



Falls Prevention and Bone Health

**Foundation Education Resource
For Health and Social Care Workers**

Table of Contents	Page
Foreword	4
Chapter 1	
Introduction to falls Prevention and Management	5
Aim and Learning Outcomes	6
Definition of fall	7
Prevalence Cause and Cost of Falls	8
Risk Factors for fall	9
Consequence of fall	10
Fear of Falling	11
Advice for people who fall and are alone	12
Falls screening and assessment	13
Falls Algorithm	15
Falls Risk Alerts: Symbols and Signs	16
Reporting Falls	16
Getting started and establishing a working group	16
Helpful Resources	17
Chapter 2	
Osteoporosis /Bone Health	18
Aim and Learning Outcomes	19
What is Osteoporosis	20
Risk factors for Osteoporosis	20-22
Prevention of Osteoporosis	22-26
Diagnosing Osteoporosis	27
Treatment of Osteoporosis	28-29
Fracture Liaison Service	30
Helpful Resources	31
Chapter 3	
Primary Care Setting	32
Aim and Learning Outcomes	33
Target Population	34
Falls Algorithm	35
Falls screening and assessment	36
Reporting Falls and Tips on falls for home Helps	37
Helpful Resources	38
Chapter 4	
Acute Hospital Setting	39
Aims and learning outcomes	40
Why older people fall in a hospital setting	40
Falls Algorithm	41
Falls screening and assessment	42-43
Safety Pause	44
Intentional Rounding	44
Falls Risk Alerts: Symbols and Signs	44
Post fall care & Fall Huddle	45-46
Discharge Home	47
Emergency Dept	47
Helpful Resources	47
Chapter 5	
Residential Setting	48
Aims and Learning Outcomes	49
Falls screening and assessment	50-51
Safety Pause	51
Intentional Rounding	52

Falls Risk Alerts: Symbols and Signs	52
Foverer Autumn Alerts /Programmes	53
Post Fall care and Falls	54-56
Additional Safety Precautions for all patients /resident	56
Resources	56
 Chapter 6	
Planning a learning sessions	57
Aims and Learning Outcomes	58
Session Layout	59-60
Event Planning Template	61
Evaluation form	62-63
Certificate of Attendance	64
Bibliography	65-67

List of Appendices	Pg.
Appendix 1: I had a fall poster	67
Appendix 2: Screening Tool Level 1 Primary care	68
Appendix 3: Assessment Tool Level 2 Primary Care	69
Appendix 4: Falls Safety Cross	77
Appendix 5: Quick Tips for Bone Health	78
Appendix 6: Tips for Healthy Aging	79
Appendix 7: Get up and go test	81
Appendix 8: Multi factorial Assessment and Intervention	83
Appendix 9: Acute setting Sample Policy	84
Appendix10: Intentional Rounding Chart	104
Appendix 11: Safety Alert form	105
Appendix 12: Pathway for care of patient post falls	106
Appendix 13: Post fall assessment management poster	107
Appendix 14: Assessment prior to contacting doctor in residential setting template	108

Chapter 1

Introduction to Falls Prevention and Management

Chapter 1

Aim

To provide staff with an overview of the National Strategy to Prevent Falls and Fractures in Ireland's Ageing Population and introduce them to falls prevention and management

Learning Outcomes

At the end of this chapter it is anticipated that the learner will be able to:

- Define a fall
- Recognise that falls are a serious public health problem
- Describe the risk factors for falls
- Explain the screening and assessment process
- Demonstrate an understanding of fear of falling
- Describe symbols and alerts used to identify those at risk
- List tips on safety in the home
- Describe falls reporting procedure

The National Strategy to Prevent Falls and Fractures in Ireland's Ageing Population was published in 2008. Its aim is to protect bone health throughout life and prevent falls in our ageing population by providing an update of best available evidence and guidelines to implement falls and osteoporosis Programmes.

AFFINITY (**A**ctivating **F**alls and **F**racture Prevention **i**n **I**reland **T**ogether) the National Falls Prevention and Bone health Project was established in 2013 and tasked with implementing the national strategy. AFFINITY aims to prevent harmful falls amongst persons age 65 years and older, enhance the management of falls and improve health and well being through a focus on bone health.

International research has shown that one third of people over the age of 65 experiences at least one fall each year and about half that number fall more than once. Falls can cause pain and distress for older people and are one of the most common reasons for admission to hospital. Falls are also a common cause of death for older people.

This resource file has been developed to provide staff at the frontline with knowledge and skills on effective falls prevention and bone health programmes, based on best practice nationally and internationally. It will provide guidance for staff on how to have a co-ordinated approach to the prevention and management of falls within their setting.

What is a fall?

A fall The World Health Organisation (2006) has defined a fall "as an event that results in a person coming to rest inadvertently on the ground or floor or other lower level".

A slip To slide accidentally causing the person to lose their balance – this is either corrected or causes the person to fall.

A trip is when a person stumbles over an obstacle, which results in the person losing their balance – it is either corrected or the person falls as a result (Cohen I, Guin P 1991).

A Harmful fall is a fall that results in harm.

A No Harm fall is a fall where no harm occurred.

Many falls can be prevented. The aim is to have falls prevention programmes in place that will reduce falls and minimise harm from falls in Ireland's Ageing Population

Why are falls a serious Public Health Problem?

- Older people have the highest risk of death or serious injury resulting from a fall and the risk increases as the individual gets older (World Health Organisation, 2012).
- By 2026 there will be approximately 908,000 people aged 65 years and older in Ireland, which will account for 16% of the population (Central Statistics Office, 2012).
- The percentage increase in people living over 65 years in Ireland is projected to grow at a rate of nearly double the EU average by the year 2020; from 14.4% to 37% compared to a 19% average for the EU (Eurostat, 2013).
- Falls have a large financial cost, one that is expected to increase sharply in coming decades as the number of older people continues to increase.

Falls Among Older adults with Mental Health Problems

In mental health settings for older people falls are the most commonly reported patient safety incident. Older people with cognitive impairment also have an increased risk of falls. In addition the use of psychotropic medication also increase fall risk (Bunn et al; 2014).

Falls among older adults with Intellectual Disability

A substantial proportion of adults with Intellectual Disability experience major difficulties with mobility, which increases with age. Adults with intellectual disability report a higher prevalence of at least one fall than that found among the general Irish population.

- The prevalence rate of falls reported among adults with intellectual disability, aged 40-49 years at 24.5%, was comparable to fall rates reported for those in the general population, aged 75 years and older (Growing older with Intellectual Disability in Ireland 2011).

Prevalence of Falls

The incidence of falls and severity of fall related complications rise with age. The TILDA Report (2014) has indicated that the prevalence of falls, recurrent falls and harmful falls has increased since the 2011 TILDA report.

If current trends continue, deaths and injuries due to falls in older people could double over the next 20 years (National Strategy to Prevent Falls and Fractures in Ireland's Aging Population, 2008).

- "More than one third of persons 65 years of age or older" fall each year and in half of such cases the falls are recurrent (Tinetti & Kumar 2011). In people over 80 years of age 50% fall each year.
- Older women make up 65% of 80+ age group – they are at greatest risk.

- One-fifth of those who fall sustain serious injury. Hip fractures are one of the most serious injuries due to falls and result in approximately 2,800 hospital admission in Ireland each year.
- 80% of these hip fracture patients are over 75 years with an average hospital stay of 18 days (National Strategy to Prevent Falls and Fractures in Irelands Aging Population, 2008).
- A greater proportion of older people die from Falls Related Injuries, compared to all other age groups in Ireland. Approximately 250 older people die from falling every year.
- Three quarters of all fall related deaths are over 65 years of age.

Cost of Falls

Fall related injuries among older people especially among women are associated with substantial economic costs.

In 2010 the estimated cost was €520-551 million and if the current trends continue, the costs of a fall will be:

€992-€1077 million by 2020

€1587-€2043 million by 2030



It is estimated that in-patient cost of fall related injury hospitalisations are €59 million annually and inpatient hip fractures costs are estimated at €35 million (Irish Centre for Social Gerontology, 2006).

The health care costs for treating falls related injuries include fees for:

- Hospital and nursing home care
- Doctors and other professional services
- Rehabilitation
- Community-based services
- Use of medical equipment
- Prescription drugs
- Changes made to the home,
- Insurance processing

Direct costs do not account for the long-term effects of these injuries such as disability, dependence on others, time out taken from work/household duties, and reduced quality of life (Centre for Disease Control and Prevention - US, 2014). Thus the economic cost of falls is likely to be much higher than policy makers appreciate (Davis et al 2010).

Falls are Preventable

As people get older, it is often accepted that falls are unavoidable; this is not the case, as most people over 65 do not fall each year. Falls are not an inevitable part of ageing but may be the first sign of an underlying health problem. A fall is nearly always due to the presence of one or more risk factors (NHS, 2011). Promoting appropriate physical activities or exercises to improve strength, balance and flexibility, is one of the most feasible and cost-effective strategies to prevent falls among older people in the community (WHO, 2007).

Risk Factors Associated with falls can be grouped as: Intrinsic, Extrinsic and Environmental.

Intrinsic: Risk factors that are linked to health problems that increase the older persons risk of falling.

Extrinsic: Risk factors that are directly linked to the person without being integral to the person.

Environmental: Risk factors related to hazards in the environment that increase the persons risk of falling.

Risk Factors

Intrinsic Fall Risk Factors

- History of Falls
- Muscle weakness
- People over the age 65 – 50% of people over 80 years fall
- Gender (Female)
- Fear of Falling
- Deterioration in Health & Mobility
- Impaired Gait & Balance
- Medical Conditions (Ex: Parkinson Disease, Osteoporosis, Dizziness/Vertigo, Hypotension, Incontinence)
- Nutritional Deficiencies
- Cognitive Impairment & Depression
- Poor Vision

Extrinsic Fall Risk Factors

- Foot wear and Clothing
- Inappropriately used Assisted Devices (Hoists, Wheelchairs, Gait Belts)
- Poly pharmacy-Multiple Medications
- (Drug Interactions)

Environmental Fall Risk Factors

- Uneven/Slippery Floor Surfaces
- Inadequate Lighting
- Trailing Flexes and Cables
- Loose mats/rugs
- Unfamiliar Environment
- Inadequate Safety Rails (Bedroom/Bathroom/Kitchen)

Adapted from Todd (2004) and HSC (2009)

Consequences of Falls

A fall can result in either **Physical**, **Psychological** or **Social** consequences for the Older People.

Physical Consequences

- Death
- Head Injuries
- Dislocation/Fractures
- Cuts/Bruises/Soft Tissue Injuries
- Pressure Ulcers/ Leg Ulceration
- Dehydration
- Immobility
- Pneumonia/ Chest Infection
- Incontinence

Psychological Consequences

- Low Self-Esteem
- Social Isolation
- Anxiety/ Depression
- Increased Dependency
- Emotional Distress
- Embarrassment
- Fear of Further Falls
- Self- Worthlessness
- Loss of Confidence
- Carer Stress

Social Consequences

- Decreased Quality of Life
- Loss of Independence
- Changes to Daily Routine
- Financial Cost of Help/Care
- Social Isolation
- Decreased Mobility

(Adapted from NHS 2011; HSE 2009)

Fear of Falling

Fear of falling is one of the major issues relating to the overall health of older people (Jung, 2008). The psychological impact of falls can cause a loss of confidence in older peoples walking ability and a fear of falling (Lach, 2005). Feeling fearful and experiencing a loss of confidence can result in a limitation of physical activities. The reduction in physical activity leads to reduced mobility and a loss of physical function, which in turn increase the risk of falling. (Love & Allen, 2011). Fear of falling and post-fall anxiety syndrome are well-recognised negative consequences of falls (Murphy et al., 2003), leading often to self-imposed functional limitations by older people themselves.

One in four older Irish people report a fear of falling.

- The prevalence increases with age from 17%, in those aged 50-64, up to 40%, in those aged 75yrs and older (TILDA 2011).
- At all ages fear of falling is twice as common in women as men; for example 50% of women aged 75yrs and older report a fear of falling compared to 25% of men of the same age (TILDA 2011).
- Many older people who have fallen are afraid of falling again.
- Even if a fall doesn't cause injury, the fear of falling again might prevent older people from doing activities they enjoy or need to do.

It is important for older people to mention if they have had a fall or have a fear of falling to a health professional. S/He can complete a fall risk screening and assessment and recommend interventions

Falls can happen anywhere but more than half of all falls happen at home. Many of these falls could be prevented by making simple changes in the home.

(CDC, 2012)

Older people Reluctant to report falls

Older People are often not keen to discuss falls as they often think it is a part of normal aging. They often feel that if family or friends know they have had a fall they will perceive them as being unable to stay living independently.

Falls don't just happen and people don't fall because they get older, there is a reason.

There is a need to create awareness of the need for falls prevention among older people in the community. Through awareness older people will be more informed to discuss with their health care professional the reason why they are falling, i.e. medication, balance problems.

Often, more than one underlying cause or risk factor is involved in a fall. A risk factor is something that increases a person's risk or susceptibility to a medical problem or disease (National Institute of Health, 2013).

As the number of risk factors rises, so does the risk of falling. Many falls are linked to a person's physical condition or a medical problem, such as a chronic disease.

Other causes could be safety hazards in the person's home or community environment.

It is important to inform older people on how to maintain a healthy lifestyle that reduces and prevents the risk of falls.

Taking Steps to Make the Home Safe

Taking precautions in and around the home can help avoid falls and injuries from falls.

Floors

Pick up things on the floor. Always keep objects off the floor.

Ask someone to move furniture so your path is clear.

Remove Rugs or use rugs that have a non-slip backing.

Stairs & Steps

Try to have an overhead light at the top of and bottom of the stairs.

If you have carpet on the stairs make sure it is firmly attached to every step.

Fix any loose handrails or put in new ones. Make sure handrails are on both sides of the stairs.

Bedrooms

Have a lamp close to the bed within reach.

A night-light can be useful to see where you are walking.

Bathrooms

Have a non-slip rubber mat or self stick strips on the floor of the bath or shower.

Have grab rails inside the bath and next to the toilet for support.

Kitchen

Keep items that you use often on the lower shelves (Waist-Level).

Never use chairs to stand on.

Monitoring/Personal Alert Systems/Services can give older adults independence and peace of mind.

(Adapted from CDC, 2008)

Advice for an older person who falls in their home

A sudden fall can be startling and upsetting, if you do fall stay calm.

If you can get up by yourself:

- Roll over onto your stomach and try to get into a crawling position.
- Crawl to a stable piece of furniture, like a lounge chair.
- Try to get up onto your knees.
- Push up, using your strongest leg and arms, still firmly holding onto the furniture
- Sit down on the furniture.

If you can't get up by yourself:

- Try to crawl or drag yourself to somewhere on carpet and find anything that can keep you warm, such as bedclothes/towel/clothing, while you wait for help.
- Use your personal alarm if you have one.
- If you don't have an alarm, use an object that you can bang to make a loud noise, like a walking stick against the wall, to alert a neighbour.
- If you know no one will hear you, keep warm and try to get up again later.
(BHPS.org.uk 2009) (I had a Fall Poster Appendix 1)

How older people can prevent falls:

Keep Physically Active

- Enjoy a Healthy Diet.
- Be Aware of their Health. (See Tips on Healthy Ageing)
- Have Medication Reviewed.
- Take Care of your Feet. Wear comfortable shoes both Inside and Outside the House (See leaflet on shoes)
- Have your Eyesight Checked. Have your Vision Checked at least Once a Year by an Optician.
- Take Steps to Make your Home Safe.
- Get Up Slowly After you Sit /Lie Down.
- Keep Emergency Numbers in Large Print Near Each Phone.

(Adapted from HSE Booklet, 2005 Web site)

Falls Screening & Assessment

In line with the National Strategy and Nice Guidelines 2014 (Clinical Practice Guidelines) for the Assessment and Prevention of falls in older people, all older people over 65 yrs should be screened for falls risk and those identified as at risk should be offered a multi-factorial assessment and tailored interventions.

Screening for Falls Risk: Level 1 (Appendix 2)

Older people in contact with health care professionals or their caregivers should be asked routinely whether they have fallen in the past year. The aim of screening for falls in older people is to identify those who are at risk of falls. This screening for falls should include:

- Has the patient fallen in the past year?
- If the patient has fallen, ask about the frequency and characteristics of their falls.
- Has the patient a fear of falling?
- Has the patient experienced difficulties in walking or with their balance?

