

INJURY REPORT, 1999-2003

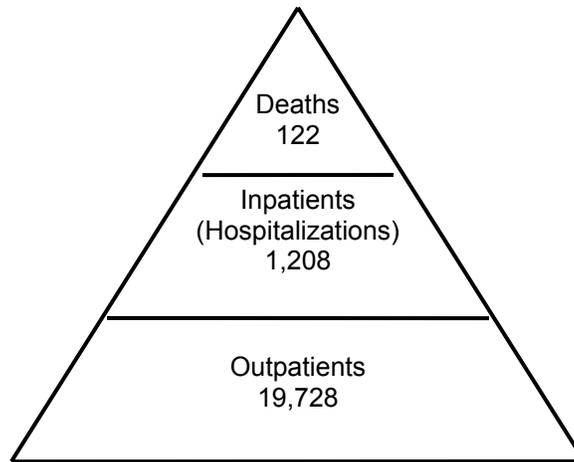
Four Corners Health Department Coverage Area

Polk, Butler, York and Seward Counties

Summary

Injury is a public health problem in the Four Corners Health Department (FCHD) coverage area. Overall, injury is the fourth leading cause of death (*Table D1*). From 1999 to 2003, in addition to 122 injury deaths, more than 1,200 residents in Polk, Butler, York and Seward Counties were hospitalized and more than 19,700 residents were treated at hospitals for injuries (*Figure A*). Overall, motor vehicle crashes were the leading cause of injury deaths. Suicide was second, followed by falls. In contrast to deaths, falls were the leading cause of injury hospital discharges and struck by/against injuries were second, followed by cutting/piercing, overexertion, and motor vehicle crashes.

Figure A: Injury Pyramid, Residents of Four Corners 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 15-29, most were due to injuries. Therefore, more years of potential life were lost due to injuries. Males were more than twice as likely as females to die from injuries. Additionally, young adults were more likely to die from motor vehicle crashes while older adults were more likely to die from fall injuries.

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

Table A: Injury Death Rates, Four Corners Health Department Coverage Area, NE, 1999-2003

Cause of Death	Average Rate 1999-2003	2010 Nebraska Objective (rate per 100,000 population)
Unintentional Injury	35.4	19.4
Fall	6.7	3.5
Motor Vehicle Crash	19.1	12.0

Injury Deaths

Overall

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

**Table D1: Five Leading Causes of Death,
Four Corners Health Department Coverage Area, NE, 1999-2003**

Rank	Cause	Total Number of Death
1	Heart Disease	799
2	Cancer	513
3	Stroke	158
4	Injury	118
5	Alzheimer's	113

Source: DHHS Death Certificate Data 1999-2003

- An average of 23 residents died from injuries each year in the FCHD coverage area (*Table D2*).
- Deaths due to injury made up 4.8% of total deaths in the FCHD coverage area compared to 6% of deaths in Nebraska. More than half of the deaths due to injuries in the FCHD coverage area were among 15-29 year olds (*Table D2*).

