

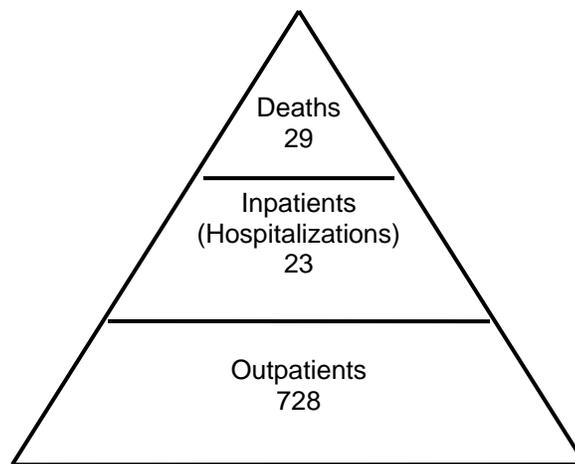
INJURY REPORT, 1999-2003

Dakota County Health Department Coverage Area
Dakota County

Summary

Injury is a public health problem in Dakota County. Overall, injury is the fourth leading cause of death (*Table D1*). From 1999-2003, in addition to 29 injury deaths, over 23 residents in Dakota County were hospitalized and more than 700 residents were treated at hospitals for injuries (*Figure A**). Overall, suicide was the leading cause of injury death. Motor vehicle crashes were second, followed by homicide. In contrast to deaths, falls were the leading cause of injury hospital discharges and struck by/against injuries were second, followed by overexertion, cut/pierce, and motor vehicle crashes.

Figure A: Injury Pyramid, Residents of Dakota County, NE, 1999-2003



The pattern of injury varies by age and gender. Injury had a greater impact on children and young adults. Of all deaths among those age 10-39, most were due to injuries. Therefore more years of potential life were lost due to injuries. Males were more than four times as likely as females to die from injuries. Older adults had a greater risk of fall injuries while teens and young adults were more likely to be injured due to stuck by/against, overexertion, motor vehicle crash, and cut/pierce.

The following table highlights Dakota County's progress towards the 2010 Nebraska Health Goals and Objectives related to deaths due to unintentional injuries, motor vehicle crash death, and suicide (*Table A*).

Table A: Injury Death Rates, Dakota County, NE, 1999-2003

Death	Average Rate 1999-2003	2010 Nebraska Objective (rate per 100,000 population)
Unintentional Injury	10.6	19.4
Motor vehicle crash	4.8	12
Suicide	16.4	8.2

Source: DHHS Death Certificate Data

*Note: According to the Nebraska Hospital Association, many residents of Dakota County may seek medical care in Sioux Fall, S. D.. Therefore, the number and rates of the hospital discharges may be undercounted and need to be used with caution.

Injury Deaths

Overall

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

**Table D1: Five Leading Causes of Death,
Dakota County, NE, 1999-2003**

Rank	Cause	Total Number of Death
1	Heart Disease	133
2	Cancer	115
3	Stroke	36
4	Injury	27
5	Alzheimer's	26

Source: DHHS Death Certificate Data, 1999-2003

- An average of 5 residents died from injury each year in Dakota County from 1999 to 2003 (*Table D2*).
- Deaths due to injuries made up 5.8% of total deaths in Dakota County, compared to 6% in Nebraska. In Dakota County, four out of six deaths among 10-24-year-olds and three out of four deaths among 35-39-year-olds were due to injuries (*Table D2*).