If the older person answers **no** to all of the screening questions give advice on health and wellbeing Tips on Healthy Aging (Appendix 6) and Tips on Bone health (Appendix 5)

If the person has had a Single Explained Fall, carry out Gait and Balance Test Get up and Go (Appendix 7)

Pass: Give advice on health and wellbeing and bone health

Fail: Perform a multi factorial risk assessment

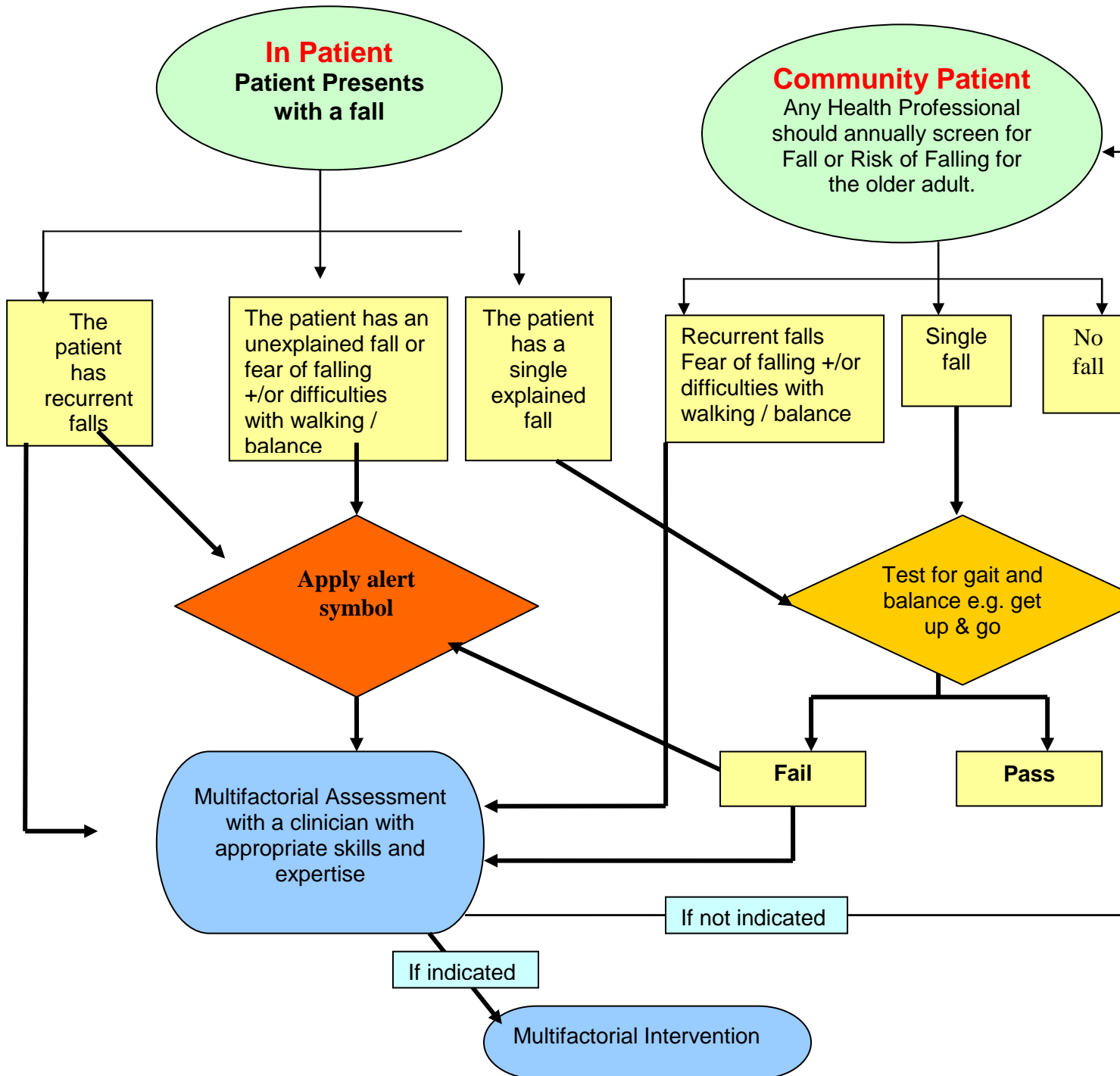
Assessment: Level 2 (Appendix 3)

The aim of multi factorial assessment is to identify the falls risks. A multi factorial assessment should be performed for service users who:

- Report recurrent (2 or more) falls in the past year
 - Report difficulties in walking or balance present
 - Report a fear of falling
 - Present for medical attention because of a fall
-
- All older people 65 or older who are admitted to hospital should be considered for a multi factorial assessment for their risk of falling during their hospital stay.
 - People aged 50 to 64 who are admitted to hospital and are judged by a clinician to be at higher risk of falling because of an underlying condition should also be screened and assessed (NICE Guidelines 2014).
 - Some settings use specific Risk assessment tool. The ones most commonly used in Ireland are the FRASE, FRAT and STRATIFIED. Screening and assessment methods should be in line with the National Strategy and best practice.
 - Assessment should be performed by a healthcare professional with appropriate skills and experience.

All screening and assessment should be in line with National Strategy" *Preventing Falls and Fractures in Ireland Aging population"*

Falls Algorithm as per the National Strategy



Recurrent Falls:
Unexplained Fall:

Explained Fall:

Two or more falls in the previous year
No clear history of accidental slip or trip and in cognitively normal person
An accidental fall (slip/ trip) in cognitively normal person

Falls Risk Alert Symbols and Signs

If on admission to an acute hospital or residential setting a service user is identified as being at risk of falling, a falls risk alert or symbol may be used to alert staff of people who are at risk of falling.

Various types of symbols/alerts (e.g. leaf or other) may be used to communicate that a service user is at risk of falling or has fallen.

The appropriate risk alert symbol should be put in place and a falls risk assessment carried out and a falls care plan initiated. These symbols/alerts are visual reminders to staff that the service user is at risk of falling.

Safety Cross

This is a monthly visual alert which is kept at the nurses station which indicates on a daily bases if any falls have occurred. (Safety Cross Appendix 4)

An orange wristband indicates a person who is at increased risk of falling. ***It is used in the acute hospital setting only.*** The older person should have the band placed around their wrist while they remain at risk. If reassessment identifies that they are no longer at risk the orange risk band should be removed

Reporting Falls

In Keeping with the HSE Safety Incident Management Policy 2014

and or your local policy (for non HSE services) all falls witnessed / un-witnessed need to be reported to the National Incident Management System (NIMS) using a risk Management Occurrence Form (all clinical incidents including falls must be reported and reviewed).

In the situation of a fall /reported fall, a Clinic Incident/Near Miss Form should be completed. The following details should be included in the form:

- Location of fall
 - Time of Day
 - Activity at time of fall
 - Immediate Management
 - Trauma both physical and psychological
 - Environmental Factors i.e. no hand rails, trailing leads etc.
 - Service user factors i.e. no footwear, stocking feet etc.
 - If the fall resulted in harm,
 - A no harm fall where no harm occurred,
 - Service user had a falls risk management completed on admission /transfer and or/within the last 3 months in line with older people Services Falls Metrics.
- (Adapted from HSE, 2013)

Getting started: Establishing a falls prevention and bone health working group

- Be familiar with the National Strategy "To Prevent Falls and Fractures in Irelands Aging Population" (available from HSE).
- Start engaging with the relevant heads of services/departments to get commitment.

- Establish how significant the problem of falls is within your setting and gather baseline data.
- Review how falls prevention is currently being addressed; are falls prevention programmes/services available?
- Falls working group needs to be established and must be multi-disciplinary or falls could be incorporated into another working group i.e. Health and Safety, Quality and Safety
- Develop Terms of Reference for the working group.
- Decide how often the group meets.

Tips for the Working Group

- Develop a policy in line with the National Strategy or adapt a policy from a similar setting where possible.
- If you already have a falls prevention programme in place, ensure it is in line with the National Strategy and best practice
- Assess the fall prevention needs within your setting.
- Identify what programmes or services are currently available.
- Prioritise area of falls prevention that need to be addressed.
- Agree on short, medium and long-term actions.
- Seek support from similar settings/departments that have established falls and fracture prevention programmes.
- Be clear about what you want to do and how it will be done.
- Decide on definite actions and timeframe.
- Implement actions.
- Monitor and review process.
- Education and Learning Sessions to be provided for all staff (including – Catering, Housekeeping etc) appropriate to their level of responsibility and role.

Resources

- **Strategy to Prevent Falls and Fracture in Irelands Ageing Population, (2008)** – www.hse.ie
- (TILDA) Fifty Plus in Ireland 2011 Irish Longitudinal Study on Ageing (2011)
- (TILDA) Growing old with Intellectual Disability in Ireland (2011)
- NICE Clinical guidance 161 guidance.nice.org.uk/cg161
- Falls Awareness: Live Life Safely Booklet (Falls Multidisciplinary Committee, St Mary's Hospital Phoenix Park, 2010) [Phone Number 01 625041]
- Falls Prevention and Management Policy_St Mary's Hospital Phoenix Park http://hsenet.hse.ie/Hospital_Staff_Hub/StMary%27sHospitalPhoenixPark/Falls_Prevention_Policy.pdf
- Falls Prevention Centre of Excellence: www.stopfalls.org
- Falls safe project-royal college of physicians www.rcplondon.ac.uk
- Videos on Fall Prevention and How to Get Up After a Fall: <http://www.rosipa.com/homesafety/adviceandinformation/falls/videos/falls-360.wmv>

Chapter 2

Osteoporosis /Bone Health

Aim

To improve awareness and knowledge of bone health and osteoporosis among health service workers.

Learning Outcomes

At the end of this chapter the learner will:

- Have knowledge of the risk factors for osteoporosis and an awareness of which individuals should seek further screening.
- Have fundamental knowledge on appropriate approaches to the prevention, detection and management of osteoporosis.
- Have an understanding of the fracture liaison service.

Osteoporosis/Bone Health

Keeping Bones Strong/Preventing Osteoporosis

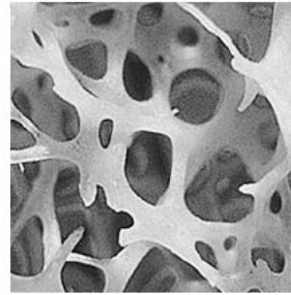
In order to ensure the best bone health possible across all stages of life it is important to have adequate calcium intake, vitamin D levels and appropriate physical activity. Bones grow during childhood and adolescence and peak bone mass (strongest bone) is usually reached between age 25 and 30 with men reaching it earlier than women. Exercise and a good diet in childhood and adolescence are very important in aiming for the best possible peak bone mass.

At middle age, the bones, while remaining strong, very gradually begin to lose their strength. Women experience the menopause which accelerates the process of bone turn over. The female hormone oestrogen has a protective effect on bones. At the menopause (normally around the age of 50) the ovaries almost stop producing this hormone reducing the protection it gives bones. At this stage in life it is important to try and maintain as much bone as possible. The loss or thinning of the bones continues as people get older and in later stages of life slowing down bone loss becomes the focus of bone health strategies.

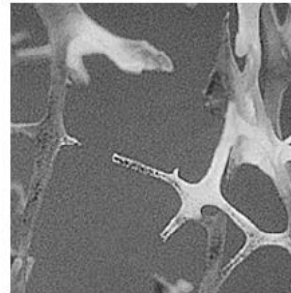
In some people bone loss occurs earlier in life and more rapidly than in others, leading to the development of osteoporosis.

What is Osteoporosis?

The word Osteoporosis literally means "porous bones". The bones in the skeleton are made of a thick outer shell and a strong inner mesh filled with protein, calcium salts and other minerals. The inside looks like a honeycomb, with blood vessels and bone marrow in the spaces between struts of bone.



normal bone



osteoporotic bone

Fig 1

Osteoporosis means that some of these struts become thin or break and the bone becomes porous. The bones then become fragile and can break without too much force. Osteoporosis is often regarded as the 'silent disease' and it is often only when a person has a fracture that they realise they have osteoporosis. Having an understanding of the risk factors for osteoporosis is important in understanding how to prevent osteoporosis or slow it down. Osteoporosis is treatable and the risk of fractures can be reduced (Irish Osteoporosis Society Guidelines 2010).

Risk Factors for Osteoporosis (National Osteoporosis Foundation 2013)

There are many factors that can increase the risk of osteoporosis. Some of these are different for men and women. Osteoporosis can occur at any age in both males and females, and persons of all races. One in five men (over 50) and 1 in 2 postmenopausal women (over 50) will develop a fracture during their lifetime (Irish Osteoporosis Society Guidelines 2010).

Women

A lack of oestrogen caused by:

Early menopause (before the age of 45).

Early hysterectomy (before the age of 45), especially if both ovaries are removed.

Missing periods for six months or more (excluding pregnancy), as a result of over exercising or over dieting.

Men

Low levels of the male hormone testosterone (hypogonadism).

Family History: Family history of osteoporosis is a very strong risk factor, particularly if it includes a history of hip fractures as approximately 80% of a persons bone is genetic.

Age: Bone loss increases in later life so by the age of 75 about half of the population will have osteoporosis. As we get older bones become more fragile and more likely to break.

Race: Osteoporosis affects men and women of all races. But Caucasians and Asian women are more at risk. Dark skinned people tend to have larger bones, however they have decreased ability to absorb vitamin from the sun.

Low Body Weight: If you have low BMI (body mass index) you are at greater risk of developing osteoporosis.

Previous Fractures: If you have already broken bones easily, including in the spine after minor trauma.

Some medical conditions increase your risk;

Rheumatoid Arthritis: The disease itself and steroid treatment can increase the risk.

Eating Disorders: People who have a history of eating disorders may have missed out on vital nutrients to their bones at a vital stage of development.

Gastrointestinal Disorders: Disorders such as Coeliac disease, Crohns Disease Ulcerative Colitis or primary Biliary Cirrhosis.

Endocrine Disorders: Disorders such as Hypogonadism, cortical or thyroid and parathyroid hormone problems, diabetes turners syndrome in females and Klienfelters in males.

Medications: Some medicines can increase the risk of osteoporosis e.g. corticosteroids (7.5 mgs daily for more than 3 months), some anti convulsants post organ transplant therapy diuretics.

Chemotherapy or Radiation: Any adult or child who has received or who will be receiving treatment should have a DEXA scan.

Life Style factors

- Lack of regular weight bearing exercises
- Low daily intake of calcium and or Vitamin D
- Excessive physiological stress
- Smoking
- Excessive alcohol consumption
- Excessive exercise particularly with inadequate caloric intake
- Getting too much protein increase calcium loss
- Excessive sodium and caffeine

These factors associated with osteoporosis can be categorised as:

- (i) non-modifiable risks like age, family history of osteoporosis
- (ii) modifiable factors which are mainly lifestyle and dietary choices which a person can try to control.

Modifiable factors	Non-modifiable factors
Exercise	Age
Nutrition and balanced diet	Race
Low dietary calcium	Gender
Vitamin D deficiency	Family history (parent with hip fracture)
Low body mass index	Previous fracture
Smoking	Ethnicity (more common in Caucasians and Asians)
Alcohol	Early menopause / hysterectomy

Fig 2

Often the first time a person realises they have osteoporosis is when they fracture a bone. If an older person has had a previous fracture as a result of very little trauma (fragility fracture), then they need to have their osteoporosis managed and it is especially important that they are assessed by their doctor. Getting the appropriate management at this point may prevent a future fracture. It is especially important that they are assessed by their doctor regarding their bone health and their need to be on medications, supplements or taking specific exercise.

Prevention of Osteoporosis

Given the modifiable risk factors, there is a great deal that can be done at all different stages in life to guard against osteoporosis and to reduce the risk of fracture.

Appropriate diet and exercise are critical in aiming to maximise bone mass. Diet is also important to support muscle strengthening exercise programmes and to slow down the effects of ageing on muscle (sarcopenia). Strong muscles are important for everyday function and reducing the risk of falls. Strong muscles are important in maintaining strong bones.

