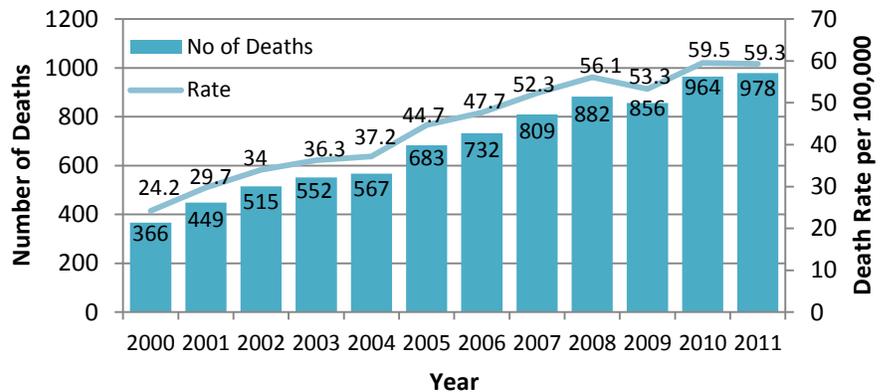


FALL-RELATED INJURY AMONG OLDER ADULTS IN OHIO

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 surpass all other mechanisms of injury as a cause of ED visits, hospitalization and death. The following data provide clear justification of the need for fall prevention efforts.

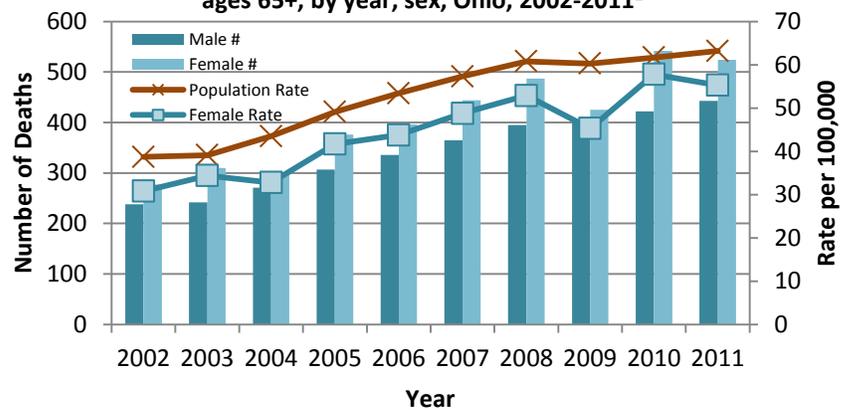
- Falls among older adults have reached epidemic proportions and rates continue to rise.
- From 2000 to 2011, Ohioans aged 65 and older experienced a 167% increase in the number of fatal falls and 145% increase in the fall death rate (Figure 1).
- On average, 2.6 older Ohioans suffered fatal falls each day in 2011 (Figure 1).

Figure 1. Annual number and rate per 100,000 of fatal falls by year, ages 65+, Ohio 2000 to 2011¹



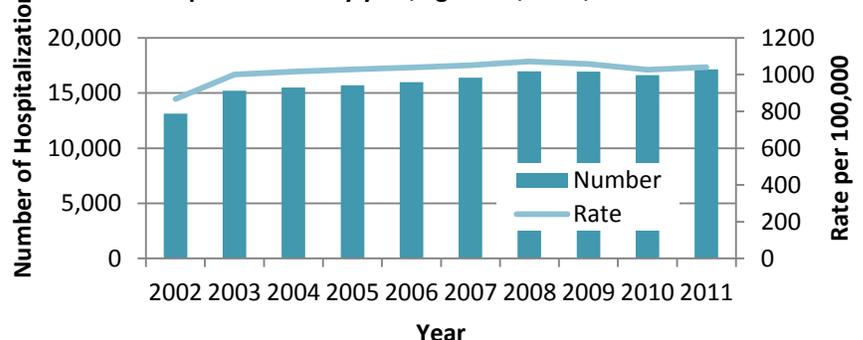
- Older males are at greater risk for suffering a fatal fall, even though there are a greater number of fatal falls among older females (Figure 2).
- Older females have higher non-fatal fall-related injury rates than males (Figure 7).

