Nursing considerations in falls risk assessment and Orthostatic Hypotension

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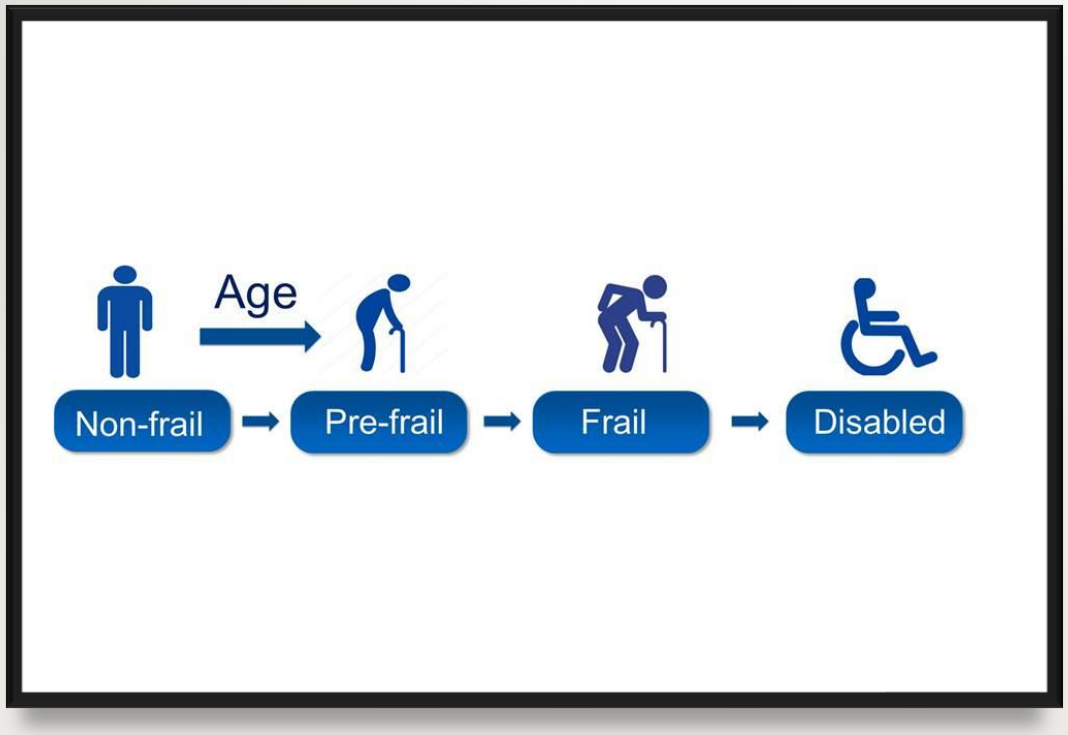
AIMS

- To increase fall prevention awareness
- Reduce risk factors for falls through multi-factorial fall risk assessment and interventions
- Promote consistency in screening for Orthostatic Hypertension (OH)
- To demonstrate technique for the recording of Lying and Standing Blood pressure **and improve routine clinical practice**

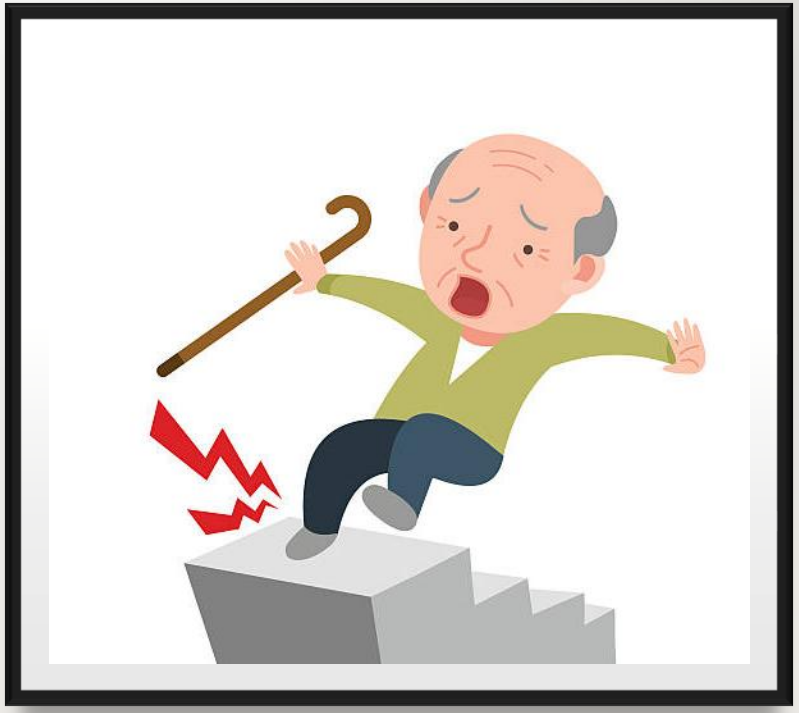
FRAILTY AND FALLS



- 10% of people aged over 65 years and 25% to 50% of those aged over 85 years are frail (WHO, 2015).
- Frailty is recognised as a risk factor for single and recurrent falls, fear of falling and disability among adults 50 years & over.
- Frail older people are between 1.2 and 3.6 times more likely to fall, than non frail people (TILDA, 2018).
- Identification and intervention can reverse / delay the trajectory of frailty (Harrison *et al.*, 2015)

