

EXECUTIVE SUMMARY

This report addresses fatal and nonfatal unintentional falls among Ohio residents from 2002-2005. The data were derived from Ohio death certificates and the OHA's hospital inpatient discharge (HID) and emergency room (ER) datasets, compiled from all OHA member hospitals. Conclusions drawn from these data about falls in Ohio from 2002-05 include:

Falls contribute substantially to the burden our health care system faces.

- Falls are the overall leading cause of injury-related ER visits and HIDs in Ohio. Forty-five percent of all injury HIDs and 27 percent of all injury ER visits are due to falls. For adults aged 65 and older, these percentages increase to 83 and 61 percent, respectively.
- For children younger than 14 years and adults aged 45 years and older, falls lead to more hospitalizations than any other injury.
- From 2002-2005, 66,845 fall-related HIDs resulted in 303,895 days of hospital stay. In addition, 817,074 ER visits were caused by fall-related injuries.
- Fall-related mean length of stay decreased by 5 percent from 2002-05. However, due to the 24 percent growth in the number of inpatients, total days stay actually increased 18 percent.

Fall-related injury rates are on the rise.

- From 2002-05, the overall number and rate of fall-related HIDs increased each year. , the inpatient discharge rate increased 18 percent from 121.4 per 100,000 in 2002 to 143.5 in 2005.
- Fatal fall rates increased an even greater amount, (30 percent), during this time period: from 5.6 per 100,000 in 2002 to 7.3 in 2005.

Falls are extremely costly and costs continue to grow.

- Fall-related HIDs resulted in \$1.2 billion in medical charges in Ohio from 2002-05, more than those associated with treating hospital-admitted injuries from motor vehicle traffic, self-harm, assault and unintentional poisoning combined.
- Overall, charges for persons treated for fall-related injury increased 58.4 percent, from \$229,707,264 in 2002 to \$363,849,305 in 2005.
- The total estimated cost of fatal falls (medical, lost work and decreased quality of life), was \$646 million annually in Ohio of which medical costs (\$11.7 million) represented only 2 percent. Indirect costs such as work-loss (\$145 million) and diminished quality-of-life (\$489 million) were far more substantial. The same is true for non-fatal, hospital-admitted falls; medical costs represent only 8 percent, (\$496 million) of the staggering \$6.2 billion annually in Ohio. Work-loss costs (\$526 million) for non-fatal falls were slightly higher, while quality-of-life costs accounted for the overwhelming majority (\$5.2 billion).

Falls result in severe injuries.

- Hip fractures were the most frequent fall-related injuries, followed by lower limb and upper limb fractures. In Ohio, more than 25,000 fall-related hip fractures occurred from 2002-05.
- Most (79 percent) females hospitalized for a fall fractured their lower or upper limb, pelvis and/or hip.
- A significant number of treated fallers (8,211) also required treatment for traumatic brain injury (TBI). More than one in four TBIs in Ohio were associated with falls.
- From 2002-05, the proportion of fall-related HIDs with TBI increased each year, as did HID rates with fall-related TBI.

The circumstances of a fall (i.e., type and location of fall) can be useful in designing prevention efforts; however, they are frequently missing in injury data.

- The type (e.g., stairs/steps, furniture) of fall was unspecified for more than half of all fatal falls. For HIDs, the proportion of unspecified fall type increased with age from 8 percent for infants to nearly half (47 percent) for ages 85 and older. A more thorough accounting of the circumstances surrounding these falls would greatly enhance future prevention efforts.
- For location of fall, the percent missing or unknown was 69 for ER visits, 60 for HIDs and 15 for deaths. When location was known, most falls occurred in the home: 61 percent of ER visits, 84 percent of HIDs and 70 percent of deaths. The proportions were greatest for those ages 4 and younger and 65 and older.
- Children and youth are at higher risk for specific types of falls at different age groups. For example, infants and toddlers fall more from furniture and down stairs while older children fall more during sports- and recreation-related activities.
- There are gender differences in risk for type of fall. For sports- and recreation-related falls in particular, young males were at the highest risk, except for playground-related falls where the risk was nearly identical for both males and females.

There are significant gender differences in fall-related injury .