Diet

Everyone needs a balanced diet to promote strong bones. A good diet includes sufficient calories, protein, fat and carbohydrates, as well as minerals and vitamins. Calcium and Vitamin D are the most important of these for bone health.

Calcium is essential throughout life for bone health and the prevention of osteoporosis. Ninety per cent of adult bone mass is laid down by age 17. Calcium comes from the food that we eat, when we consume less calcium than our body requires, it is taken from our bones (National Osteoporosis Foundation - US, 2013). Dairy products (milk, cheese and yoghurt) are the richest source of calcium. Consuming 3 servings a day will help meet your calcium needs. Low fat dairy products have similar calcium content to full fat products so calcium intake need not be compromised if people have to alter dietary intake for health reasons.

The recommended daily allowance* of calcium is:

Women

Aged 19 to menopause	1000 mg/day
Post menopause	1300 mg/day

Men

Aged 19–65 years	1000mg/day
65+ years	1300mg/day

<http://www.iofbonehealth.org/calcium-calculator>

Calcium Content of Common Foods:

Weight per average serving (oz) (g)(ml)		Food	Calcium (mgs)
1/3 pt	200ml	Whole/reduced fat milks	235
1/3 pt	200ml	Fortified milks	320
1/3 pt	200ml	Fortified soya milk	240
1/3 pt	200ml	Unfortified soya milk	26
1 pot	125g	Yoghurt (fruit)	200
1 pot	60g	Petit filous	85
1oz	28g	Cheddar cheese	202
4oz	112g	Cottage cheese	82
4oz	112g	Canned sardines (in tomato sauce)	460
Small tin	100g	Tuna	12
Small tin	100g	Salmon	93
Small tin	100g	Pilchards (canned in tomato sauce)	300
4oz	112g	Spinach, boiled	179
4oz	112g	Broccoli, boiled	45
4oz	112g	Baked beans	60
4oz	112g	Red kidney beans cooked	80
3oz	84g	Soya bean curd, steamed	428
2oz	56g	Brazil nuts	95
2oz	56g	Swiss style muesli	62
1 bar	56g	Milk chocolate	123
1 slice	30g	Bread, white (standard)	33
1 slice	30g	Bread, wholemeal (standard)	16

Vitamin D plays a vital role in bone health – without it calcium, which is required for strong and healthy bones cannot be absorbed.

Sunlight exposure is probably the most important source of Vitamin D and people should aim to expose skin to natural sunlight to achieve requirements. Diet can provide vitamin D and this may be particularly important for people not frequently exposed to sunlight. The richest sources of dietary vitamin D include:

- Oily fish
- Fish liver oil
- Liver
- Eggs
- Vitamin D enriched foods such as milks, spreads



The recommended daily* vitamin D intake is:

Women and Men

51 to 65 years	400 IU/day
65+ years	600 IU/day

April 2015



Calcium and Vitamin D Supplementation

Supplementation with calcium and vitamin D may be necessary for people who do not get outdoors much or who have restricted exposure to sunlight or who have a restricted diet. Older frail people may have insufficient exposure to sunlight and a low dietary intake thus decreasing vitamin D levels in the blood.

Calcium and Vitamin D supplements are only necessary:

- If a person is not getting adequate amounts of Calcium via diet or Vitamin D via diet and exposure to sunlight
- If a person is unable to absorb sufficient calcium and Vitamin D

Composition of Calcium and Vitamin D supplements

Supplement	Calcium per tablet	Vit. D per tablet	Usual Dose
Calcichew	500mg	none	Two tablets / day
Calcichew D ₃ Forté	500mg	400iu	Two tablets / day
Calcit	500mg	440iu	Two tablets / day
Ideos	500mg	400iu	Two tablets / day
Calceous	500mg	400iu	Two tablets / day
Osteofos	1200mg	800iu	One sachet daily

Protein

Protein is important for muscle and bone health. European guidance for the diagnosis and management of osteoporosis in postmenopausal women recommends a daily intake of at least 1g/kg body weight of protein for all women aged over 50 years (Rizzoli et al, 2014). So if a person weighs 65kg that means eating a minimum of 65g of protein.

Sources of protein

Lean red meat, Chicken, Hummus, Kidney beans, Lentils, Salmon

There are two other factors to consider in a person's diet; alcohol and caffeine

Alcohol

Excessive alcohol intake can increase loss of calcium from bone. The Department of Health and Children recommend not more than 14 units per week for women and 21 units for men. No more than 3-4 units should be taken in any one day. People should try to have a few alcohol free days every week.

1 unit of alcohol = $\frac{1}{2}$ (300ml) pint beer
small glass (125ml) wine

1 measure of spirits = 1½ units

Caffeine

Caffeine can increase the amount of calcium lost from a person's body. Daily intake of coffee (not more than 3 cups) and high caffeine drinks (e.g. cola) should be limited.

Smoking

Give up smoking!

Exercise for Bone Health

Exercise is important in promoting bone health. The overall goal is to prevent a fracture and this can be achieved by:

1. Building bone or slowing down bone loss
2. Preventing falls

Not all exercise is sufficient however to provide these benefits, so the key types of exercise recommended are outlined below. This section draws on evidence based Bone Health Guidelines published by the Irish Society of Chartered Physiotherapists (iscp.ie, 2013).

Bone Building Exercise

Impact Exercise

One of the most effective ways of loading the bones to stimulate bone strength is by doing impact/weight-bearing exercise. Weight-bearing activities such as running or skipping stimulate bone growth. It is important to stimulate bone in the arms, legs and spine.

Whilst swimming and cycling improve cardiovascular fitness and muscle strength, such exercises are not effective for promoting bone gains as compared to those that involve a weight-bearing component. Although walking as the only form of exercise will not specifically improve bone density, walking has other important health benefits and should be continued as part of having a healthy lifestyle.

Resistance /Weight Training Exercise

Resistance training using weights and gym machines has also been shown to promote bone health. Advice from a Chartered physiotherapist or an exercise specialist should be sought prior to starting a weights programme.

Key points for bone building:

- To build bone, or slow down the rate of bone loss, exercises which load bones are necessary.
- Bones can be loaded by impact exercise such as jogging, skipping, and jumping for the hips and spine or taking load through the arms.
- Resistance training using weights, resistance machines or elastic band/tubing will also improve bone health.
- The best way of improving bone health through exercise is by performing a structured mixed loading programme consisting of resistance training and impact such as jumping, jogging, step training and walking (Howe, 2011).

Exercise Precautions:

If a person has osteopaenia/osteoporosis certain exercises should be avoided e.g. exercise which involves a lot of twisting or bending of the spine or heavy lifting. It is best to consult with a Chartered Physiotherapist / HSE Physiotherapist who will take each person's individual case into consideration.

Exercise to reduce risk of falls

Exercise can prevent falls and should include

- balance training
- strength training

It is the combination of fragile bone and an incident such as a fall which often causes a fracture and so prevention of falls is important.

Exercise for falls prevention should provide a moderate or high challenge to balance and be undertaken for at least 2 hours per week on an ongoing basis. Strength and walking training may be

included in addition to balance training. High risk individuals should not be prescribed brisk walking programmes as it may increase their risk of falling. Other health-related risk factors should also be addressed. Falls prevention exercise should target both the general community and those at high risk for falls. Exercise may be undertaken in a group or home-based setting (Sherrington et al, 2011).

Key points for balance and strength exercise

- Balance can be improved with practice. It is important to continue with balance exercises and to make them challenging but safe.
- To be effective, strengthening exercises need to challenge a person's muscles so they need to be hard enough that a muscle feels fatigued. It is usual to aim for muscle fatigue in less than 10 repetitions of the exercise for strength exercise programmes. So if a person can perform more than 10 repetitions, the weight/resistance/load needs to be increased.

Falls Prevention Exercise Precautions

In trying to make balance exercise challenging, safety needs to be considered e.g. need to have a rail or heavy piece of furniture nearby to grab/hold onto when practising balance exercise. A Chartered/HSE Physiotherapist can advise on balance exercises and their progression.

Finding out if a person has osteoporosis

The best way of finding out whether one has osteoporosis or not, is by undergoing a DXA scan.

Who needs to be screened for osteoporosis by DXA?

A DXA scan is recommended, generally, for people who are at high risk of osteoporosis (see risk factors above). By discussing the medical history with one's doctor, he/she will decide whether to refer the patient to hospital for a DXA scan. If a person has symptoms that already indicate a diagnosis of osteoporosis, like a low trauma fracture, then a DXA is not necessary.

What is DXA?

A bone density scan called a DXA scan is used to measure the density of bones. The letters DXA stand for: **D**ual-energy **X**-ray **A**bsorptiometry. This test is currently the most accurate and reliable means of assessing the strength of one's bones and risk of fracture. It is a simple painless procedure that uses very low doses of radiation. The patient is asked to lie down on a machine for approx. ten minutes whilst an X-ray arm passes over the patient to take an image of the spine and hip. A bone density scan can diagnose osteoporosis, assess risk of fracture and monitor the effects of treatment.

Treatment options for Osteopaenia/Osteoporosis

If a person has Osteopenia or Osteoporosis their doctor may prescribe medications to slow bone loss. Taking control of the modifiable risk factors, of diet and exercise habits, is critical to slow bone loss. Exercise can also reduce the risk of falling, which is often the cause of a fracture in people with poor bone.

There are, therefore, 3 pillars to managing osteoporosis / preventing fracture:

- Diet
- Medication
- Exercise for bone health and falls prevention

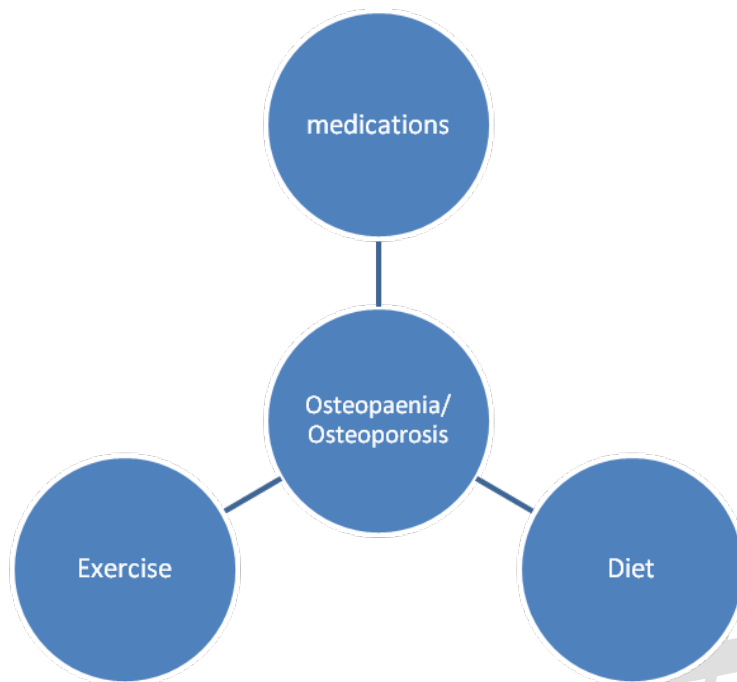


Fig 3

Diet and exercise for bone health have already been described in this chapter and below is a summary of medication for bone health

Treatment with Osteoporosis Medication (National Osteoporosis Foundation)

There are many things to think about when choosing the right osteoporosis medicine. You and your healthcare provider may want to look at:

Your gender. Calcitonin (Fortical[®] and Miacalcin[®]), estrogen and hormone therapies, and estrogen agonists/antagonists (Evista[®]) are only approved for women. Some bisphosphonates (Actonel[®], Atelvia[®], Fosamax[®] and Reclast[®]), denosumab (Prolia[®]) and teriparatide (Forteo[®]) are approved for both men and women.

Your age. Some medicines may be more appropriate for younger post-menopausal women while others are more appropriate for older women.

In general, osteoporosis medicines are not recommended for pre-menopausal women. Certain osteoporosis medicines are approved for the prevention and treatment of osteoporosis in pre-menopausal women, as a result of the long-term use of steroid medicines. In very rare cases, healthcare providers may recommend that some pre-menopausal women consider taking an osteoporosis medicine if they've had a broken bone caused by low bone density or have experienced bone loss from a rare medical condition.

How severe your osteoporosis is. Osteoporosis medicines work in different ways. A person with more severe bone loss or a broken bone may take a different medicine than a person with less bone loss. Your healthcare provider will consider other health problems you have when recommending a medicine. If you have had breast cancer or blood clots, for example, you should not take estrogen. Also, if your bones have been exposed to radiation treatment, you should not take teriparatide (Forteo[®]).

Personal preference.

Do you prefer a pill, liquid or IV medicine or one that is given as a nasal spray or an injection? Does it work better for you to take your medicine every day, once a week, once a month, several times a year or even once a year? Do you have negative feelings about a particular drug? Any of these factors could influence your treatment decision. It's also important to keep in mind that no two people are the same. How well a medicine works, or what side effects it will have, can vary from one person to the next (Appendix 5 Quick Tips for Bone Health).

Secondary Prevention-Following Fragility Fracture

There is now a growing body of evidence on the effectiveness of secondary prevention using anti-resorptive drugs to improve bone quality. Evidence for the effectiveness of falls prevention interventions is also accumulating. Effective secondary prevention must become an integral part of our strategy for fragility fractures (Blue Book, 2007). 'The Blue Book' entitled 'The Care of Patients with fragility Fracture' (British Orthopaedic Association, 2007) is a really useful document. One of the most important initiatives for minimising the burden of osteoporosis related fractures is to identify people who have sustained a minimal trauma fracture early and initiate appropriate treatments (Department of Health, Western Australia: Osteoporosis Model of Care. Perth: Health Networks Branch, Department of Health, Western Australia; 2011.page 16).

We need to consider what happens in the years before people present to hospital with a hip fracture. The various patient experiences are illustrated in the 'fragility fracture cycle' in figure 1. A study based on records from the UK General Practice Research Database (GPRD) reported the lifetime risk of any fracture at age 50 as 53% for women and 21% for men. Thus, less than one half of women will be fracture free for life.

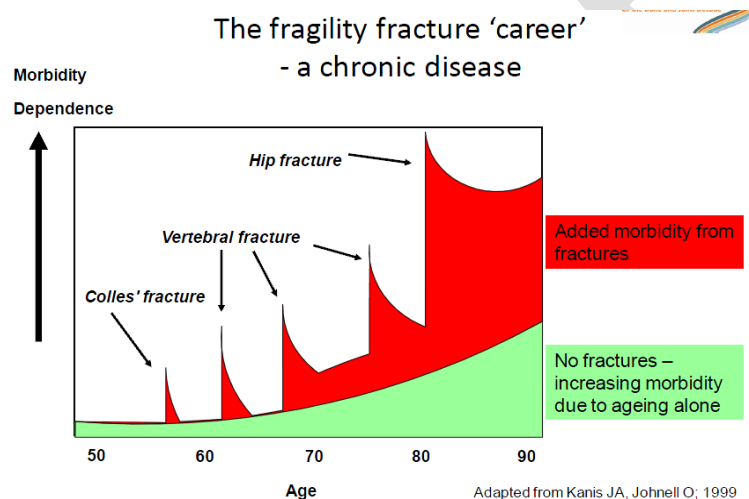


Fig 4

A crucial observation is that fracture begets fracture. Several studies have evaluated future fracture risk associated with fractures at various skeletal sites. Two major meta-analyses found that a prior fracture at any site is associated with a doubling of future fracture risk. From another perspective, it is known since the 1980s that half of patients presenting with hip fractures today have experienced prior fragility fractures in the past (Bone Care 2020 A systematic approach to hip fracture care and prevention for New Zealand page 21).

Development of a Fracture Liaison Service

Fracture Liaison Services, commonly known as FLS, are co-ordinator based secondary fracture prevention services implemented by health care systems for the treatment of osteoporotic patients.

The FLS is designed to:

- Close the care gap for fracture patients who are currently never offered screening and/or treatment for osteoporosis.
- Enhance communication between health care providers by providing a care pathway for the treatment of fragility fracture patients.

