

# Falls and Fall Prevention in Older Adults



# Objectives

At the end of the lecture, you will be able to:

- Define the terms “elderly” and “falls”
- Identify the risk factors for falls among elderly.
- Outline the consequences of falling.
- Describe the impact of physio/psychological changes with aging on the risk of falling.
- Describe the preventive measures

# Definition of a Fall

***An event which results in a person coming to rest inadvertently on the ground or floor or other lower level***

(World Health Organisation, 2007)

***An unexpected event in which the participant comes to rest on the ground, floor or lower level***

(Prevention of Falls Network Europe (ProFaNE) collaborators, 2007)



- Throughout the ageing process the occurrence of chronic illnesses are common and along with that disabilities and functional decline are often associated. (Wang et al., 2019; Fong, 2019)
- Among the consequences of age-related health problems Falls occupies a vital role as it interferes with the independence and quality of life of older people.

# Fall Rates Per Year



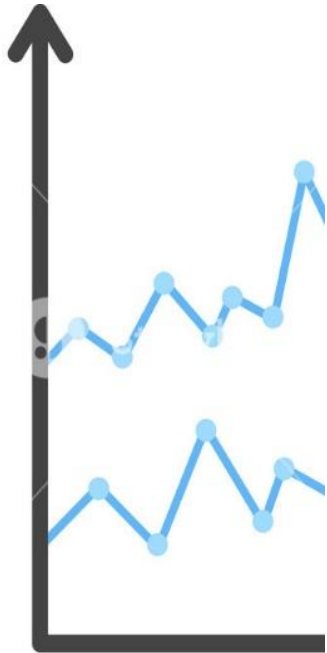
**1 in 3 community dwelling adults >65 years globally**



**1 in 2 people living in residential aged care facilities**



**1 in 3 community dwelling older adults in Sri Lanka**

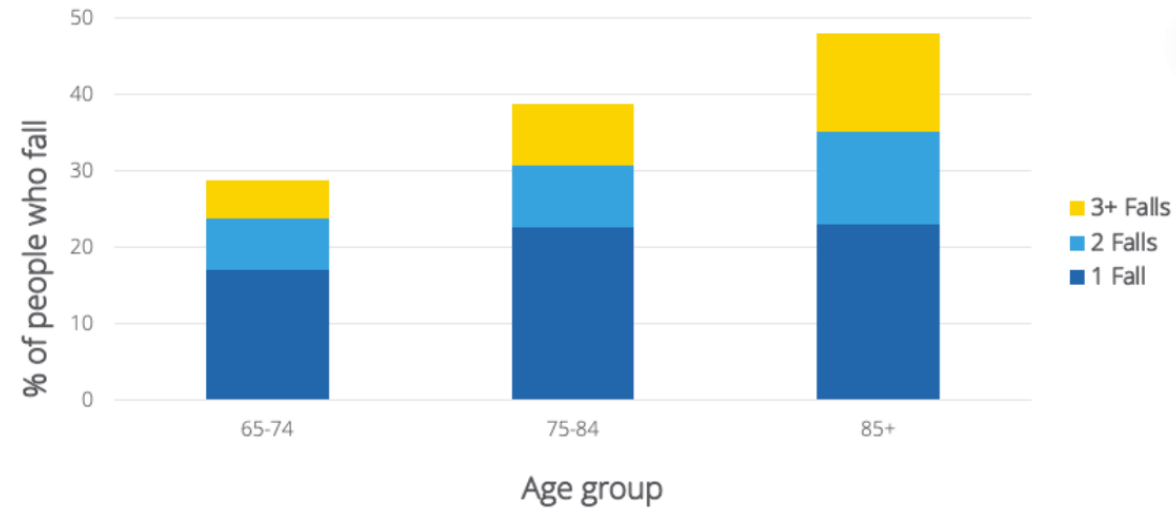


- Falls are the 2<sup>nd</sup> leading cause of death due to unintentional injuries.
- 1 in 4 older adults fall each year.
- Annually 36 – 37 million falls are recorded among which 37% are leading to injuries.
- Older adults > 60 years suffer most of the fatal injuries.
- 6.8 million deaths occur each year and 80% of those occur in low and middle-income countries

- 17% of emergency department presentations in people aged 70+ years are due to falls.
- 43% of people aged 70+ years who attend emergency departments because of a fall are admitted to hospital.
- After hospitalisation 10% of patients become first-time residents of long-term care facilities.
- 20% of people who suffer a fall-related hip fracture die within the following 12 months.