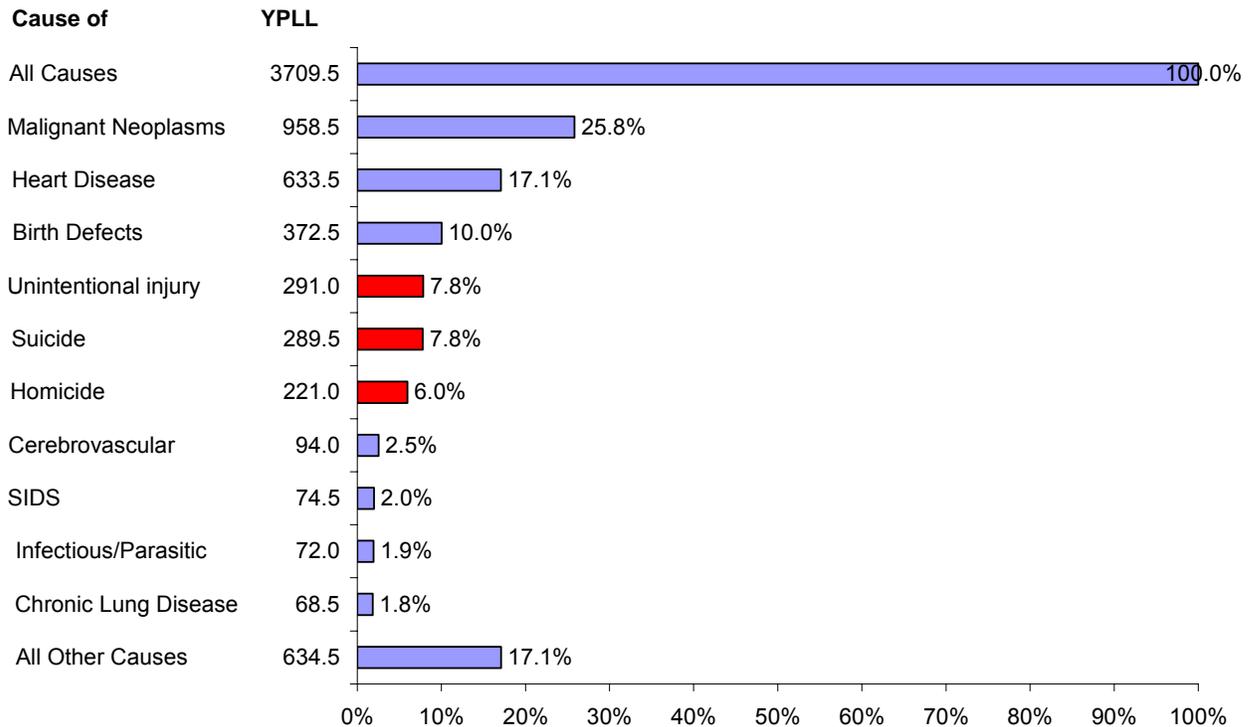
**Table D2: Injury Deaths as a Percent of All Deaths by Age,
Dakota County, NE, 1999-2003**

Age Group	Annual Average			Percent of Death due to Injury
	Injury Deaths	Injury Deaths	All Deaths	
<1	1	0	8	12.5
1-4	1	0	2	50.0
5-9	0	0	2	0.0
10-14	1	0	1	100.0
15-19	1	0	1	100.0
20-24	2	0	4	50.0
25-29	0	0	1	0.0
30-34	0	0	3	0.0
35-39	3	1	4	75.0
40-44	2	0	8	25.0
45-49	5	1	17	29.4
50-54	4	1	20	20.0
55-59	0	0	14	0.0
60-64	1	0	22	4.5
65-74	0	0	70	0.0
75-84	3	1	114	2.6
85+	3	1	171	1.8
Total	27	5	462	5.8

Source: DHHS Death Certificate Data, 1999-2003

- Years of Potential Life Lost (YPLL) from unintentional injury ranked fourth (7.8%), following those from cancer (25.8%), heart disease (17.1%), and birth defects (10.0%). Suicide ranked 5th at 7.8% and homicide ranked 6th at 6.0% (*Figure D1*).

**Figure D1: Years of Potential Life Lost (YPLL) before 75 by Cause of Death
Dakota County, NE, 1999-2003**



- Dakota County had a lower unintentional injury rate (10.6 per 100,000) but a higher suicide rate (16.4 per 100,000) than Nebraska rates (33.3 and 10.6 per 100,000 respectively) (*Table D3*).
- Overall, males (55.5 per 100,000) were nearly six times as likely as females (9.5 per 100,000) to die from injuries (*Table D3*).

Table D3: Injury Deaths, Percentage, and Age-adjusted Rates, Dakota County, NE, 1999-2003

Intent	Male			Female			Total			State		
	N	%	Rate	N	%	Rate	N	%	Rate	N	%	Rate
Unintentional	9	37.5	19.8	1	20.0	*	10	34.5	10.6	3,020	70.4	33.3
Suicide	11	45.8	28.9	2	40.0	*	13	44.8	16.4	894	20.8	10.6
Homicide	2	8.3	*	2	40.0	*	4	13.8	*	273	6.4	3.2
Legal/War	1	4.2	*	0	0.0	0.0	1	3.4	*	10	0.2	1.6
Adverse Effects	1	4.2	*	0	0.0	0.0	1	3.4	*	93	2.2	0.0
Total	24	100.0	55.5	5	100.0	9.5	29	100.0	32.4	4,290	100.0	48.7

Source: DHHS Death Certificate Data, 1999-2003

* the number of deaths is less than five, no rate calculated

- More males (82.8%) died from all injury-related causes than females (17.2%) (*Table D4*).