Figure 2. Number and rate per 100,000 of fatal falls, ages 65+, by year, sex, Ohio, 2002-2011¹



- In 2011, there were 3.9 fall-related ED visits for every 100 Ohio older adults (data not shown) and 10.5 fall-related hospitalizations for every 1,000 Ohio older adults (Figure 3).
- Fall-related hospitalizations and hospitalization rates increased 32% and 21% respectively from 2002 to 2011 (Figure 3).

Figure 3. Number and rate per 100,000 of fall-related hospitalizations by year, ages 65+, Ohio, 2002-2011



¹Source: Ohio Department of Health, Office of Vital Statistics

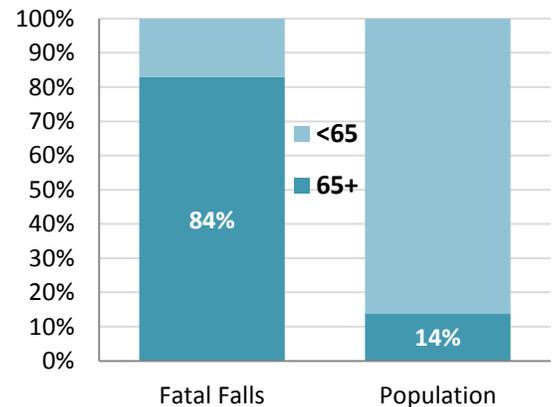
²Source: Ohio Hospital Association

FALL-RELATED INJURY AMONG OLDER ADULTS IN OHIO

Older adults are disproportionately affected by fall-related injury.

- Falls are the leading cause of injury-related ED visits, hospitalizations and deaths for Ohioans aged 65 and older.^{1,2} Fall-related ED visit and hospitalization rates for Ohioans 65 years and older are higher than rates for all other injuries combined.¹
- Ohioans 65 and older accounted for approximately 84% of fatal falls in 2011; while they represent only 14% of the population (Figure 4.)
- Risk for suffering serious injury after a fall increases dramatically with advancing age (Figure 7). Females 85 years and older account for half of fatal falls, while they account for only 3% of the female population.¹

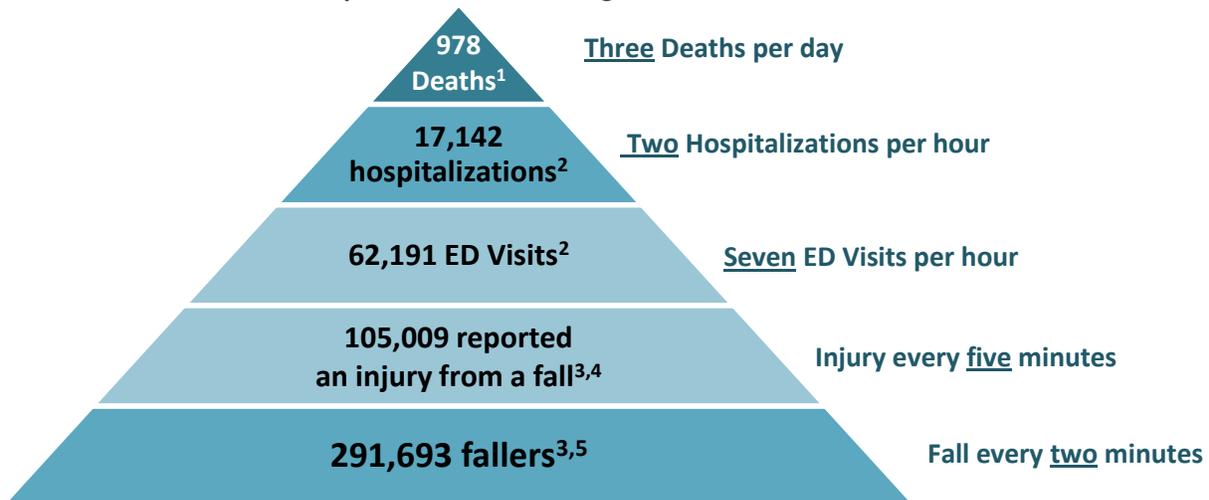
Figure 4. Distribution of fatal falls compared to population by age group, 65+ years vs <65 years, Ohio 2011¹



