



OLDER ADULT FALLS IN NEBRASKA

2009



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Older Adult Falls in Nebraska

Nebraska Department of Health and Human Services

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Executive Summary

According to the Centers for Disease Control and Prevention, falls are the leading cause of injury deaths and the most common cause of nonfatal injuries for adults 65 and older. The same is true in Nebraska. Falls are the leading cause of unintentional injury death and the most common cause of emergency department visits and hospitalization for Nebraskans age 65 and older. A total of 68,809 hospital discharges or 68% of the total unintentional injuries (100,804) were recorded as a fall injury to an older adult in Nebraska.

- Falls were the leading cause of unintentional injury death and hospital discharge for adults age 65 and over in Nebraska from 2001-2006.
- An average of 130 Nebraskans age 65 and older died, over 8,200 visited an emergency room, and 3,200 were hospitalized each year due to a fall-related injury.
- The age-adjusted death rates and hospital discharge rates due to unintentional falls among Nebraskans age 65 and older increased from 2001 to 2006.
- The age-adjusted death rates and hospital discharge rates due to unintentional falls among Nebraskans age 65 and older showed significant variation across the twenty health department coverage areas.
- Nebraska's fall injury death rates among older adults age 65 and over were higher than national rates for both males and females.
- The age-adjusted death rate was higher for males than for females. However, females had greater fall injury hospital discharge rates than males.
- Fall injury death rates and hospital discharge rates increased with age. Older adults age 85 and over had the highest rates.
- Most of the injuries sustained were fractures, specifically, hip fractures.
- More than half of the fall-related injuries occurred at home.
- Falls on the same level from slipping, tripping or stumbling were most likely to cause fall injuries.
- More than 60% of fall injury patients age 65 and over were discharged to home.

- Medicare was billed for the majority of medical costs for fall injuries (89.2%) for Nebraska residents age 65 and older.
- For inpatients, the highest average hospital charge (\$56,052) for an injury due to a fall was for patients who suffered a spinal cord injury. Traumatic brain injuries had the second highest charges.

Adults falls are not an inevitable consequence of aging, but falls do occur more often among older adults because fall risk factors increase with age and are usually associated with health and aging conditions⁴. Prevention interventions can reduce falls. The Centers for Disease Control and Prevention have identified effective strategies to help public health practitioners effectively address the problem of falls, which include exercise alone or by combining exercise with other risk reduction approaches such as medication review and management, vision screening and correction, education, and safer living environments.

Preventing Falls: What Works—A CDC Compendium of Effective Community-based Interventions from Around the World is available online at <http://www.cdc.gov/ncipc/preventingfalls/>.

Introduction

For adults age 65 and older, unintentional injuries are the leading cause of hospitalization in the United States. The majority of these unintentional injuries are from falls. It is estimated that more than one in three older adults fall each year.^{1,2}

According to the National Center for Injury Prevention and Control, about 1.8 million older adults were treated in emergency departments, with more than 433,000 of these hospitalized, for non-fatal injuries from falls in 2005 in the United States. The total direct costs for these injuries totaled more than \$19 billion dollars.³

In Nebraska, falls are the leading cause of injuries reflected by emergency department and inpatient hospital admissions for older adults. From 2001-2006, there were 68,809 hospital discharges for adults age 65 and older from a Nebraska hospital for treatment for a fall-related injury. Two-and-a-half times more patients were seen in emergency rooms than were admitted for fall-related injuries. A total of 715 adults died because of fall-related injuries, more than half of them female.

**Table 1: 5 leading causes of injury hospital discharges*
Nebraska residents age 65 and older, 2001-2006**

	Age Groups			
Rank	65-74	75-84	85+	Total
1	Falls N=16,239	Falls N=27,138	Falls N=25,432	Falls N=68,809
2	Cut/Pierce N=2,531	Motor Vehicle Crash N=1,818	Struck by/against N=946	Motor Vehicle Crash N=4,625
3	Motor Vehicle Crash N=2,180	Struck by/against N=1,657	Overexertion N=659	Struck by/against N=4,544
4	Struck by/against N=1,941	Overexertion N=1,481	Motor Vehicle Crash N=627	Cut/Pierce N=4,365
5	Overexertion N=1,744	Cut/Pierce N=1,377	Cut/Pierce N=457	Overexertion N=3,884

*Includes Inpatients and ER patients

Causes coded as "other specified" or "Not specified" are excluded from this table

Source: NE Hospital Discharge Data, 2001-2006

This report provides an overview of the demographics, mechanics and circumstances of falls among the older adult population in Nebraska. It focuses on the leading cause of hospitalization and emergency room treatment in Nebraska for adults 65 years and older from 2001-2006. It also includes information on fall deaths for adults 65 years and older. Falls were the leading cause of unintentional injury death for this age group. The purpose of this report is to assist public health, health care and the public in understanding fall injuries and consequences among older adults and in developing fall prevention strategies.

Methodology

Data Source

Nebraska death certificate data (2001-2006) and hospital discharge data (2001-2006) were used for this report.

The death certificates classify injuries by external cause of death. The data included information on a variety of attributes of the deceased, including age, gender, race, ethnicity, place of residence, and primary and secondary causes of deaths. The death certificate data was coded based on ICD-10 (International Classification of Diseases-10th Revision).

The 2001-2006 hospital discharge data (HDD) was provided by Nebraska acute care hospitals to the Nebraska Hospital Association (NHA) using the 1992

Uniform Billing form (UB-92). The records for each discharge contain information on the date of admission, date of discharge, patient's age and gender, county of residence, and primary and secondary diagnosis codes, as well as a dedicated field for an E-code. An E-Code specifies the external cause of injury. The E-code data, a subset of HDD containing injury-related records, was provided to the Nebraska Department of Health and Human Services (DHHS) by NHA. Diagnosis codes are used to describe the type of injury, such as a broken arm. Both injuries and their external cause are classified according to the 9th Revision of the International Classification of Diseases, Clinical Modification (ICD-9-CM). Discharge records in the E-code database are identified as inpatient, outpatient-ER (emergency room), and outpatient non-ER.

Analysis

Data was prepared and analyzed based on the Instructions for Calculating National Public Health Surveillance System Indicators Using 1999 Data. Data analysis steps, as described in the State and Territorial Injury Prevention Director's Association (STIPDA) Consensus Recommendations for Injury Surveillance in State Health Departments document, were used to analyze the hospital discharge data.

An unintentional fall death was defined as a death to a Nebraska resident age 65 or older for which the underlying cause was coded within the ICD-10 range W00-W19. This range also was used to define deaths nationally.

An unintentional fall injury was defined as a Nebraska resident age 65 or older who was discharged from an acute care hospital in Nebraska for which the principal diagnosis was an injury and the cause of injury was an unintentional fall (E-code within the ICD-9 range E880-E886, E888). Injury diagnoses were those in the following range of ICD-9-CM: 800.0-909.2, 909.4, 909.9, 910.0-994.9 995.5-995.59 995.80-995.85 (Table 2). Rehab patients and non-ER outpatients were excluded.

Age-adjusted rates are per 100,000 Nebraska population and are age adjusted to the 2000 U.S. standardized population. Age-specific rates were calculated by dividing the actual number of cases in a given period (e.g. 2001-2006) for a specific age group by the population in that age group for that period and multiplying by 100,000. The numerator and the denominator refer to the same age group.

All of the analyses presented in this report are based on the deaths and hospital discharges of Nebraska residents. Nebraska residents who died outside the state of Nebraska or who were treated at out-of-state hospitals are not included. Thus, rates may be underestimated if Nebraskans died or were treated in other states.

A limitation of the hospital discharge data is that it is record-based; therefore, one patient may be counted more than once if discharged for the same injury more

than once. The rates displayed in this report reflect the number of discharge records, rather than the number of patients discharged.

Table 2: ICD-9-CM AND E CODES USED TO DEFINE INJURY AND MEDICAL MISADVENTURE/ADVERSE REACTION EVENTS
ICD-9-CM Codes Used to Identify Injury Events

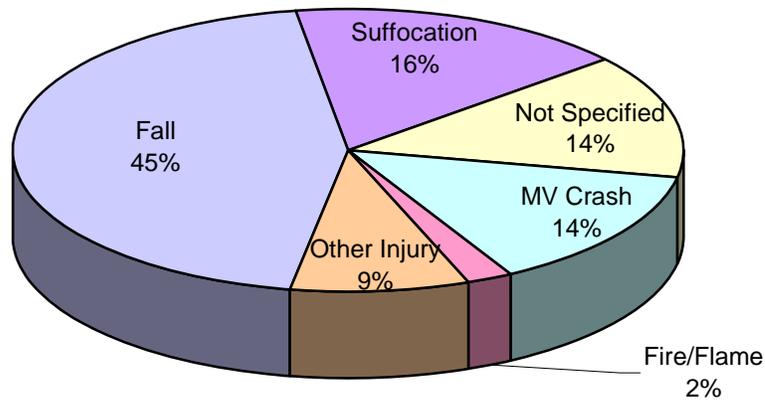
ICD-9-CM Diagnosis Codes	Description
800-909.2, 909.4, 909.9	Fractures; dislocations; sprains and strains; intracranial injury; internal injury of thorax, abdomen, and pelvis; open wound of the head, neck, trunk, upper limb, and lower limb; injury to blood vessels; late effects of injury, poisoning, toxic effects, and other external causes, excluding those of complications of surgical and medical care and drugs, medicinal or biological substances.
910-994.9	Superficial injury; contusion; crushing injury; effects of foreign body entering through orifice; burns; injury to nerves and spinal cord; traumatic complications and unspecified injuries; poisoning and toxic effects of substances; other and unspecified effects of external causes
995.5-995.59	Child maltreatment syndrome.
995.80-995.85	Adult maltreatment, unspecified; adult physical abuse; adult emotional/ psychological abuse; adult sexual abuse; adult neglect (nutritional); other adult abuse and neglect.

Results

Fall Injury Deaths

In Nebraska, from 2001 to 2006, falls were the leading cause of unintentional injury death for adults age 65 and older (45%), followed by suffocation (16%), motor vehicle crashes (14%), and unspecified unintentional injury (14%) (Figure D1). On average nearly 130 Nebraskans age 65 and older died from an unintentional fall injury each year.

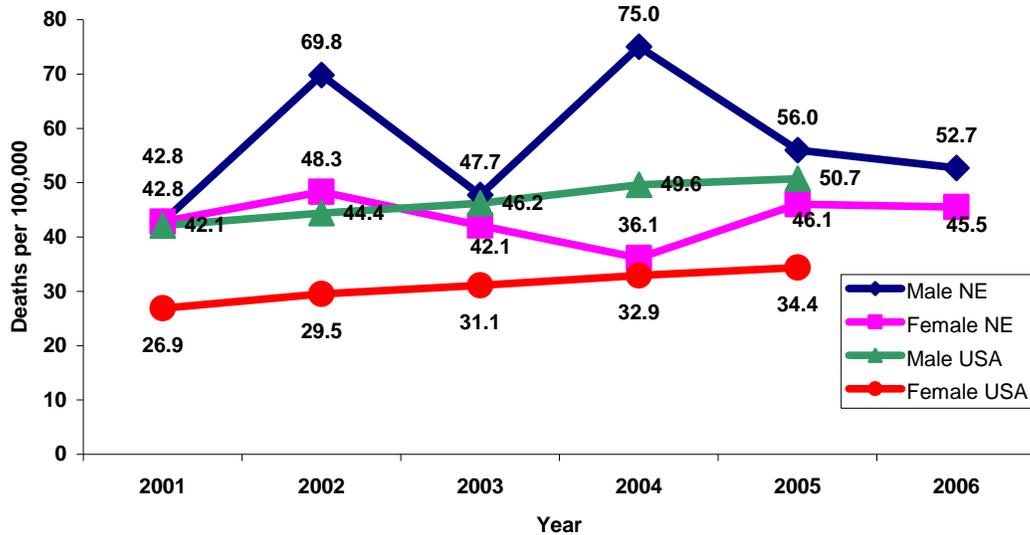
**Figure D1: Cause of unintentional injury death
Nebraska residents age 65 and older, 2001-2006 (N=1,728)**



Source: DHHS Death Certificate Data, 2001-2006

Between 2001 and 2006, the age-adjusted death rate due to unintentional falls among Nebraskans age 65 and older increased 23% for males and 6.3% for females. Nebraska's rates were higher than national rates for both genders. Rates for males were consistently higher than rates for females (Figure D2).