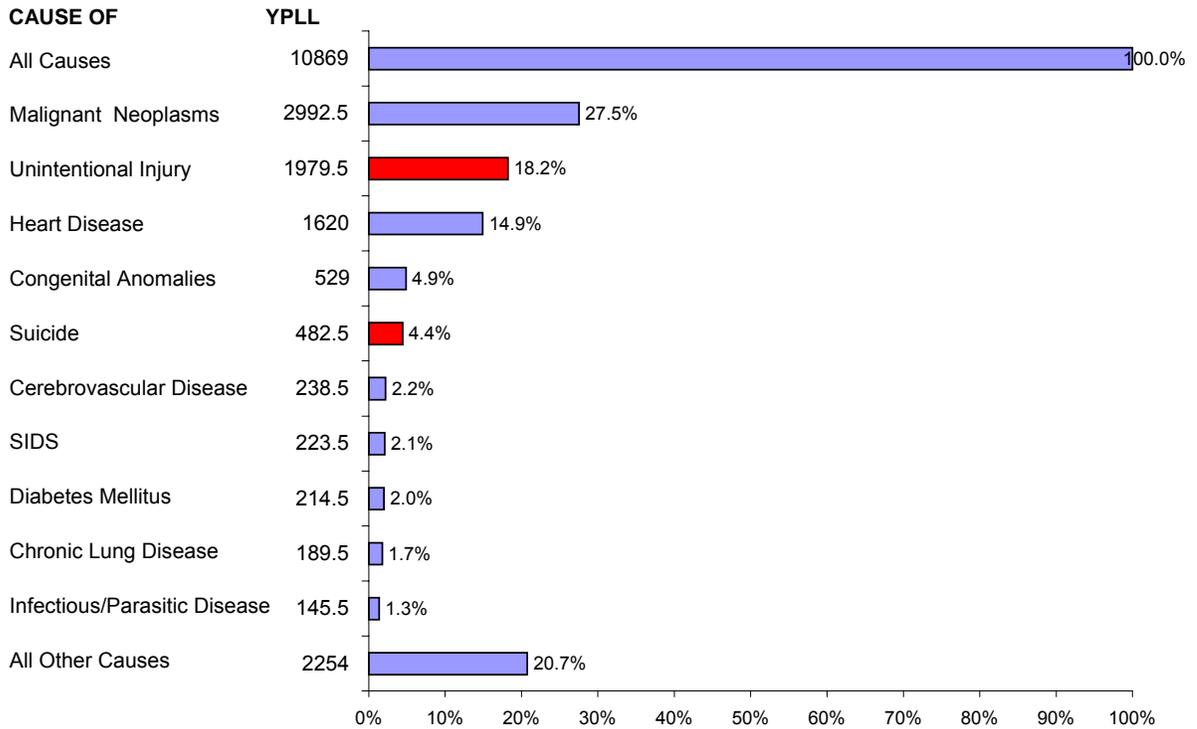
**Table D2: Injury Deaths as a Percent of All Deaths by Age,
Four Corners Health Department Coverage Area, NE, 1999-2003**

Age Group	Annual Average			Percent of Death due to Injury
	Injury Deaths	Injury Deaths	All Deaths	
≤14	4	1	18	22.2
15-19	9	2	12	75.0
20-24	6	1	8	75.0
25-29	7	1	10	70.0
30-34	3	1	6	50.0
35-39	4	1	12	33.3
40-44	10	2	26	38.5
45-49	9	2	39	23.1
50-54	2	0	44	4.5
55-59	2	0	65	3.1
60-64	7	1	94	7.4
65-74	8	2	328	2.4
75-84	12	2	720	1.7
85+	35	7	993	3.5
Total	114	23	2,357	4.8

Source: DHHS Death Certificate Data 1999-2003

- Years of Potential Life Lost (YPLL) from unintentional injuries (18.2%) ranked second, following that from cancer (27.5%). Suicide ranked 5th at 4.4% (*Figure D1*).

Figure D1. Years of Potential Life Lost (YPLL) before Age 75 by Cause of Death, Four Corners Health Department Coverage Area, NE, 1999-2003



- The counties served by the FCHD had a higher unintentional injury death rate (35.4 per 100,000), but lower suicide rate (8.4 per 100,000) than Nebraska rates (33.3 and 10.6 per 100,000 respectively) (*Table D3*). The FCHD has not met the 2010 Nebraska Objective of 19.4 or fewer unintentional injury deaths per 100,000 population.

Table D3: Injury Deaths, Percentage, and Age-adjusted Rates, Four Corners Health Department Coverage Area, NE, 1999-2003

Intent	Male			Female			Total			State		
	N	%	Rate	N	%	Rate	N	%	Rate	N	%	Rate
Unintentional	51	71.8	43.9	46	90.2	26.9	97	79.5	35.4	3,020	68.3	33.3
Suicide	17	23.9	14.8	3	5.9	*	20	16.4	8.4	894	20.2	10.6
Homicide	1	1.4	*	0	0.0	*	1	0.8	*	273	6.2	3.2
Undetermined	0	0.0	*	1	2.0	*	1	0.8	*	139	3.1	1.6
Adverse Effects	2	2.8	*	1	2.0	*	3	2.5	*	93	2.1	1.0
Total	71	100.0	60.9	51	100.0	29.9	122	100.0	45.3	4,419	100.0	48.9