Table D4: Injury Related Deaths and Hospital Discharges by Gender, Age, and Race, Dakota County, NE, 1999-2003

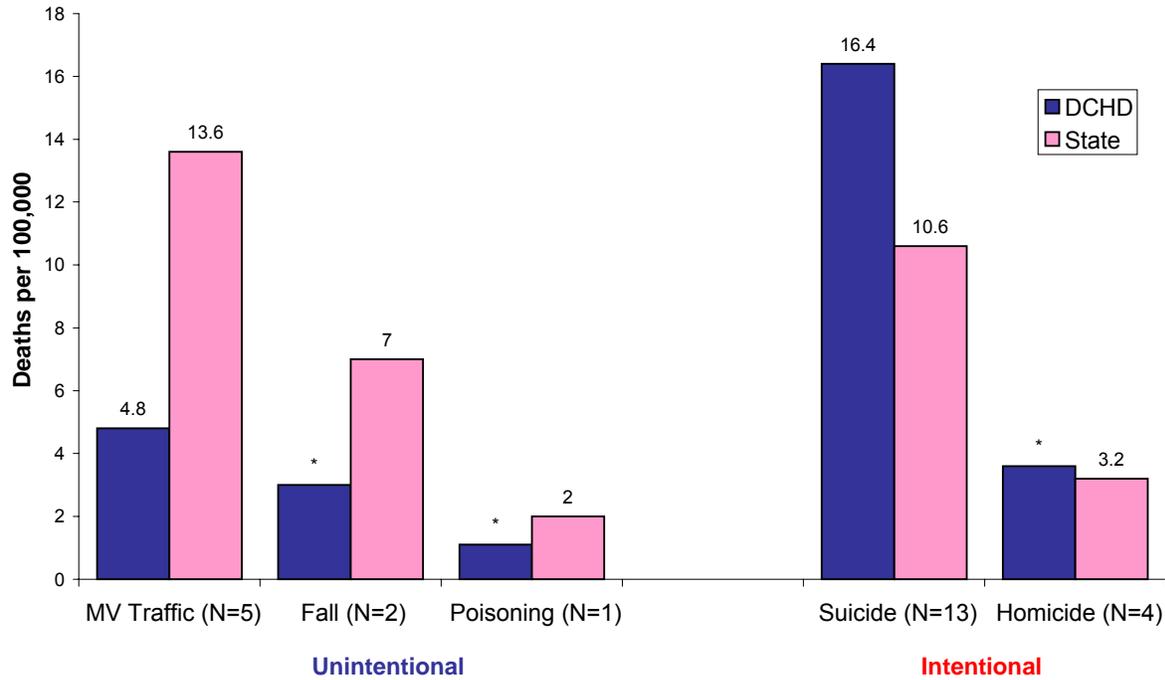
	Dakota County HD				State			
	Deaths		Hospital Discharges		Deaths		Hospital Discharges	
	N	%	N	%	N	%	N	%
Gender								
Male	24	82.8	454	60.45	2,848	64.3	386,563	53.1
Female	5	17.2	297	39.55	1,581	35.7	341,506	46.9
Total	29	100.0	751	100.0	4,429	100.0	728,069	100.0
Age								
<1	1	3.5	7	0.93	26	0.6	7,142	1.0
1-4	1	3.5	46	6.13	58	1.3	59,764	8.2
5-14	2	6.9	126	16.78	107	2.4	122,382	16.8
15-24	3	10.3	178	23.7	699	15.8	144,001	19.8
25-34	1	3.5	75	9.99	486	11.0	84,574	11.6
35-44	5	17.2	82	10.92	593	13.4	84,445	11.6
45-54	9	31.0	76	10.12	547	12.4	66,321	9.1
55-64	1	3.5	49	6.52	292	6.6	39,540	5.4
65-74	0	0.0	40	5.33	355	8.0	40,555	5.6
75-84	3	10.3	36	4.79	575	13.0	45,135	6.2
85+	3	10.3	36	4.79	691	15.6	34,222	4.7
Total	29	100.0	751	100.0	4,429	100.0	728,081	100.0
Race								
Asian	1	3.5			29	0.7		
African American	0	0.0			194	4.4		
Native American	0	0.0			72	1.6		
White	28	96.6			4,123	93.1		
Other	0	0.0			11	0.3		
Total	29	100.0			4,429	100.0		