A FLS is made up of:

- A Committed team of care providers
- A co-ordinator dedicated to act as the link between the patient and the orthopaedic team, the osteoporosis and fall prevention services, and the primary care physician.
- A structure that ensures all patients presenting with fragility fractures to a particular hospital receive fracture risk assessment and treatment where appropriate.
- A service that will be provided by a clinical nurse specialist, who works to pre-agreed protocols to identify and assess fracture patients.

The FLS can be based in secondary or primary care health care settings and requires support from a medically qualified practitioner, be they a hospital doctor with expertise in fragility fracture prevention or a primary care physician with a specialist interest.

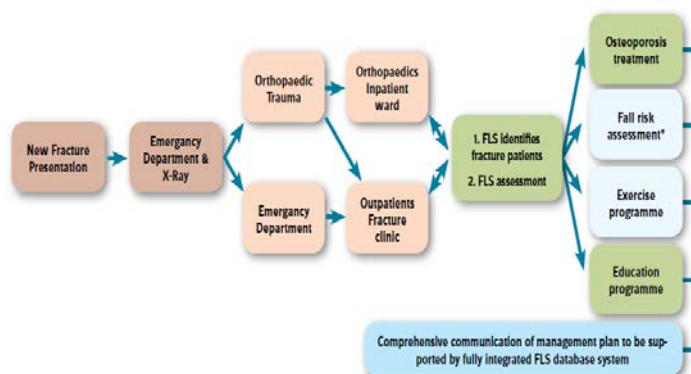


Fig 5

The service structure for a UK hospital based Fracture Liaison Service (*Capture the Fracture International Osteoporosis Foundation www.iofbonehealth.org/capture-fracture 24/03/2014*).

A Fracture Liaison Service, delivered by the nurse specialist, is a proven approach to the identification, assessment and treatment of fracture risk

Resources

- Irish Osteoporosis Society - www.irishosteoporosis.ie
- National Osteoporosis Foundation – www.nof.org
- Osteoporosis (UK) www.nos.org.uk
- Strategy to Prevent Falls and Fracture in Irelands Ageing Population, 2008 – www.hse.ie
- Osteoporosis Poster – www.bonehealth.co
- Eat Well for Bone Health Booklet (Paula Mee, 2014) – www.paulamee.com
- Access <http://www.iofbonehealth.org/calcium-calculator> for a calcium calculator

Chapter 3

Primary Care

Chapter 3

Aim

To provide Health Care professionals in the Primary Care Settings with the information and knowledge on the screening, assessment and intervention process for falls prevention and bone health

Learning Outcomes

At the end of this chapter it is anticipated that the learner will be able to:

- Identify the risks of falling for older people in the primary care setting.
- Explain falls risk screening, assessment and intervention.
- Describe the Falls Pathway.
- Describe the falls reporting procedure.

The Health Status of people living at home or in the community varies. There are people who are well, independent and active, whose risk of falling is low. There are others, who have long-term health conditions, requiring multiple medications, whose risk of falling is high.

The Primary Care Draft working Guidelines (2012) inform Health Professionals on how to screen and assess for falls, at risk people (≥ 65 years) and refer for appropriate interventions at primary care level.

Primary Care Services mean all of the health or social care services in your community. Nine Community Healthcare Organisations are being established and they each will have 10 Primary Care networks. The Primary Care Network supports several Primary Care teams. Primary Care Team consists of health professionals who work closely together to meet the needs of the people living in the community; they provide a single point of contact to the health system. The Primary Care team consists of:

- General Practitioner & Practice Nurse
- Community Nursing Service – Public Health Nurse & Community Registered Nurse
- Occupational Therapist
- Physiotherapist
- Home Help/Support Staff
- The Primary Care Team also links in with other community-based disciplines to ensure all health and social needs are provided for.

(HSE, 2013)

Target Population

The target population for the guidelines ideally are older people (≥ 65 years) living in the community who are availing of services provided at primary care level. Priority may need to be given to the highest risk groups such as older people who attend Emergency Departments or out of hours GP services with a history of falls, frail elderly, or older people attending day centres

Structured falls prevention programmes in primary care settings have been shown to achieve a reduction, of between 15% and 30%, in falls and potentially, could see a reduction nationally

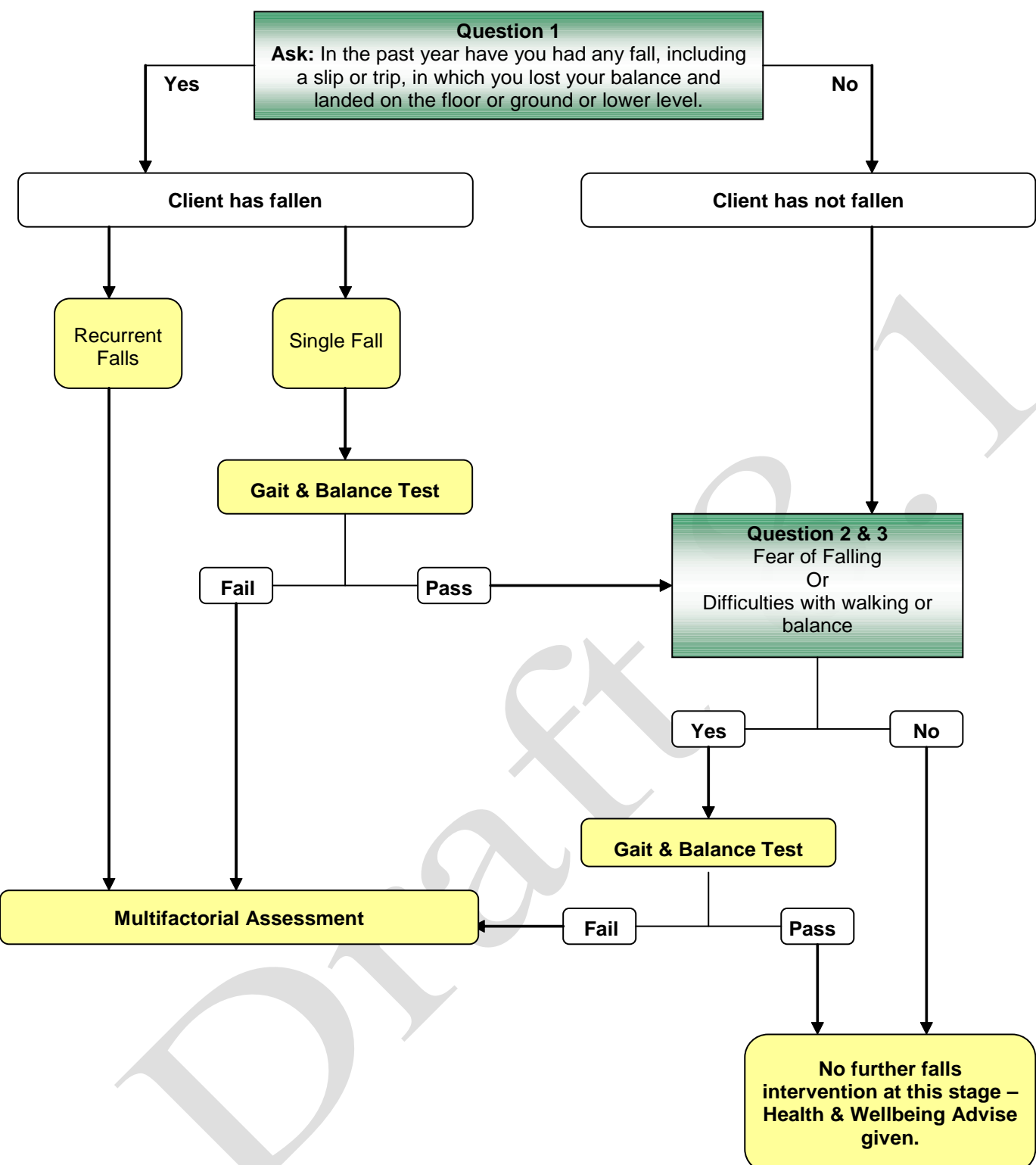
of up to 10,200 admissions per annum, which equates to a saving of €17.7m - Primary Care (Teams HSE Board Report 2011).

The objectives of the Primary Care draft working Guidelines are to provide a national guide for health professionals working in Primary Care to:

- Screen older people for risk of falling.
- Encourage a multidisciplinary assessment and management approach of older adults who are at risk of falling.
- Provide an individually tailored action plan for clients identified as a falls risk.
- Involve the client in formulating an action plan and inform the client of the outcome of referral processes.
- Link in local referral pathways within the various services.

Falls Algorithm

Draft 8.1



Reference HSE, Dept. of Health and Children (2008) "Strategy to Prevent Falls and Fractures in Ireland's Aging population"

Falls Screening and Assessment

In line with the National Strategy and Nice Guidelines 2014 (Clinical Practice Guidelines) for the Assessment and Prevention of falls in older people, all older people over 65 yrs should be screened for falls risk and those identified as at risk should be offered a multi-factorial assessment and tailored interventions.

Falls Screening and Risk Assessment

Screening

The Aim of screening for falls in older people is to identify those who are at risk of falls **Level 1 Screening** (Appendix 2).

Older persons in contact with Health Care Professionals or their care givers should be asked the following at least once a year:

- Have you fallen during the past years?
- If the older person has fallen, ask about the frequency and characteristics of their falls.
- Has the older person a fear of falling?
- Has the older person experienced difficulties in walking or with their balance?

If the older person answers **no** to all of the screening questions give advice on health and wellbeing Tips on Healthy Aging (Appendix 6) Tips on Bone health (Appendix 5)

If the person has had a Single Explained Fall, carry out Gait and Balance Test Get up and Go (Appendix 7)

Pass: Give advice on health and wellbeing and bone health

Fail: Perform a multi factorial risk assessment

Assessment

The Aim of the multi factorial assessment is to identify the falls risks. A multi factorial fall risk assessment Level 2 (Appendix 3) should be performed for older people living in the community who:

- Report recurrent (2 or more) falls in the past year.
- Report difficulties with gait and balance.
- Report fear of falling.
- Seek medical attention because of a fall.

The multi factorial risk assessment should be carried out and should incorporate the following:

- History of falls
- Characteristics of fall – was it a slip, trip or fall, fear of falling, questioning in relation to any difficulties in walking or with their balance.
- Medications
- Environmental Issues
- Feet and Footwear
- Vision Impairment
- Related Medical History
- Social Factors

Dietary intake including hydration Any team member can complete the Multi factorial Fall Risk assessment. Section 12 (bone health), Section 13 (Drug history) and Section 14 (vision) are best completed by the General Practitioner.

The Multi factorial interventions include management of the risk factors identified in the multi-factorial Assessment (Appendix 8) would include:

Interventions

A falls risk assessment, followed by intervention to modify the identified risk (deficit), is the most effective strategy to reduce both the risk of falling and incidence of falling in older people.

Strategies that combine interventions, targeted at more than one risk factor, to reduce falls are:

- Interventions that have been shown to reduce falls are individualised exercise programme that includes a combination of resistance, (strength) training, gait, balance, and co-ordination training.
- Medication review and withdrawal of psychotropic and other culprit medications, if appropriate.
- Home environment assessment and modification, carried out by a health care professional.
- Managing postural hypotension.
- Vision assessment and referral for intervention.
- Assessment of vitamin D deficiency and calcium insufficiency and treat if identified.
- Identification of foot problems and appropriate treatment.
- Behavioural modification and educational programmes should be considered.

(Adapted from National Strategy HSE 2008)

Reporting Falls

In Keeping with the HSE Safety Incident Management Policy 2014 and or your local policy (for non HSE services), all falls witnessed /unwitnessed need to be reported to the National Incident Management System (NIMS), using a risk Management Occurrence Form (all clinical incidents including falls must be reported and reviewed).

In the situation of a fall /reported fall, a Clinic incident/Near Miss form should be completed. The following details should be included in the form

- Location of fall
 - Time of Day
 - Activity at time of fall
 - Immediate Management
 - Trauma both physical and psychological
 - Environmental Factors i.e. no hand rails, trailing leads, etc
 - Service user factors i.e. no footwear, stocking feet, etc
 - If the fall resulted in harm
 - A no harm fall where no harm occurred
 - Service user had a falls risk management completed on admission / transfer and or/within the last 3 months in line with older people Services Falls Metrics
- (Adapted from HSE, 2013)

Tips on Falls for Home Help

Members of the Home Help Service should:

- Observe for and notify manager of possible risk factors for falls.
- Report witnessed, un-witnessed and near-falls to clinicians and managers.
- Report home safety hazards such as poor lighting, throw rugs and trailing flexes.
- Encourage patient and caregiver to use walkers or canes, if patient has a device.
- Ensure proper use of adaptive equipment in bathrooms.
- Check that the older person's glasses are clean.
- Check if hearing aids are ok.
- Remind the older person to exercise as regularly as possible.
- Observe the older person has safe footwear.

Resources

- **HSE, 2012. A Guide to Falls Screening and Multi-factorial Falls Risk Assessment *in* Primary Care. National Care of the Elderly and Primary Care Clinical Programmes.**
- **Eat Well for Bone Health Booklet (Paula Mee, 2014) – www.paulamee.com (Pg: 189-190)**
- **Falls Awareness: Live Life Safely Booklet (Falls Multidisciplinary Committee, St Mary's Hospital Phoenix Park, 2010) [Phone Number 01 6250414]**
- **Osteoporosis Poster – www.bonehealth.co**

Chapter 4

Acute Hospital Setting

Chapter 4

Aim

To provide staff in the Acute Setting with the information and knowledge on the screening assessment and management process for falls and bone health.

Learning Outcomes

At the end of this chapter it is anticipated that the learner will be able:

- To identify the risks of falling for older people in an acute hospital setting.
- To explain the falls risk screening assessment and intervention process.
- To implement post fall care.
- Describe falls reporting procedure.

Falls in the Acute Hospital Setting

There are 53 acute hospitals in Ireland. They vary greatly in size, type, number of specialities and activity level. Of the Acute Hospitals, 37 have an Emergency Department (ED).

Why Do Patients Fall in a Hospital Setting?

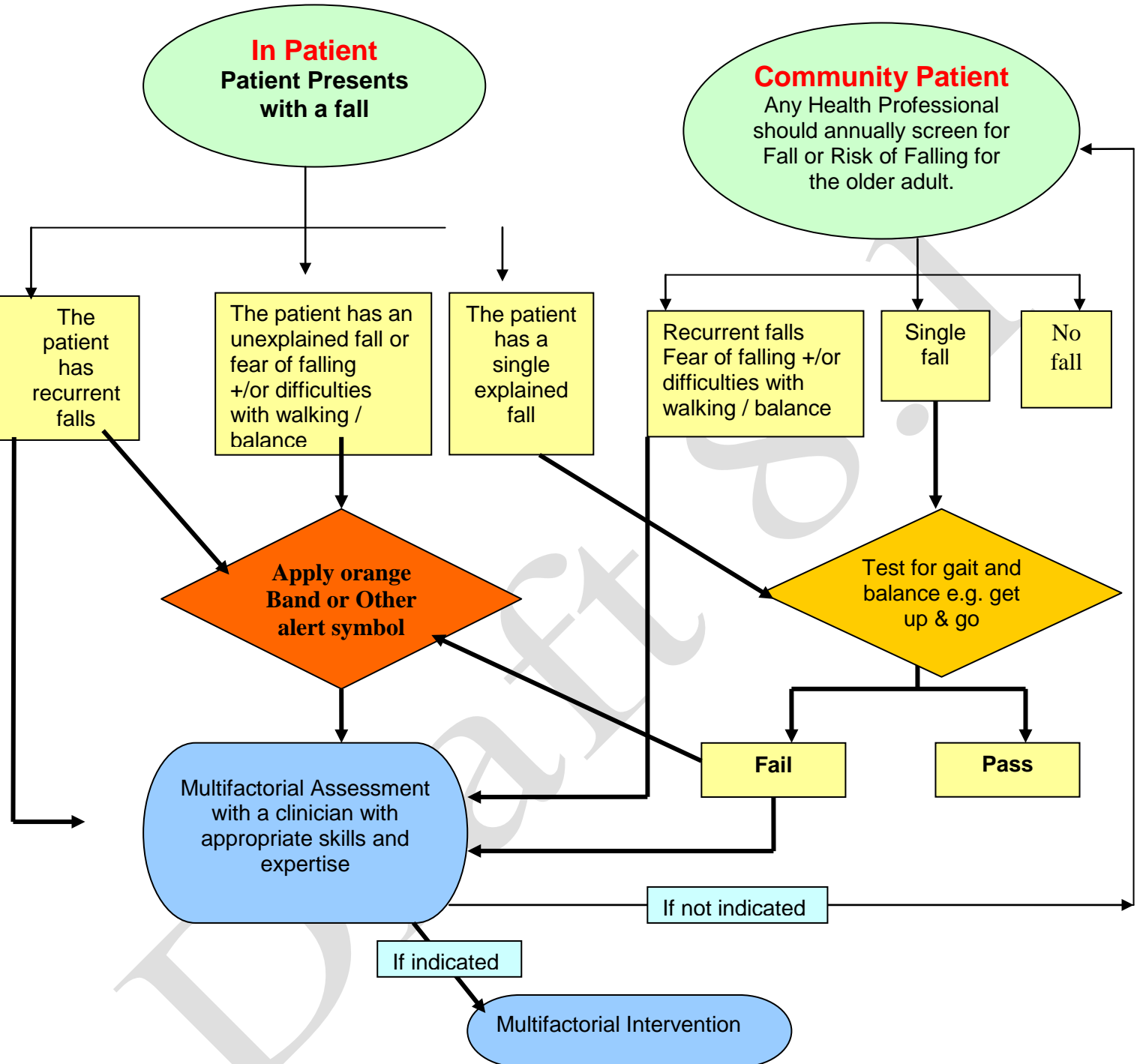
Hospital patients are at greater risk of falling than people in the community (NICE, 2004). Individuals admitted to hospital are at an increased risk of falling, particularly if there are co-existing risk factors. Other reasons might include that they may have recently undergone surgery that affects their memory or mobility, and they may have cardio-vascular problems or need medication, which may increase the risk of falling.