RISK FACTORS FOR FALLS

- **M**edication–high risk medication for falls
- **O**rthostatic Hypotension
- **M**obility
- **S**afety - **Personal** & **Environmental**



MULTIFACTORIAL ASSESSMENT OF FALL RISK

- Healthcare providers can lower a person's risk of falling by reducing or minimising the individual's risk factors (Oliver *et al.* 2007)

- All adults over 65 years to be considered as at risk of falling (NICE, 2018)
  (This should also include adults under 50 yrs or 50-64yrs old who have had a previous fall or admitted with a fall / need supervision to transfer or walk / have a fear or falling / medical condition with increased fall risk)

- Falls risk assessment tools should be replaced by **a Multi-factorial assessment**
  (NICE, 2018)

- HOLISTIC patient assessment - *Think personal fall risk factors!*

ACTIVITIES OF DAILY LIVING PATIENT ASSESSMENT

Roper, Logan & Tierney (1998)

- **COMMUNICATION**
- **MAINTAINING A SAFE ENVIRONMENT**
- **MOBILISING**
- **PERSONAL CLEANSING & DRESSING**
- **SLEEP & REST**
- EXPRESSING SEXUALITY
- **BREATHING & CIRCULATION**
- **ELIMINATION**
- **EATING & DRINKING**
- **WORKING & PLAYING**
- CONTROLLING BODY TEMPERATURE
- END OF LIFE

HOW DO WE PROMOTE GOOD COMMUNICATION?

Think personal fall risk factors!

COMMUNICATION & MOOD

Consider:

- ❑ Impaired verbal communication
- ❑ Impaired vision
- ❑ Impaired hearing
- ❑ Depression/ low mood

INTERVENTIONS

- ❑ Regular ophthalmology / audiology
- ❑ Use appropriate communication assistive devices/aids
- ❑ Regular monitoring of devices to ensure maintained in working order
- ❑ Appropriate level of assistance to promote independence with assistive devices
- ❑ Recognise low mood and depression and refer for assessment and management

How Do we keep our patients Mobile?

Think personal fall risk factors!

MOBILISING

Consider :

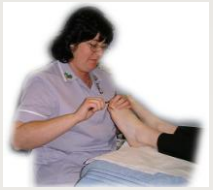
- Previous falls
- Gait & balance problems
- Fear of falling
- Mobility aids
- Limited physical activity/exercise
- Pain
- Foot problems
- Poor bone health/Osteoporosis

INTERVENTIONS

- Record fall history/ fragility fractures
- Discuss with the older adult their risk of falling and prevention strategies
- Refer to physiotherapy
- Encourage mobility, participation in functional activities and active lifestyle,

Get up Get dressed Get moving & End PJ paralysis

- Education &Falls Prevention leaflets
- Encourage patients to use of mobility aids
- Provide visual cues/signs to remind patient of safety techniques for transfers, ambulation e.g. orange arm bands
- Footwear assessment - Well fitting walking shoes with non-slip soles
- Refer for chiropody
- Assess and manage pain



How do we maintain good cardiovascular status?

Think personal fall risk factors!

BREATHING AND CIRCULATION

Consider :

- Orthostatic hypotension
- Dizziness
- Syncope

INTERVENTIONS

- BP Lying and Standing record
- Referral to medical team for review of antihypertensive and/or diuretics
- Patient education for safe standing to reduce symptoms of dizziness
- Non-pharmacological interventions OH

Orthostatic Hypotension- OH

- **WHAT IS OH?**

Describes a drop in blood pressure sufficient to cause inadequate blood supply to the brain. Symptoms of dizziness, falls and blackouts may occur.

A drop in blood pressure may occur quickly, happen anytime from position change – after getting up from lying or sitting down.

- In frailty – OH may reflect underlying health deficits & is predictive of adverse outcomes in older adults (Shibao *et al., 2007*, Xin *et al.*, 2013, Liguori *et al.*, 2018, Shaw *et al., 2019).*

https://www.youtube.com/watch?v=o54v_tuEvpw&feature=youtu.be

POSITIVE RESULTS FOR LYING AND STANDING BP

- A drop in systolic blood pressure by 20 mmHg or more on standing (with or without symptoms)
- A drop in Systolic Blood pressure to below 90mmHgs on standing even if the drop is less than 20 mmHg (with or without symptoms)
- A drop in Diastolic Blood pressure of 10mmHgs on standing with symptoms (although clinically less significant than a drop of systolic BP)

(Royal College of Physicians 2017)

Orthostatic Blood Pressure Chart

Addressograph

Before Taking Blood Pressure:

- Have patient lie down for 5 minutes
- Measure Blood Pressure and Pulse rate while lying down and record
- Have patient stand for 1 minute and record Blood Pressure and Pulse
- Repeat Measurement after 3 minutes of standing and record in chart below

Measuring Orthostatic Blood Pressure:

- A drop in BP of ≥ 20mmHg systolic Bp, or ≥ 10mmHg diastolic BP, or experiencing light-headedness or dizziness is considered abnormal.