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

Leading causes

- Suicide was the leading cause of injury death at a rate of 16.4 per 100,000 (N=13), which was higher than the Nebraska rate (10.6 per 100,000) (*Figure D3*).
- Motor vehicle crashes were the second leading cause of injury death at a rate of 4.8 per 100,000 (N=5). The rate was lower than the Nebraska rate (13.6 per 100,000) (*Figure D3*).

**Figure D3: Age-adjusted Injury Deaths by Cause
Dakota County, NE, 1999-2003**



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

Age

- Of five motor vehicle crash deaths, three were persons age 45-54 years. (Table D4)
- Of 13 suicide deaths, persons age 35-44 years accounted for 30.8%, followed by ages 45-54 (23.1%) and 75-85 (23.1%) (Table D6).

Gender

- All motor vehicle crash related deaths were males (N=5) (Table D4).
- Both fall-related injury deaths were males (Table D5).
- More males (N=11) died from suicide than females (N=2) (Table D6).

Table D4: Deaths Due to Motor Vehicle Crash by Age and Gender, Dakota County, 1999-2003

Age	Male		Female		Total	
	N	%	N	%	N	%
1-4	1	20.0	0	0.0	1	20.0
15-24	1	20.0	0	0.0	1	20.0
45-54	3	60.0	0	0.0	3	60.0
Total	5	100.0	0	0.0	5	100.0

Source: DHHS Death Certificate Data, 1999-2003

Table D5: Deaths Due to Fall by Age and Gender, Dakota County, 1999-2003

Age	Male		Female		Total	
	N	%	N	%	N	%
45-54	1	50.0	0	0.0	1	50.0
85+	1	50.0	0	0.0	1	50.0
Total	2	100.0	0	0.0	2	100.0

Source: DHHS Death Certificate Data, 1999-2003

Table D6: Deaths Due to Suicide by Age and Gender, Dakota County, NE, 1999-2003

Age	Male		Female		Total	
	N	%	N	%	N	%
15-24	0	0.0	1	50.0	1	7.7
35-44	4	36.4	0	0.0	4	30.8
45-54	2	18.2	1	50.0	3	23.1
55-64	1	9.1	0	0.0	1	7.7
75-84	3	27.3	0	0.0	3	23.1
85+	1	9.1	0	0.0	1	7.7
Total	11	100.0	2	100.0	13	100.0

Source: DHHS Death Certificate Data, 1999-2003

Hospital Discharges

Overall

- Dakota County had a much lower unintentional injury discharge rate (696 per 100,000), suicide attempt rate (5 per 100,000), and assault rate (10 per 100,000) than Nebraska rates (7,610, 75, and 204 per 100,000) respectively (*Table H1*).
- More males (54.2%) than females (45.8%) were treated at a hospital for all injury-related causes (*Table D4*).

Table H1: Injury Hospital Discharges, Percentage, and Age-adjusted Rates, Dakota County, NE, 1999-2003

Intent	Males			Females			Total			State		
	N	%	Rate	N	%	Rate	N	%	Rate	N	%	Rate
Unintentional	432	98.2	866.1	272	96.8	527.5	704	97.6	696.4	665,407	95.9	7,609.6
Suicide Attempt	1	0.2	*	4	1.4	*	5	0.7	4.8	6,379	0.9	75.0
Assault	7	1.6	12.1	4	1.4	*	11	1.5	10.1	17,720	2.6	203.9
Undetermined	0	0.0	0.0	1	0.4	*	1	0.1	*	4,181	0.6	48.3
Other	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	404	0.1	4.7
Total	440	100.0	879.9	281	100.0	545.3	721	100.0	712.3	694,091	100.0	7,941.5