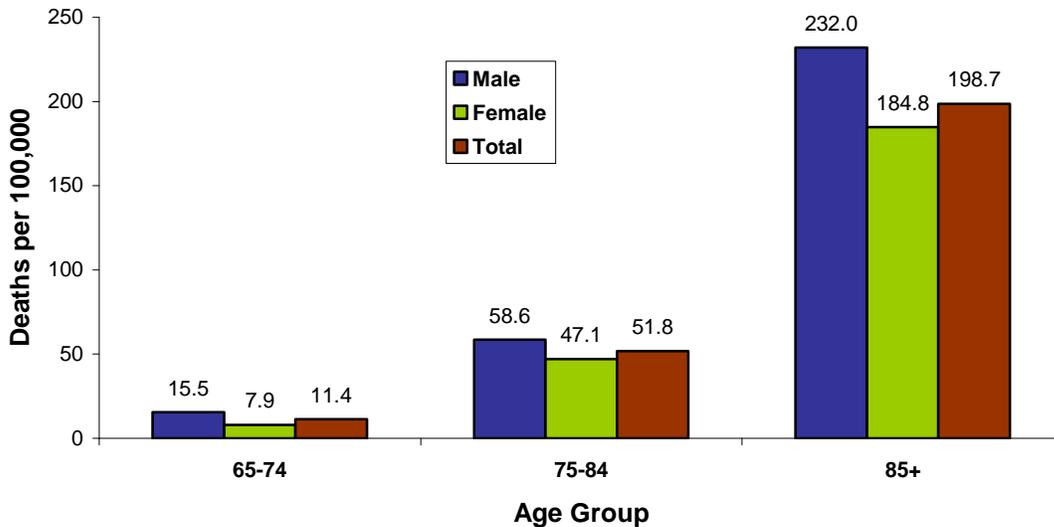
Figure D2: Age-adjusted fatal fall injury rates* among males and females age 65 years and older by year, Nebraska and U.S. residents, 2001-2006 (N=773)



Source: DHHS Death Certificate Data 2001-2006
 * Age adjusted to the 2000 U.S. population

Unintentional fall injury death rates varied by age and gender. The death rates increased by age; the oldest age group, 85+, had the highest death rate (198.7 per 100,000) due to unintentional fall injuries. Males had a slightly higher death rate than females in all age groups. (Figure D3).

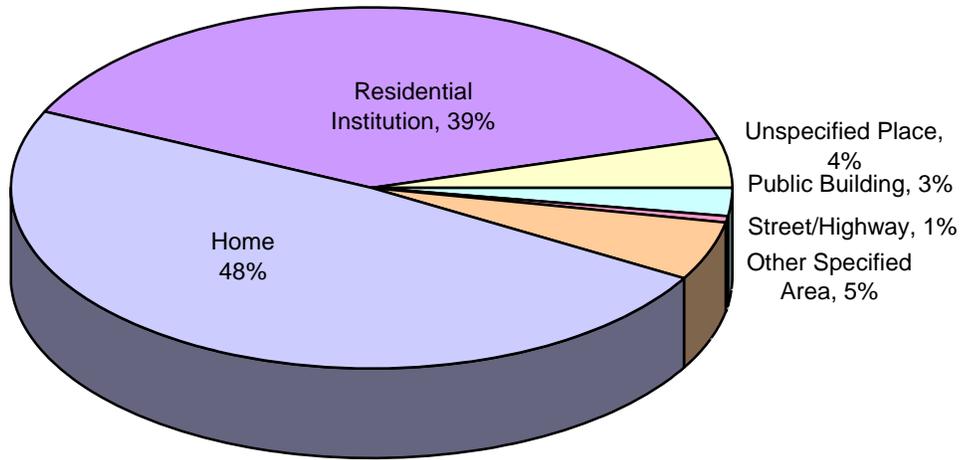
Figure D3: Fall injury death rate per 100,000 Nebraska residents age 65 and older by age group, 2001-2006 (N=773)



Source: DHHS Death Certificate Data 2001-2006

About half (48%) of the falls that caused injuries resulting in death among those age 65 and older occurred at home, followed by falls that occurred in residential institutions (39%) (Figure D4).

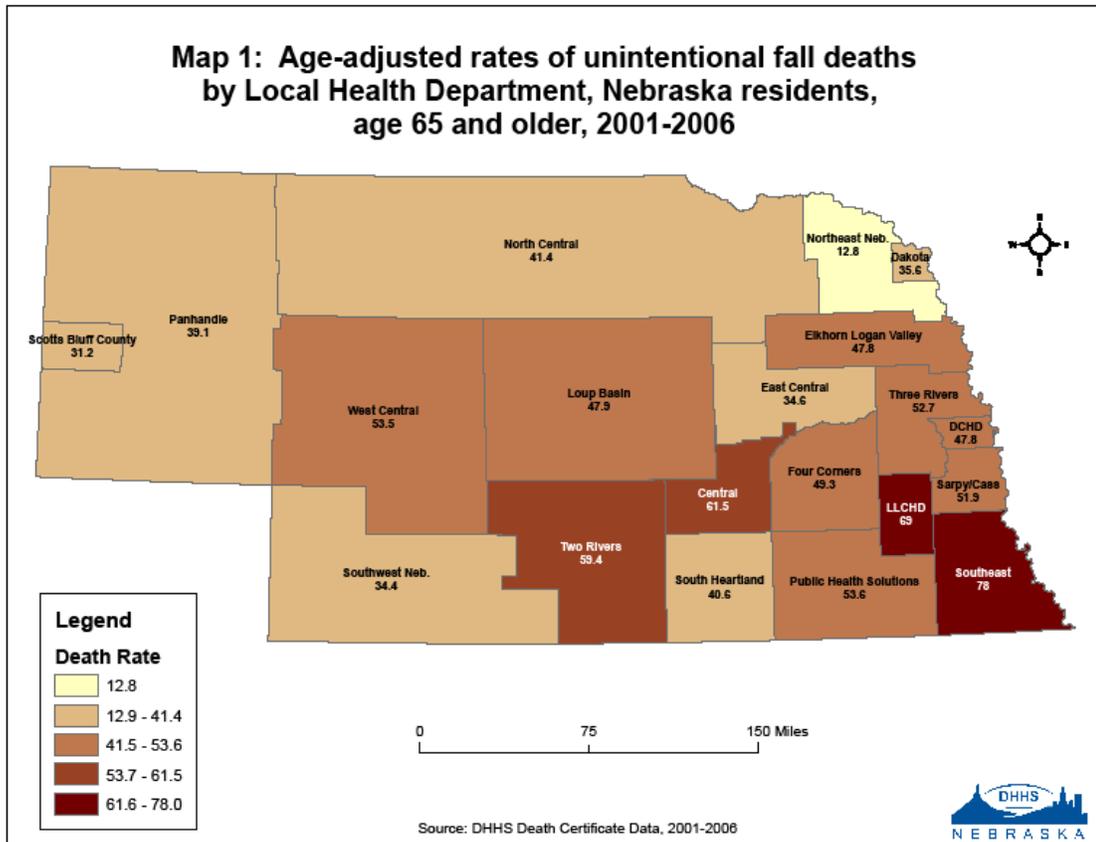
**Figure D4: Place of occurrence of unintentional fall injury death
Nebraska residents age 65 and older, 2001-2006 (N=773)**



Source: DHHS Death Certificate Data, 2001-2006

Death Rate by Local/District Health Department Coverage Area

From 2001-2006, the age-adjusted death rate due to unintentional falls was 50.4 per 100,000 (n=773) for Nebraska residents age 65 and older. However, the rates of each of the 20 local health department coverage areas showed significant variation, ranging from 12.8 to 78.0 per 100,000 population. Southeast District Health Department had the highest death rate (78 per 100,000, n=43), followed by Lincoln/Lancaster County (69 per 100,000, n=114). Northeast Nebraska Public Health Department had the lowest death rate (12.8 per 100,000, n=6) (Map1).

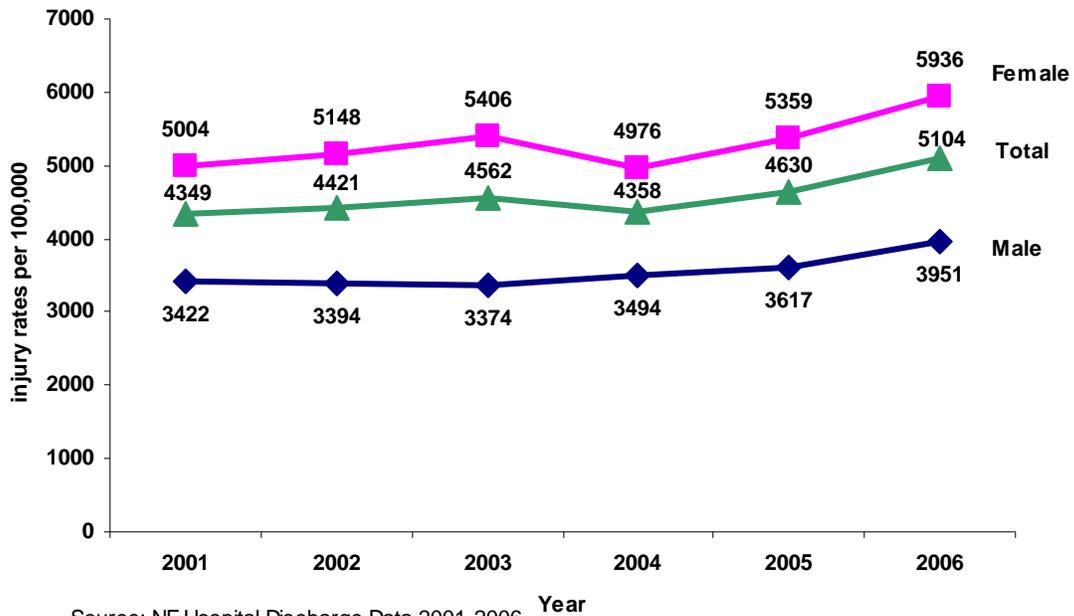


Fall Injury Hospital Discharges

Trends

From 2001 to 2006, the age-adjusted fall injury rate among Nebraska residents age 65 and older increased. The rate increased 17.4% for males and females combined. Rates for females are consistently higher than rates for males. In 2004 the rate was low relative to the trend line maybe due to reporting issues (Chart 0).

Chart 0: Age-adjusted fall injury rates* for Nebraska residents age 65 and older by year, 2001-2006 (N=68,809)



Source: NE Hospital Discharge Data 2001-2006

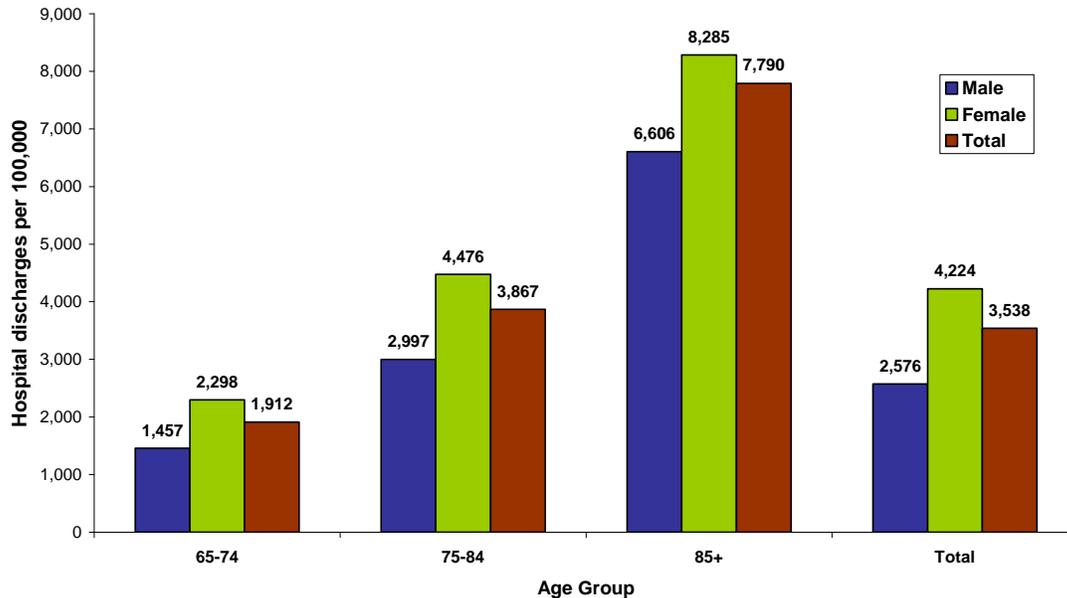
* Age adjusted to the 2000 U.S. population

Falls: Age Group and Gender

Between 2001 and 2006 in Nebraska, a total of 68,809 hospital discharges were recorded as fall injuries for adults age 65 and older. Fall injury rates varied by age and gender. Overall, the injury rate increased with age. Females had a higher injury rate than males in all age groups. Following national trends, the oldest age group, 85+, had the highest injury rates.

