

EDWARD P. MANGANO
COUNTY EXECUTIVE



MARIA TORROELLA CARNEY,
M.D., F.A.C.P.
COMMISSIONER

Nassau County Department of Health

Division of Chronic Disease, Research and Prevention

FALLS AMONG OLDER ADULTS: FROM THE NATIONAL, STATE AND LOCAL PERSPECTIVE

Falls among the older adult population are a major public health concern. This problem is often overlooked, viewed as an inevitable reality of getting older; however, falls are preventable and predictable events with associated risk factors in certain populations.

The following report investigates the public health concern of falls among older adults on the national, state and local scale, calling particular attention to the problem in Nassau County and addressing ways to solve it.



FALLS AMONG OLDER ADULTS:

FROM THE NATIONAL, STATE AND LOCAL PERSPECTIVE

Falls are prevalent among older adults nationwide.

Every year approximately one third of adults who are 65 years and older and one half of adults 80 years and older experience a fall^{1,2}.

Among those adults who fall, half will fall again within the year².

Falls can be devastating for older adults nationwide.

Approximately one out of ten falls among older adults result in a serious injury, such as a hip fracture or head injury, that requires hospitalization³.

In 2005, traumatic brain injuries (TBI) accounted for 50% of fatal falls among older adults⁴.

In 2006, adults 65 and older made up over half (566,000) of the 1.1 million fracture related hospitalization discharges⁵

In 2007, falls were the leading cause of death among all injury types in the adult 65 and older population (18,334) greater than motor vehicle crashes (6,632)and suicide by firearms (3,895)⁶

In 2008, 2.1 million nonfatal fall injuries among older adults were treated in emergency departments and more than 559,000 of these patients were hospitalized⁶.

Falls are costly to older adults nationwide.

In 2000, the total direct medical costs (paid for by insurance companies and patients) of all fall injuries for older adults was \$19.2 billion⁷.

In 2002, Medicare costs per fall averaged between \$9,113 and \$13,507⁸.

Costs for fall-related injuries vary by age and sex factors- older adults and women report higher costs associated with their fall related injuries⁷.

Certain injuries vary in costs, with TBI and injuries to hips, legs and feet among the most common and costly⁷ .

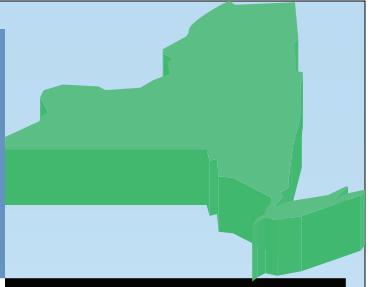
Beyond the financial costs of falls, there is a significant cost to the quality of life of older adults who fall, namely the loss of independence, emotional distress and fear of future injury.

Falls among older adults are preventable nationwide.

Older adults can significantly reduce their risk of falling by doing the following:

- ✓ Exercise regularly to increase strength and improve balance.
- ✓ Ask their doctor or pharmacist to review their medicines to reduce side effects & interactions
- ✓ Have an eye exam at least once a year for a checkup and always update eyeglasses.
- ✓ Improve home safety by tripping hazards, adding grab bars and railings, and improving the lighting in their homes.

FALLS AMONG OLDER ADULTS: FROM THE NATIONAL, STATE AND LOCAL PERSPECTIVE



Falls are prevalent among older adults in New York State.

Falls are the leading cause of injury deaths, hospitalizations & emergency department visits among adults 65 and older in New York State⁹.

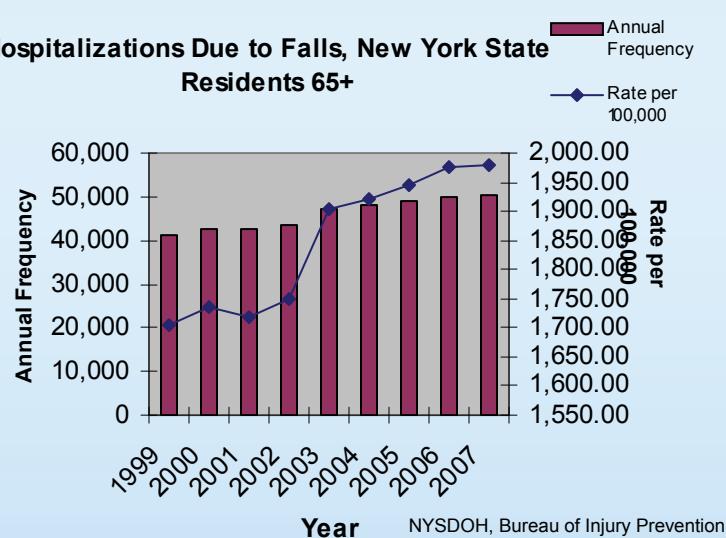
Every day, because of a fall:

- o 2 older New Yorkers die
- o 136 older New Yorkers are hospitalized
- o 215 older New Yorkers are seen in Emergency Departments⁹

Falls can be devastating for older adults in New York State.

Fall related hospitalizations among older adults in New York State are increasing.

60.0% of adults 65 and older who are hospitalized due to a fall end up in a nursing home or rehabilitation center⁹.



Among adults 65 and older who are hospitalized due to a fall, 10.8% suffer a traumatic brain injury and 28.4% experience a hip fracture⁹.

Falls are costly to older adults in New York State.

Falls account for \$1.5 billion in annual hospitalization charges and \$123.5 million in annual outpatient emergency department charges⁹.

Falls among older adults are preventable in New York State.

[New York State Office for the Aging](#) is part of the Executive Department in NYS, advocates for policies and programs to support elderly New Yorkers and their families in partnership with the network of public and private organizations which serve them.

[Home Safety Council, Older Adults](#) provides information for older adults and their caregivers about home safety including falls, fires, and medication use.

[ProAction Senior Wellness Program](#) in Bath, New York provides educational resources and programming for injury prevention, mental health services, exercise and physical fitness, nutrition, osteoporosis, and stress management at no cost to seniors. "Safety in the Home" program provides individual safety surveys and educates adults about preventing falls and fractures in the home, medication management services provide screening of medicines and education to prevent incorrect medication use and adverse drug effects.

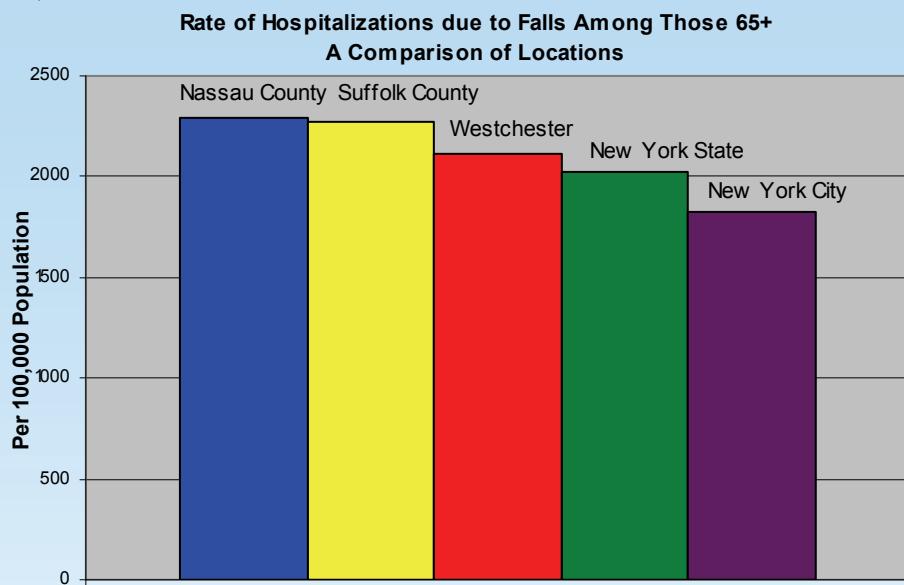
[Umbrella of the Capital District](#) is a membership organization which provides high quality home maintenance to improve the home environment and prevent injuries