# Falls Frequency Increases With Age

The proportion of older adults who experience single or multiple falls in a year grouped by age.



# Personal Costs of Falls

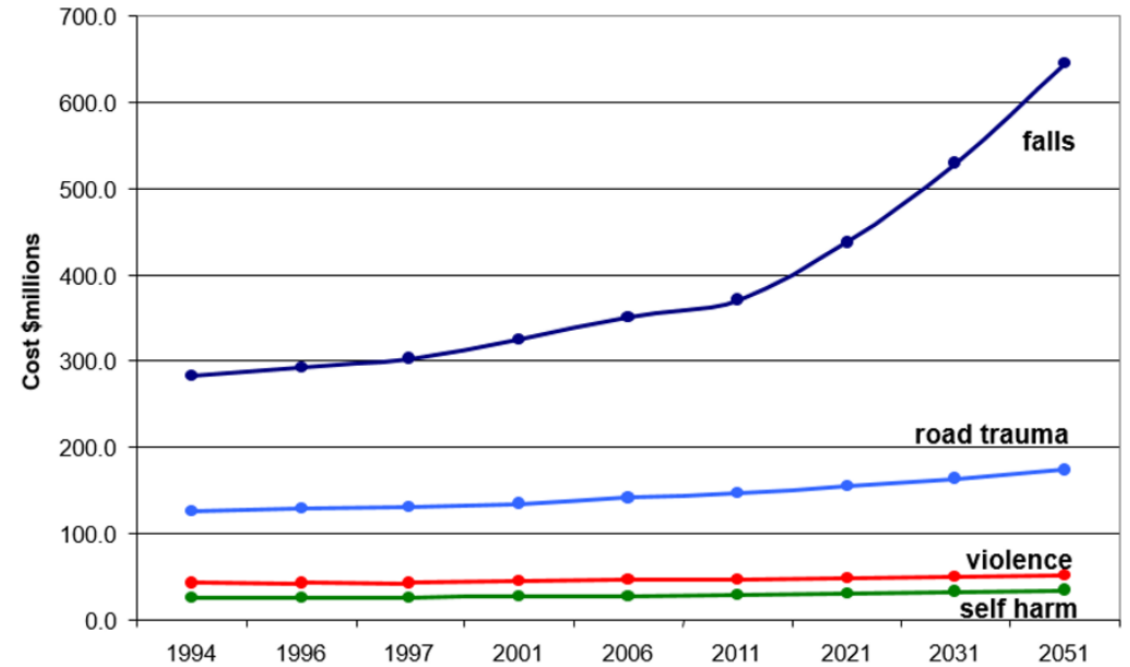
The financial and personal cost of a hip fracture

- Leading cause of injury-related death in older adults (10%)
- 30% suffer injuries requiring medical treatment
- 10% are serious injuries (e.g. fractures)

## Hip fracture example

- 50% discharged to nursing homes
- 25% never regain their pre-fracture mobility
- 25% die within 12 months

The projected cost of falls compared to road trauma, violence and self harm through to 2051



Moller J: Changing resource demands related to fall injury in an ageing population – unpublished paper (NSW Health, Injury Prevention Policy Unit), 2000.

# The situation in Sri Lanka

- A high prevalence of falls is observed among community dwelling older adults in both urban and rural regions of Sri Lanka.