For female ER patients, the total fall injury rate was 4,224 per 100,000 (Chart 1). For male ER patients, the total fall injury rate was 2,576 per 100,000. For all age groups, the total injury rate was 3,538 per 100,000 for ER patients.

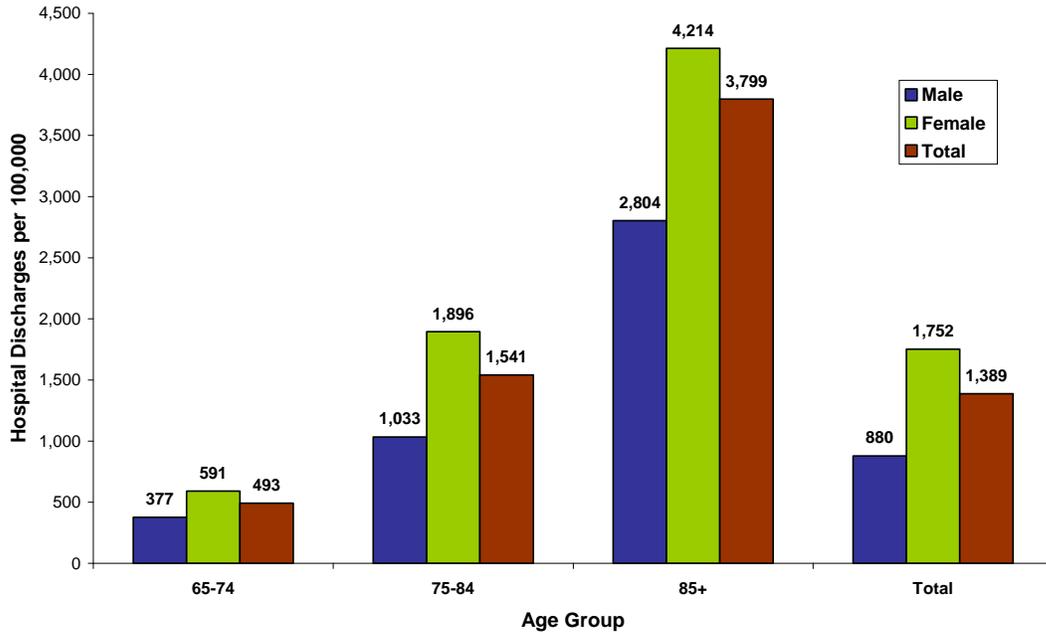
**Chart 1: Fall injury rates per 100,000 for ER patients age 65 and older
Nebraska residents, 2001-2006 (N=49,414)**



Source: NE Hospital Discharge Data 2001-2006

For inpatients, the total fall injury rate for females was 1,752 per 100,000, while for males it was 880 per 100,000 (Chart 2). The total injury rate for all age groups was 1,389 per 100,000 for inpatients.

**Chart 2: Fall injury rates per 100,000 for inpatients age 65 and older
Nebraska residents, 2001-2006 (N=19,395)**

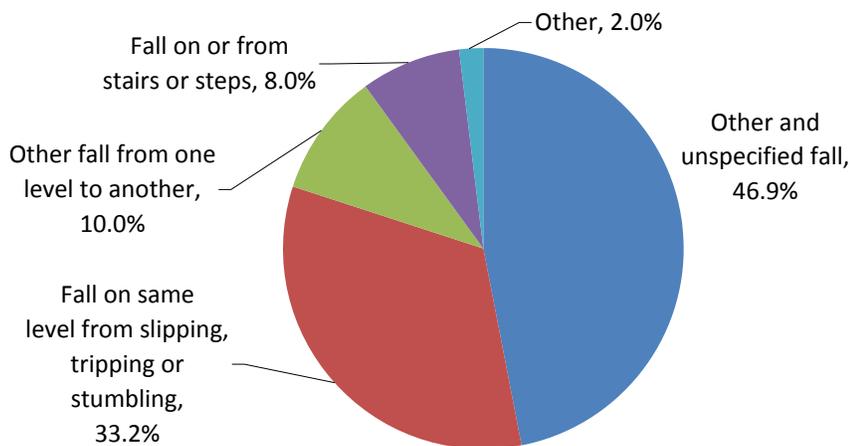


Source: NE Hospital Discharge Data 2001-2006

Falls: Types

In hospital discharge data, falls were most often coded as “other and unspecified fall” (46.9%). Other causes were: “fall on the same level from slipping, tripping, or stumbling” (33.2%), “other fall from one level to another” (10.2%), and “fall on or from stairs or steps” (7.9%) (Chart 3). Included in “other fall from one level to another” were falls from a bed, chair or wheelchair and other types of furniture along with falls from an embankment, haystack, stationary vehicle or tree.

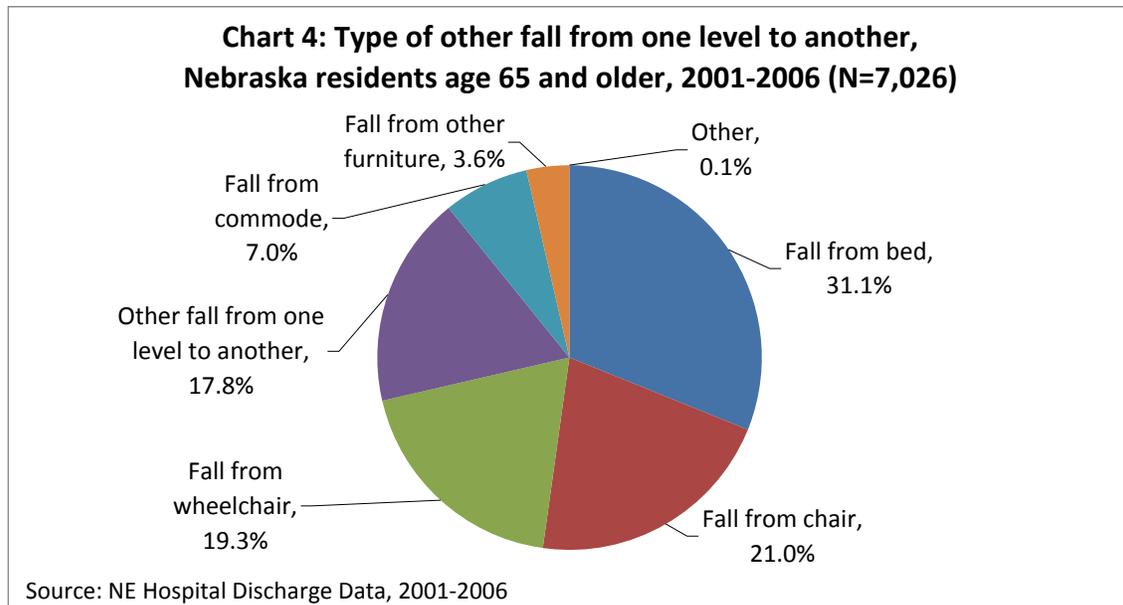
**Chart 3: Type of fall resulting in injury,
Nebraska residents age 65 and older, 2001-2006 (N=68,609)**



Source: NE Hospital Discharge Data, 2001-2006

A comparison of falls on the same level versus falls from one level to another finds that most falls occur on the same level, with 22,975 hospital discharges for Nebraska residents age 65 and older. The majority of hospital discharges due to falls, 49,414 or 72%, were from the ER, while the remaining 28% were inpatient hospital discharges.

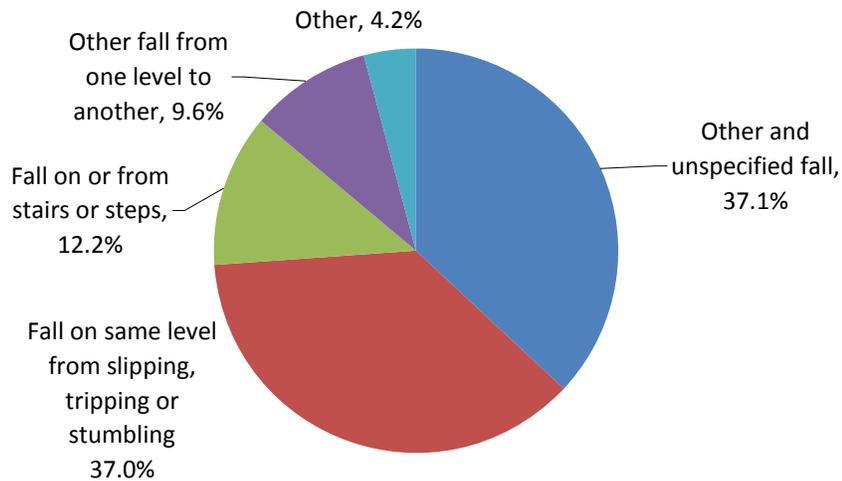
Falls classified as “other fall from one level to another” were responsible for 10.2% (N=7,026) of total hospital discharges due to falls. Of these, 31.1% (N=2,184) were “fall from a bed”, while 21% or 1,478 were “fall from a chair” and 19.3% or 1,359 were “fall from a wheel chair” (Chart 4).



Falls: Age Group and Type

There were a total of 16,239 hospital discharges due to fall injuries for adults age 65-74 in Nebraska. The leading types of falls for ER patients (N=12,912) for this age group were equally distributed between “other and unspecified fall” with 4,788 discharges (37.1%) and “fall on the same level from slipping, tripping, or stumbling” with 4,781 discharges (37%) (Chart 5).

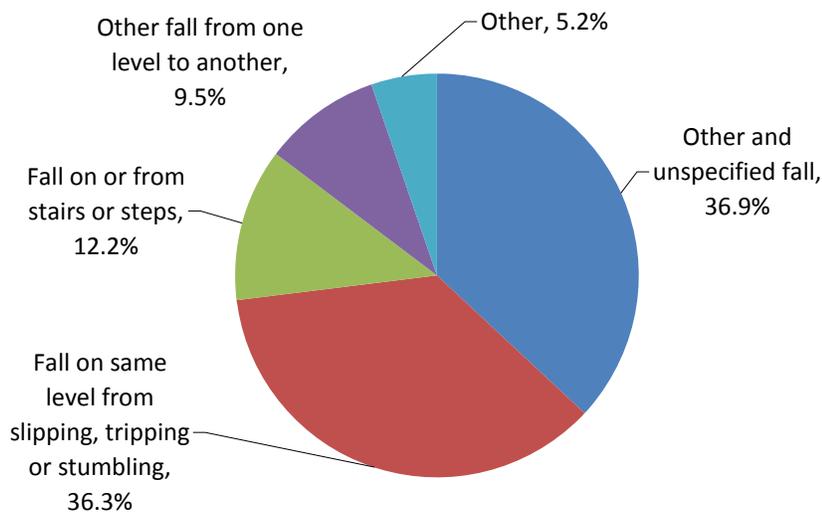
**Chart 5: Fall type for adults age 65-74 seen in the E.R.
Nebraska, 2001-2006 (N=12,912)**



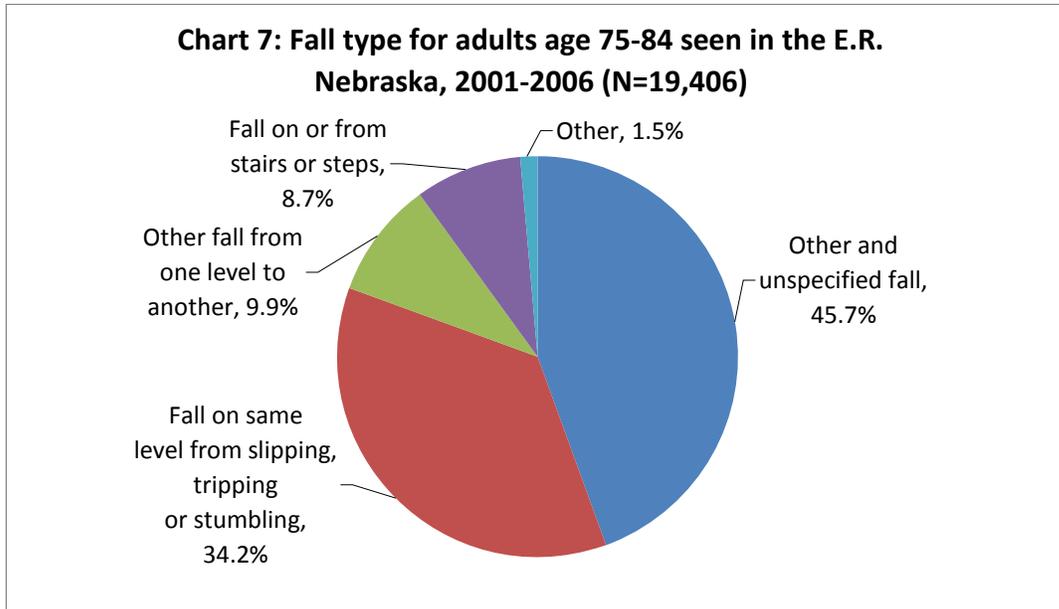
Source: NE Hospital Discharge Data, 2001-2006

“Other and unspecified falls” were the leading type of falls for inpatients (N=3,327) in this age group, accounting for 1,228 discharges or 36.9% of all types of fall injuries, followed by “fall on the same level from slipping, tripping, or stumbling” (36.3%) (Chart 6).