Dementia also increases the risk as these patients are less likely to recognise environmental hazards, less likely to recover their balance and are often unaware of their limitations. All patients in hospital, whether suffering from dementia or not, have to adapt to a different environment and to changes in their strength and mobility (NHS, 2010).

All acute hospitals should have:

- A falls policy. Sample policy (Appendix)
- A multidisciplinary Falls Group.
- A process for screening assessment and interventions for service users at risk.
- A process for reporting falls and fall related injuries.
- A structure for educating staff on falls and fracture prevention.

Falls Algorithm as per the National Strategy



Recurrent Falls: Two or more falls in the previous year.
Unexplained Fall: No clear history of accidental slip or trip, in cognitively normal person.
Explained Fall: An accidental fall (slip/ trip) in cognitively normal person.

Falls Screening and Assessment

All patients 65 or older who are admitted to hospital should be considered for a multi-factorial assessment, for their risk of falling during their hospital stay.

Screening

The Aim of screening for falls in older people is to identify those who are at risk of falls_Level 1 Screening (Appendix 2)

Older persons in contact with Health care professional or their care givers should be asked the following at least once a year

- Have you fallen during the past years
- If the older person has fallen, ask about the frequency and characteristics of their falls
- Has the older person a fear of falling?
- Has the older person experienced difficulties in walking or with their balance?

If the older person answers **no** to all of the screening questions give advice on health and wellbeing Tips on healthy Aging (Appendix 6) and Tips on Bone health (Appendix 5)

If the patient answers **yes** to any of the screening questions apply orange band or other alert. Carry out a falls risk assessment and initiate a Falls Care Plan.

If the patient has a single explained fall i.e. tripped over object, clothing etc, test for Gait and balance (Appendix 7)

Pass: Give advice on health and wellbeing and bone health

Fail: Perform a multi factorial risk assessment and apply orange alert band



Assessment

The Aim of the multi factorial assessment is to identify the falls risks. A fall risk assessment Level 2 (Appendix 3) Multi factorial falls risk Assessment should be performed for older people living who:

- Report recurrent (2 or more) falls in the past year
- Report difficulties with gait and balance
- Report fear of falling
- Seek medical attention because of a fall

The multi factorial risk assessment should incorporate the following:

- History of falls
- Characteristics of fall – was it a slip, trip or fall, fear of falling, questioning in relation to any difficulties in walking or with their balance.
- Medications
- Environmental Issues
- Feet and Footwear
- Vision Impairment
- Related Medical History
- Social Factors
- Dietary intake including hydration

Any team member can complete the Multi factorial Fall Risk assessment. Section 12 (bone health), Section 13 (Drug history) and Section 14 (vision) are best completed by a Doctor

Assessment should be performed by a healthcare professional with appropriate skills and experience.

Be Aware that screening methods may under or over estimate an Individual's risk of falling therefore clinical judgement is also required

The **multi-factorial interventions** (Appendix 8) would include:

A falls risk assessment followed by intervention, to modify the identified risk (deficit), is the most effective strategy to reduce both the risk of falling and incidence of falling in older people. Strategies that combine interventions and target more than one risk that have been shown to reduce falls are:

- individualised exercise programme that includes a combination of resistance. (strength) training, gait, balance, and co-ordination training.
- Medication review and withdrawal of psychotropic and other medications, if appropriate.
- Home environment assessment and modification, carried out by a health care professional.
- Managing postural hypotension.
- Vision assessment and referral for intervention.
- Assessment of vitamin D deficiency and insufficiency and treat if identified.
- Identification of foot problems and appropriate treatment.
- Behavioural modification and educational programmes should be considered. (A Guide to Falls Screening and Multi factorial Falls Risk Assessment in Primary Care 2012)

Safety Pause

The aim of the safety pause is to enhance communication, prioritise patient safety and experience and embed quality improvement in daily practice. The safety pause assists teams in applying elements of the *National Standards for Safer Better Healthcare* (2012) and the *Quality Framework for Mental Health Services in Ireland* (2007) and can be used in any ward, department, clinic, unit or service e.g., prior to medical rounds, at the beginning or end of the handover and is wider than the nurse handover. It should be multidisciplinary and take no longer than 5 minutes. It is a method of alerting staff to patient safety issues for the shift/day and actions needed. The HSE safety pause Information Sheet. www.hse.ie/go/clinicalgovernance

Additional Safety Precautions for High Fall Risk Patients

- Move the patient closer to the nurse's station where possible.
- Have the bed down low, with the brakes locked.
- Keep floor surfaces dry and uncluttered.
- Have the patients belongings and drinking water within their reach.
- Ensure footwear is non-slip and well-fitting.
- Ensure clothes/nightwear are not trailing, causing a tripping hazard.
- Monitor regularly throughout the day/night.

Intentional Rounding Or Comfort Checks

The aim is to provide a regular routine of individualised checks at times agreed within the acute setting. This enables staff to interact with patients every hour or every 2 hours depending on needs. This can be implemented for all patients or those deemed most at risk. The idea around this is for staff members to check in on patients in order to address any needs they may have, which are linked with Pain, their Position, their Personal Needs and Placement.

There are "Four P's" which are vital for successful rounding which are outlined below. This may be very difficult to achieve within current resources. The patients at risk or who have had a fall should be rounded on. This may only be required at certain times of the day when there is less staff/ patient activity.

Each ward can identify which parts of the day when there is less staff supervision of the patients and intentionally round at those times. Intentional Rounding Chart Sample (Appendix 10).

All staff have a role to play in this

The "Four P's" vital for successful rounding consist of:

- **Positioning:** Making sure the patient is comfortable and assessing the risk of falls or pressure ulcers.
- **Personal Needs:** Scheduling patient trips to the bathroom to avoid unsafe conditions.
- **Pain:** Asking patients to describe their pain level on a scale of zero to 10.
- **Placement:** Making sure the items a patient needs are within easy reach, such as water, tissues, television remote control and the telephone.

Falls Risk Alert Symbols and Signs

If on admission a patient is identified as being at risk of falling "an appropriate risk alert symbol", (e.g. orange wrist ban or other) should be put in place and a falls risk assessment carried out and a falls care plan initiated. These symbols/alerts are visual reminders to staff that the patient is at risk of falling.

Orange is generally considered the national colour for falls risk. They are used in the form of stickers, braclets or signage placed above the patient's bed, on the patient's door, or on the patient's chart.

Safety Cross:

This is a monthly visual alert which is kept at the nurses station which indicates on a daily bases if any falls have occurred (Appendix 11).

An orange wristband

An orange wristband indicates a patient who is at increased risk of falling. *It is used in the acute hospital setting only.* The older person should have the band placed around their wrist while they remain at risk. If reassessment identifies that they are no longer at risk the orange risk band should be removed

Post Fall Care

If a fall occurs while a patient is in the acute setting the nurse on duty will:

- Call for help and administer first aid if necessary.
- Not attempt to move the patient until sufficient help is available.
- Not manually lift the client from the floor unless in an emergency (Ex: fire, explosion).
- In the event of cardiac arrest, resuscitate the patient on the floor.
- If the patient is uninjured and has recovered sufficiently, assist them to get themselves up by rolling onto all fours or into a kneeling position and pulling themselves in a sitting position with the aid of a chair/stool.
- If the patient is unable to get up themselves from the floor, must use a mechanical aid (Ex: Hoist). If the client is in a confined space, a sliding device can be used to move them to a more comfortable area.
- Call the doctor on-call to assess the patient.
- Contact Patient family as soon as possible
- Will complete Clinical Incident/Near Miss form accurately and submit to the Clinical Nurse Manager.
- Submit Incident Report form/Near Miss forms to the line manager for review and sign off and entry on to the STARS system.
- Encourage staff to perform a post fall assessment of the incident eg huddle
- Use a visual cue to identify that a fall has occurred in the setting. i.e.: The Safety Cross (Appendix 11)
- Re-assess Patients falls risk after the fall
- Encourage information re patients at risk of falls or who has fallen during that shift, to be handed over at report times between staff

Once the patient is stabilised following any slip trip or fall reflect and analysis to prevent further occurrence using the falls huddle method

Post-Fall “Huddle” Tool and/or asking the 5 Why’s.

This is part of the falls care bundle; it is a method used to analysis the reason why the patient fell.

This tool should be used to guide the immediate post-fall “huddle” and should take only 5 minutes of your time. Gather all available staff, including nurses, NA, and managers. Discuss at least the key points below to help modify the patient’s care and prevent further falls.

- Environmental Assessment
- Bedrails up?
- Bed/Chair alarm on?
- Bed in low position?
- Call light within reach?
- Fall history, fall circumstances, and fall risk factors assessment
- Health history and functional status
- Medications and alcohol consumption review
- Vital signs & Pain assessment
- Vision Screening
- Gait, Balance, or Musculoskeletal/Foot
- Continence Assessment
- Cardiovascular Assessment
- Neurological Assessment
- Depression Screening
- Walking Aids, Assistive Technologies, & Protective Devices Assessment t

OR

As part of the post fall huddle you could also use the 5 whys approach.

Was Assessment undertaken on admission? Risk status- low, moderate, high?

Why do YOU think the patient fell (based on your nursing assessment of the following):

Who fell? **When** did they fall? **Where** did they fall? **What** were they doing when they fell?

Additional comments

What specifically can you change to prevent the patient from falling again?

File Fall Occurrence Report and include any “huddle” insight.

BE SURE to document patient fall and complete incident form including the following details:

- Signs or Symptoms
- Previous Fall
- Location of fall
- Time of Day
- Activity at time of fall
- Trauma both physical and psychological
- Environmental Factors i.e. no handrails, trailing leads etc
- Residents factors i.e. no footwear, stocking feet etc
- Harm/ No Harm

Actions Plan Post fall Huddle

- Update fall risk assessment
- Decide on interventions and time frame
- Decide on review date

Discharge Home

The time spent by patients in the acute hospital setting is usually short. It is very important that as part of their discharge plan from the hospital that the falls history, the appropriate treatment and setting for follow-up is included in the letter to the GP, PHN and other relevant health professionals.

- o They should also be offered a multi-factorial assessment of their community-based falls risk, if appropriate (NICE Guidelines 2014).

Emergency Department

For older people who experience a fall and attend the Emergency Department it is a very important point of contact. 13%-52% of older people experience subsequent falls (Close, Ellis et al. 1999; Bloch, Jegou et al. 2009) 49% are re-hospitalised (Bloch, Jegou et al. 2009)

If Falls Risk Screening identifies that the older person is at risk of falling, a falls risk assessment should be completed by hospital staff if patient is admitted or in the community if the older person is discharged home.

The falls status of the patient should be communicated to the Primary care team who should initiate the appropriate referral for assessment and appropriate intervention. This requires a multidisciplinary approach and clear pathways of referral.

Resources

- **Example of Policy Acute Hospital – Appendix 9**
- **Example of intentional rounding Chart – Appendix 10**
- **Multi-Factorial Assessment and Intervention– Appendix 8**
- **Gait and Balance Test Get up and Appendix 7**
- **Safety Pause Information Sheet** www.hse.ie/go/clinicalgoverance
- **The Fall Safe Care Bundle** www.bgs.org.uk/campaigns/fallsafe Pg 116
- **Safety Alert Form- Appendix 11**
- **Osteoporosis Poster –** www.bonehealth.co
- **Safety Cross – Appendix 4**
- **Fall Safe Care bundle** www.bgs.org.uk/campaigns/fallsafe

Chapter 5

Residential Setting

Chapter 5

Aim

To provide staff in the residential setting with the information and knowledge on the screening assessment and management process for falls and bone health

Learning Outcomes

At the end of this chapter it is anticipated that the learner will be able to:

- Identify the risks of falling for older people in an residential setting
- Explain the falls risk screening assessment and intervention process
- Implement post fall care
- Describe the falls reporting procedure
- Have an awareness of bone health

Falls in the Residential Setting

Older People in residential setting are generally frailer than older people living in the community. They are usually older, have more chronic conditions, and have more difficulty walking. They also tend to have thought or memory problems, to have difficulty with activities of daily living, and need help getting around or taking care of themselves. Approximately 6% of people aged 65 years and older in Ireland are receiving residential care (CSO, 2012). Of those requiring long-term care, approximately 70% are aged 80 years and older (Department of Health, 2010).

Older people in residential settings residents are at highest risk of falls, fractures and osteoporosis. Their rate of hip fracture is 3-11 times greater than age-matched community dwelling older people (HSE, 2008). An estimated 50% of older people in residential settings fall each year, this fall rate is more than double the rate for older people living in the community (CDC, 2008).

All Residential settings should have:

- A falls prevention and management policy. (Sample Policy Residential setting)
<http://hsenet.hse.ie/HospitalStaffHub/StMary%27sHospitalPhoenixPark/FallsPrevnctionPolicy.pdf>
- A process for screening assessment and interventions for patients at risk.
- A process for reporting falls and fall related injuries.
- A structure for educating staff on falls and fracture prevention. All staff have a role in preventing falls

The majority of older people in residential care are in:

63%

Private Nursing Home Sector

9%

Voluntary Home Sector

28%

Extended Care Units/Welfare Homes

(Drennan, 2012).

- Approximately 50% of older people in residential care facilities fall at least once a year; up to 40% fall more than once a year.
- Falls are recorded as a contributing factor in of admissions to nursing homes.
- The incidence of falls can double after older people are relocated to a new environment and then return to baseline after the first three months.
- Among people 85 and older, 20% of fall-related deaths occur in residential care settings Todd, C., & Skelton, D. (2004).
- People with cognitive impairment have 2 times the risk of falling compared to people without cognitive impairment (Shaw, 2002).
- The use of sedatives, hypnotics, antidepressants and benzodiazepines demonstrate a significant association with falls (Woolcott, 2009).
- Older people with confusion, short-term memory loss and/or poor safety awareness are considered "High Fall Risk". Those at risk of wandering and those who are likely to try to leave a safe environment should have their level of risk identified.

Falls Screening and Assessment

A general risk assessment is carried out and recorded upon admission to the residential care setting. It should also be carried out as indicated by the residents changing needs or circumstances and no less frequently than at three monthly intervals (HQA Standard, 10.4).

In line with the National Strategy any older person with any degree of mobility should have their falls risk assessed on admission to a residential unit and reassessed at three monthly intervals. If there is a change to the medical condition of the resident they should be reassessed sooner than three months.

People aged 50 to 64 who are admitted to a residential care setting and are judged by a clinician to be at higher risk of falling because of an underlying condition should also be screen and assessed for risk of falls (**Nice Guidelines 2014**).