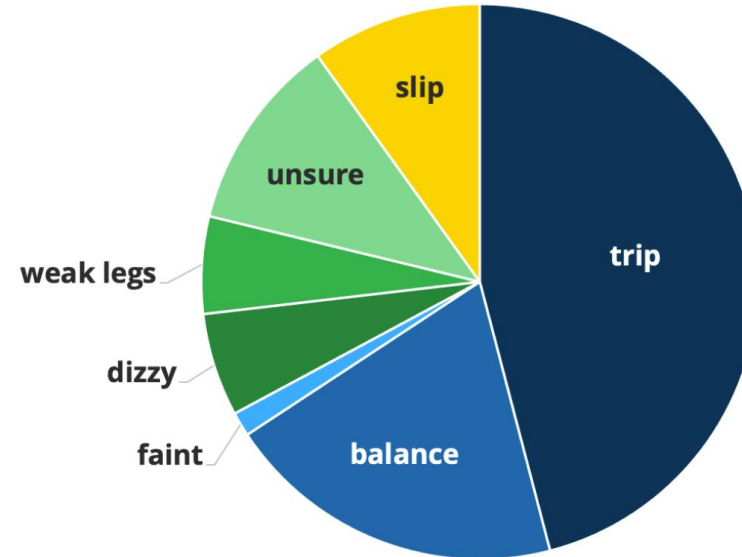
# Risk Factors for Falls in Older People