FALLS AMONG OLDER ADULTS: FROM THE NATIONAL, STATE AND LOCAL PERSPECTIVE

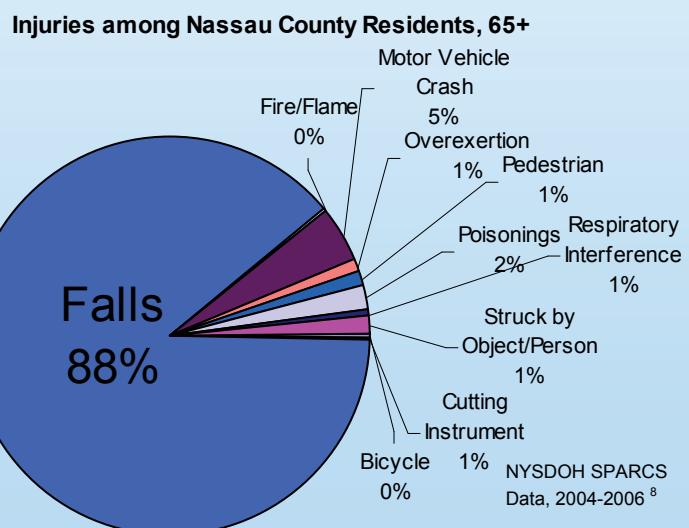
Falls among older adults are prevalent in Nassau County.

88% of all injury hospitalizations were due to falls in the older adult population of Nassau County, followed by motor vehicle accidents at a mere 5%. Although motor vehicle accidents are a major injury and concern across age groups, among older adults fall related injuries are the biggest problem¹⁰.

NYSDOH SPARCS
Data, 2004-2006⁸



From 2004-2006, Nassau County reported a rate of 2,290 fall related hospitalizations per 100,000 population as compared to 2,269 in Suffolk, 2,110 in Westchester, 2,027 in New York State and 1,824 per 100,000 in New York City⁸. When comparing rates of falls by sex between Nassau County and the State both men and women in Nassau County report higher rates of fall related injuries than New York State. Overall, the female rate of fall related injuries is greater on both the state and county level, which is consistent with national data. Women are more likely to suffer nonfatal injuries because of a fall, while men are more likely to suffer from fatal injuries due to falls⁶.

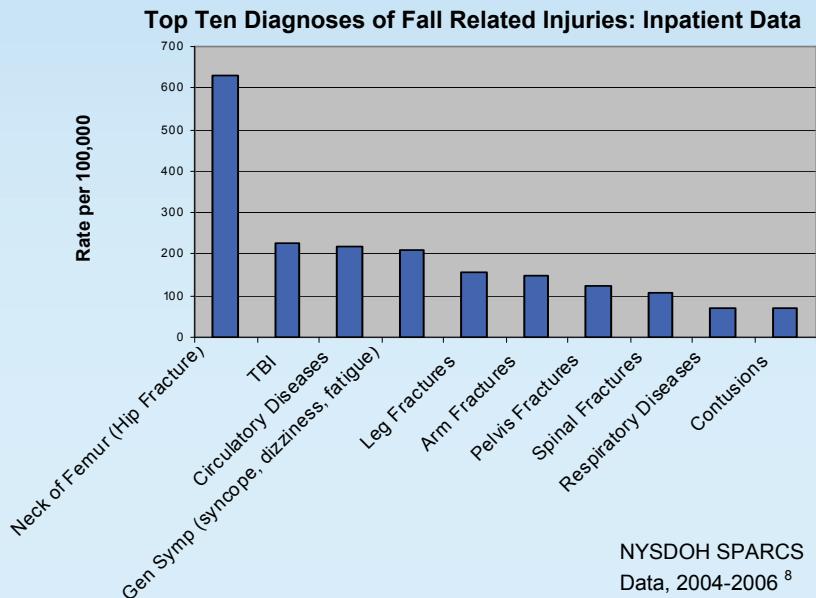


As age increases the proportion of fall related injury hospitalizations increases drastically, more so than any other type of injury.

Precise reasons for the high rate of falls in Nassau County are unknown; however, it is likely that the suburban environment plays an important role. In addition, Nassau County is one of the oldest suburbs in the nation, with this age may come unsafe home environments.