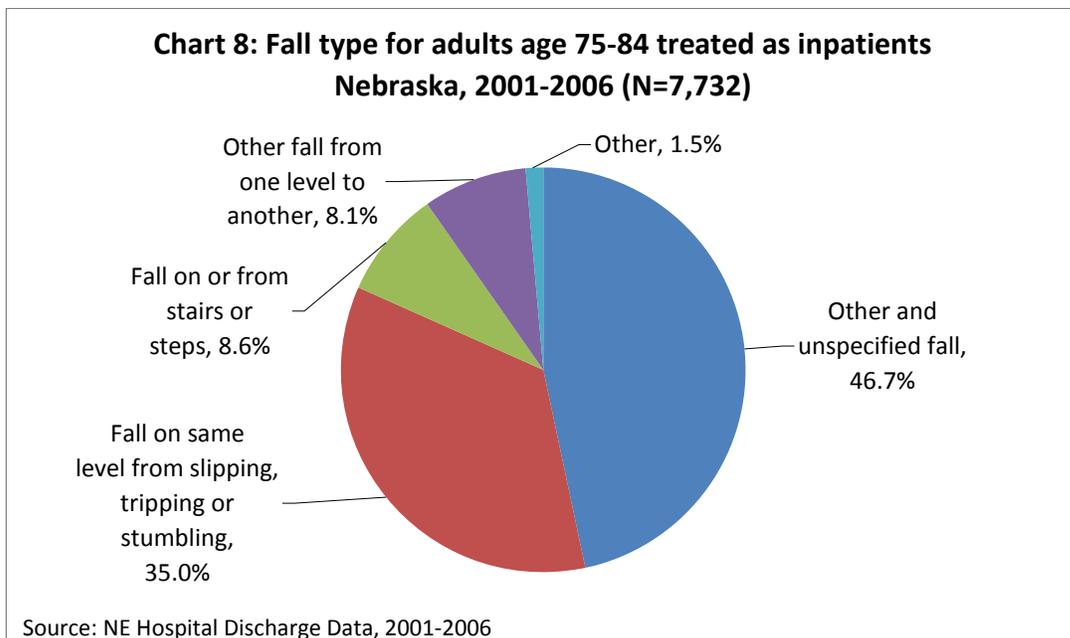
**Chart 6: Fall type for adults age 65-74 treated as inpatients
Nebraska, 2001-2006 (N=3,327)**



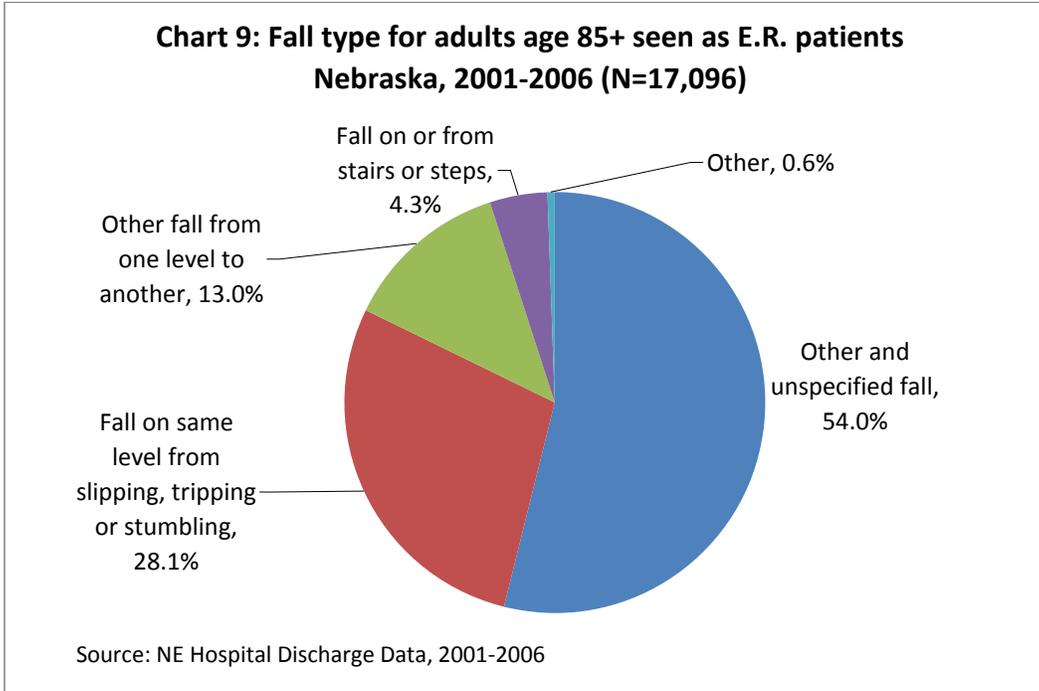
For adults age 75-84, there were a total of 27,138 hospital discharges due to falls. Nearly half of the falls for ER patients (N=19,406) in this age group were “other and unspecified fall” (45.7%), followed by “fall on the same level from slipping, tripping, or stumbling” (34.2%) (Chart 7).



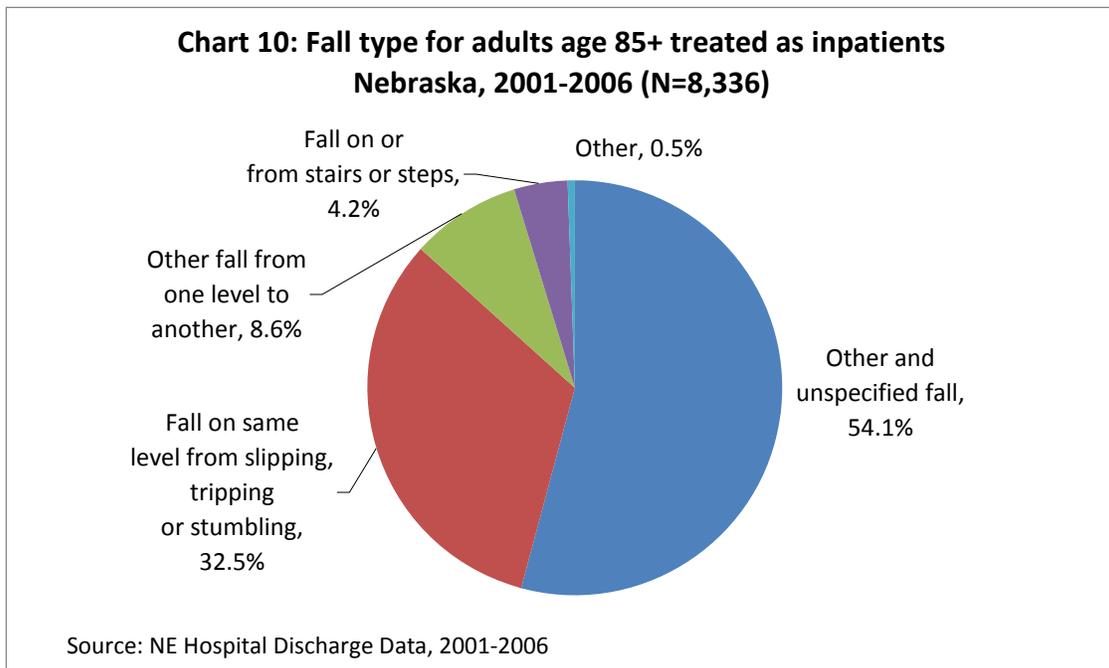
For inpatients (N=7,732) in this age group, the leading type of fall was also “other and unspecified fall” with 3,611 hospital discharges (46.7%), followed by “fall on the same level from slipping, tripping, or stumbling” (35%) (Chart 8).



There were a total of 25,432 hospital discharges due to falls for adults age 85 and older. More than half of the fall types for ER patients (N=17,096) in this age group were “other and unspecified fall” accounting for 54% of the total. This was followed by “fall on the same level from slipping, tripping or stumbling” (28.1%) (Chart 9).



For inpatients (N=8,336) in this age group, the leading type of fall was also “other and unspecified fall” (54.1%), followed by “fall on the same level from slipping, tripping, or stumbling” (32.5%) (Chart 10).



Falls: Place of Occurrence

For both ER and inpatients, the primary place of occurrence for most falls was the home, accounting for 52.1% (12,282) of hospital discharges due to falls (Table 3).

Table 3: Place of occurrence of fall, Nebraska residents age 65 and older, 2001-2006

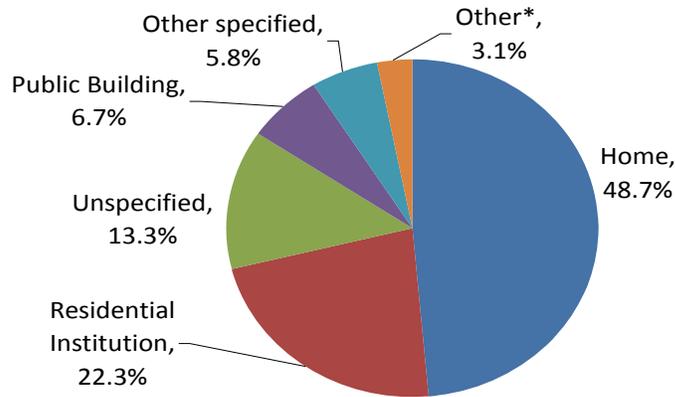
Place of Occurrence	ER		Inpatient		Total	
	N	%	N	%	N	%
HOME	8,266	48.7	4,016	60.6	12,282	52.1
RESIDENTIAL INSTITUTION	3,785	22.3	1,476	22.3	5,261	22.3
UNSPECIFIED	2,257	13.3	269	4.1	2,526	10.7
PUBLIC BUILDING	1,131	6.7	346	5.2	1,477	6.3
OTHER SPECIFIED	984	5.8	341	5.1	1,325	5.6
Other*	545	3.1	178	2.7	723	3.1
Total	16,968	100	6,626	100	23,594	100

*Included in other are streets or highways, place of sport/recreation, industrial premises, farms, and mines or quarries.

