

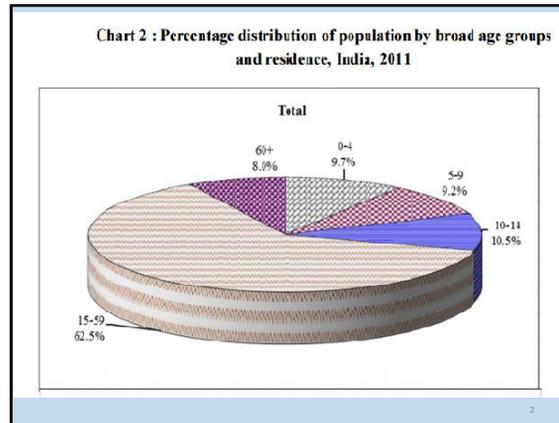
MEDICA Superspecialty Hospital
Setting the Gold

Fall Prevention is Everyone's Business

Part 1

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What is a Fall

- The WHO defines a fall as:
 - An event which results in a person coming to rest inadvertently on the ground or floor or other lower level
- Injurious Fall
 - An injurious fall is a fall that causes a fracture to the limbs, hip or shoulders or one that causes a traumatic brain injury

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Types of Falls

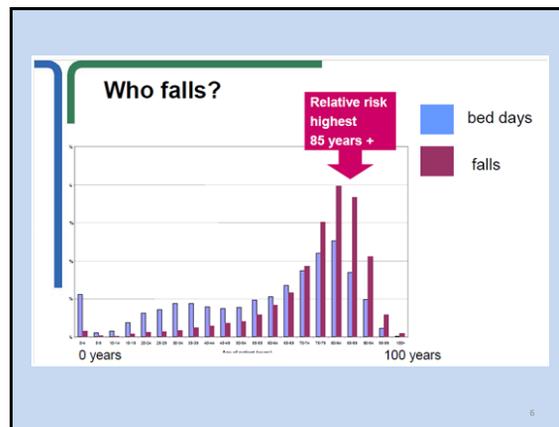
- Three types of patient falls occur in hospitals and long-term care institutions
 - Accidental
 - Fourteen percent of all falls are considered accidental
 - These are caused by patient slipping, tripping, or having some other mishap
 - These falls are often caused by environmental factors such as spilled water or urine on the floor
 - A patient may fall when using an IV stand for support if the wheels stuck suddenly
 - They may fall when IV pole catches on an overhead curtain railing, or doorway
 - Patient may fall when climbing out of bed

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Types of Falls

- Patient who experiences an accidental fall may not have been identified as being at risk of falling
- Accidental falls are not due to physical factors
 - They are due to environmental hazards or errors of judgment
- The prevention strategies for accidental falls include
 - Ensuring that the environment is free from hazards
 - Orientation of patient to environment
 - Instruction on how to use walkers and so forth

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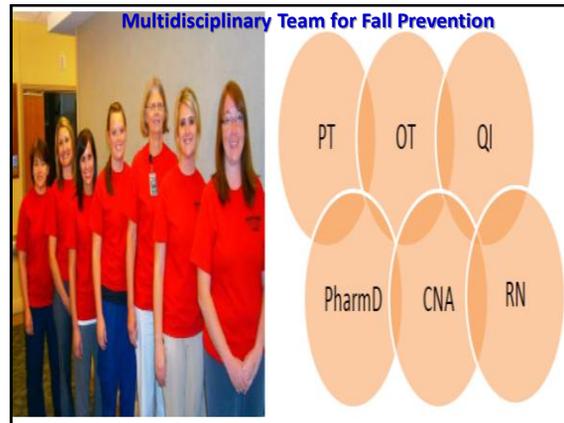
Source: Preventing Patient Falls

Table 1.1

COMPARISON OF PATIENT FALL RATES¹ AND INJURY RATES FOR VARIOUS PATIENT POPULATIONS

AUTHOR (DATE)	SETTING	FALL RATE (# FALLS/# PATIENT BED DAYS) × 1,000	INJURY RATE	COMMENTS
Barnett (2002)	General hospital	9.6	22%	England
Healey et al. (2004)	Geriatric	17.99	4.42/1000 pt bed days	England
Hitcho et al. (2004)	Medical Neurology	6.12 6.12	8%	USA
Schwandiman (2008)	Geriatrics Internal medicine Surgery	10.7 9.6 3.2	30.1% minor 5.1% major	Switzerland
von Renteln-Kruse et al. (2007)	General	10.0	26.9%	Germany

¹ Unless otherwise stated, patient fall rate = (# falls/# patient bed days) × 1,000



Institutional Coordination for Fall Prevention

- Preventing patient falls require a planned and coordinated effort
- All staff need to be involved from the highest level down to the housekeeping staff
 - It includes all health professionals but specifically
 - Nursing
 - Medicine
 - Pharmacy and
 - Physiotherapy
- Nursing has to lead the programme

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Patient Falls

- Definition**
 - A patient fall is defined as an unplanned descent to the floor with or without injury
- Cause of Falls**
 - Falls occur due to a mismatch between an
 - individual's physiological function,
 - environmental requirements, and
 - the individual's behaviour
- Result of Fall**
 - A fall may result in
 - Fractures
 - Lacerations
 - Internal bleeding
- How many falls can be prevented?**
 - About one-third falls can be prevented