Be Aware that screening methods may under or over estimate an Individual's risk of falling therefore clinical judgement is also required

Falls screening and assessment for the resident in the Residential Setting

The Aim of screening for falls in residents is to identify those who are at risk of falls Level 1 Screening (Appendix 2).

Older persons on admission to a residential unit should be screened for falls risk. They or their care givers should be asked the following:

- Have you fallen during the past year?
- If the older person has fallen, ask about the frequency and characteristics of their falls.
- Has the older person a fear of falling?
- Has the older person experienced difficulties in walking or with their balance?

If the resident answers **no** to all of the screening questions give advice on health and wellbeing, Tips on healthy Aging (Appendix 6) and Tips on Bone health (Appendix 5).

If the patient answers **yes** to any of the screening questions an appropriate alert symbol is put place, e.g Forever Autumn leaf symbol, a falls risk assessment carried out and a falls care plan initiated.

If the resident has a single explained fall (i.e. tripped over object, clothing etc.) test for Gait and balance (Appendix 7).

Pass: Give advice on health and wellbeing and bone health.

Fail: Carry out a multi factorial assessment.

The Aim of the multi factorial assessment is to identify the falls risks. A fall risk assessment Level 2 Multi factorial falls risk Assessment (Appendix 3) should be performed for residents who:

- Report recurrent (2 or more) falls in the past year.
- Report difficulties with gait and balance.
- Report fear of falling.
- Seek medical attention because of a fall.

The multi factorial risk assessment should incorporate the following:

- History of falls
- Characteristics of fall – was it a slip, trip or fall, fear of falling, questioning in relation to any difficulties in walking or with their balance.
- Medications
- Environmental Issues
- Feet and Footwear
- Vision Impairment
- Related Medical History
- Social Factors
- Dietary intake including hydration

Any team member can complete the Multi-factorial Fall Risk assessment. Section 12 (bone health), Section 13 (Drug history) and Section 14 (vision) are best completed by a Doctor

Assessment should be performed by a healthcare professional with appropriate skills and experience.

It is important to identify the resident at risk of falling to all residential care staff including porter, catering staff, cleaning staff etc, education needs to be given to all hospital staff about falls symbols, bands etc.

Safety Pause

The aim of the safety pause is to enhance communication, prioritise resident's safety and experience and embed quality improvement in daily practice. The safety pause assist teams in applying elements of the *National Standards for Safer Better Healthcare* (2012) and the *Quality Framework for Mental Health Services in Ireland* (2007) and can be used in any ward, department, clinic, unit or service, eg, prior to medical rounds, at the beginning or end of the handover and is wider than the nurse handover. It should be multidisciplinary and take no longer than 5 minutes. It is a method of alerting staff to patient safety issues for the shift/day and actions needed. The HSE safety pause Information Sheet. www.hse.ie/go/clinicalgovernance

Additional Safety Precautions for High Fall Risk Residents

- Move the resident closer to the nurse's station where possible.
- Have the bed down low, with the brakes locked.
- Keep floor surfaces dry and uncluttered.
- Have the resident's belongings and drinking water within their reach.
- Ensure footwear is non-slip and well-fitting.
- Ensure clothes/nightwear are not trailing, causing a tripping hazard.
- Monitor residents regularly throughout the day/night.

Intentional Rounding or Comfort Checks

The aim is to provide a regular routine of individualised resident checks at times agreed within the residential setting. This enables staff to interact with residents every hour or every 2 hours depending on needs. This can be implemented for all residents or those deemed most at risk. The idea around this is for staff members to check in on residents in order to address any needs they may have, which are linked with Pain, their Position, their Personal Needs and Placement.

There are "Four P's" which are vital for successful rounding which are outlined below.

This may be very difficult to achieve within current resources.

The residents at risk or who have had a fall should be rounded on.

This may only be required at certain times of the day when there is less staff/ patient activity.

Each unit can identify which parts of the day when there is less staff supervision of the residents and intentionally round at those times. Intentional rounding Chart Sample (Appendix 10).

All staff have a role to play in this.

The "Four P's" vital for successful rounding consist of:

- **Positioning:** Making sure the resident is comfortable and assessing the risk of falls or pressure ulcers.
- **Personal Needs:** Scheduling residents trips to the bathroom to avoid unsafe conditions.
- **Pain:** Asking residents to describe their pain level on a scale of zero to 10.
- **Placement:** Making sure the items a residents needs are within easy reach, such as water, tissues, television remote control and the telephone.

Falls Risk Alert Symbols and Signs

Various types of symbols/alerts are used to communicate that a resident is at risk of falling or has fallen. A falling leaf, falling star are examples of symbols being used by residential care settings to alert staff of residents at risk of falls. Orange is generally considered the national colour for falls risk. These symbols and colours serve as visual

reminders of falls risk. They are used in the form of stickers, or signage placed above the resident's bed, on the resident's door, or on the residents chart. These symbols/colours are to remind staff that the resident is at risk of falls and trigger interventions that reduce the risk of falls .

Forever Autumn Alerts /Programme

On admission all residents who have any degree of mobility are assessed for their falls risk and an appropriate coloured leaf (green, amber or red) is displayed to indicate their risk as follows:



The green leaf signifies the resident has a low risk of having a fall. Minimum Falls Prevention Standards will be put in place. A leaf will not be on display but will be placed next to the residents name on the white board in the Clinical Nurse Manager's Office.



The amber leaf signifies a medium risk of the resident having a fall. This leaf will be placed outside the door & over the bed in multi-occupancy rooms and a yellow 'grip' will be placed on the individual's mobility aid or wheelchair. A leaf will be placed next to the residents name on the white board in the Clinical Nurse Manager's Office.



The red leaf signifies the resident has a high risk of having a fall. This leaf will be placed outside the door & over the bed in multi-occupancy rooms and a red 'grip' will be placed on the individual's mobility aid or wheelchair. A leaf will be placed next to the residents name on the white board in the Clinical Nurse Manager's Office.

If anyone on the unit sees these symbols, they are asked to look in on the resident to ensure that they are safe. If the door of the resident's room is closed please take into account the right to privacy and dignity by knocking and waiting for response before entering the room. If there is a problem, they either stay with the resident until help comes or intervene if they are qualified to do so.

Post Fall Care

If a fall occurs while a resident is in residential care, the nurse on duty will inform the Nurse in Charge on the shift.

- Check the environment is safe for all.
- Take necessary action; scan body for injuries, assess for pain, tenderness, swelling, laceration, irregularities, and deformities and assess if it is suitable to move the person.
- Pathway for residents who have had a slip, trip or fall observed / unobserved should be followed (Appendix 12) .
- Do not attempt to move the resident until sufficient help is available.
- Do not manually lift the resident from the floor unless in an emergency situation, eg, fire, explosion. In the event of cardiac arrest, residents can be resuscitated on the floor (if this is the starting position).
- If the resident is uninjured and has recovered sufficiently, S/He may be able to get up themselves by rolling onto all fours or into a kneeling position and pulling themselves in a sitting position with the aid of a chair or stool.
- If the resident is unable to get up themselves from the floor, then a mechanical aid must be used, eg, hoist. If the resident is in a confined space a sliding device can be used to move them to a more comfortable area.
- Contact the Doctor as soon as possible. Record the name of the Doctor and time, advice received from Doctor in nursing progress notes. Assessment prior to contacting Doctor (Appendix13).

Once the resident is stabilised following any slip, trip or fall, reflect and analyse to prevent a further occurrence, using the Falls Huddle method.

Post-Fall “Huddle” Tool and/or asking the 5 Why’s.

This is part of the falls care bundle: it is a method used to analyse the reason why the resident fell. This tool should be used to guide the immediate post-fall “huddle” and should take only 5 minutes of your time.

Gather all available staff, including nurses, auxillary staff and managers.

Discuss the key points below to help modify the residents care and prevent further falls.

File an incident report immediately to capture all the data discussed in the huddle. Remember, the more information you include in the incident report, the better you can look at patterns and opportunities to prevent future falls.

Why do **YOU** think the resident fell (based on your nursing assessment of the following): Who fell? When did they fall? Where did they fall? What were they doing when they fell? Was Assessment undertaken on admission? Is risk status - low, moderate, high?

- Environmental Assessment
- Bedrails up?
- Bed/Chair alarm on?
- Bed in low position?
- Call light within reach?
- Fall history, fall circumstances, and fall risk factors assessment
- Health history and functional status
- Medications and alcohol consumption review
- Vital signs & Pain assessment
- Vision Screening
- Gait, Balance, or Musculoskeletal/Foot
- Continence Assessment
- Cardiovascular Assessment
- Neurological Assessment
- Depression Screening
- Walking Aids, Assistive Technologies, & Protective Devices Assessment
- Why does your patient think s/he fell?

OR

Additional comments

- What specifically can you change to prevent the resident from falling again?
- File Fall Incident Report and include any “huddle” insight.

BE SURE to document patient fall and complete incident form including the following details:

- Signs or Symptoms
- Previous Fall
- Location of fall
- Time of Day
- Activity at time of fall
- Trauma both physical and psychological
- Environmental Factors i.e. no handrails, trailing leads etc
- Residents factors i.e. no footwear, stocking feet etc
- Harm / No Harm

Actions Plan Post fall Huddle

- Update fall risk assessment
- Decide on interventions and time frame
- Decide on review date

A Resident you observe Falling

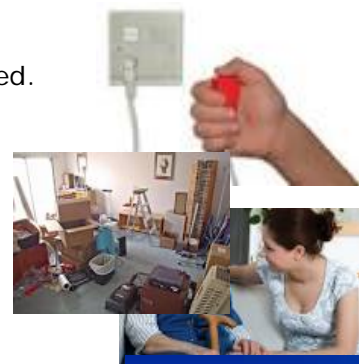
This is a hazardous situation. The key objective of the handler is to guide the resident onto the floor.

- If the resident is at a distance from you, do not reach out and try and grab the resident.
- If the resident is beside you when they begin to fall then release your grip on the resident. Stand slightly behind the client and to the side with your feet in a wide base and allow the client to slide to the floor.
- Remember to bend your knees while lowering the resident. If possible support the residents head. *Do not attempt to support the full weight of the resident* (The Guide to Handling of People 2011).
- Should a resident require transfer to the acute hospital or another Health Care facility, the resident Safety Alert form should accompany them.
- A Clinical Incident Form should be completed.

Safety Precautions for all Residents

- Ensure Resident has a call bell to hand.
- Check that the Resident knows how and when to operate the call bell.
- Explain to the Resident the importance of looking for assistance when needed.
- Discuss the Residents walking ability with them.
- Ensure that the Residents walking aid (if used) is within reach.
- Assess that the Residents environment is free from any potential hazards.
- Do not leave Residents with cognitive impairment unattended on commodes, toilets, in baths or showers.
- Ensure personal belongings are within easy reach for the Resident.

(Adapted from NHS Scotland, 2011)



Resources

- Falls Prevention and Management Policy_St Mary's Hospital Phoenix Park http://hsenet.hse.ie/Hospital_Staff_Hub/StMary%27sHospitalPhoenixPark/Falls_Prevention_Policy.pdf
- Multi Factorial Assessment and Intervention – Appendix 8
- Gait and Balance Test (Get Up and Go) – Appendix 7
- Osteoporosis Poster – www.bonehealth.co
- Fall Safe Care bundle www.bgs.org.uk/campaigns/fallsafe
- Safety Alert Form – Appendix 11
- Intentional Rounding Chart –Appendix 10
- Pathway for Care of service user Post Fall – Appendix 12
- Assessment Prior to Contacting Doctor – Appendix 14
- Northern Ireland Nursing Home Regional Collaborative, Falls Prevention Toolkit – www.publichealth.hscni.net (
- Bone health in the Park Forever Autumn (2011/12)www.bonehealth.co/

Chapter 6

Planning a

Learning Session

Chapter 6

Aim

To provide staff with Guidance on delivering an information session

Learning Outcomes

At the end of this section it is anticipated that staff will be able to:

- To deliver an information session on falls prevention, management and Bone Health to all members of staff

Fall Prevention, Management and Bone Health

The falls prevention bone health foundation programme aims to promote excellence in falls prevention, management and bone health of older persons. The programme will be delivered by Falls link workers (or equivalent), responsible for delivering education and learning sessions on falls and fracture prevention to health and social care workers. The falls prevention foundation programme has been developed in line with the National Strategy, the best available evidence and practice.

The falls prevention foundation programme will provide Falls link workers (or equivalent) with the knowledge needed to deliver learning sessions to all health and social care workers involved in the implementation of falls and fracture prevention initiatives. Learning sessions will be appropriate for workers across all disciplines working in hospital, residential and/or community settings.

The categories of health and social care workers are:

- **Category1**-Health and social care workers who provide support services e.g. catering housekeeping, administrative personnel, portering etc
- **Category2**- Health and social care workers who provide direct clinical care to service users e.g. nurses, doctors, all other allied healthcare professionals and health care assistants.

The falls prevention foundation programme is evidence informed, multidisciplinary and organised to meet the needs of a broad range of health and social care workers.

The **taught programme (see URL –downloadable in full)** addresses the core competencies required by staff working with older people at risk of falls and fractures .

It is aimed at health and social workers who may:

- Be new to falls prevention and bone health issues – such as rotational staff or those new in post.
- wish to refresh/extend their existing knowledge base.
- may have a mixed pathology caseload including older persons.
- Have limited access to other falls and bone health specific training.

The programme can be delivered as a half day classroom taught programme. It may be delivered locally in different ways (e.g. ward based or session by session over a period of weeks) to health and social care workers caring for patient affected by falls and bone health issues.

Core Learning Session 1 (Chapter 1)

15 minute session

Aims:

To provide staff with an overview of the National Strategy to prevent falls and fractures in Ireland's Aging population and introduce them to falls prevention and management.

Objectives:

At the end of this session the learner will be able to:

- Define a fall
- Recognise that falls are a serious public health problem and that there is a substantial economic cost, social and personal consequences for older people
- Describe the risk factors for falls
- Explain the screening and assessment process
- Demonstrate an understanding of fear of falling
- Describe symbols and alerts used to identify those at risk
- Give advice to people who fall and are on their own
- List tips on safety in the home
- Describe reporting falls

Core Learning Session 2 (Chapter 2)

15 minute session

Aims:

To improve awareness and knowledge of bone health and osteoporosis among health service workers.

Objectives:

At the end of this session the learner will:

- Have knowledge of the risk factors for osteoporosis and an awareness of which individuals should seek further screening
- Have fundamental knowledge on appropriate approaches to the prevention, detection and management of osteoporosis
- Have a understanding of the fracture liaison service

Core Learning Session 3 (Chapter 3)

15 minute session

Aims:

Staff in the Primary Care setting will be informed and have knowledge of the screening assessment and management process for falls and bone health

Objectives:

At the end of this session the learner will be able :

- To Identify the risks of falling for older people in the primary care setting
- To explain falls risk screening and assessment
- To describe the Falls Pathway
- To implement post fall care
- Have an awareness of Bone Health

Core Learning Session 4 (Chapter4)

15 minute session

Aims:

To provide staff in the Acute setting with the information and knowledge on the screening assessment and management process for falls and bone health

Objectives:

At the end of this session the learner will be able

- To Identify the risks of falling for older people in an acute hospital setting
- To explain the falls risk screening assessment and intervention process
- To implement post fall care

:

Core Learning Session 5 (Chapter5)

15 minute session

Aims:

To provide staff in the residential setting with the information and knowledge on the screening assessment and management process for falls and bone health

Objectives:

At the end of this session the learner will be able

- To Identify the risks of falling for older people in an acute hospital setting
- To explain the falls risk screening assessment and intervention process
- To implement post fall care

:

Sample of Event Planning Template

Date of Session	28 th August 2014
Time of Session	2pm-2.15pm
Location	Dining Room
Who is to Attend	Name Name Name
Main Message to be delivered	Importance of being aware of the risk factors that are associated with falls
Outline of Session	<ul style="list-style-type: none"> • Risk Factors associated with falls • Consequences of a fall • Question & Answer

Example of Session Delivery

Time allocated to each session: 60mins (Can be divided into 4 x 15 minute sessions over 1-2 weeks)

Timeframe: Session to be held every 2-3 weeks, having different staff members involved each time.