Source: NE Hospital Discharge Data, 2001-2006

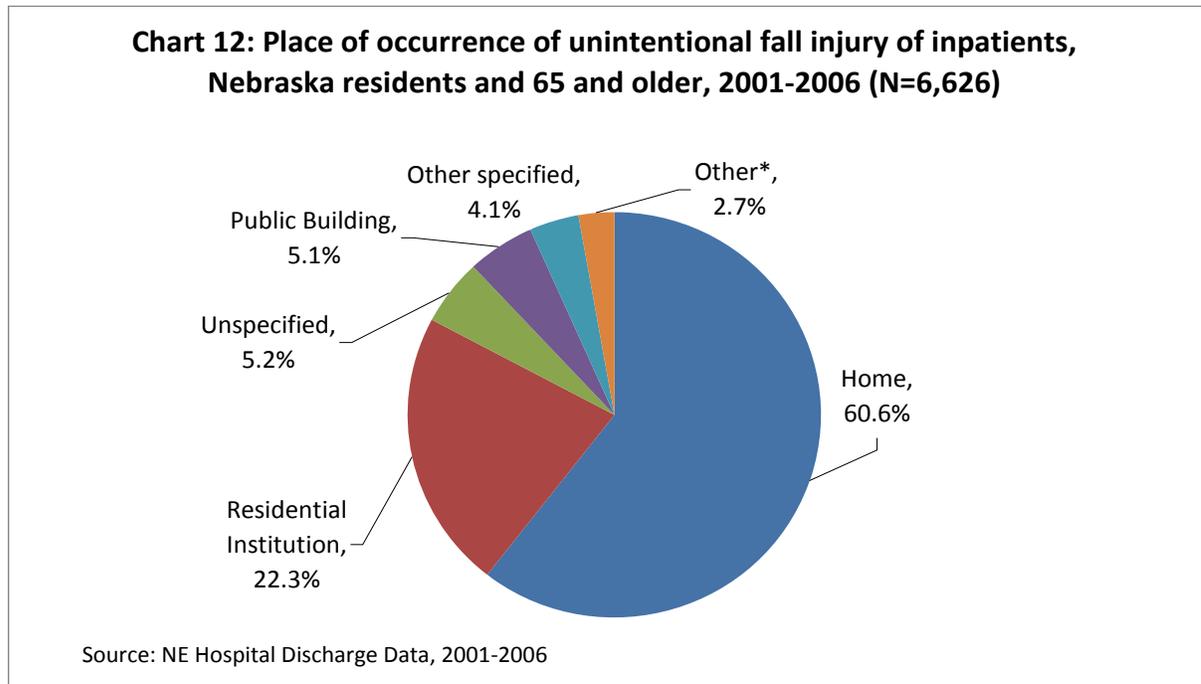
Falls in the home were the primary place of occurrence for ER patients (N=16,968) with 8,266 discharges (48.7%) (Chart 11). This was followed by falls in a residential institution (22.3%).

Chart 11: Place of occurrence of unintentional fall injury of E.R. patients, Nebraska residents and 65 and older, 2001-2006 (N=16,968)



Source: NE Hospital Discharge Data, 2001-2006

There were 6,626 inpatient hospital admissions due to falls. Falls in the home accounted for 60.6%, with 4,016 of these (Chart 12). This was followed by falls in a residential institution, such as a nursing home or assisted care facility, with 22.3% of the inpatient hospital discharges.



Falls: Body Part Injured

The most common body part injured due to falls in Nebraskans age 65 and older was the lower extremity, including the hip, with 23,140 hospital discharges (Table 4). The next most common type of injuries was upper extremity injuries followed by other types of injuries to the head, face, and neck.

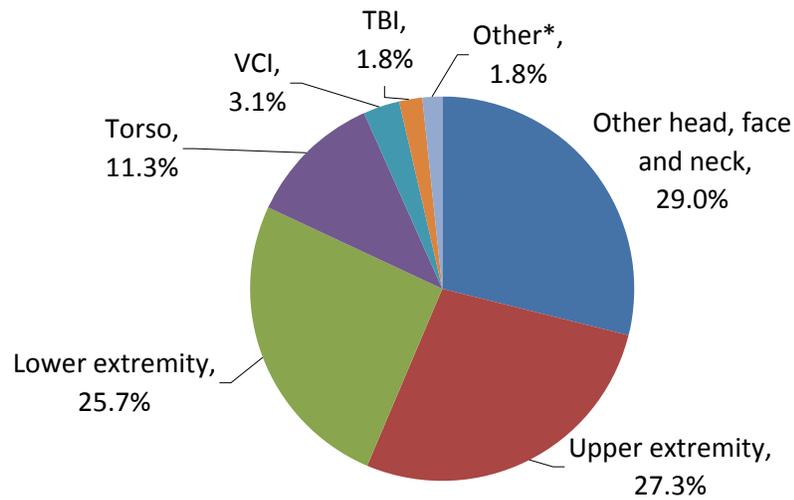
Table 4: Most common body part injured due to fall for Nebraska residents age 65 and older, 2001-2006

Rank	Body part	65-74	75-84	85 +	Total
1	Lower extremity	4,884	8,805	9,451	23,140
2	Upper extremity	4,147	5,375	3,848	13,370
3	Other head, face and neck	2,949	5,110	4,801	12,860
4	Torso	1,594	2,848	2,649	7,091
5	Vertebral Column injury (VCI)	492	1,126	1,086	2,704
6	Traumatic Brain Injury (TBI)	474	863	669	2,006
7	Other and unspecified	188	291	311	790
8	Spinal Cord injury (SCI)	23	26	13	62
9	Systemwide effects	22	30	16	68

Source: NE Hospital Discharge Data, 2001-2006

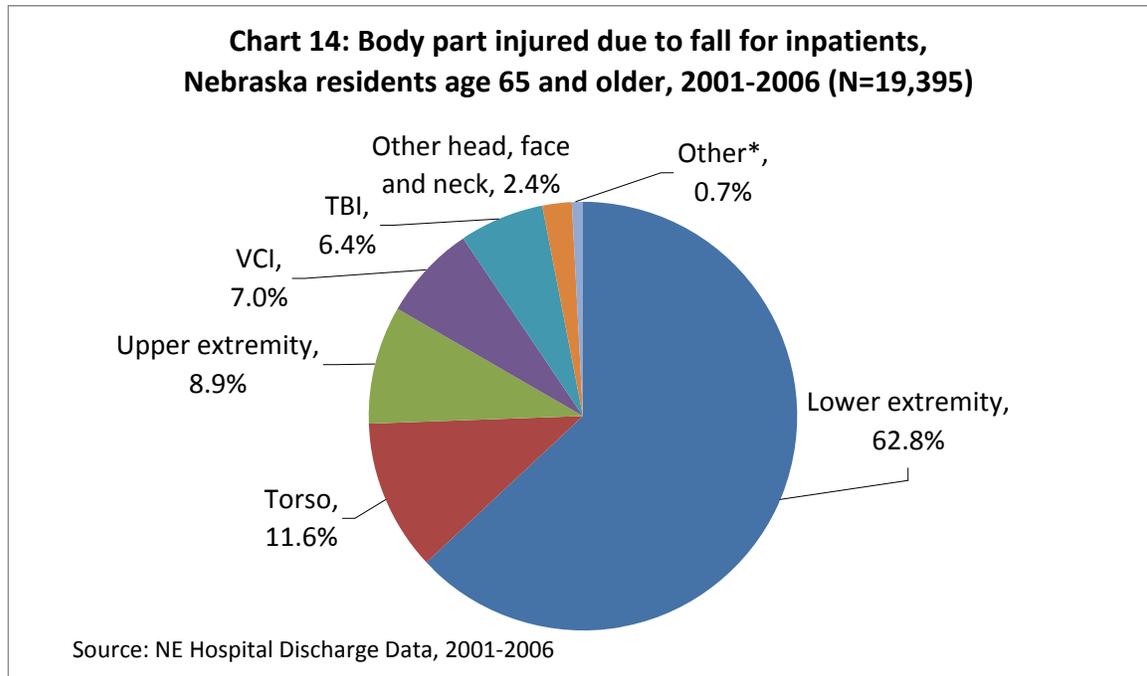
The primary body part injured in ER patients (N=42,696) was other head, face and neck, with 29% (N=12,388) of the hospital discharges due to falls (Chart 13). This was followed by upper extremity injuries at 27.3% (N=11,638) and lower extremity injuries with 25.7% (N=10,952) of hospital discharges due to falls. Included in "Other" is spinal cord injuries (SCI), system wide and late effects, and other and unspecified injuries.

Chart 13: Body part injured due to fall for E.R. patients, Nebraska residents age 65 and older, 2001-2006 (N=42,696)



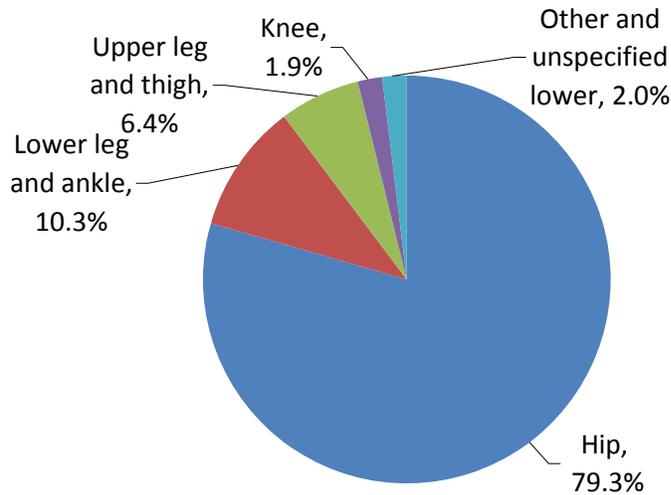
Source: NE Hospital Discharge Data, 2001-2006

The primary body part injured for inpatients (N=19,395) was the lower extremity, with 12,188 of hospital discharges due to falls accounting for 62.8% (Chart 14). This was followed by torso and upper extremity injuries, with 2,256 hospital discharges due to falls (11.6%) and 1,732 hospital discharges due to falls (8.9%) respectively. Included in “Other” is SCI, systemwide and late effects, and other and unspecified injuries.



Since lower extremity injuries make up such a large part of inpatient hospital discharges due to falls (N=19,395) it is important to break them down and see what types of body parts are primarily being injured (Chart 15). The primary body part injured was the hip, with 9,670 hospital discharges due to falls or 79.3% of the total. Following this were lower leg and ankle (10.3%), upper leg and thigh (6.4%), and knee (1.9%) injuries.

Chart 15: Breakdown of lower extremity injury for inpatients, Nebraska residents age 65 and older, 2001-2006 (N=12,188)



Source: NE Hospital Discharge Data, 2001-2006

Falls: Injury Type

Fractures were the leading injury caused by falls (Table 5). A total of 30,248 (48.7%) of Nebraskans age 65 and older were treated for fractures due to falls. This was distantly followed by superficial wounds or contusions, with 12,715 (20.5%) hospital discharges due to falls and open wounds, with 9,546 (15.4%) hospital discharges due to falls.

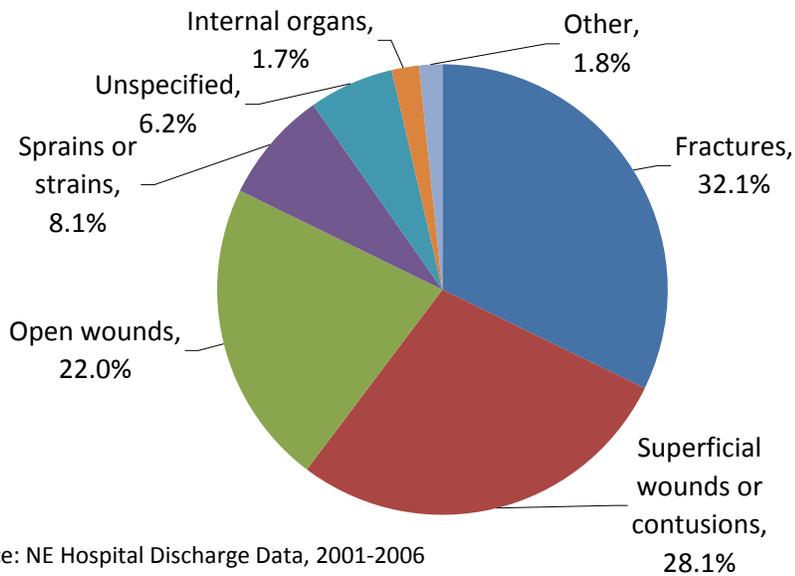
Table 5: Leading injury type due to falls for Nebraska residents age 65 and older, 2001-2006

Rank	Type of Injury	65-74	75-84	85 +	Total
1	Fractures	6,574	11,851	11,823	30,248
2	Superficial wounds or contusions	3,087	5,099	4,529	12,715
3	Open wounds	2,095	3,731	3,720	9,546
4	Sprains or Strains	1,444	1,420	959	3,823
5	Unspecified	747	1,117	979	2,843
6	Internal organ	482	884	657	2,023
7	Dislocation	312	326	152	790

Source: NE Hospital Discharge Data, 2001-2006

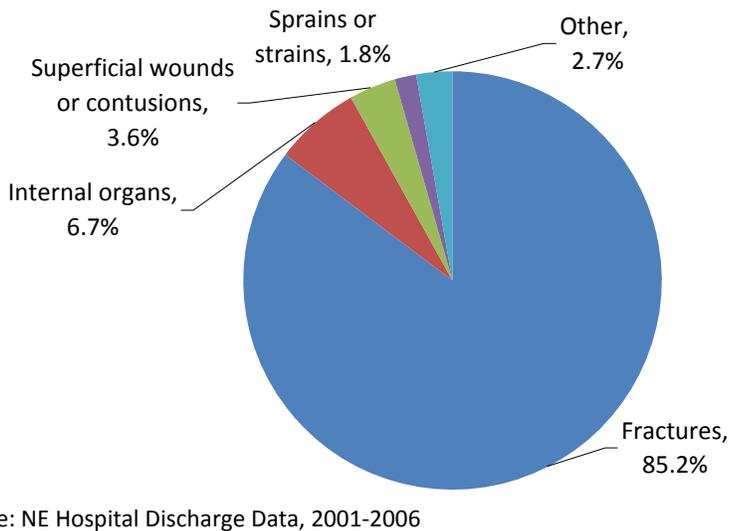
Fractures were the leading injury type for ER patients, with 13,724 (32.1%) of hospital discharges due to falls (Chart 16).

