	7.7	1444.2	73	7.6	810.9	205	7.6	1130	1212	676.9	948.9
Struck by/against	35-44	136	7.9	961.7	84	8.7	597.6	220	8.2	780.2	854.1	527.3	691.6
Struck by/against	45-54	119	6.9	846.7	62	6.4	454.5	181	6.7	653.5	574.9	385.7	479.9
Struck by/against	55-64	67	3.9	674.7	33	3.4	322	100	3.7	495.6	414.7	291.2	351.6
Struck by/against	65-74	58	3.4	739.9	34	3.5	358.3	92	3.4	531	415.7	292.7	349
Struck by/against	75-84	30	1.7	495.8	36	3.7	401.2	66	2.5	439.3	415.6	363.7	384.7
Struck by/against	85+	16	0.9	764.8	43	4.5	850	59	2.2	825.1	507.4	519.4	516
Total		1723	100.0	1859.6	963	100.0	1033.6	2686	100.0	1435.0	1488.5	786.4	1132.3
Overexertion	<1	0	0	*	3	0.3	*	3	0.2	145.7	111.1	156.8	133.4
Overexertion	1-4	14	1.5	312	22	2.5	500.7	36	2	405.4	352.6	519.6	434.1
Overexertion	5-14	97	10.4	696.4	122	13.9	927.5	219	12.1	808.7	537.1	610.3	572.9
Overexertion	15-24	250	26.8	1911	172	19.6	1391.8	422	23.3	1658.8	1317.5	1024.1	1173.9
Overexertion	25-34	103	11	1126.9	116	13.2	1288.6	219	12.1	1207.1	952.4	828.7	891.6
Overexertion	35-44	164	17.6	1159.7	119	13.5	846.6	283	15.6	1003.6	817.7	677.3	747.9
Overexertion	45-54	130	13.9	924.9	103	11.7	755.1	233	12.9	841.3	616.4	572.9	594.5
Overexertion	55-64	73	7.8	735.1	65	7.4	634.3	138	7.6	683.9	426.6	433.8	430.3
Overexertion	65-74	65	7	829.2	77	8.8	811.6	142	7.8	819.5	356.1	445.4	404.6
Overexertion	75-84	30	3.2	495.8	47	5.3	523.9	77	4.2	512.5	311.8	419.9	376.0
Overexertion	85+	7	0.8	334.6	33	3.8	652.3	40	2.2	559.4	236.9	387.2	343.8
Total		933	100.0	996.0	879	100.0	916.5	1812	100.0	955.0	705.5	635.6	679.2
Cut/Pierce	<1	1	0.1	*	4	0.7	*	5	0.3	242.8	228.7	185.5	207.6
Cut/Pierce	1-4	43	4.1	958.3	42	6.9	955.8	85	5.2	957.1	925.2	609.5	771.1
Cut/Pierce	5-14	178	17.2	1278	119	19.6	904.7	297	18.1	1096.7	1033.2	615.8	829.4
Cut/Pierce	15-24	238	23	1819.3	113	18.6	914.4	351	21.4	1379.7	1399.6	650.1	1032.9
Cut/Pierce	25-34	136	13.1	1488	57	9.4	633.2	193	11.7	1063.8	1138.4	596.8	872.2
Cut/Pierce	35-44	153	14.8	1082	114	18.8	811	267	16.2	946.9	861	517.5	690.1
Cut/Pierce	45-54	104	10	740	58	9.6	425.2	162	9.9	584.9	650.7	401.2	525.4
Cut/Pierce	55-64	70	6.8	704.9	36	5.9	351.3	106	6.4	525.3	555	309.7	429.6
Cut/Pierce	65-74	65	6.3	829.2	27	4.4	284.6	92	5.6	531	582.4	266.5	411.1
Cut/Pierce	75-84	43	4.1	710.6	18	3	200.6	61	3.7	406	448.3	214.8	309.5
Cut/Pierce	85+	6	0.6	286.8	19	3.1	375.6	25	1.5	349.6	333.7	194.8	234.9
Total		1037	100.0	1122.6	607	100.0	656.2	1644	100.0	883.0	893.0	492.5	689.8
MV traffic	<1	1	0.2	*	0	0	*	1	0.1	*	128.9	121.4	125.2
MV traffic	1-4	18	3	401.2	7	1.1	159.3	25	2	281.5	251.0	229.3	240.4
MV traffic	5-14	52	8.5	373.3	49	7.7	372.5	101	8.1	373	400.0	436.0	417.6
MV traffic	15-24	205	33.7	1567	257	40.3	2079.6	462	37	1816	1444.2	1831.5	1633.7
MV traffic	25-34	66	10.8	722.1	79	12.4	877.6	145	11.6	799.3	855.6	993.0	923.2
MV traffic	35-44	82	13.5	579.9	71	11.1	505.1	153	12.3	542.6	607.3	708.3	657.6
MV traffic	45-54	76	12.5	540.7	53	8.3	388.5	129	10.3	465.8	476.5	523.1	499.9
MV traffic	55-64	36	5.9	362.5	50	7.8	487.9	86	6.9	426.2	346.5	441.2	394.9
MV traffic	65-74	37	6.1	472	36	5.6	379.4	73	5.9	421.3	327.3	382.2	357.1
MV traffic	75-84	32	5.3	528.8	26	4.1	289.8	58	4.7	386.1	402.4	393.8	397.3
MV traffic	85+	4	0.7	*	10	1.6	197.7	14	1.1	195.8	404.8	248.5	293.6
Total		609	100.0	649.7	638	100.0	688.6	1247	100.0	670.0	629.3	737.3	684.0

Source: Hospital Discharge Data 1999-2003

Rates are per 100,000 per year

* Fewer than five discharges