Source: DHHS Death Certificate Data 1999-2003

* Fewer than five deaths

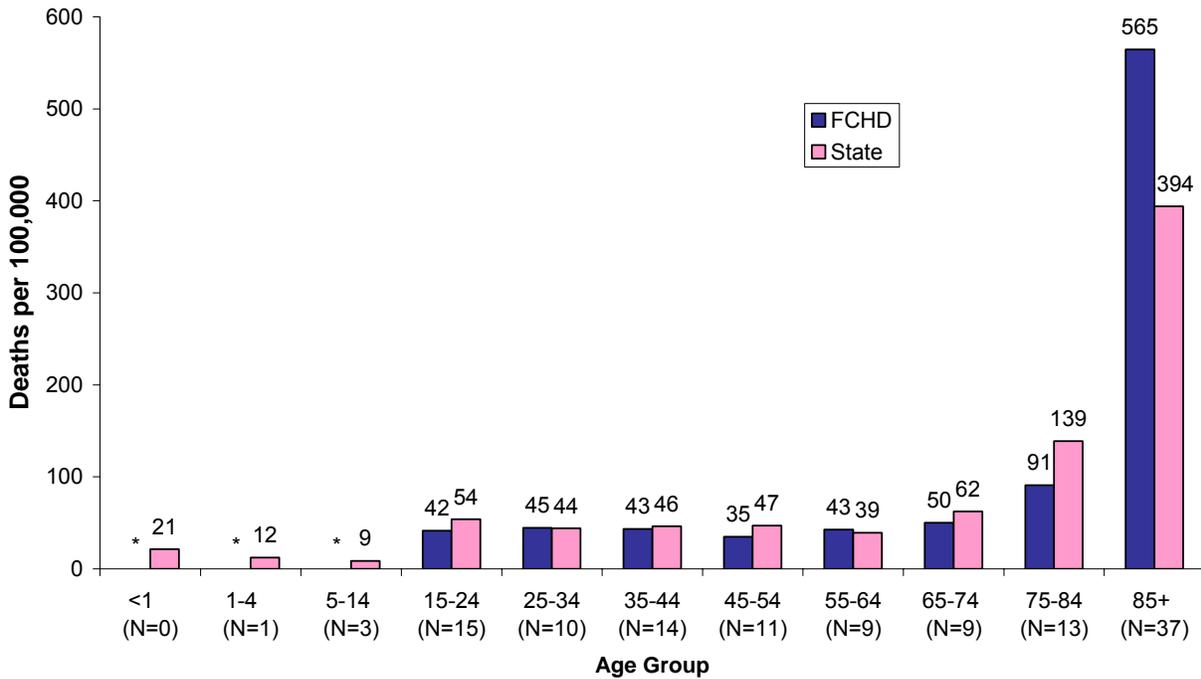
- More males (58.2%) died from all injury-related causes than females (41.8%) (*Table D4*).
- The injury death rate was the highest for the oldest age groups (75 and older). Persons age 85 and older had an injury death rate of 565 per 100,000, which was 1.4 times higher than the Nebraska rate (394 per 100,000) (*Figure D2*).

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

	Four Corners HD				State			
	Deaths		Hospital Discharges		Deaths		Hospital Discharges	
	N	%	N	%	N	%	N	%
Gender								
Male	71	58.2	11,034	52.7	2,848	64.3	386,563	53.1
Female	51	41.8	9,902	47.3	1,581	35.7	341,506	46.9
Total	122	100.0	20,936	52.7	4,429	100.0	728,069	100.0
Age								
<1	0	0.0	143	0.7	26	0.6	7,142	1.0
1-4	1	0.8	1,278	6.1	58	1.3	59,764	8.2
5-14	3	2.5	3,195	15.3	107	2.4	122,382	16.8
15-24	15	12.3	4,055	19.4	699	15.8	144,001	19.8
25-34	10	8.2	1,893	9.0	486	11.0	84,574	11.6
35-44	14	11.5	2,041	9.8	593	13.4	84,445	11.6
45-54	11	9.0	1,697	8.1	547	12.4	66,321	9.1
55-64	9	7.4	1,060	5.1	292	6.6	39,540	5.4
65-74	9	7.4	1,753	8.4	355	8.0	40,555	5.6
75-84	13	10.7	2,054	9.8	575	13.0	45,135	6.2
85+	37	30.3	1,767	8.4	691	15.6	34,222	4.7
Total	122	100.0	20,936	100.0	4,429	100.0	728,081	100.0
Race								
Asian	0	0.0			29	0.7		
African American	1	0.8			194	4.4		
Native American	0	0.0			72	1.6		
White	120	98.4			4,123	93.1		
Other	1	0.8			11	0.3		
Total	122	100.0			4,429	100.0		