Source: Nebraska Hospital Discharge Data 1999-2003

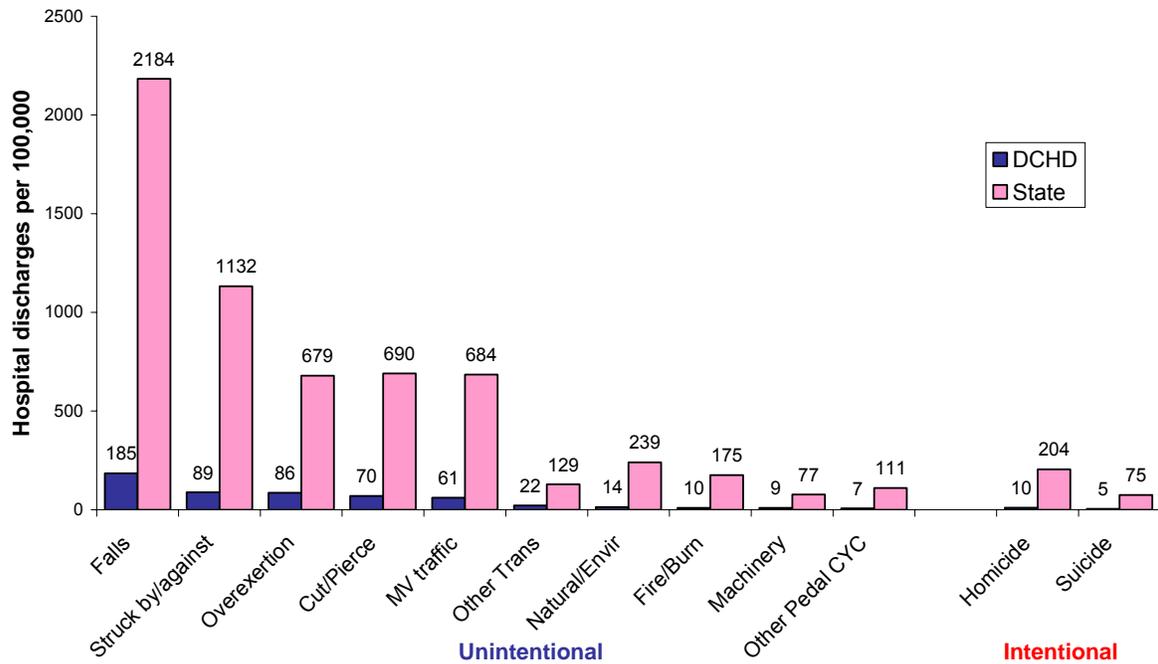
Rates per 100,000 population are age-adjusted to the 2000 U.S. standard population

Leading causes

- Falls were the leading cause of injury related hospital discharges for all age groups combined with an age-adjusted rate of 185 per 100,000. The rate was more than ten times lower 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 discharges for all age groups combined. The age-adjusted hospital discharge rate for struck by/against was much lower than the Nebraska rate (89 and 1,132 per 100,000 respectively) (*Table H2 & Figure H1*).

- Overexertion was the third leading cause of injury related hospital discharges. The age-adjusted rate was lower than the Nebraska rate (86 and 679 per 100,000) (Table H2 & Figure H1).
- Cutting/piercing (70 per 100,000) and motor vehicle crashes (61 per 100,000) were the 4th and 5th leading causes of injury-related hospital discharges (Table H2 & Figure H1).

**Figure H1: Age-adjusted Injury Hospital Discharge Rates by Cause
Dakota County, NE, 1999-2003**



Source: NE Hospital Discharge Data 1999-2003

Table H2: Five Leading Causes of Hospital Discharges for Injury by Age, Dakota County, Nebraska, 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=4	Falls N=12	Falls N=13	Struck by/against N=19	Struck by/against N=35	Falls N=12	Overexertion N=15	Falls N=14	Falls N=10	Falls N=19	Falls N=15	Falls N=28	Falls N=183
2	Homicide N=1	Struck by/against N=10	Struck by/against N=11	Falls N=17	Falls N=27	Cut/Pierce N=10	Falls N=12	Overexertion N=12	Cut/Pierce N=7	Cut/Pierce N=3	MV traffic N=2	MV traffic N=2	Struck by/against N=98
3		Overexertion N=6	Cut/Pierce N=7	Overexertion N=14	Overexertion N=24	Overexertion N=9	MV traffic N=9	MV traffic N=9	Overexertion N=6	MV traffic N=2	Firearm N=1	Cut/Pierce N=1	Overexertion N=89
4		Cut/Pierce N=5	MV traffic N=4	Cut/Pierce N=8	MV traffic N=20	MV traffic N=6	Struck by/against N=9	Cut/Pierce N=8	MV traffic N=3	Overexertion N=2	Cut/Pierce N=1		Cut/Pierce N=73
5		Poisoning N=2	Other Pedal CYC N=4	MV traffic N=2	Cut/Pierce N=15	Struck by/against N=6	Cut/Pierce N=8	Struck by/against N=4	Struck by/against N=2	Struck by/against N=1	Struck by/against N=1		MV traffic N=60