# Categories of Risk Factors



- ✓ Intrinsic Factors
- ✓ Extrinsic Factors
  
- ✓ Modifiable
- ✓ Non-Modifiable

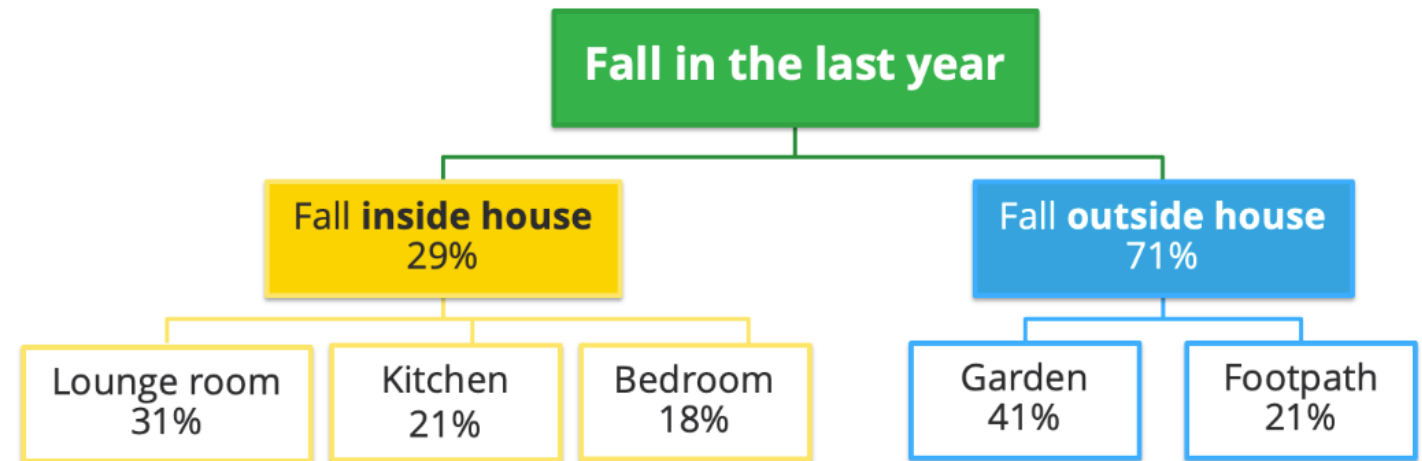
# Fall Mechanisms

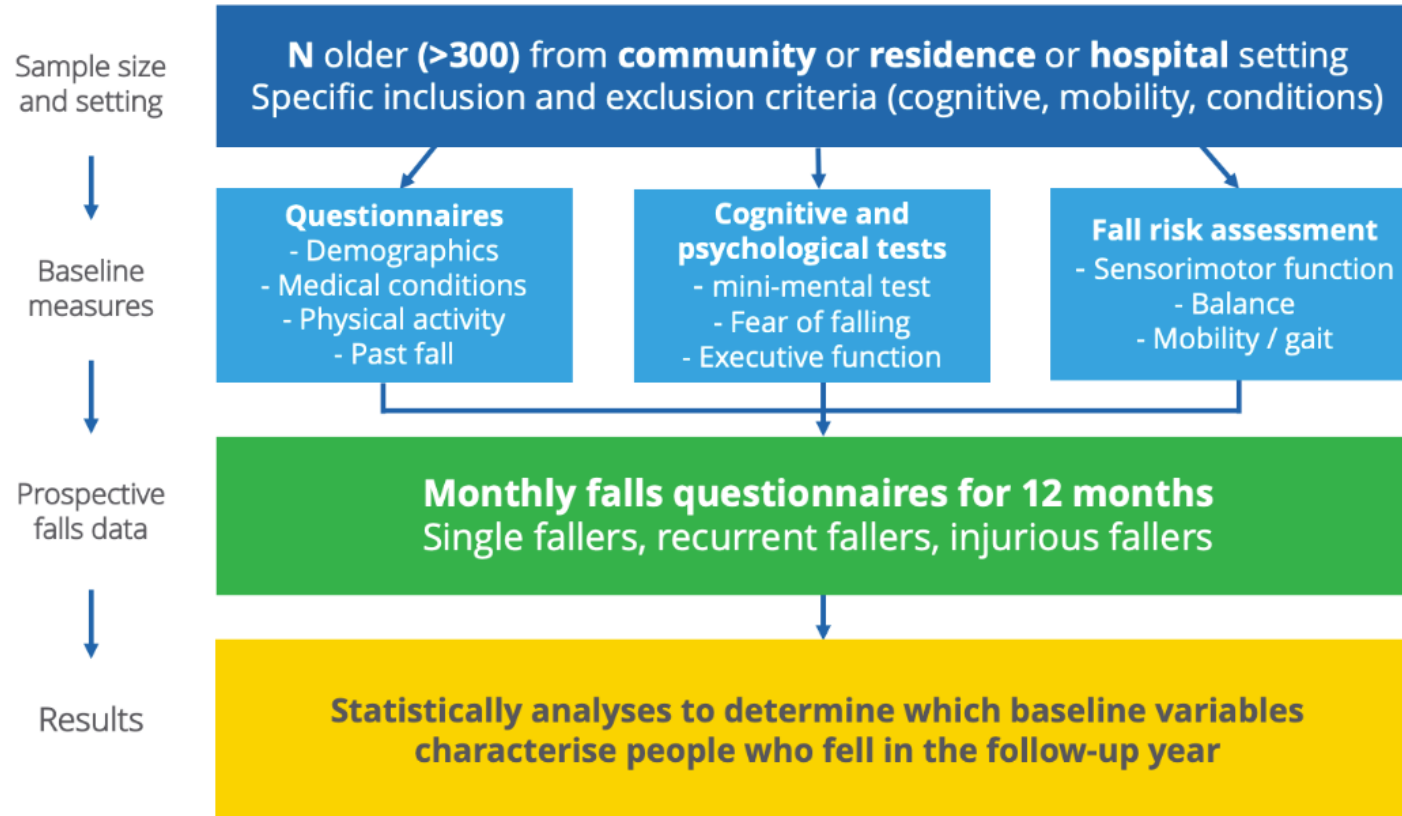


N=704 women aged 65-99 years  