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

**Figure D2: All Injury Death Rates by Age,
Four Corners Health Department Coverage Area, NE, 1999-2003**

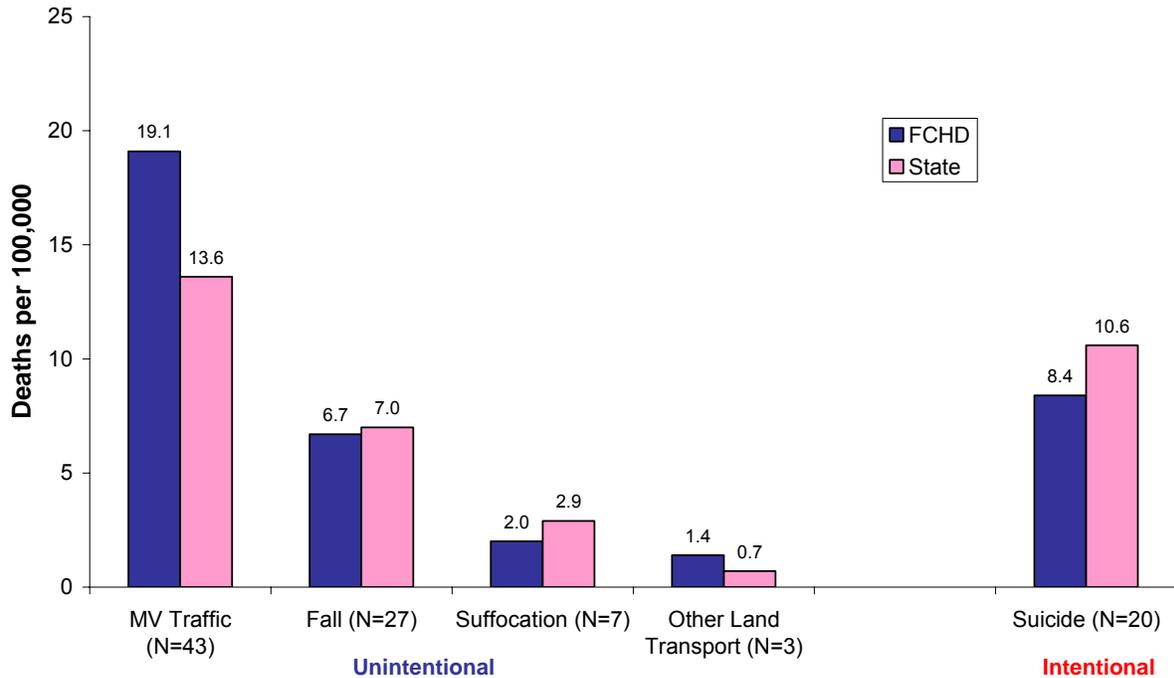


* Fewer than five deaths
Source: DHHS Death Certificate Data 1999-2003

Leading causes

- Motor vehicle crashes were the leading cause of injury deaths with an age-adjusted rate of 19.1 per 100,000 as compared to the Nebraska rate of 13.6 per 100,000 (*Figure D3*). The FCHD has not met the 2010 Nebraska Objective of 12.0 or fewer motor vehicle crash injury deaths per 100,000 population.
- Suicide was the second leading cause of injury deaths. The age-adjusted death rate for suicide was lower than the Nebraska rate (8.4 vs. 10.6 per 100,000 respectively) (*Figure D3*).
- Falls were the third leading cause of injury deaths. The age-adjusted death rate due to falls was similar to the Nebraska rate (6.7 vs. 7.0 per 100,000 respectively) (*Figure D3*). The FCHD has not met the 2010 Nebraska objective of 3.5 or fewer fall injury deaths per 100,000 population.

Figure D3: Age-adjusted Injury Death Rates by Cause, Four Corners Health Department Coverage Area, NE, 1999-2003



Source: DHHS Death Certificate Data 1999-2003

Age

- The most motor vehicle crash deaths were among persons age 25-34 years (N=11) (Table D5).

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

Age	Male		Female		Total	
	N	%	N	%	N	%
15-24	2	6.9	0	0.0	2	4.7
25-34	6	20.7	5	35.7	11	25.6
35-44	4	13.8	2	14.3	6	14.0
45-54	7	24.1	1	7.1	8	18.6
55-64	6	20.7	2	14.3	8	18.6
65-74	1	3.4	1	7.1	2	4.7
75-84	2	6.9	2	14.3	4	9.3
85+	1	3.4	1	7.1	2	4.7
Total	29	100.0	14	100.0	43	100.0

Source: DHHS Death Certificate Data 1999-2003

- Almost 78% of deaths (N=21) due to fall injuries were among persons 85 years and older (Table D6).