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

Age

- Older adults (85 or older) had the highest fall injury hospital discharge rate at 1,930 per 100,000, which was lower than the Nebraska rate at 13,320 per 100,000 (*Table H3*).
- The 15-24 year age group had the highest injury hospital discharge rates for the following categories: struck by/against (230 per 100,000), overexertion (158 per 100,000), cutting/piercing (99 per 100,000) and motor vehicle crashes (132. (*Table H3*).

Gender

- Females had higher fall injury hospital discharge rates than males (190.4 vs. 179.5 per 100,000) (*Table H3*).
- Males (128.2 per 100,000) were more than 2.5 times likely to be injured due to struck by/against than females (49.6 per 100,000).
- Males also had higher injury hospital discharge rates for overexertion (106.9 per 100,000), cutting/piercing (92.8 per 100,000), and motor vehicle crashes (73.4 per 100,000) than females (65.5, 47.4, and 49.1 per 100,000 respectively) (*Table H3*).

Table H3: Five Leading Causes of Injury Hospital Discharges, Rates by Gender and Age, Dakota County, NE, 1999-2003

Cause	Age	Dakota County									State		
		Male			Female			Total			Rate		
		N	%	Rate	N	%	Rate	N	%	Rate	Male	Female	Total
Falls	<1	0	0	0	4	4	*	4	2.2	*	2298.5	2139.4	2220.8
Falls	1-4	6	7.3	169.9	6	5.9	171.5	12	6.6	170.7	4871.2	3721.2	4309.7
Falls	5-14	21	25.6	244.5	9	8.9	110	30	16.4	178.8	2855.0	2404.1	2634.8
Falls	15-24	10	12.2	126.3	17	16.8	233.1	27	14.8	177.5	1570.9	1323.5	1449.9
Falls	25-34	11	13.4	155.5	1	1	*	12	6.6	86	1048.4	1303.4	1173.8
Falls	35-44	3	3.7	*	9	8.9	123.4	12	6.6	81.2	1084.2	1357.6	1220.2
Falls	45-54	7	8.5	107.9	7	6.9	110	14	7.7	108.9	1116.0	1610.3	1364.2
Falls	55-64	2	2.4	*	8	7.9	199.5	10	5.5	124.2	1337.7	1976.8	1664.3
Falls	65-74	10	12.2	400.3	9	8.9	313.9	19	10.4	354.1	2151.5	3581.0	2926.8
Falls	75-84	5	6.1	369.3	10	9.9	459.3	15	8.2	424.8	4355.2	7355.0	6138.2
Falls	85+	7	8.5	1776.6	21	20.8	1986.8	28	15.3	1929.7	10070.0	14640.0	13320.0
Total		82	100.0	179.5	101	100.0	190.4	183	100.0	185.0	2013.8	2349.3	2184.0
Struck by/against	<1	0	0	0	0	0	0	0	0	0	836	692.9	766.1
Struck by/against	1-4	7	9.7	198.2	3	11.5	*	10	10.2	142.3	2812.4	1729.5	2283.7
Struck by/against	5-14	22	30.6	256.1	8	30.8	97.8	30	30.6	178.8	2919.3	1521.6	2236.7
Struck by/against	15-24	29	40.3	366.2	6	23.1	82.3	35	35.7	230.1	3069.3	1161.5	2135.8
Struck by/against	25-34	4	5.6	*	2	7.7	*	6	6.1	43	1212	676.9	948.9
Struck by/against	35-44	6	8.3	80.2	3	11.5	*	9	9.2	60.9	854.1	527.3	691.6
Struck by/against	45-54	2	2.8	*	2	7.7	*	4	4.1	*	574.9	385.7	479.9
Struck by/against	55-64	2	2.8	*	0	0	0	2	2	*	414.7	291.2	351.6