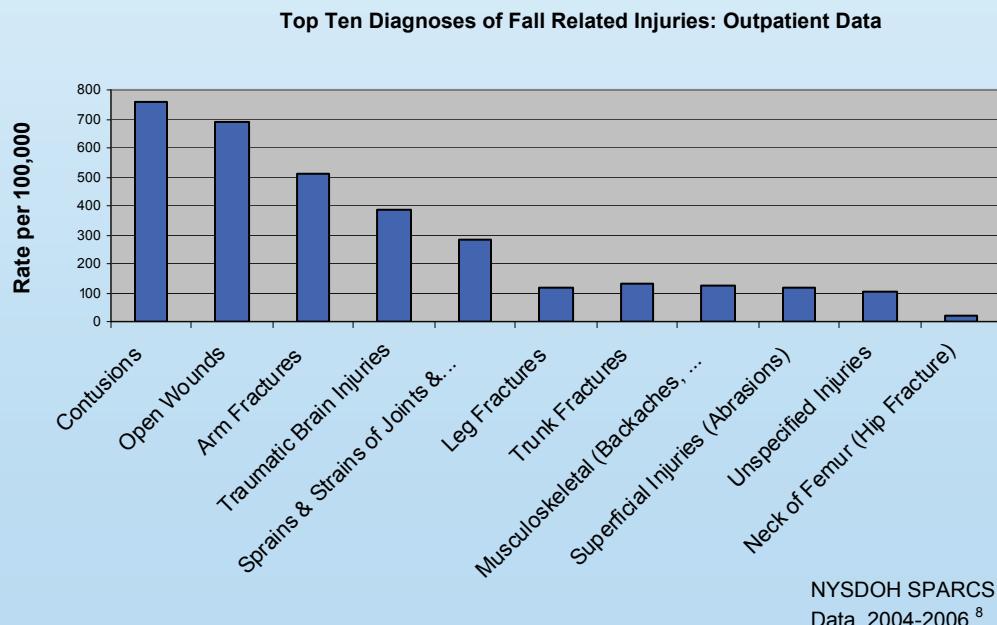
FALLS AMONG OLDER ADULTS: FROM THE NATIONAL, STATE AND LOCAL PERSPECTIVE

Falls can be devastating among older adults in Nassau County.



This graph highlights the most common principal diagnoses given to patients who are hospitalized for fall related injuries. The rate of hip fractures (630.2 per 100,000 population) is clearly the most common followed by traumatic brain injuries (TBI) (227.5 per 100,000 population) and circulatory diseases (218.8 per 100,000 population).

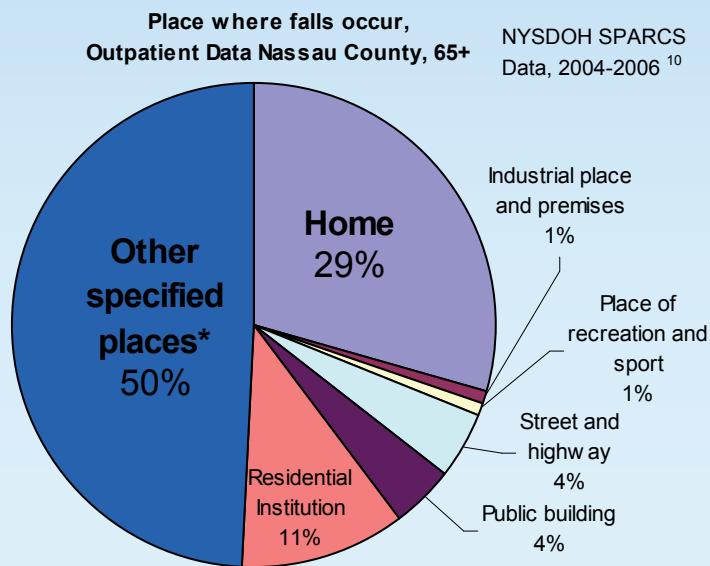
Contrasting with inpatient data, the graph below shows that more superficial injuries such as contusions (759.2 per 100,000), open wounds (691.8 per 100,000) and arm fractures (510.3 per 100,000) are the most common fall related injuries reported in outpatient data among Nassau County resident who are 65 years old and older .



In Nassau County, women had a significantly higher rate of hip fractures than men, and reported a higher rate of all principal diagnoses with the exception of traumatic brain injury (TBI), circulatory disease and respiratory disease.