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

Age	Male		Female		Total	
	N	%	N	%	N	%
35-44	1	14.3	0	0.0	1	3.7
55-64	0	0.0	0	0.0	0	0.0
65-74	0	0.0	1	5.0	1	3.7
75-84	1	14.3	3	15.0	4	14.8
85+	5	71.4	16	80.0	21	77.8
Total	7	100.0	20	100.0	27	100.0

Source: DHHS Death Certificate Data 1999-2003

- Those in the 55-64 year age group had more deaths (N=5) due to suicide than other age groups (Table D7).

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

Age	Male		Female		Total	
	N	%	N	%	N	%
15-24	3	17.6	0	0.0	3	15.0
25-34	3	17.6	0	0.0	3	15.0
35-44	2	11.8	0	0.0	2	10.0
45-54	1	5.9	0	0.0	1	5.0
55-64	3	17.6	2	66.7	5	25.0
65-74	1	5.9	0	0.0	1	5.0
75-84	1	5.9	0	0.0	1	5.0
85+	3	17.6	1	33.3	4	20.0
Total	17	100.0	3	100.0	20	100.0

Source: DHHS Death Certificate Data 1999-2003

Gender

- More males (N=29) died from motor vehicle crashes than females (N=14) (Table D5).
- More females (N=20) died from fall injuries than males (N=7) (Table D6).
- The number of males (N=17) who died from suicide was almost six times as high as females (N=3) (Table D7).

Hospital discharges

Overall

- The FCHD coverage area had a higher unintentional injury hospital discharge rate (7,819 per 100,000), but lower suicide attempt rate (57 per 100,000) and homicide rate (93 per 100,000) than Nebraska rates (7610, 75, and 204 per 100,000 respectively) (*Table H1*).
- More males (N=10,188) than females (N=8,472) were treated at a hospital for all injury-related causes (*Table H1*).

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

Intent	Males			Females			Total			State		
	N	%	Rate	N	%	Rate	N	%	Rate	N	%	Rate
Unintentional	9,984	98.0	8,755.1	8,577	98.1	6,890.2	18,561	98.1	7,818.9	665,407	95.9	7,609.6
Suicide	59	0.6	50.6	70	0.8	64.0	129	0.7	57.3	6,379	0.9	75.0
Homicide	121	1.2	108.5	77	0.9	77.6	198	1.0	93.0	17,720	2.6	203.9
Undetermined	24	0.2	21.3	18	0.2	17.0	42	0.2	19.2	4,181	0.6	48.3
Other	0	0.0	*	0	0.0	*	0	0.0	*	404	0.1	4.7
Total	10,188	100.0	8,935.6	8,742	100.0	7,048.8	18,930	100.0	7,988.4	694,091	100.0	7,941.5

Source: Nebraska Hospital Discharge Data 1999-2003

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

* Fewer than five discharges

Leading causes

- Falls were the leading cause of injury hospital discharges for all age groups except for the 10-14 and 15-24 year age groups. They were the leading cause for all age groups combined, with an age-adjusted rate of 2,090 per 100,000. The rate was relatively lower than the Nebraska rate (2,184 per 100,000) (*Table H2 & Figure H1*).
- Struck by/against was the second leading cause of injury hospital discharge for all age groups combined, and the leading cause for the age groups 10-14 and 15-24. The age-adjusted hospital discharge rate for struck by/against was slightly higher than the Nebraska rate (1,184 vs. 1,132 per 100,000 respectively) (*Table H2 & Figure H1*).
- Cutting/piercing was the third leading cause of injury hospital discharges. The age-adjusted rate was slightly higher than the Nebraska rate (755 vs. 690 per 100,000 respectively) (*Figure H1*).
- Overexertion (581 per 100,000) and motor vehicle crashes (550 per 100,000) were the 4th and 5th ranking causes of injury hospital discharges in the FCHD coverage area (*Figure H1*).