**Chart 16: Injury type for E.R. patients,
Nebraska residents age 65 and older, 2001-2006 (N=42,696)**



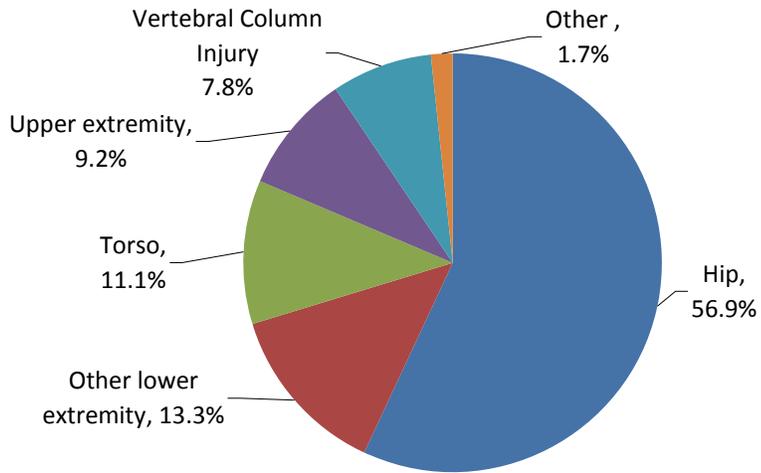
This was followed by superficial or contusion injuries (28.1%) and open wounds (22%). The primary injury type for inpatients was also fractures, with 85.3% (N=16,524) of hospital discharges due to falls (Chart 17). This was followed by injuries to internal organs (6.7%) and superficial wounds or contusion injuries (3.6%).

**Chart 17: Injury type for inpatients,
Nebraska residents age 65 and older, 2001-2006 (N=19,395)**



For inpatients, the leading body part fractured was the hip, with 9,405 (56.9%) hospital discharges due to falls (Chart 18). This was followed by other lower extremity fractures (13.3%) and torso fractures (11.1%). All together, lower extremity fractures account for 11,605 (70.2%) hospital discharges due to falls.

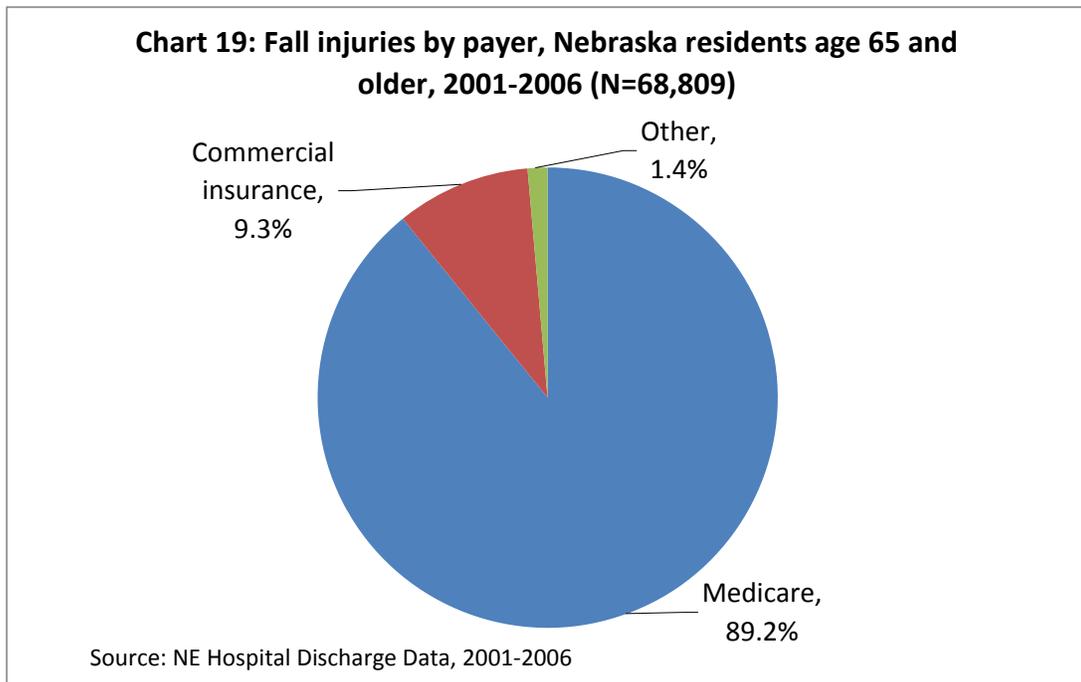
**Chart 18: Body part fractures for inpatients,
Nebraska residents age 65 and older, 2001-2006 (N=16,524)**



Source: NE Hospital Discharge Data, 2001-2006

Falls: Payer

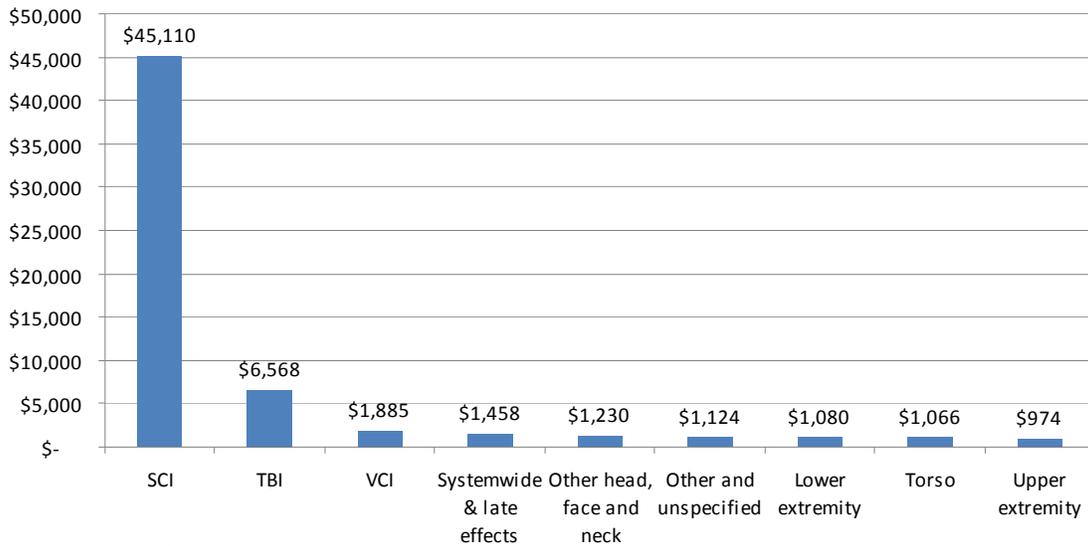
Medicare was billed for the majority of hospital charges due to fall injuries for Nebraska residents age 65 and older, covering 61,373 (89.2%) (Chart 19). This was followed by commercial insurance, covering 9.3% and other types of payers. Included in other types of payer are self-pay, Medicaid, and other federal programs.



Falls: Charges by Body Region Injured

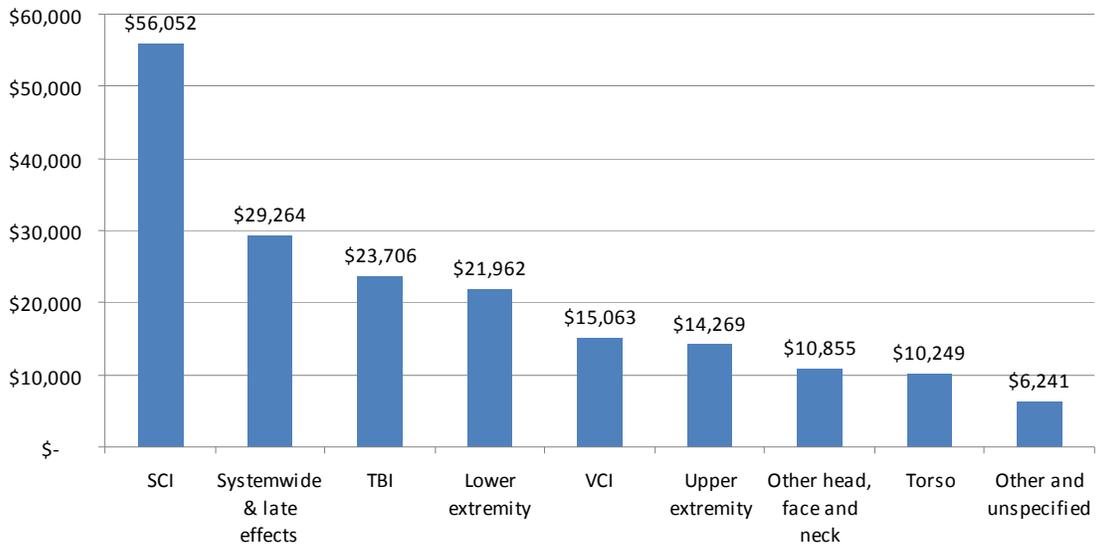
The most expensive body part region to injure in a fall was the spinal cord, accounting for an average stay charge of \$45,110 for ER patients and \$56,052 for inpatients (Chart 21). For ER patients, the second most expensive body region to be injured was the brain. Traumatic brain injuries result in an average charge of \$6,568, followed by vertebral column injuries with charges of \$1,885. For inpatients, the second most expensive injury was systemwide and late effects due to a fall with an average stay charge of \$29,264. Following this were traumatic brain (\$23,706) and lower extremity injuries (\$21,962).