FALLS AMONG OLDER ADULTS: FROM THE NATIONAL, STATE AND LOCAL PERSPECTIVE

Falls among older adults are preventable in Nassau County.



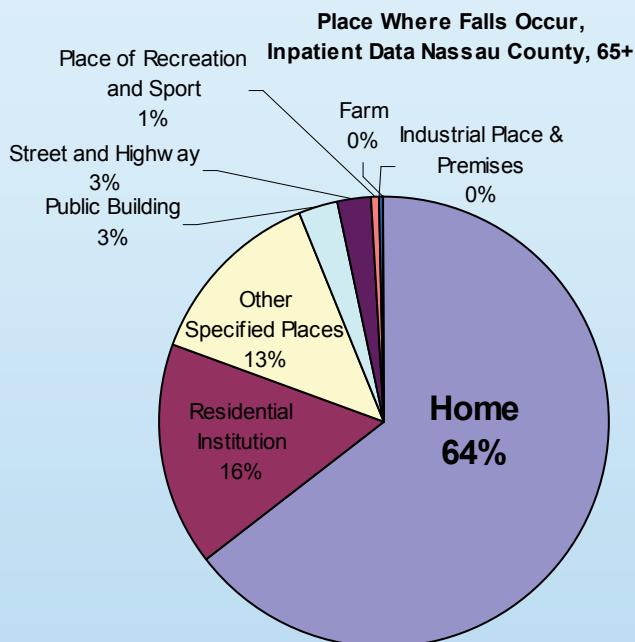
This graph shows the most common places where falls take place in Nassau County leading to emergency department visits. Of significance is the commonality of falling in “other specified places” which include a variety of public locations in a community.

The implications of this data is important when considering potential environmental hazards and steps that can be taken to prevent falls in the older adult population.

Environmental hazards which can lead to falls need to be considered in the construction and maintenance of community spaces.

Contrasting with outpatient data, fall related injuries which result in hospitalizations most commonly take place in the home, followed by residential institutions and other specified places. This seems to mean that more serious injuries (as measured by the difference between outpatient and inpatient classification) take place in the home as opposed to any other location.

The greatest threat to the safety of older adults in terms of locations seem to their own homes.



*beach, canal, caravan site, derelict house, desert, dock, forest, harbor, hill, lake, parking lot, pond, prairie, public place, railway line, reservoir, river, sea/shore, stream, swamp, trailer court, woods

NYSDOH SPARCS
Data, 2004-2006¹⁰

Increasing your home safety is easy!

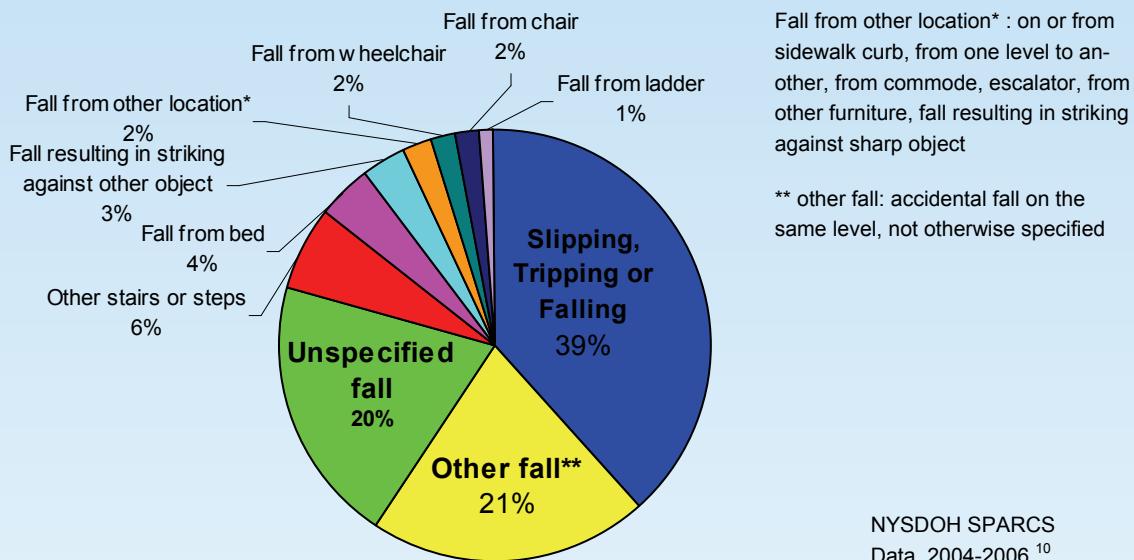
[Home Fall Prevention Checklist](#)

FALLS AMONG OLDER ADULTS: FROM THE NATIONAL, STATE AND LOCAL PERSPECTIVE

Falls are preventable among older adults in Nassau County.