- Females accounted for approximately two out of three fall-related HIDs (44,049 of 66,845).
- Among younger persons (through age 54) treated for a fall-related injury, males were overrepresented, while older fallers were increasingly more likely to be female.
- Both mean charges and length of stay were greater for males than females in every age group.
- Nearly three-fourths of treated, fall-related hip fractures occurred among women: 18,605 females and 6,711 males. Males are at greater overall risk for TBIs.

Falls are a notable problem in the workplace.

- Falls are the second-leading cause of fatal occupational injury after transportation-related injury. From 2003-06, 87 deaths in the workplace were due to falls, accounting for 11 percent of all fatal occupational-related injuries.

FALLS AMONG OLDER OHIOANS- AGES 65 AND OLDER

Falls are particularly harmful to older adults. Falls and fall-related injury seriously affect older adults' quality of life and present a substantial burden to the Ohio health-care system. They easily surpass all other mechanisms of injury as a cause of ER visits, hospitalization and death. For this reason, the falls report focuses special attention on this urgent public health issue. Important findings related to falls among older adults include:

Falls among older adults have reached epidemic proportions and rates continue to rise.

- From 2002-05, there were more than two and a half (2.6) fall-related ER visits for every 100 Ohio older adults and nearly eight (7.7) fall-related HIDs for every 1,000 Ohio older adults.
- Fall death rates among older Ohioans have increased 56 percent since 1999, and will continue to increase as the baby-boomers skew population dynamics. The proportion of Ohioans aged 65 and older is projected to increase by 50 percent from 2010 – 2030. The 515 fatal falls among those 65 or older in 2002 are expected to increase to nearly 900 by 2009.

Older adults account for a disproportionate share of fall-related injury.

- In 2005, persons 65 and older accounted for 20 percent of all fall-related ER visits, 71 percent of fall-related inpatient discharges and *81 percent of deaths*, while they represented only 13 percent of the overall Ohio population.
- Fall-related ER visit and hospitalization rates for Ohioans 65 years and older were higher than rates for all other injuries combined.

The likelihood of falling and the severity of fall-related injury increases with age, and therefore the risk for hospitalization and death.

- Mean age increased when comparing fall-related ER visits (37.5 years), HIDs (70.1 years) and deaths (76.2 years).
- Younger Ohioans were more likely to be treated in an ER for fall-related injuries and not to require an overnight stay in the hospital. Mean length of stay in days increased with age.
- More than 90 percent of fall-related hip fractures occurred among those 65 years and older, and nearly half (48.7 percent) of fall-related HIDs among those 65 and older had a hip fracture.

Age and gender play a large role in determining risk for type of fall.

- For males, type of fall was largely determined by their activities, while for females, health issues frequently associated with aging may have played a greater role.
- The likelihood that a fall occurred on the same level from a slip, trip, or stumble as opposed to falling from one level another (e.g., down stairs, off a cliff, etc.) increases with age, particularly for females.

Older adults with poor health status and those who are isolated are at greater risk for falling.

- BRFSS respondents with diabetes, eye disease, obesity, heart disease or stroke had a higher prevalence of falls in the past three months than those without. Social isolation is a risk factor for fatal falls. Married elders were significantly less likely to die from a fall than the unmarried.

Fatal and medically-treated falls represent only a proportion of all falls among older adults.

- As reported in the 2006 BRFSS results, 14.3 percent of Ohio respondents aged 65 and older indicated that they fell during the previous three months, projecting to a total of approximately 215,000 persons who suffered at least one fall. Nearly one-third of those who fell (31.6 percent), or an estimated 69,000, reported sustaining an injury that resulted in a doctor visit or restricted activity.
- The psychological consequences of a fall can be severe, resulting in fear and decreased quality of life from self-imposed restriction of activities, social isolation and depressive symptoms.

Additional resources for prevention of falls among older adults are needed.

- Due to the large and growing burden of fall-related injury in Ohio, especially among older Ohioans over 65 years, additional resources are needed at both the state and local level for evidence-based prevention initiatives.
- **Falls are not a normal part of aging.** There are simple steps that older adults can take to reduce their risk for a fall. Additional resources including checklists and brochures are available from the CDC at: <http://www.cdc.gov/ncipc/duip/preventadultfalls.htm>.