Chart 20: Average hospital charge for fall injury by body region of injury for E.R. patients, Nebraska residents age 65 and older, 2001-2006 (N=35,999)



Source: NE Hospital Discharge Data, 2001-2006

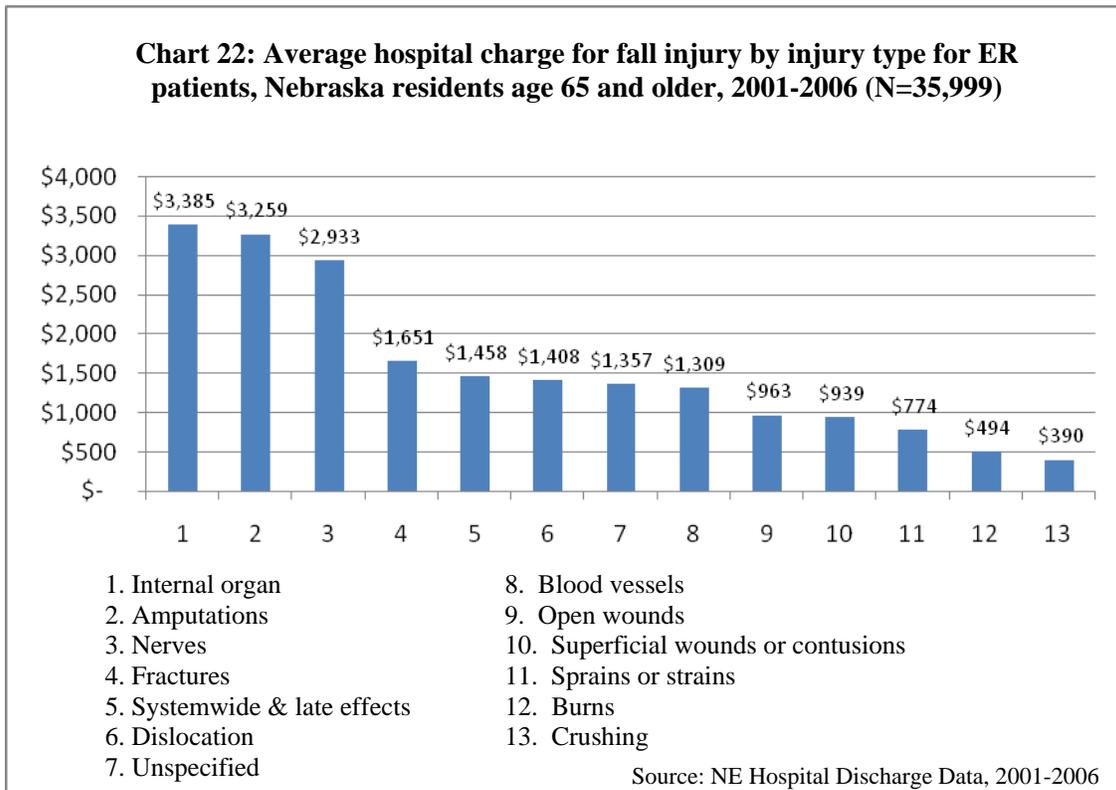
Chart 21: Average hospital charge for fall injury by body region of injury for inpatients, Nebraska residents age 65 and older, 2001-2006 (N=16,203)



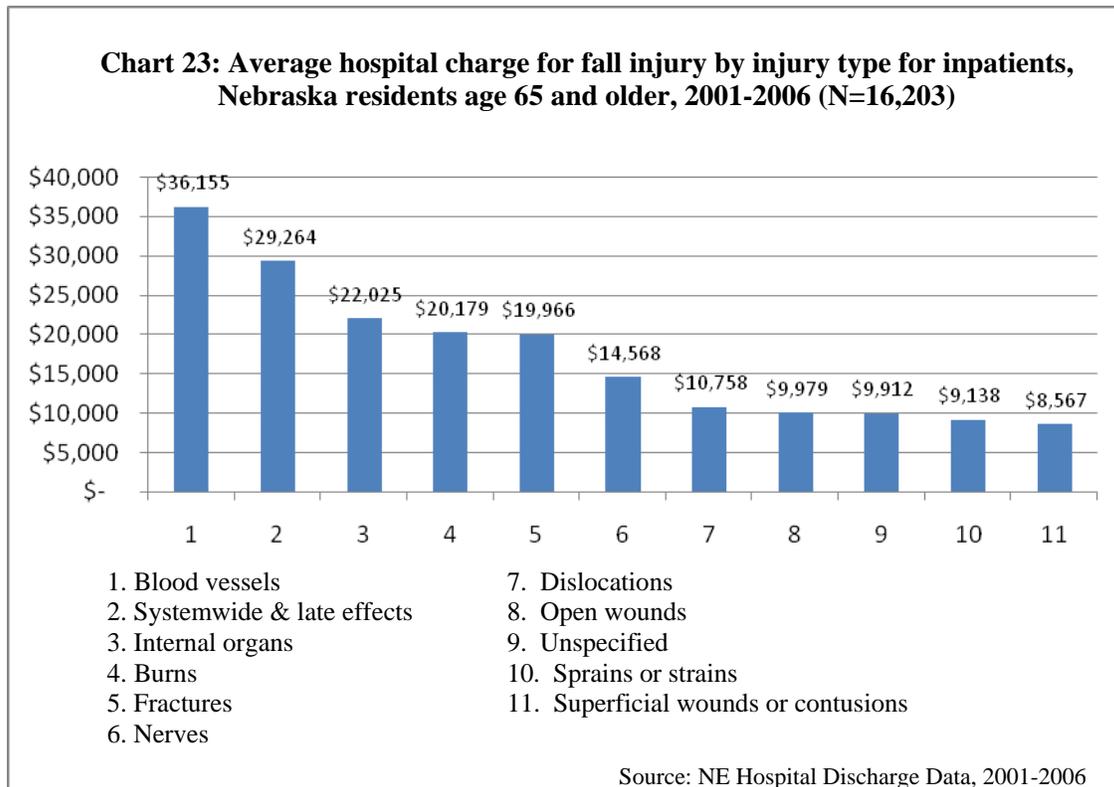
Source: NE Hospital Discharge Data, 2001-2006

Falls: Charge by Injury Type

Internal organ injuries, with an average charge of \$3,385, were the most expensive fall injury type for ER patients (Chart 22). This was followed closely by amputation and nerve injuries, with charges of, respectively, \$3,259 and \$2,933.



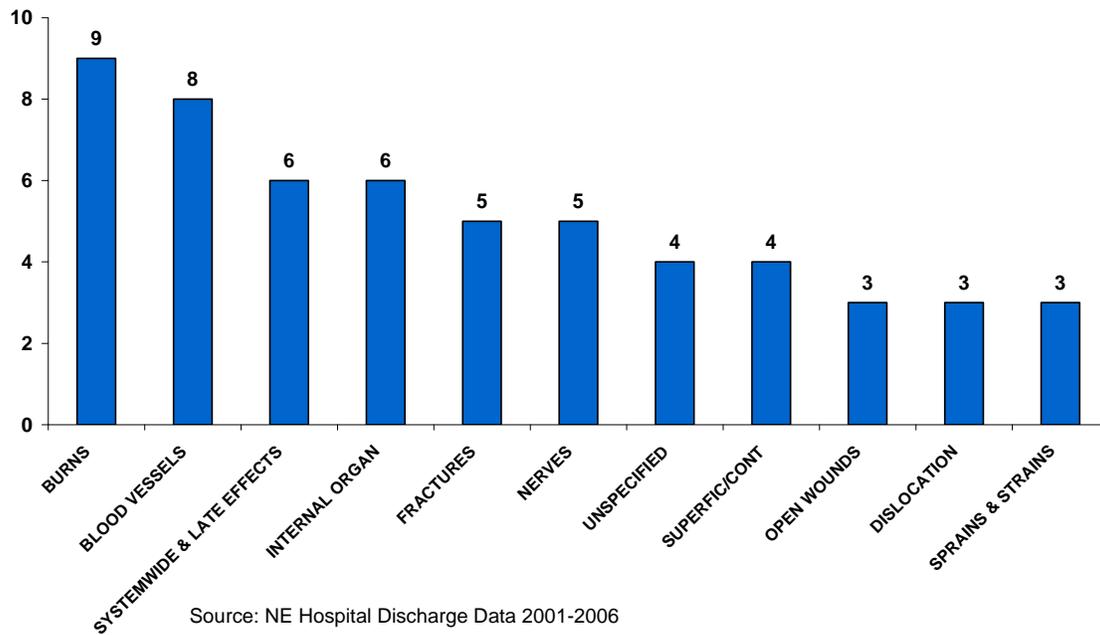
The most expensive fall injury type for inpatients was blood vessel injuries, with an average charge of \$36,155 (Chart 23). Systemwide and late effects, internal organ injuries and burns, followed behind blood vessel injuries as the most costly with average charges of \$29,264, \$22,025, and \$20,179, respectively.



Falls: Stay Length

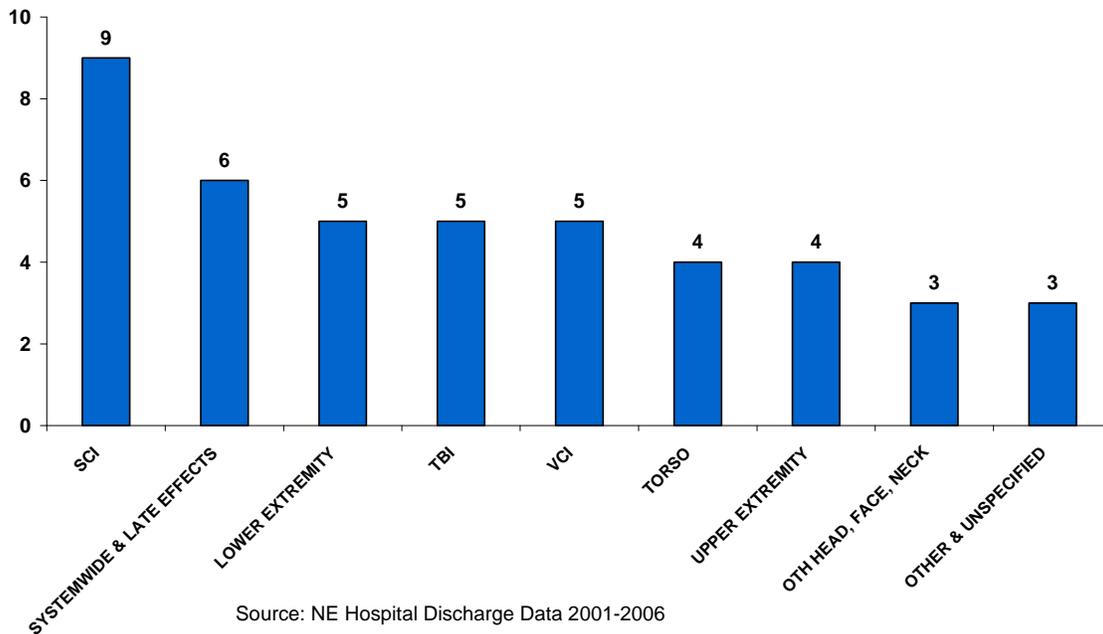
The longest average stay length based on site of injury for inpatients was for spinal cord injury patients, with an average stay length of 9 days (Chart 24). This was followed by systemwide and late effects from falls, with an average stay length of 6 days, and lower extremity injuries, with an average of 5 days.

Chart 24: Average hospital stay length for fall injury by injury site for inpatients, Nebraska residents age 65 and older, 2001-2006 (N=19,395)



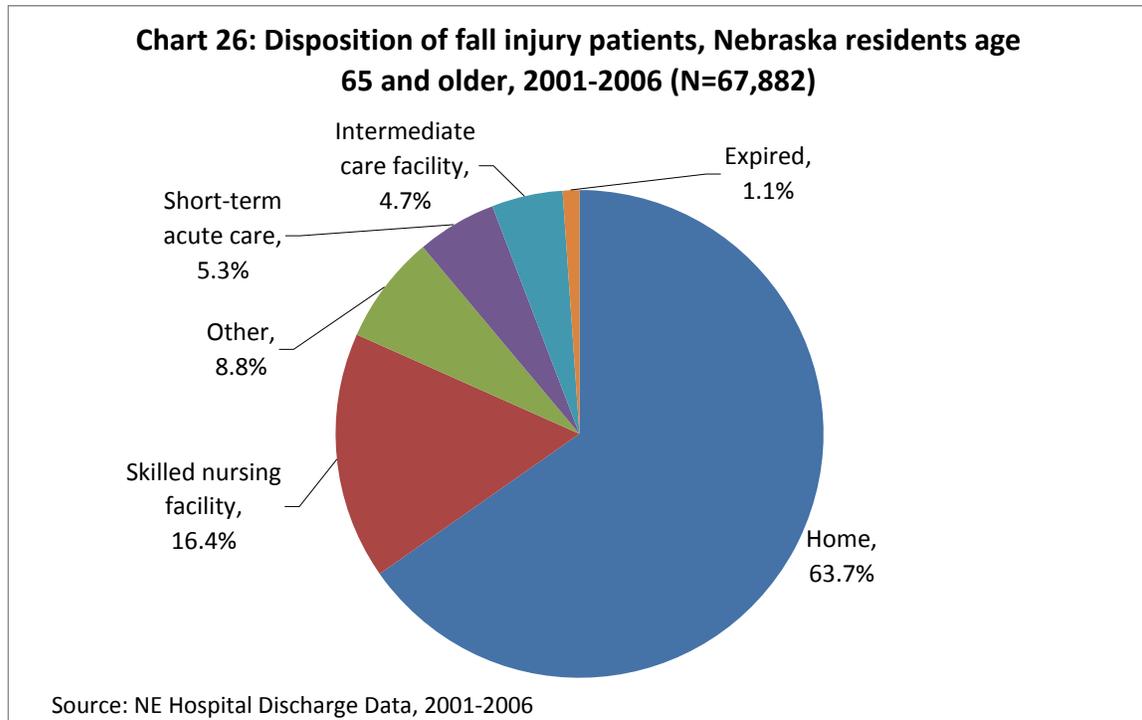
Patients who experienced burns as a result of their fall also had an average hospital stay length of 9 days (Chart 25). This was followed by blood vessel injuries, with an average stay of 8 days, and systemwide and late effects from falls, with an average stay length of 6 days.