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Patient Falls

- Challenges of Fall Prevention**
 - Falls Prevention requires an interdisciplinary approach to care
 - Some parts of care is highly routinized
 - Other aspects to be tailored to each patient's specific risk profile
 - Fall prevention requires the active engagement of many individuals which needs to be coordinated
 - This coordination needs
 - An organisational culture
 - Operational practices for team work and communication
 - Individual expertise

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Burden of Falls

- Falls may have a devastating effect on:
 - The patient
 - The Hospital, and
 - The Society

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Burden of Falls

- Effect on patient
 - Injury
 - Increased stay in hospital
 - Psychological problems including
 - fear of falling and
 - loss of confidence

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Burden of Falls

- Loss of mobility
- Increase in dependency and disability
- Infection
- Admission to long term care
- Increases chances of early Death
- Deterioration of quality of life

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Burden of Falls

- On Hospital
 - Loss of name
 - Law suite
 - Increased cost
 - Increased length of stay of patient
 - Bad name for nurses, being a nursing sensitive indicator
 - Adverse effect on accreditation status
 - Loss of Income

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Burden of Falls

- On Society
 - The cost of fall injuries increase rapidly with age
 - It is higher for women than for men
 - The burden will increase as population ages
 - In USA it is estimated to reach \$55 billion by 2020
 - In USA in 2010, A fall without serious injuries incurred an additional annual cost of about \$3500

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Epidemiology of Fall (1/14)

- Falls are one of the most common health concerns facing elderly persons today
- About one-third of community dwellers over the age 65 will fall each year
- Similarly, nearly one-half of institutionalized patients over the age 80 will fall every year
- Half of fallers will experience a repeat fall within the next year
- 31% falls result in an injury
 - Though most are minor, but 10-15% of falls result in fractures
 - 5% may result in more serious injuries and head trauma

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Epidemiology of Fall (2/14)

- Falls have other important consequences
 - Associated with greater financial decline
 - Social withdrawal
 - Anxiety and depression
 - Increased use of medical services
- Fear of falling is common among elderly fallers
 - This is associated with impaired mobility
 - Decreased Functional status
- This results in greater risk of being institutionalized

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Epidemiology of Fall (4/14)

- Pathophysiology of Falls
 - Most falls are due to multiple causes
 - The causes are:
 - Multiple interactions between an individual with a propensity to fall, and
 - Acute mediating factors

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Epidemiology of Fall (5/14)

- Individual Characteristics of Falls
 - In elderly, the incidence of falls increases steadily with advancing age
 - In older adults, various conditions increase the chances of fall. These are:
 - Chronic medical conditions
 - Cognitive impairment
 - Arthritis
 - Physiologic changes of normal aging also increases the risks of falls

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Epidemiology of Fall (6/14)

- Co-morbidities predisposing the risk factors for falls
 - Parkinson's disease due to rigidity of the lower musculature
 - Bradykinesia
 - Orthostasis, and
 - Cognitive impairment
 - Stroke giving rise to
 - Visual spatial problems
 - Impairment in balance through loss of peripheral sensation or cerebellar function
 - Residual dizziness

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Epidemiology of Fall (7/14)

- Dementia, irrespective of cause
- Osteoarthritis of hip or knee
 - This impairs one's ability to maneuver around objects
 - Postural stability may be influenced if there is a tendency to avoid full weight-bearing on the affected limb
- Risk of falling increases with increase in numbers of co-morbidity

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Epidemiology of Fall (8/14)

- Physiologic changes with normal aging
 - There is diminished input affecting balance from the systems:
 - Visual
 - Proprioceptive, and
 - Vestibular
 - Impaired balance recovery due to
 - Decline in the ability to rapidly and efficiently contract the muscles of the lower extremities

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Epidemiology of Fall (9/14)

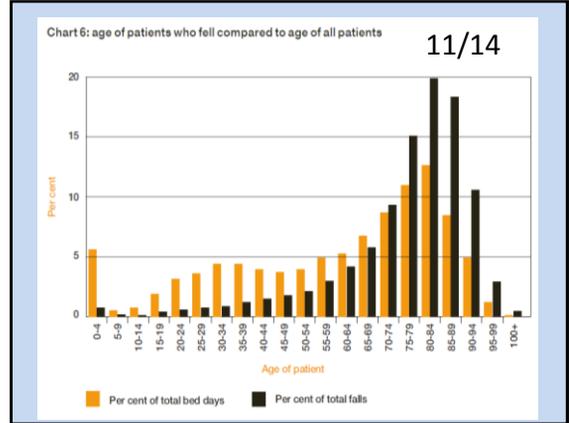
- Diminished baroreflex sensitivity and vascular compliance resulting in
 - Risk of orthostasis during periods of decreased cardiac preload and tachycardia
- Impairment in Blood pressure regulation due to:
 - Age related changes in total body water and in renin-angiotensin system
 - Stressors producing transient drop in blood pressure leads to
 - Impaired postural control or cerebral hypoperfusion in association with syncope
- Aging also leads to decreased muscle mass

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Epidemiology of Fall (10/14)

- Age related Increased risk of falling is affected by:
 - Inability to rise from chair without using one’s arms
 - Poor depth perception
 - Poor contrast sensitivity
- Medication
 - This is one of the most common and potentially reversible risk factor
- Hypoglycaemic agents
- Footwear
 - Shoes with thin, hard soles and athletic shoes are best for balance

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End of Part 1

Thank you

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