Date	Time	After 5 minutes lying down		After 1 minute standing		After 3 minutes Standing		Signature	Comments
		BP	Pulse	BP	Pulse	BP	Pulse		

INTERVENTIONS FOR OTHROSTATIC HYPOTENSION

NON –PHARMACHOLOGICAL

- Increase intake of fluid (2-2.5 litres per day is recommended)
- Provide gradual staged movements with postural change
- Avoid prolonged recumbency
- Preform physical counter-manoeuvers such as crossing legs, stooping, squatting & tensing muscles
- Raise head of bed by 10 – 20 degrees to decrease supine hypertension
- Avoid straining, coughing, & other manoeuvers that increase intra-thoracic pressure
- Wear compression stockings & abdominal binder as prescribed
- Increase sodium intake
- Minimise postprandial hypotension

PHARMACOLOGICAL

- *Discontinue or reduce antihypertensive and diuretics medications*
- *Pharmacological intervention may be considered*

How do we ensure Personal safety - physical and psychological?

Think personal fall risk factors!

MAINTAINING A SAFE ENVIRONMENT

Consider :

- ❑ Unfamiliar environment
- ❑ Cognitive impairment
- ❑ Delirium
- ❑ Dementia
- ❑ Alcohol intake
- ❑ Agitated behaviour/unsafe walking
- ❑ Risk-taking behaviour, unsafe carrying, reaching and bending

INTERVENTIONS

- ❑ Assessment and diagnosis of cognitive impairment, dementia
- ❑ Early detection and treatment of cause of delirium (4AT Score)
- ❑ Dementia friendly environment
- ❑ Patient education

How do we promote safe personal care?

Think personal fall risk factors!

PERSONAL CARE

Consider :

- Ill-fitting or trailing clothes
- Unsafe shoes/socks /stockings
- Risk-taking behaviour-unsafe carrying, over -reaching and unsafe bending

INTERVENTIONS

- Avoid ill-fitting/ trailing clothing
- Safe shoe assessment to encourage safe shoes
- Non-slip socks especially at night ???
- Refer to Occupational therapy
- Encourage use of assistive devices
- Appropriate level of assistance to promote independence

How do we promote effective continence & safe elimination?

Think personal fall risk factors!

CONTINENCE & ELIMINATION

Consider :

- Incontinence
- Limited access to the toilet
- Difficulty finding the toilet

INTERVENTIONS

- Assess causes of incontinence and promote continence
- Ensure access to toilet
- Appropriate level of assistance to promote independence
- Assessment and provision appropriate incontinence wear

DIETARY AND NUTRITIONAL CONSIDERATIONS

Think personal fall risk factors!

EATING AND DRINKING

Consider :

- Poor dietary and fluid intake
- Unintentional weight loss
- Low BMI-underweight
- High BMI – obesity
- Malnutrition
- Vitamin D and Calcium deficiencies
- Diabetes

INTERVENTIONS

- Nutrition risk assessment
- Referral to dietitian
- Blood screening and treatment for deficiencies
- Screening and management for diabetes
- Patient education

How do we promote effective exercise and mobility?

Think personal fall risk factors!

WORKING AND PLAYING

Consider:

- Inactivity and lack of exercise
- Poor access to outdoors/ garden, uneven ground

INTERVENTIONS

- Encourage older adults to mobilise, participate in functional activities and maintain an active a lifestyle as possible.
- Refer to Occupational therapy
- Promote meaningful activities indoor and outdoor
- Refer to physiotherapy for exercise programmes to suit all levels of mobility

How do we promote safe care, day and night

Think personal fall risk factors!

SLEEP AND REST

Consider:

- Effects of medications to induce sleep
- Poor lighting
- Way finding difficulties to toilet
- Unfamiliar environment

INTERVENTIONS

- Appropriate night lighting
- Adequate signage to use toilet during the night

- Appropriate level of assistance to promote independence
- Access to Call bell

POST FALL REVIEW

- Older adults who have fallen or who have been identified as being at increased risk of falling or present with recurrent falls, should be considered for an individualized, multi-factorial assessment and management programme.

- This assessment should be interdisciplinary

(NICE, 2004)

TAKE HOME MESSAGE

- All adults 65 years and over at risk of falling
- Multifactorial Falls Risk Assessment and interventions will reduce fall risks for older adults
- Record lying and standing blood pressure on all older adults as part a multifactorial falls risk assessment
- Engage and support older adults to lower or minimise their fall risk factors

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