Struck by/against	65-74	0	0	0	1	3.8	*	1	1	*	415.7	292.7	349
Struck by/against	75-84	0	0	0	1	3.8	*	1	1	*	415.6	363.7	384.7
Struck by/against	85+	0	0	0	0	0	0	0	0	0	507.4	519.4	516
Total		72	100.0	128.2	26	100.0	49.6	98	100.0	88.8	1488.5	786.4	1132.3
Overexertion	<1	0	0	0	0	0	0	0	0	0	111.1	156.8	133.4
Overexertion	1-4	1	1.8	*	5	14.7	142.9	6	6.7	85.4	352.6	519.6	434.1
Overexertion	5-14	8	14.5	93.1	6	17.6	73.3	14	15.7	83.5	537.1	610.3	572.9
Overexertion	15-24	17	30.9	214.7	7	20.6	96	24	27	157.8	1317.5	1024.1	1173.9
Overexertion	25-34	4	7.3	*	5	14.7	72.6	9	10.1	64.5	952.4	828.7	891.6
Overexertion	35-44	12	21.8	160.3	3	8.8	*	15	16.9	101.5	817.7	677.3	747.9
Overexertion	45-54	9	16.4	138.7	3	8.8	*	12	13.5	93.4	616.4	572.9	594.5
Overexertion	55-64	2	3.6	*	4	11.8	*	6	6.7	74.5	426.6	433.8	430.3
Overexertion	65-74	2	3.6	*	0	0	0	2	2.2	*	356.1	445.4	404.6
Overexertion	75-84	0	0	0	1	2.9	*	1	1.1	*	311.8	419.9	376.0
Overexertion	85+	0	0	0	0	0	0	0	0	0	236.9	387.2	343.8
Total		55	100.0	106.9	34	100.0	65.5	89	100.0	86.2	705.5	635.6	679.2
Cut/Pierce	<1	0	0	0	0	0	0	0	0	0	228.7	185.5	207.6
Cut/Pierce	1-4	3	6.1	*	2	8.3	*	5	6.8	71.1	925.2	609.5	771.1
Cut/Pierce	5-14	12	24.5	139.7	3	12.5	*	15	20.5	89.4	1033.2	615.8	829.4
Cut/Pierce	15-24	12	24.5	151.5	3	12.5	*	15	20.5	98.6	1399.6	650.1	1032.9
Cut/Pierce	25-34	6	12.2	84.8	4	16.7	*	10	13.7	71.6	1138.4	596.8	872.2
Cut/Pierce	35-44	5	10.2	66.8	3	12.5	*	8	11	54.1	861	517.5	690.1
Cut/Pierce	45-54	4	8.2	*	4	16.7	*	8	11	62.2	650.7	401.2	525.4
Cut/Pierce	55-64	5	10.2	123.8	2	8.3	*	7	9.6	87	555	309.7	429.6
Cut/Pierce	65-74	2	4.1	*	1	4.2	*	3	4.1	*	582.4	266.5	411.1
Cut/Pierce	75-84	0	0	0	1	4.2	*	1	1.4	*	448.3	214.8	309.5
Cut/Pierce	85+	0	0	0	1	4.2	*	1	1.4	*	333.7	194.8	234.9
Total		49	100.0	92.8	24	100.0	47.4	73	100.0	70.1	893.0	492.5	689.8
MV traffic	<1	0	0	0	0	0	0	0	0	0	128.9	121.4	125.2
MV traffic	1-4	1	2.8	*	0	0	0	1	1.7	*	251.0	229.3	240.4
MV traffic	5-14	3	8.3	*	3	12.5	*	6	10	35.8	400.0	436.0	417.6
MV traffic	15-24	14	38.9	176.8	6	25	82.3	20	33.3	131.5	1444.2	1831.5	1633.7
MV traffic	25-34	4	11.1	*	2	8.3	*	6	10	43	855.6	993.0	923.2
MV traffic	35-44	4	11.1	*	5	20.8	68.6	9	15	60.9	607.3	708.3	657.6
MV traffic	45-54	5	13.9	77.1	4	16.7	*	9	15	70	476.5	523.1	499.9
MV traffic	55-64	2	5.6	*	1	4.2	*	3	5	*	346.5	441.2	394.9
MV traffic	65-74	0	0	0	2	8.3	*	2	3.3	*	327.3	382.2	357.1
MV traffic	75-84	1	2.8	*	1	4.2	*	2	3.3	*	402.4	393.8	397.3
MV traffic	85+	2	5.6	*	0	0	0	2	3.3	*	404.8	248.5	293.6
Total		36	100.0	73.4	24	100.0	49.1	60	100.0	61.3	629.3	737.3	684.0

Source: Hospital Discharge Data 1999-2003
 Rates are per 100,000 per year