The most common cause of fall related injuries among Nassau County residents 65 and older is due to "slipping, tripping or falling." These are falls that occur on a single level. It is notable that a considerable amount of fall related injury data include unknown or unspecified causes. Better documentation of fall related injury causes will enhance fall prevention efforts. When current local data is taken together, the most common place and cause of a fall related injury is due to "slipping, tripping and falling" in the home. Prevention of fall related injuries is related to older adults taking steps to better their physical health and their home environment.

Cause of Fall, Outpatient Data Nassau County, 65+



NYSDOH SPARCS
Data, 2004-2006¹⁰

Nassau County Department of Health is taking steps to specifically address the issues of falls among older adults with an aim of prevention.

Fall injury prevention is among Nassau County Local Health Priorities

- On October 22nd, NCDOH participated in a conference entitled *Standing Up for Falls: An Interdisciplinary Approach* Sponsored by Long Island Geriatric Education Consortium, Winthrop University Hospital.

Future Steps:

- Standardized fall injury intake forms - pilot
- Share data with local health department
- NCDOH Healthy Homes program to evaluate home safety
- Falls squad to investigate non-hospitalized fall cases

Educational Resources:

[Nassau County Department of Health: Terry Thomann, Falls Prevention Program Coordinator , 516-227-9446 Teresa.Thomann@hhsnassaucountyny.us](#)

[Senior Citizens Affairs](#)

[What YOU Can do to Prevent Falls](#)

[CDC Injury Prevention & Control, Falls- Older Adults](#)

[World Health Organization- Global Report on Falls Prevention in Older Age](#)

[New York State Office for the Aging](#)

[Home Safety Council, Older Adults](#)

[ProAction Senior Wellness Program](#)

[Umbrella of the Capital District](#)

References:

1. Cassel, C.K., Leipzig, R.M., Cohen, H.J., Larson, E.B., & Meier, D.E. *Geriatric Medicine: An Evidence-Based Approach*. New York: Springer- Verlag, 2003
2. O'Loughlin, J.L., Robitaille,Y., Boivin, J.F., & Suissa, S. "Incidence of and risk factors for falls and injurious falls among the community-dwelling elderly." *American journal of epidemiology* 137, no. 3 (1993): 342-354.
3. Nevitt, M.C, Cummings, S.R. & Hudes, E.S. "Risk factors for injurious falls: a prospective study". *Journal of Gerontology*, 46 (1991): 164-170.
4. Thomas, KA., "Fall-related traumatic brain injury deaths and hospitalizations among older adults, United States." *Journal of Safety Research*, 39 (2008): 269-272.
5. DeFrances, C.J., Lucas, C.A., Buie, V.C., & Golosinskiy, A. "2006 National Hospital Discharge Survey". *National health statistics reports*, 5 (2008). 1-20
6. Centers for Disease Control and Prevention, National Center for Injury Prevention and Control, [Web-based Injury Statistics Query and Reporting System \(WISQARS\)](#) accessed November 1, 2010.
7. Stevens JA, Corso PS, Finkelstein EA, Miller TR. The costs of fatal and nonfatal falls among older adults. *Injury Prevention* 2006;12:290-5
8. Shumway-Cook A, Ciolk MA, Hoffman J, Dudgeon BJ, Yorston K, Chan L. Falls in the Medicare population: incidence, associated factors, and impact on health care. *Physical Therapy* 2009;89(4):1-
9. New York State Department of Health, [Falls in Older Adults, New York State](#) accessed October 27, 2010
10. New York State Department of Health Statewide Planning and Research Cooperative System (SPARCS) Hospitalization Data, Nassau County 2004-2006.