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

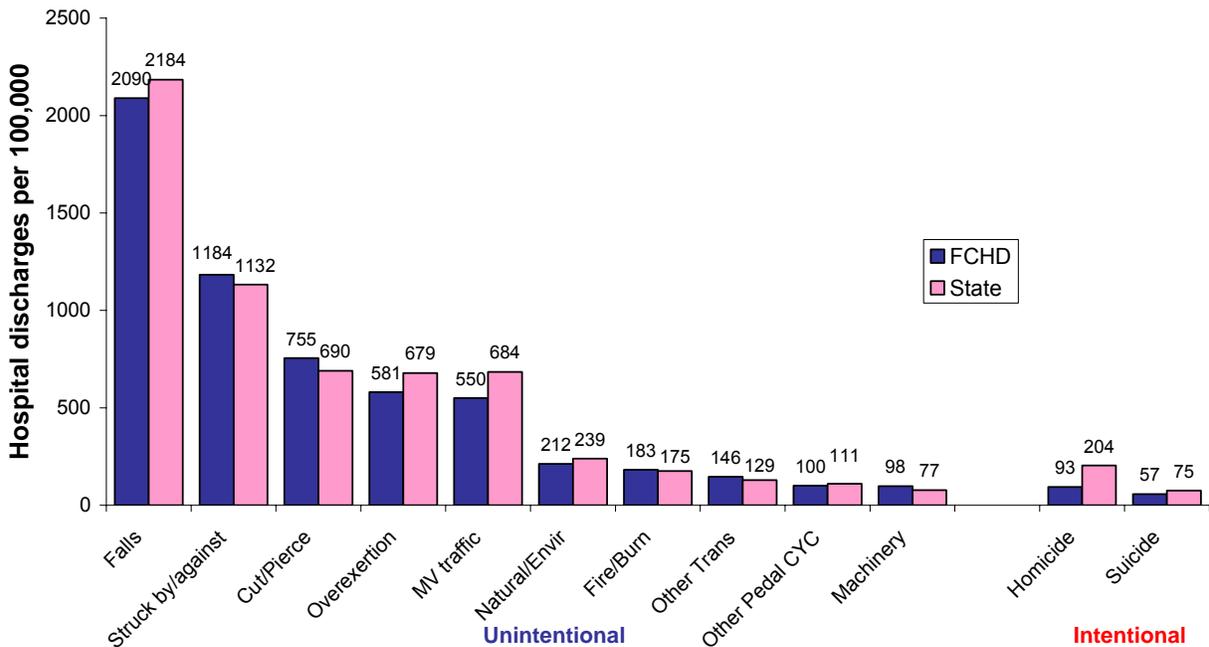
Rank	<1	1-4	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	84+	All Ages
1	Falls N=42	Falls N=384	Falls N=345	Struck by/against N=496	Struck by/against N=988	Falls N=336	Falls N=372	Falls N=393	Falls N=330	Falls N=576	Falls N=885	Falls N=968	Falls N=5,401
2	Struck by/against N=13	Struck by/against N=164	Struck by/against N=216	Falls N=353	MV traffic N=489	Cut/Pierce N=250	Struck by/against N=243	Cut/Pierce N=173	Cut/Pierce N=84	Cut/Pierce N=88	Struck by/against N=70	Struck by/against N=38	Struck by/against N=2,723
3	Fire/Burn N=8	Cut/Pierce N=104	Cut/Pierce N=144	Cut/Pierce N=165	Falls N=417	Struck by/against N=243	Cut/Pierce N=222	Overexertion N=152	Overexertion N=75	Overexertion N=75	Overexertion N=64	Overexertion N=33	Cut/Pierce N=1,663
4	Overexertion N=5	Natural/Envir N=83	Natural/Envir N=40	Overexertion N=118	Overexertion N=388	Overexertion N=176	MV traffic N=178	Struck by/against N=147	MV traffic N=74	MV traffic N=54	Cut/Pierce N=45	Cut/Pierce N=22	Overexertion N=1,323
5	Assault N=5	Poisoning N=54	MV traffic N=28	MV traffic N=95	Cut/Pierce N=362	MV traffic N=155	Overexertion N=168	MV traffic N=100	Struck by/against N=55	Struck by/against N=50	MV traffic N=40	MV traffic N=14	MV traffic N=1,249

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: Nebraska Hospital Discharge Data 1999-2003

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



Source: Nebraska Hospital Discharge Data 1999-2003

Age

- In the FCHD coverage area, hospital discharge rates due to falls were highest for persons age 85 and older (14,770 per 100,000). Among children age 14 and under, the age group 1-4 years had the highest fall injury rate (3,617 per 100,000), which was lower than the Nebraska rate (4,310 per 100,000) (*Table H3*).
- Persons age 15-24 years had the highest hospital discharge rate (2,734 per 100,000) due to struck by/against, which was higher than the Nebraska rate (2,136 per 100,000) (*Table H3*).
- The hospital discharge rate for cutting/piercing injuries was highest for the 25-34 year age group (1,114 per 100,000) (*Table H3*).
- Hospital discharge rates for overexertion (1,074 per 100,000) and motor vehicle crash injuries (1,353 per 100,000) were highest for individuals in the 15-24 year age group (*Table H3*).