Chart 25: Average hospital stay length for fall injury by injury type for inpatients, Nebraska residents age 65 and older, 2001-2006 (N=19,395)



Falls: Disposition

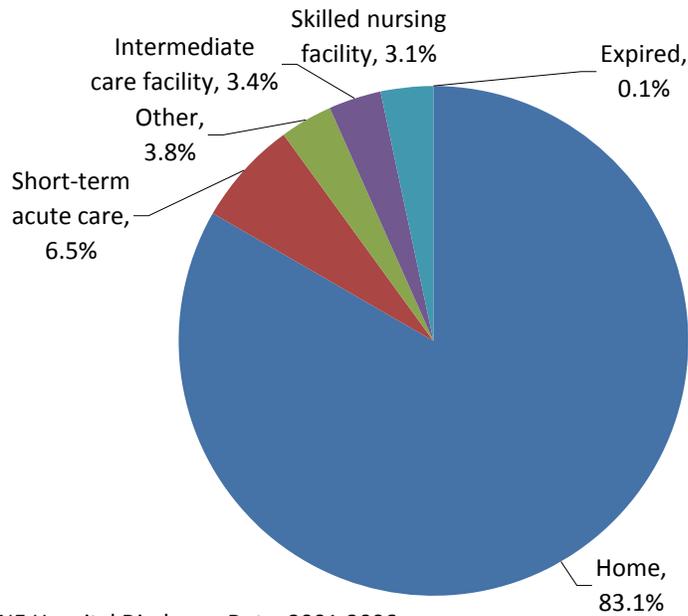
The majority of fall injury patients went home after being seen in the hospital (63.8%), while some were discharged to skilled nursing facilities (16.4%) such as nursing homes. Other places patients were discharged to included a hospital-based swing bed, rehabilitation facility or hospice care. Other patients (5.3%) went to short-term acute care facilities and intermediate care facilities (4.7%). 716 or 1.1% of patients expired (Chart 26).



The majority of ER patients (83.1%) were discharged to home after receiving care for a fall-related injury, while 6.5% of patients were discharged to short-term acute care facilities, intermediate care facilities (3.4%), skilled nursing facilities (3.1%), and other places (3.8%). 0.1% (66) of ER patients expired (Chart 27).

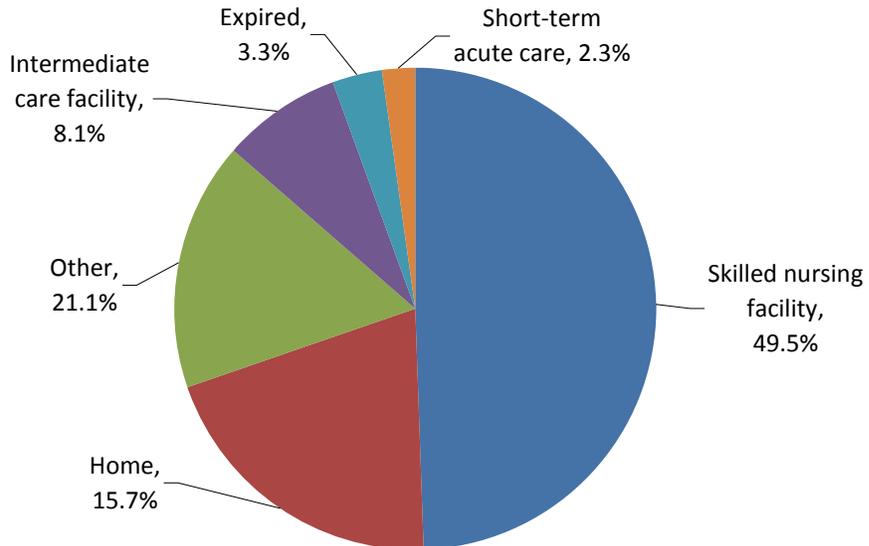
Most inpatients in Nebraska were discharged to skilled nursing facilities (49.5%), followed by discharge to home (15.7%), intermediate care facilities (8.1%), short-term acute care facilities (2.3%) and other places (21.1%), such as rehabilitation facilities, hospice care and long term care hospitals. 650 or 3.3% of inpatients expired (Chart 28).

Chart 27: Disposition of E.R. fall injury patients, Nebraska residents age 65 and older, 2001-2006 (N=48,487)



Source: NE Hospital Discharge Data, 2001-2006

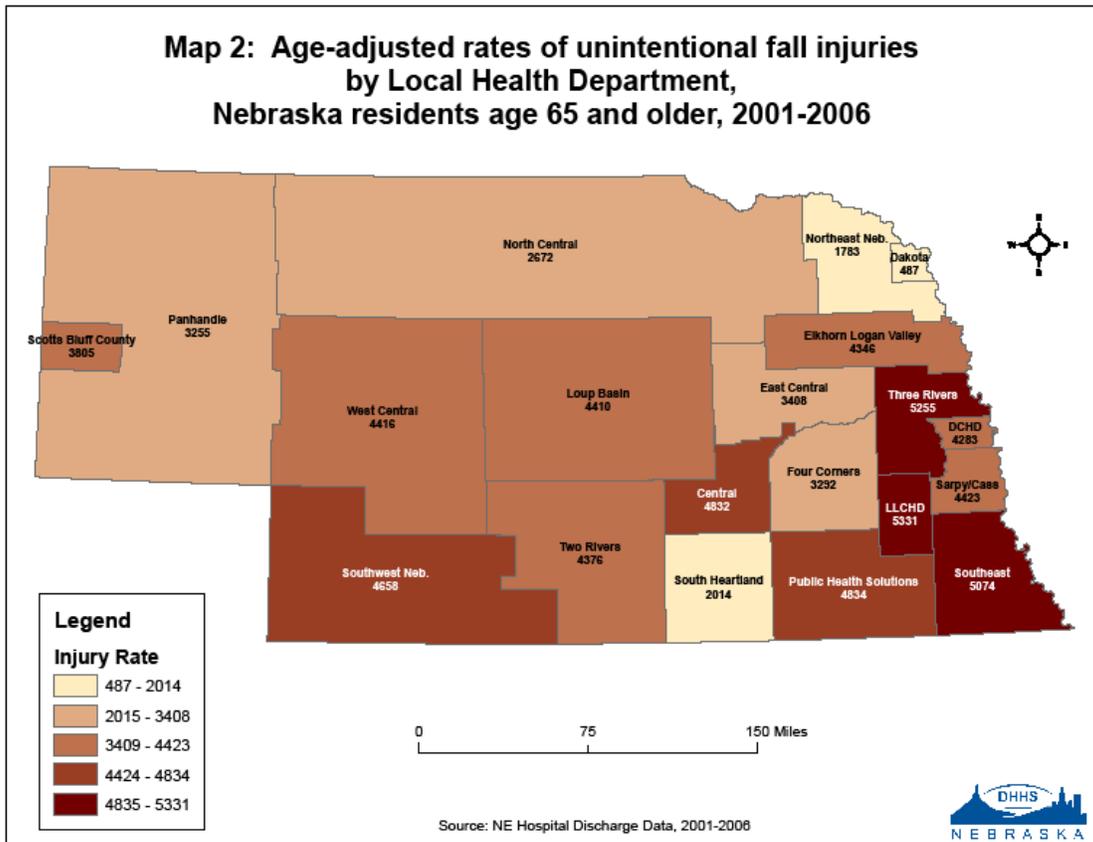
Chart 28: Disposition of fall injury inpatients, Nebraska residents age 65 and older, 2001-2006 (N=19,395)



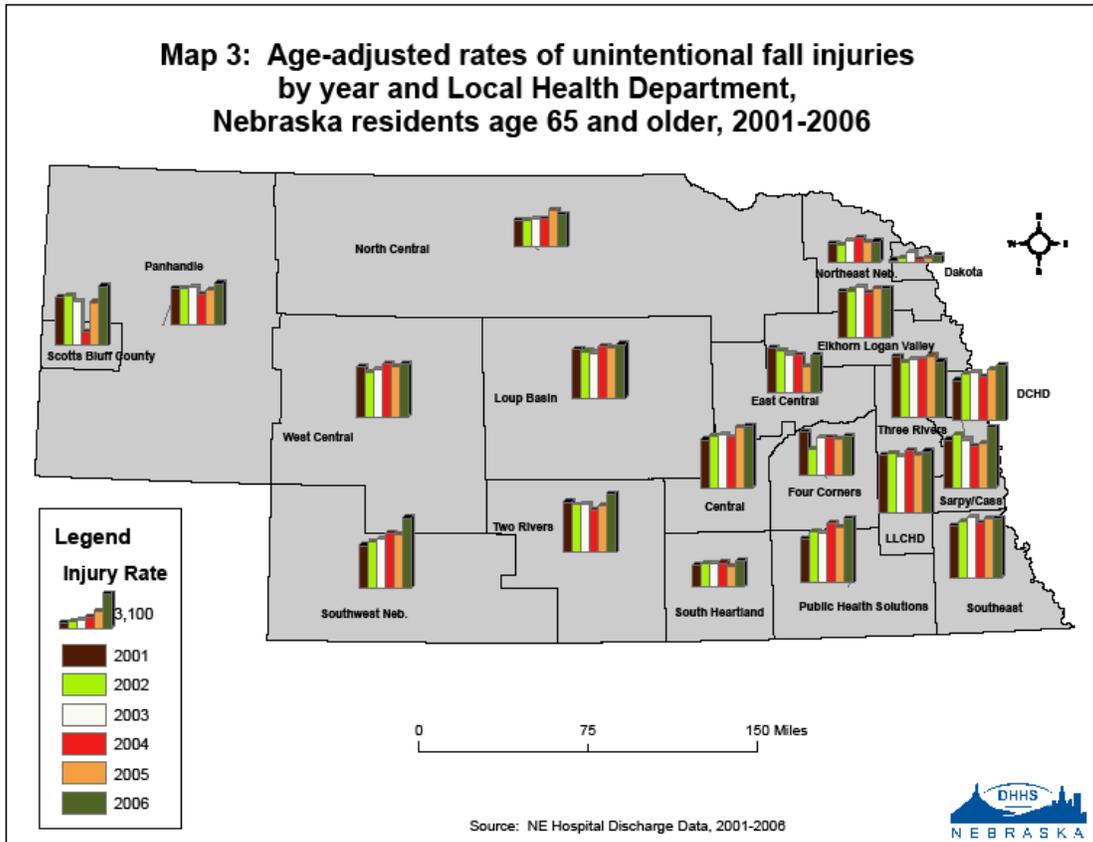
Source: NE Hospital Discharge Data, 2001-2006

Discharge Rate by Local/District Health Department Coverage Area

From 2001-2006, the age-adjusted hospital discharge rate due to unintentional falls was 4,433 per 100,000 (n=68,809) for Nebraska residents age 65 and older. Fall injury death rates also vary by local health department areas, ranging from 487 to 5,331 per 100,000 population. Among these health department coverage areas, Lincoln/Lancaster Health Department had the highest hospital discharge rate (5,331 per 100,000, n=9,348), followed by Three Rivers Public Health Department (5,255 per 100,000, n=4,158). Dakota County Health Department had the lowest hospital discharge rate (487 per 100,000, n=66) (Map2).



Map 3 shows the fall injury trends over the years 2001 - 2006 among Nebraska residents age 65 and older by local health department coverage areas. Overall, the age-adjusted hospital discharge rates increased for most of the local health department areas (Map 3).



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