Participants: Session for both Clinical and Non-Clinical Staff. Staff will have already received the key messages associated with their roles so the sessions to be pitched accordingly depending on participants attending.

Number of participants: TBC (At least 2 members from each department/area within the setting)

Layout: Mixture of presentations/talks with some practical demonstrations

Affinity Falls prevention & Bone Health Foundation Education programme Participant Evaluation

1. My Healthcare professional role is:

2. What was your overall impression of this Affinity Falls Prevention and Bone Health Foundation session.

Poor Adequate Good Very good Excellent

3. The aim and learning objectives were clearly outlined at the beginning of today's session.

Strongly disagree Disagree Agree somewhat Agree Strongly agree

4. How relevant was this education session for you?

Not relevant Minimal relevance Moderately relevant Very relevant
Extremely relevant

5. Will this education session influence/change your practice?

Yes No

6. Please rate the presenter's performance.

Poor Adequate Good Very good Excellent

7. Please rate the content of the presentation.

Poor Adequate Good Very good Excellent

8. Would you recommend this education session to others?

Yes No

9. Please identify up to 3 learning points that you have gained from the session provided.

1 _____
2 _____
3 _____

10. What were the best aspects?

[samples to be provided]

11. Thank you for your time in completing this evaluation.

Any other comments are welcome.



Gníomhaireacht Bainistíochta an Chisteáin Náisiúnta
National Treasury Management Agency

An Gníomhaireacht Stáit um Éilimh
State Claims Agency



AFFINITY

Falls Prevention & Bone Health Education Programme for all
Health and Social Care Workers

This certifies that

Attended the above course on

DATE

VENUE

[Insert, if available, Continuing Education Credits relevant to Staff]

Signature
Course Provider/Coordinator/Facilitators

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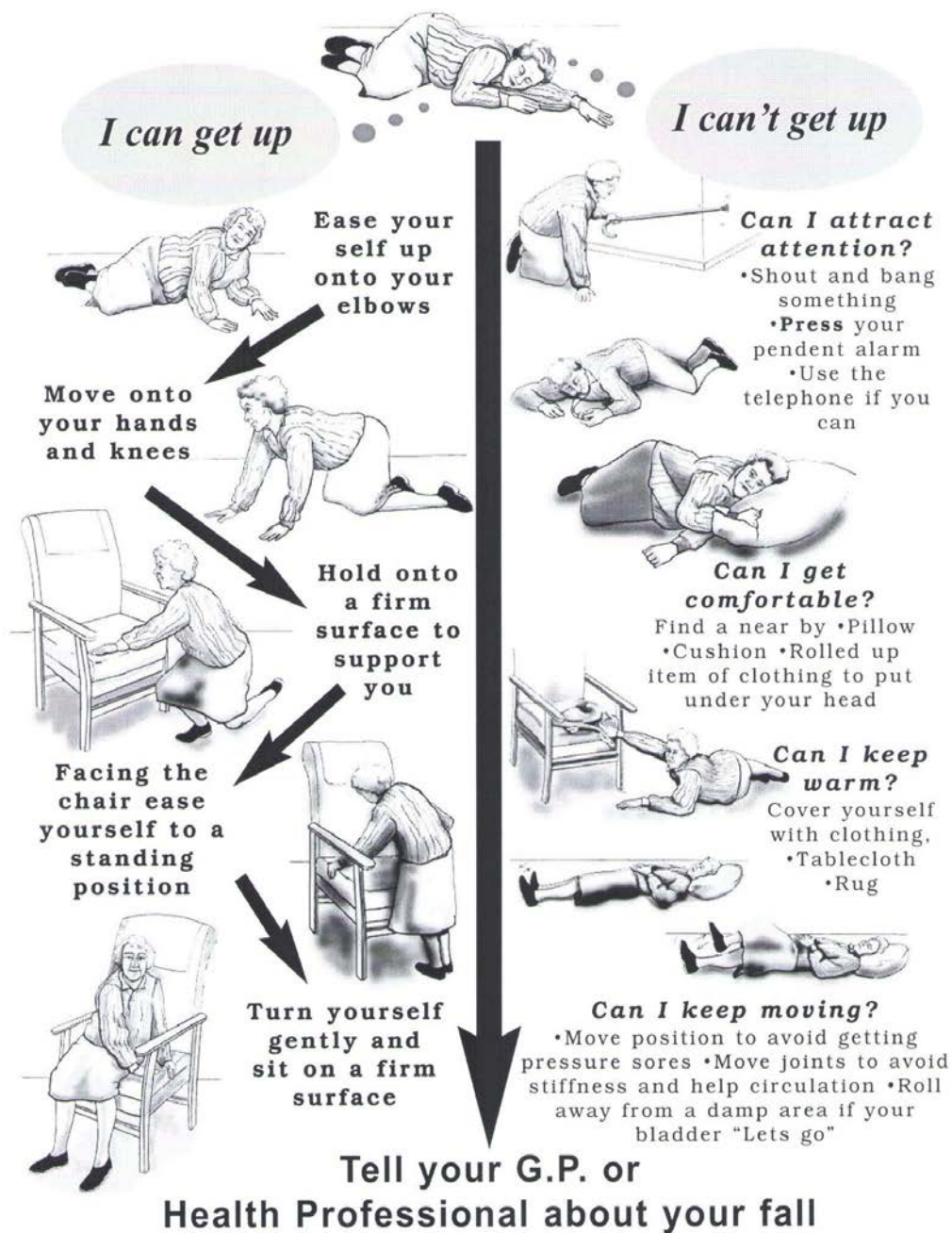
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Appendix 1 Post Fall Poster

I have had a fall



Berkshire
HEALTH PROMOTION

Appendix 2

Level 1 'Screen' for Falls or Risk of Falling for clients over 65 yrs.

Clients Name _____

Telephone No _____

present with a fall: Yes ☐ No ☐

Person identified opportunistically?
Had a fall Yes ☐ No ☐

Has any other health professional asked
you about falls Yes ☐ No ☐

Professionals Name _____

Consent Obtained: to discuss at team
meeting

and receive follow up phone call

Yes ☐ No ☐

Question 1

Ask: Client ☐ and / or Carer ☐

"In the past year have you had any fall, including a slip or trip, in which you lost your balance and landed on the floor or ground or lower level?"

☐ **No** → Proceed to Question 2

☐ **Yes** → (A) How many times did you fall in the past year? _____

(B) How did you fall? *Please describe:*

Activity: _____

Question 2

Ask Client: "Are you afraid of falling?"

☐ **No** (If no, proceed to question 3)

☐ **Yes** → **Multi-factorial Assessment if considered clinically significant** (Level 2)
(Significant = interfering with activities of daily living)

Question 3

Ask Client: "Have you any difficulty with your walking or balance?"

☐ **No** → **No further Intervention**

☐ **Yes** → **Gait and Balance and, if fail, then Multi-factorial Assessment** (Level 2)

***Gait and Balance Test** (Please refer to Appendix 6 for rationale and references for Get Up and Go protocol)

The client is asked to do the following (normal mobility aid can be used):

- Client is asked to sit in a standard height arm chair (approx seat height of 46cm), arms resting on the arms of the chair
- Then he/she is asked to stand up, walk a distance of approximately 3 metres at normal pace
- Turn,
- Walk back and sit down again
- The subject wears their regular footwear and uses their customary walking aid (none, cane, or walker). No physical assistance is given.
- The observed performance is scored as steady or unsteady.

Individuals fail the test if they are unable to perform/complete the test, or have difficulty or demonstrate unsteadiness performing any component of the test

Assessor:

Profession:

Date:

Appendix 3

Level 2: Multi-factorial Falls Risk Assessment

The form is intended to be completed by any healthcare professional on a primary care team. local arrangements may vary the assessor/health care professional should complete the form so far as their scope of practice allows and refer to their colleagues as required for completion of the appropriate parts. The Clinician who initiates the process should maintain record of the assessment and a register should be maintained by the Primary Care Team Administration Support. This register would allow clients to be called back for follow up required.

Assessor: _____ **Date:** _____

Information obtained from: ☐ Client ☐ Carer ☐ Other (Specify _____)

Demographic details

Name:

Address:

Telephone number:

Date of Birth:

GMS/LTI Card No:

Next of kin:

Relationship:

Tel. No:

GP:

Address:

Tel. No:

Past Medical History

Social History

Living Alone ☐ Yes ☐ No

Carer ☐ Yes ☐ No

1. Falls History

History of Falls: ☐ Yes ☐ No

Number of falls in last 12 months? :

Location of fall(s): Indoors ☐ _____ Outdoors ☐

Time of the day falls occurred? _____

How did the fall occur/what was the activity at the time?

What (in the person's opinion) was the cause of the fall(s)?

Has the person changed their routine or environment since the fall?

☐ Yes ☐ No

Did the person receive any injuries as a result of the fall?

☐ Yes ☐ No

Episodes of dizziness associated with falling?

☐ Yes ☐ No

Episode of blackout

☐ Yes ☐ No

Was the person able to get up from the floor?

☐ Yes ☐ No

Was the person able to summon help following the fall?

☐ Yes ☐ No

Does the person have a pendant alarm?

☐ Yes ☐ No

(If yes, was the person wearing pendant alarm at time of fall?

☐ Yes ☐ No

Client:

DOB:

2. Gait and Balance

Gait analysis (unsteady on feet/shuffles/uneven stride length etc):

Poor balance:

☐ Yes ☐ No

Reported difficulty climbing stairs/steps to house:

☐ Yes ☐ No ☐ N/A

Walking aid:

☐ Yes (please specify): _____

☐ No

3. Functional Ability

Activities of Daily Living: Ask the client are they: Independent **(I)**, requires Assistance **(A)**, or Dependent **(D)** with each of the following tasks?

Personal Activities of Daily Living (Dressing, Bathing, Toileting)

☐ I

A ☐ **D**

Transfers (Toilet, Bed, Chair)	<input type="checkbox"/> A <input type="checkbox"/> D
Domestic Activities of Daily Living (Housework, Meal Preparation, Shopping)	<input type="checkbox"/> I
<input type="checkbox"/> D	
4. Fear of Falling	
Fear of falling or restricting any activity they appear capable of doing	<input type="checkbox"/> Yes <input type="checkbox"/> No
If yes, details:	

5. Home Safety	
Does the client have:	
Steps / Stairs in the home either inside or outside unprotected by a rail?	<input type="checkbox"/> Yes <input type="checkbox"/> No
A shower with step or a bath without grab rails?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Indoor hazards present (cluttered rooms, rugs, cords)	<input type="checkbox"/> Yes <input type="checkbox"/> No
6. Perceived Functional Ability	
Demonstrates decreased awareness in reporting falls, risks and consequences of falls	<input type="checkbox"/> Yes <input type="checkbox"/> No
7. Cognitive Function	
Complete The Abbreviated Mental Test Score – Appendix 7	
8. Urinary Incontinence	
Urinary Incontinence <input type="checkbox"/> Yes <input type="checkbox"/> Urgency <input type="checkbox"/> Nocturia <input type="checkbox"/> Other _____)	
<input type="checkbox"/> No	
9. Foot Problems and Footwear	
Foot problems i.e. corns, bunions, swelling, overgrown toenails	<input type="checkbox"/> Yes <input type="checkbox"/> No
Inappropriate, poorly fitting or worn footwear	<input type="checkbox"/> Yes <input type="checkbox"/> No
10. Assessment of Mood	
During the last month have you been bothered by feeling sad, depressed or hopeless?	<input type="checkbox"/> Yes <input type="checkbox"/> No
During the last month have you often had little interest or pleasure in doing things?	<input type="checkbox"/> Yes <input type="checkbox"/> No
11. Nutrition	
11(i)	
Weight loss (within previous 12 months)	<input type="checkbox"/> Yes <input type="checkbox"/> No
Loss of appetite	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are there issues impacting on dietary intake	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>(If client answers "yes" carry out 11(ii) as appropriate ('MUST' screening - refer to MUST tool in Appendix 4)</i>	
11(ii) 'MUST' screening:	

Height :	Weight (kg):	BMI (kg/m²):	'MUST' Score: _____ 0 – Low risk: Monitor. 1 – Med risk: Implement 'First Line Dietary' advice (Appendix 4). ≥ 2 – High risk: Implement 'First Line Dietary' advice (Appendix 4) & refer to dietitian.
Client:		DOB:	
12. Bone health			
Previous low trauma fracture Xray evidence of osteopenia Corticosteroid Use (i.e. prednisolone for ≥3months) Family history of osteoporosis (especially maternal hip fracture) Other clinical risk factors: height loss, kyphosis, low Body Mass Index (<19kg/m ²) Possible secondary osteoporosis (primary hyperparathyroidism, poorly controlled thyrotoxicosis, malabsorption, rheumatoid arthritis, liver disease, alcoholism, primary hypogonadism) Untreated oestrogen deficiency (history of surgical or natural menopause <45 years, secondary amenorrhoea > 6 months not due to pregnancy or primary hypogonadism)			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
13 .Drug History			
Medications: Is the client on 4 or more medications? Is the client on psychotropic medication, e.g. night sedation, anti depressants, anxiety meds? List all medications (including dosage): Document below or attach print out			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No
Alcohol: Does the client have alcohol dependency issues? If yes, alcohol units per week: _____			
14. Vision			

Appendix 4 Falls Safety Cross

No Falls



New Resident with Falls History



Fall



		1	2		
		3	4		
		5	6		
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
		25	26		
		27	28		
		29	30		

Year: _____

Month: _____

(Adapted from HSC, 2013)

Appendix 5 Quick Tips for Healthy Bones

- Diet – Try to get the recommended daily amounts of Calcium and Vitamin D in your diet and by having some exposure to sunlight but you may need supplements if this is not possible.
- Exercise – Impact and muscle strengthening exercises will help build bone/maintain bone/slow bone loss
- Stop Smoking and avoid excessive alcohol intake
- Talk to you Doctor – Discuss with your doctor if you are worried about your bone health.
- Get Tested – Have a bone density test (DXA Scan)
- If diagnosed with osteoporosis or you fracture a bone as a result of a minor trauma you will probably need to take bone medications which your Doctor can prescribe
- Preventing a fall is especially important if you have osteoporosis and exercise can reduce your risk of falling

Appendix 6 Tips for Healthy Ageing

Physical Activity

Regular physical activity is one of the most important things you can do for your health. It can prevent many of the health problems that seem to come with age.

It also helps your muscles grow stronger so you can keep doing your day-to-day activities without becoming dependent on others.

Recommended that if you are 65 or over and relatively fit and healthy:

- ❖ Do 150 minutes of moderate exercise (Ex: Brisk Walking) every week. Moderate means you should still be able to talk but unable to sing!
- ❖ Also do muscle-strengthening exercises on 2 or more days of the week. You could also use your body as resistance, do some gardening that requires digging etc or even yoga.
- ❖ If you are not mobile, then exercising whilst sitting down can be just as effective.

(CDC – US, 2011)



Mental Health

Older people experience many changes (Retirement, Bereavement, Decline in Physical Function or Moving from their Own Home into a Care Home) as they get older and these can be stressful.

Steps to minding your mental health:

- ❖ Keep Physically Active whether outdoors/indoors/standing up or sitting down (See tips on Physical Activity)
- ❖ Eat Well (See tips on Diet)
- ❖ Value and Care for yourself and others
- ❖ Keep in touch with friends and family – it is important to have contact with them and to include them in your everyday life.
- ❖ Get involved and make a contribution - Being involved in community life can be fulfilling and enjoyable. Participating in organised activities like dancing, craftwork, outings and art classes may help you to make new friends.
- ❖ Talk about how you are feeling



Diet

Remember to drink at least 6-8 cups of fluid (Water, Tea, Juice etc) each day to keep your bowels healthy and regular and to prevent dehydration.