Gender

- In the FCHD coverage area, females had higher injury hospital discharge rates for falls and motor vehicle crashes than males (2,262 and 589 vs. 1,917 and 512 per 100,000) (*Table H3*).
- Hospital discharge rates for males were more than twice those for females for struck by/against and cutting/piercing (1,592 and 1,009 vs. 779 and 502 per 100,000) (*Table H3*).
- Males also had a higher overexertion injury hospital discharge rate than females (599 vs. 562 per 100,000) (*Table H3*).

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

Cause	Age	Four Corners HD									State		
		Male			Female			Total			Rate		
		N	%	Rate	N	%	Rate	N	%	Rate	Male	Female	Total
MV traffic	<1			0	3	0.5	*	3	0.2	*	128.9	121.4	125.2
MV traffic	1-4	10	1.7	183.5	9	1.4	174.2	19	1.5	179	251.0	229.3	240.4
MV traffic	5-14	57	9.6	353.3	66	10.1	427.8	123	9.8	389.7	400.0	436.0	417.6
MV traffic	15-24	241	40.5	1234.8	248	37.9	1492.4	489	39.2	1353.3	1444.2	1831.5	1633.7
MV traffic	25-34	80	13.4	698.8	75	11.5	682.4	155	12.4	690.8	855.6	993.0	923.2
MV traffic	35-44	84	14.1	519.1	94	14.4	587.4	178	14.3	553.1	607.3	708.3	657.6
MV traffic	45-54	54	9.1	338.5	46	7	298.2	100	8	318.7	476.5	523.1	499.9
MV traffic	55-64	21	3.5	199.8	53	8.1	500.9	74	5.9	350.8	346.5	441.2	394.9
MV traffic	65-74	26	4.4	314.2	28	4.3	290.2	54	4.3	301.3	327.3	382.2	357.1
MV traffic	75-84	18	3	297.8	22	3.4	266.2	40	3.2	279.5	402.4	393.8	397.3
MV traffic	85+	4	0.7	*	10	1.5	225	14	1.1	213.6	404.8	248.5	293.6
Total		595	100.0	512.1	654	100.0	588.5	1249	100.0	550.0	629.3	737.3	684.0
Falls	<1	27	1.2	2022.5	15	0.5	1148.5	42	0.8	1590.3	2298.5	2139.4	2220.8
Falls	1-4	222	10	4073.4	162	5.1	3135.9	384	7.1	3617.2	4871.2	3721.2	4309.7
Falls	5-14	355	16.1	2200.5	343	10.8	2223.1	698	12.9	2211.5	2855	2404.1	2634.8
Falls	15-24	236	10.7	1209.2	181	5.7	1089.2	417	7.7	1154	1570.9	1323.5	1449.9
Falls	25-34	155	7	1353.9	181	5.7	1646.8	336	6.2	1497.4	1048.4	1303.4	1173.8
Falls	35-44	185	8.4	1143.3	187	5.9	1168.5	372	6.9	1155.8	1084.2	1357.6	1220.2
Falls	45-54	187	8.5	1172.3	206	6.5	1335.6	393	7.3	1252.6	1116	1610.3	1364.2
Falls	55-64	142	6.4	1350.7	188	5.9	1776.8	330	6.1	1564.4	1337.7	1976.8	1664.3
Falls	65-74	194	8.8	2344.1	382	12	3959	576	10.7	3213.4	2151.5	3581	2926.8
Falls	75-84	271	12.3	4483	614	19.2	7428	885	16.4	6184.1	4355.2	7355	6138.2
Falls	85+	237	10.7	11238	731	22.9	16445	968	17.9	14770	10070	14640	13320
Total		2211	100.0	1916.7	3190	100.0	2261.9	5401	100.0	2090.0	2013.8	2349.3	2184.0
Cut/Pierce	<1	3	0.3	*	1	0.2	*	4	0.2	*	228.7	185.5	207.6
Cut/Pierce	1-4	62	5.5	1137.6	42	7.7	813	104	6.3	979.7	925.2	609.5	771.1