¹Source: ODH Office of Vital Statistics

²Source: Ohio Hospital Association

Figure 5. Number of fall-related deaths,¹ Hospitalizations,² ED visits,² and self-reported injured fallers^{3,4} And self-reported fallers,^{3,5} for ages 65 and older, Ohio, 2010-11



¹Source: ODH Office of Vital Statistics, 2011 data ²Source: Ohio Hospital Association, 2011 data ³Source: BRFSS Survey, 2010

⁴Self-reported fallers (estimated) whose fall in preceding 12 months resulted in a doctor's visit or restricted activities for at least one day ⁵BRFSS respondents who reported experiencing a fall in the preceding 12 months

Fatal and medically-treated falls represent only a proportion of all falls among older adults. Falls have significant consequences on quality of life.

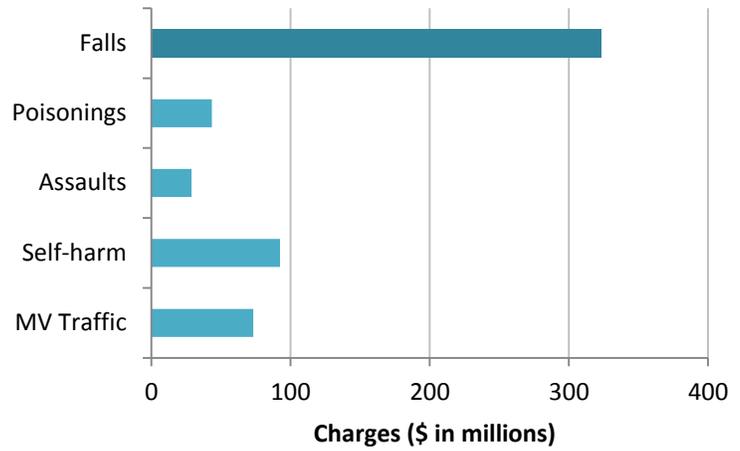
- As reported in the 2010 Behavioral Risk Factor Surveillance Survey (BRFSS) results, 17.3% of Ohio respondents aged 65 and older indicated that they fell during the previous three months, projecting to a total of approximately 291,693 persons who suffered at least one fall. More than one-third of those who fell (34%), or an estimated 105,009 older Ohioans, reported sustaining an injury that resulted in a doctor visit or restricted activity (Figure 3, equaling a fall-related injury every five minutes on average.
- The psychological consequences of any fall, whether injury-causing or not, can be severe, resulting in fear and decreased quality of life from self-imposed restriction of activities, social isolation and depressive symptoms. These "near-miss" falls can put someone at risk for future falls as well if they are not adequately assessed and managed by a health care professional.

COSTS ASSOCIATED WITH FALL-RELATED INJURY AMONG OLDER OHIOANS

Falls are Costly!

- In 2011 in Ohio, direct treatment charges for fall-related hospitalizations totaled \$323 million. These charges represent nearly two-thirds (61%) of the \$525 million in charges for the five leading causes of injury combined (*Figure 6.*)
- Direct medical costs represent only a fraction (8%) of the total cost of falls among older adults in Ohio - **\$4.2 billion** in 2003 (*Table 1*).

Figure 6. Total charges (in millions) for inpatient treatment of leading causes of injury, by type of injury, Ohio, 2011



¹Source: Ohio Hospital Association

Table 1. Average Annual Cost of Non-fatal, Hospital-admitted Falls Among Older Adults, Ages 65+ Ohio, 2010¹

	65+ yrs Total	Percent of Fall Costs for All Ages	Percent of Ohio population 65+
Incidence of Fall-related Hospital Admissions	16,636¹	72%	14%
Medical	\$ 360 million²	22.4%	
Work-Loss	\$ 207.7 million²	38.4%	
Total Costs	\$ 567.7 million²	65.7%	

¹Source: Ohio Hospital Association 2 CDC WISQARS Cost of Injury Reports <http://wisqars.cdc.gov>

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

- Average age increases when comparing fall-related ED visits (41 years), inpatient hospitalizations (72 years) and deaths (87 years). Younger Ohioans are more likely to be treated in an ER for fall-related injuries and not to require an overnight stay in the hospital.¹
- Average length of stay in days also increases with age.¹
- More than 89 percent of fall-related hip fractures occur among those 65 years and older, and approximately 40 percent of fall-related inpatient hospitalizations among those 65 and older involved a hip fracture.¹
- Ohio's 65+ population is projected to increase by 100 people per day for the next 14 years.