Randomly selected from the community

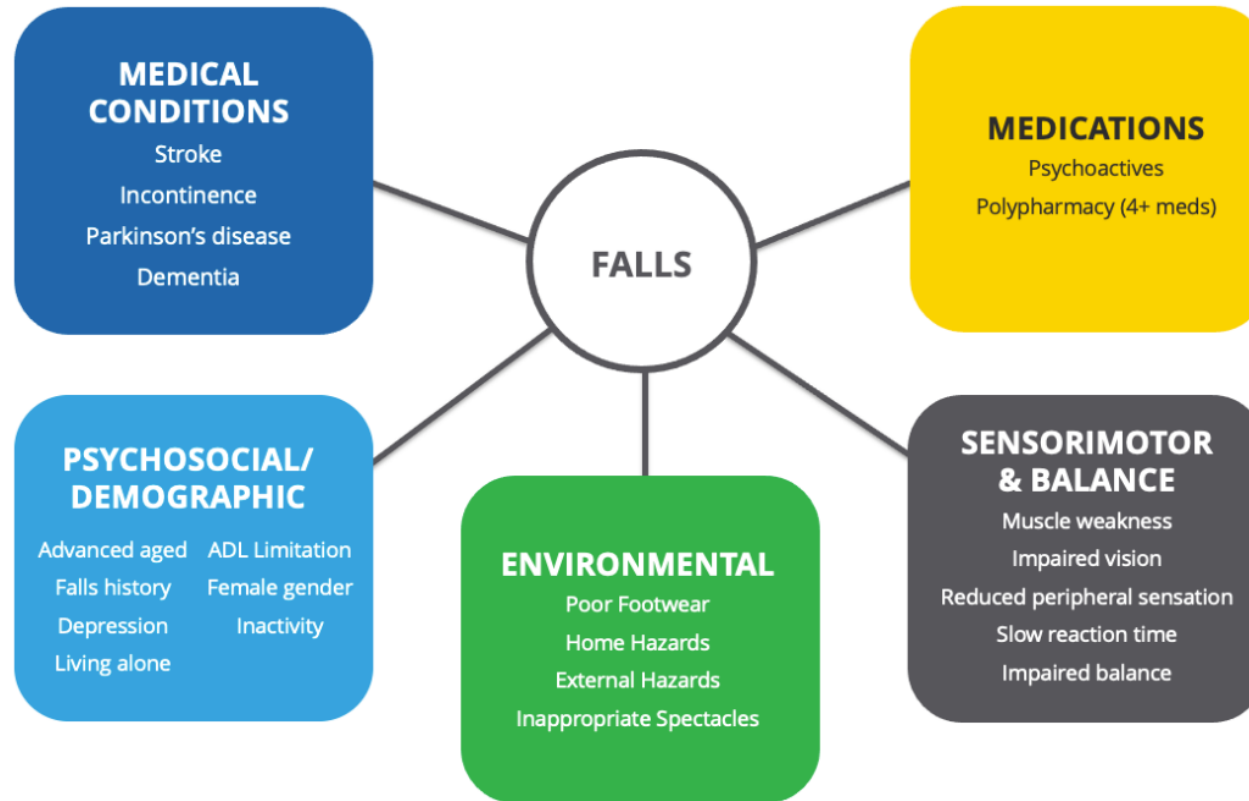
# Fall Locations

- Responses to the question “Where did you fall” by 1100 randomly selected community dwelling older people aged 60 years and older.