Cut/Pierce	5-14	195	17.4	1208.7	114	21	738.9	309	18.6	979	1033.2	615.8	829.4
Cut/Pierce	15-24	272	24.3	1393.7	90	16.6	541.6	362	21.8	1001.8	1399.6	650.1	1032.9
Cut/Pierce	25-34	179	16	1563.6	71	13.1	646	250	15	1114.1	1138.4	596.8	872.2
Cut/Pierce	35-44	143	12.8	883.8	79	14.6	493.6	222	13.3	689.8	861.0	517.5	690.1
Cut/Pierce	45-54	118	10.5	739.8	55	10.1	356.6	173	10.4	551.4	650.7	401.2	525.4
Cut/Pierce	55-64	55	4.9	523.2	29	5.4	274.1	84	5.1	398.2	555.0	309.7	429.6
Cut/Pierce	65-74	59	5.3	712.9	29	5.4	300.5	88	5.3	490.9	582.4	266.5	411.1
Cut/Pierce	75-84	31	2.8	512.8	14	2.6	169.4	45	2.7	314.4	448.3	214.8	309.5
Cut/Pierce	85+	4	0.4	*	18	3.3	404.9	22	1.3	335.7	333.7	194.8	234.9
Total		1121	100.0	1009.3	542	100.0	502.2	1663	100.0	755.0	893.0	492.5	689.8
Struck by/against	5-14	477	25.6	2956.7	235	27.3	1523.1	712	26.1	2255.9	2919.3	1521.6	2236.7
Struck by/against	15-24	763	41	3909.4	225	26.1	1354	988	36.3	2734.3	3069.3	1161.5	2135.8
Struck by/against	25-34	160	8.6	1397.6	83	9.6	755.2	243	8.9	1082.9	1212	676.9	948.9
Struck by/against	35-44	167	9	1032.1	76	8.8	474.9	243	8.9	755	854.1	527.3	691.6
Struck by/against	45-54	95	5.1	595.6	52	6	337.1	147	5.4	468.5	574.9	385.7	479.9
Struck by/against	55-64	32	1.7	304.4	23	2.7	217.4	55	2	260.7	414.7	291.2	351.6
Struck by/against	65-74	31	1.7	374.6	19	2.2	196.9	50	1.8	278.9	415.7	292.7	349
Struck by/against	75-84	27	1.5	446.7	43	5	520.2	70	2.6	489.1	415.6	363.7	384.7
Struck by/against	85+	6	0.3	284.5	32	3.7	719.9	38	1.4	579.8	507.4	519.4	516
Total		1758	100	1591.5	788	100	779.1	2546	100	755	1488.5	786.4	1132.3
Overexertion	<1	3	0.4	*	2	0.3	*	5	0.4	189.3	111.1	156.8	133.4
Overexertion	1-4	21	3.1	385.3	22	3.4	425.9	43	3.3	405.0	352.6	519.6	434.1
Overexertion	5-14	69	10.2	427.7	75	11.6	486.1	144	10.9	456.2	537.1	610.3	572.9
Overexertion	15-24	208	30.7	1065.7	180	27.9	1083.2	388	29.3	1073.8	1317.5	1024.1	1173.9
Overexertion	25-34	111	16.4	969.6	65	10.1	591.4	176	13.3	784.3	952.4	828.7	891.6
Overexertion	35-44	87	12.9	537.7	81	12.5	506.1	168	12.7	522	817.7	677.3	747.9
Overexertion	45-54	87	12.9	545.4	65	10.1	421.4	152	11.5	484.5	616.4	572.9	594.5
Overexertion	55-64	42	6.2	399.5	33	5.1	311.9	75	5.7	355.6	426.6	433.8	430.3
Overexertion	65-74	23	3.4	277.9	52	8	538.9	75	5.7	418.4	356.1	445.4	404.6
Overexertion	75-84	19	2.8	314.3	45	7	544.4	64	4.8	447.2	311.8	419.9	376.0
Overexertion	85+	7	1	331.9	26	4	584.9	33	2.5	503.5	236.9	387.2	343.8
Total		677	100	599.3	646	100	562.2	1323	100	679	705.5	635.6	679.2

Source: Nebraska Hospital Discharge Data 1999-2003

Rates are per 100,000 per year

* Fewer than five discharges