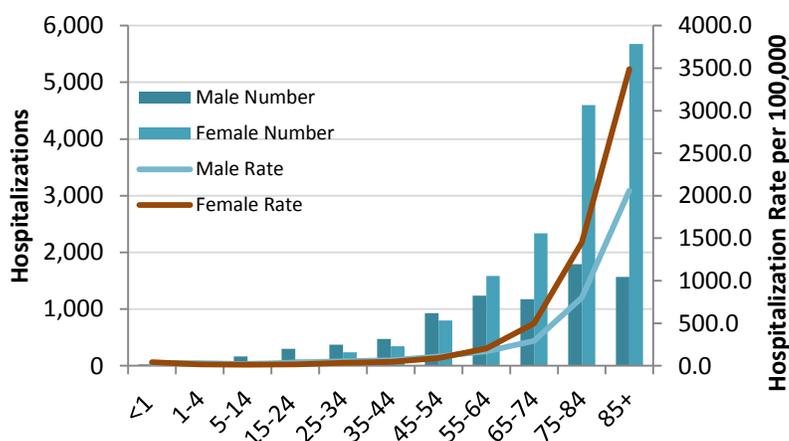
¹Source: Ohio Hospital Association

FALL-RELATED INJURY AMONG OLDER OHIOANS

Older females have higher risk for non-fatal fall-related injury.

- In 2011 hospitalization rates ranged from lows of 16.7 per 100,000 for females aged 5-14 to highs of 3,031 per 100,000 for females 85 and older (Figure 7).
- From ages 65 and older, female risk for fall-related injury skyrockets, with the disparity between male and female rates widening with advancing age. In numbers of fall-related hospitalizations, there were 2 women treated for every man among 65-74-year-olds and there was a 3.6 to 1 female/male ratio for those aged 85 years and older (Figure 7).

Figure 7. Average Annual Fall-Related Inpatient Hospitalization Rates, by Age Group, Sex, Ohio, 2011

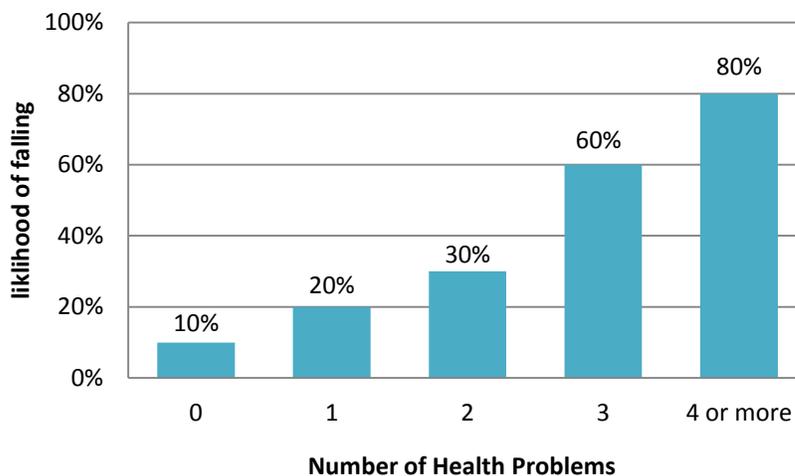


¹Source: Ohio Hospital Association

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

- The number of health problems and the risk of falling increase proportionately (Figure 8).
- BRFSS respondents with diabetes, stroke as well as those using special equipment and having a sedentary lifestyle had a higher prevalence of falls in the past three months than those without (Ohio BRFSS Survey 2010).
- Social isolation is a risk factor for fatal falls. Married elders are significantly less likely to die from a fall than the unmarried (ODH Office of Vital Statistics).

Figure 8. Number of Health Problems and Risk for Falling among Adults, aged 65 and older¹



¹Source: Tinetti et al., 1988

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 to implement 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>

FALL-RELATED INJURY AMONG OLDER ADULTS IN OHIO

Fall Fatality Rates among 65+ by County, Ohio, 2008-2011