# Fall Risk Factors



# Consequences of Falls

## Physical

Fractures

Skin tear

Internal bleeding

Subdural hematoma

Immobilization

Hospitalization

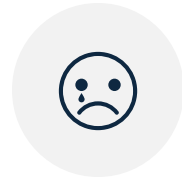
# Consequences of Falls - Psychological



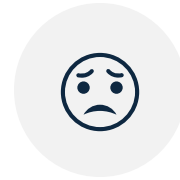
Fear of falling



Increased  
dependency



Depression



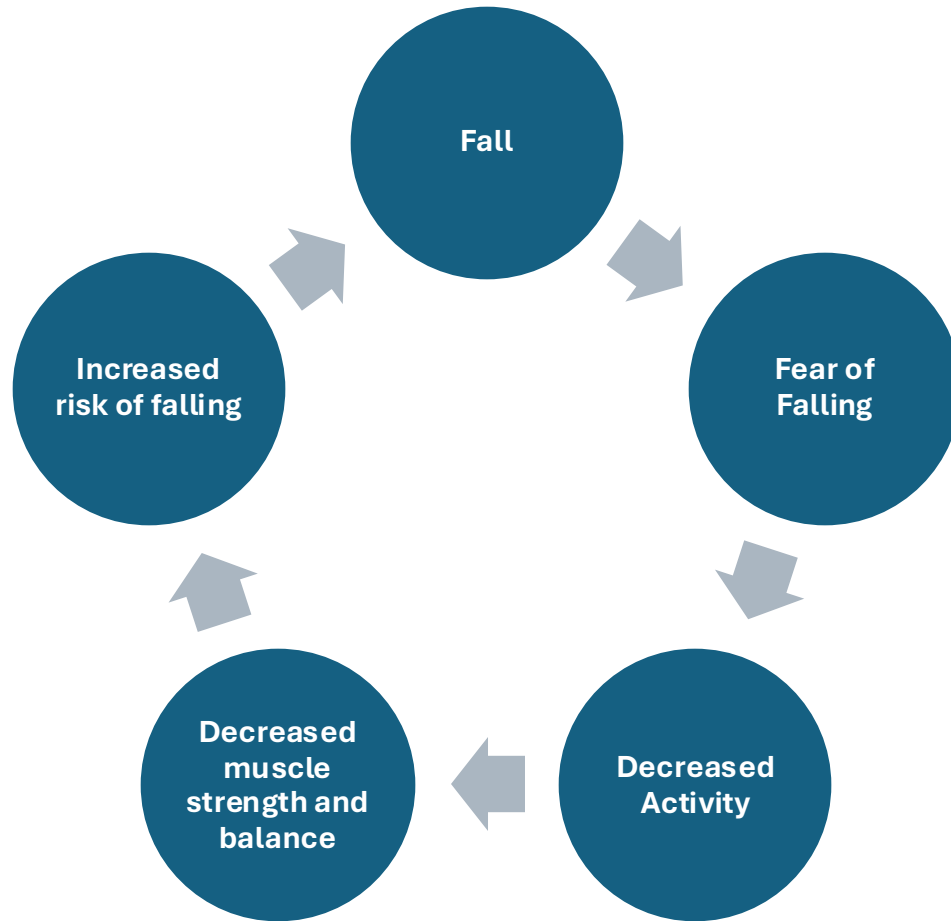
Anxiety



Loss of  
Confidence



Social  
withdrawal



# FALLS AND FEAR OF FALLING

# How to prevent falls?



- ❖ Talk to the health care provider
  - Get an assessment for fall risk and fear of falling
  - Share your history of recent falls.
  - Get a physical check up
  
- ❖ Engaging in a good balance and exercise program
  - Focus on balance, strength, and flexibility
  - Build up self confidence and maintain/ gain independence

- ❖ Regularly review the medications with a doctor or pharmacist.
  - Make sure side effects aren't increasing the risk of falling.
  - Take medications only as prescribed.
  
- ❖ Getting vision and hearing checked annually.



- ❖ Keep your home safe.
  - Remove tripping hazards, increase lighting, make stairs safe, and install grab bars in key areas.
- ❖ Talk to the family members.
  - Seek their support in taking simple steps to stay safe.



# Reference

- Narinder Kaur Multani, Satish Kumar Verma; Principles of Geriatric Physiotherapy, First Edition : 2007.
- Ganong WF. Review of Medical Physiology, 20th edn, Lange Medical Books/McGraw-Hill Medical Publishing Division, 2001;132-43.
- MacKinnon CD. Sensorimotor anatomy of gait, balance, and falls. Handb Clin Neurol. 2018;159:3-26. doi: 10.1016/B978-0-444-63916-5.00001-X. PMID: 30482322; PMCID: PMC7069605.

# Thank you