As you get older your appetite may reduce so it is important that you try and eat small but nourishing meals and snacks throughout the day

- ❖ Balance your energy (calorie) needs with physical activity – the more active you are, the more energy you need.
- ❖ Using the food pyramid as a guideline, you should try and have at least:
 - 4 servings of Fruit and Vegetables daily (Apples, Bananas etc, Carrots, Cabbage etc)
 - 6 servings of Carbohydrates (Breads, Cereals and Potatoes)
 - 2 servings of Protein (Meat, Chicken, Fish)
 - 3-4 servings of Dairy (Milk, Yoghurts, Cheese)
 - Sweet and Fatty foods should be ate sparingly (Oils, Butter, Biscuits)

(INDI, 2014)

Alcohol

Alcohol should be enjoyed in moderation. Do not exceed the recommended limits -
Men (17 units/week) and Women (11 units/week)

(HSE, 2013)

Incontinence

Urinary Incontinence is loss of control of your bladder. It can affect anyone regardless of age. It is a common condition. It affects 1 in 4 women and 1 in 10 men. It can be improved and often cured with proper advice and treatment.

Recommended:

- ❖ Drink plenty of fluids (Water and Juices)
- ❖ Restrict your intake of tea, coffee, fizzy drinks as these can irritate your bladder
- ❖ Try to avoid constipation by eating plenty of fibre
- ❖ Stay as active and mobile as possible

Tips to Managing Incontinence:

- ❖ Good personal hygiene, which decreases the risk of skin problems and unpleasant odours
- ❖ Keeping a commode or urine bottle beside your bed at night
- ❖ Remembering to use the toilet on a regular basis
- ❖ Ensuring the toilet is easy to get to

Contact your Continence Advisor Nurse for more information

(NWHB, 2005)

Appendix 7:

Get Up and Go Test

In the Get Up and Go, normal mobility aid can be used.

- Client is asked to sit in a standard height arm chair (Approx seat height – 46cm) with their arms resting on the arms of the chair.
- He/She is asked to stand up and walk a distance of approx 3 metres at normal pace.
- Turn
- Walk back and sit down
- The subject wears regular footwear and uses their customary walking aid (none, cane or walker). No physical assistance is given.
- The observed performance is scored as steady or unsteady

If they fail the Get Up and Go test the client is referred for Multi-factorial assessment. If the client passes the Get Up and Go they are given education on falls prevention.

Get Up & Go Test - Rationale for recommended Protocol:

- The Get Up & Go Test was developed by Mathias et al (1986) to test basic functional mobility in frail older persons. The initial study reported on a cohort of n= 40 inpatients, outpatient and day patients medical and geriatric. Subjects sat in a high seat office chair with arm rests placed 3 metres from a wall. They were asked to rise, stand still momentarily, walk toward the wall, to turn without touching the wall, to walk back to the chair, turn around and sit down. Observed performance was scored on a 5 point ordinal scale ranging from 1= normal to 5= severely abnormal.
- A modified timed version the above test called the Timed Up & Go (TUG) was devised by Podsiadlo & Richardson in 1991. They described the TUG as the time taken in seconds by an individual to stand up from a standard height arm chair (approx seat height of 46cm), walk a distance of 3 metres, turn, walk back to the chair, and sit down again, wearing his/ her regular footwear and using their customary walking aid (none, cane, or walker).

A similar methodology in terms of chair characteristics and subject instruction is reported in subsequent studies on TUG including Shumway-Cook et al (2000), Morris et al (2001), Nikolaus et al (1996), Freter et al (2000), Wall et al (2000), Schoppen et al (1999), Newton al (1997). Rockwood et al (2000) deviated from the protocol used by other studies in using a chair without arms. Overall the use of a chair with arms (commonest seat height reported 46cm), a starting position of arm resting on the arm rests and no reference to the use of arms or otherwise are common to both Get up & Go and TUG in reported studies.

- The National Strategy for Prevention of Falls and Fractures in Ireland's Ageing population recommends the Get Up & Go test as a test of balance and gait in older people who report a history of falls fear of falling and difficulties with gait or balance on opportunistic screening. However the protocol recommended differs from Mathias et al's protocol in 3 fundamental ways:

1. The client is asked not to use their arms or any assistive device for the sit to stand and stand to sit phases of the test.
2. The distance is unspecified "Take Several steps"
3. The test is timed even though the distance is unspecified.

There is no specific reference given for the above protocol, however there is a general reference to the AGS/ BGS (2001) and subsequent NICE (2004) for that section of the national strategy document.

- The use of a simple Get up & go test (Mathias et al 1986) is recommended in the NICE (2004) and the more recently updated AGS/BGS guidelines (2010). Given the procedure outlined in the National Strategy differs considerably from the original protocol and those most frequently reported subsequently in the literature we would recommend use the following methodology for the Get Up and Go Test, if indicated, in the initial opportunistic PCCC screening tool:
 - Client is asked to sit in a standard height arm chair (approx seat height of 46cm), arms resting on the arms of the chair
 - Then he/she is asked to stand up, walk a distance of 3 metre approx at normal pace
 - Turn,
 - Walk back and sit down again
 - The subject wears their regular footwear and uses his customary walking aid (none, cane, or walker). No physical assistance is given.
 - The observed performance is scored as steady or unsteady.

Appendix 8

Multi factorial Assessment and Intervention

Multi factorial Assessment (Box 1)

- Identification of Falls History
- Review of Medication(s) and their Dose(s)
- Assessment of Gait, Balance and Mobility and Lower Extremity Joint Function
- Assessment Endurance
- Assessment of Osteoporosis Risk
- Assessment of Vision
- Examination of Neurological Function, Muscle Strength, Proprioception, Reflexes and Tests of Cortical, Extrapyramidal and Cerebellar Function.
- Assessment of Cognitive Function
- Screening for Depression
- Assessment of Postural Blood Pressure
- Assessment of Heart Rate and Rhythm and Evidence of Structural Heart Disease
- Assessment of Heart Rate and Blood Pressure responses to Carotid Sinus Stimulation if appropriate
- Assessment of Environmental Hazards
- Assessment of the Older Person's Perceived Functional Ability and Fear relating to Falling.
- Assessment of Urinary Incontinence
- Assessment of Vitamin D Deficiency
- Assessment of Foot Problems and Footwear

- Withdrawal or Minimisation of Psychoactive Medications
- Withdrawal or Minimisation of other Culprit Medications
- Gait, Strength and Balance Training
- Prescription and Teaching in the use of Assistive Devices and Occupational Therapy
- Treatment of Osteoporosis
- Management of Neurological Disorders
- Management of Cognitive Impairment
- Management of Depression
- Management of Postural Hypotension
- Management of other Cardiovascular Abnormalities
- Adaptation or Modification of Home Environment
- Management of Functional Disability
- Management of Fear of Falling
- Management of Urinary Abnormalities
- Assessment of Vitamin D Deficiency
- Management of Foot Problems and Footwear
- Management of other relevant Acute or Chronic Medical Conditions

(Adapted from HSE, National Strategy, 2008)

Appendix 9 Sample Policy Acute setting

TITLE: Guideline for Identification, Assessment, Prevention and Management of Falls in Sligo General Hospital.

AREA: All Areas

REFERENCE NO: COR-NPDU-003

REVISION NO: 1

AUTHOR: Charlotte Hannon NPDU, SGH & Falls Working Group, Sligo General Hospital

DATE: November 2011

APPROVED BY:

DATE:

EFFECTIVE FROM:

REVIEW DATE:

	<i>Table of Contents</i>	
1.0	Guideline Statement	3
2.0	Guideline Purpose	3
3.0	Scope of Guideline	3
4.0	Legislation, related policies/guidelines	3
5.0	Glossary of terms and Definitions	4
6.0	Roles and Responsibilities	4
7.0	Procedure	7
	7.1 Step 1 Screen the older adult	
	7.2 Step 2 Document outcome	
	7.3 Step 3 Carry out timed 'get up and go' test	
	7.4 Step 4 Multifactorial assessment	
8.0	Post Fall Guidance	8
9.0	Implementation Plan	9
10.0	Monitoring and Auditing	10
11.0	References	10
12.0	Production/Consultation Trail	10
	Appendices	
Appendix 1	Falls Algorhythm	12
Appendix 2	Screening and Assessment	13
Appendix 3	Risk Factors	15
Appendix 4	Environmental considerations	16
Appendix 5	Osteoporosis referral form	18
Appendix 6	referral, assessment and interventions	19
Appendix 7	Pathway for patient who has a slip, trip, or fall.	22
Appendix 8	Patient safety Alert form	23
Appendix 9		

1.0 Guideline Statement:

It is the guideline of Sligo General Hospital that all patients aged 65 and over will be screened for risk of falls as part of the admission process by the admitting nurse. The screening will be carried out as soon after admission as possible and immediately upon admission where it is known or perceived upon admission that the patient may be at risk of falling. Where a patient is identified as being at risk it is the responsibility of that staff member to initiate referral to appropriate services for a comprehensive assessment intervention and management process suitable to each individual.

2.0 Purpose

Today 11% of Ireland's population are over the age of 65 years of age. The risk of falling increases with age. One in three older people fall every year and two thirds of them will fall again within 6 months. 50% of people fall in the hospital setting (HSE, 2008). In Sligo General hospital 309 people fell in 2010 as recorded on incident reports on Q Pulse IT system in Sligo Regional Hospital. Falls are the most common incident reported on 'STARS Web' a web based IT System which links all healthcare settings to the Clinical Indemnity Scheme in Ireland. The primary fall related injuries include fractures, head injuries and post-fall anxiety. These in turn can lead to decreased mobility, loss of independence or even premature death (Clinical Indemnity scheme, 2010).

The purpose of this guideline is to assist staff to identify patients who are at risk of falls, to reduce the risk of falls to patients and to protect patients from injury, ultimately enhancing their safety and minimising the rate of falls and associated injury. The purpose of this guideline is also to inform healthcare staff on best practice regarding falls prevention and immediate management of a patient post fall.

3.0 Scope:

All staff in the acute setting i.e Health care professionals, Multidisciplinary Team (MDT) members all support staff and any other staff member involved in patient care.

4.0 Legislation/other Related policies

Integrated Risk Management Policy and Procedure, Older Person Services (HSE). 2010.
Health Service Executive (HSE). 2008. Strategy to Prevent Falls and Fractures in Ireland's Ageing Population . HSE, Dublin.
Safety, Health and Welfare at work Act, (2005). Irish Statute Book.
Dewing wandering risk assessment tool (2008)
Best practice guidelines on using restraint on adult patients in Sligo General Hospital (2008) CLN-GEN-020

5.0 Glossary of Terms and Definitions:

A fall is a sudden, unintentional change in position causing an individual to land at a lower level, on an object, the floor, or the ground, other than as a consequence of sudden onset of paralysis, epileptic seizure, or overwhelming external force (Tinnetti et al.,1992).

A slip or slide accidentally causing the person to lose their balance this is either corrected or causes a person to fall.

A trip is to stumble accidentally often over an obstacle causing the person to lose their balance, this is either corrected or causes the person to fall.

Multifactorial interventions means that they are multiple interventions to address risks /concern identified in the falls risk assessment.

Multidisciplinary Team. Is a group of people, with a variety of skills and experience, who will work together to respond to the needs of people who are at risk of falling or who have fallen.

A person may interface with one or a number of the following multidisciplinary team members when they enter a falls prevention programme

General Practitioners	Physiotherapists/Physiotherapy Assistants
Practice Nurses	Occupational Therapists
Nursing PHN,s RGN,s CNM's CNS CPNs	Opticians
Home Support Workers	Chiropodists /Podiatrists
Pharmacists	Dieticians
Continence Advisors	Social workers
Clerical Admin and support staff	Other Health care Professionals

Patient- Resident, client, service user.

Family- Family refers to any significant others, identified by the patient / client and not necessarily blood relatives (ABA, 2002)

6.0 Roles and Responsibilities:

6.1 General Manager

The General Manager has overall responsibility for ensuring that this guideline and procedure is implemented. In discharging this responsibility the General Manager will ensure that:

- The falls Guideline is distributed to all Departments and wards.
- The General Manager will ensure that all staff have access to falls prevention and education awareness training appropriate to their role and that an attendance record is documented and retained.
- All Allied Health professionals are supported in opportunistically Screening for falls or risk of falls and to address the risk factor if relevant or refer appropriately for further assessment.
- This guideline is monitored and audited on an annually basis
- All incidents forms are reviewed and trends analysed.
- Monitoring / review/ auditing of implementation of the guideline is carried out.

6.2 Director of Nursing/Midwifery (DoNM)

The Director of Nursing/Midwifery will

- delegate responsibility to the Unit Nursing Officer/Service Manager (UNO/SM) and Clinical Nurse Manager (CNM) of informing all staff in the ward/unit of the guideline
- Ensure that the agreed alert system for use with high risk patients i.e. Orange band /sign is in use throughout the hospital.
- Ensure that **all nursing and allied staff have access to falls** prevention and education awareness training appropriate to their role and that an attendance record is documented and retained.

6.3 Unit Nursing Officer/Service Manager/Assistant Director of Nursing(UNO/SM, ADoNs

The UNO/SM's ADoN are responsible for ensuring that all Clinical Nurse Managers (CNM) are aware of the guideline and supported in the implementation of the document.

- To liaise with CNM 3, CNM 2, Clinical Nurse Specialists (CNS) and Registered General Nurse/Midwives (RGN/M) to ensure that an attendance record is maintained for all staff attending falls prevention and education awareness.
- To ensure that all clinical incidence reports are completed accurately and to take part in the review and trends analysis with risk manager(s).
- To support the release of staff to attend relevant training.

6.4 Clinical Nurse Manager (CNM)

The CNM's are responsible for:

- All their staff are informed of the guideline.
- To ensure that all staff have access to falls prevention and education awareness training and that an attendance record is documented and retained.
- To ensure all that staff complete the screening of all patients aged 65 years and over for risk of falls.
- To ensure that the alert (orange wristband) for high risk patients is in place.
- To ensure level of falls risk and specific actions / interventions planned or requested are documented in discharge letters to GP PHN or transfer letters /safety alert to other healthcare institutions

6.5 Risk Manager(s) and Relevant Clinical Nurse Specialist(s)

- Register of Risks: For the purpose of managing risk each hospital setting will maintain a register of risks on which Slip trips and falls will be included.
- Assist and support audits of all falls undertaken. These should, at a minimum, be on an annual basis and where trends indicate an increase in falls an audit should be carried out.
- To ensure falls care plan/pathway is developed as necessary and ongoing care regarding falls prevention is documented in care plan.
- Ensure that all clinical incidence reports are completed accurately taking part in the review and trend analysis with clinical staff.

6.6 Registered Nursing Staff

- It is the responsibility of the admitting nurse to screen for risk of falls as part of the admission process.
- To identify level of risk and refer appropriately for multifactorial assessment.
- To ensure ongoing care regarding falls prevention is documented in patient's care plan.
- If a concern exists about Osteoporosis it is recommended that there be routine screening of osteoporosis clinical risk factors, the patient be referred to the osteoporosis CNS.
- To report and record incidence reports accurately.
- To complete Safety Alert form where necessary (Appendix 9,p.26). This should accompany patient on transfer to other unit or outpatients Appointments or Departments.
- To participate in the monitoring, review, auditing and implementation of this guideline.

6.7 Allied Health professionals e.g. Occupational Therapist, Physiotherapist

- It is the responsibility of all Allied Health professional to opportunistically Screen for falls or risk of falls and to address the risk factor if relevant or refer appropriately for further assessment.
- To participate in the monitoring, review, auditing and implementation of this guideline.

6.8 Attending Medical Officer

- It is the responsibility of the attending medical officer to assess patients for medical risk factors that be may increasing the patients risk of falling and refer appropriately for investigations of same.
- To assess for significant risk factors and onward referral if necessary to relevant members of the multidisciplinary team

6.9 Ancillary Support Staff

- It is the responsibility of Ancillary Support Staff to inform the Clinical Nurse Manager /Unit Manager/Staff Nurse if they observe patients at risk (i.e. wearing an orange wrist band) to be engaged in unsafe routine or in an unsafe environment.
- Where appropriate Health care assistants may participate in falls risk assessment and support implementation of safety and care plan, and assist in completing incident forms where they observe falls.

It is the responsibility of all **staff in the clinical settings whether there are Healthcare professionals, support staff or any other staff member:**

- To read the Guideline and comply.
- If they observe patients at risk (i.e. wearing an orange wrist band) to be engaged in unsafe routine or in an unsafe environment to escort the patient back to their ward/unit, or ensure a safe environment for the patient while they inform the CNM/person in charge of patient's ward.
- Inform their managers if they need further information in order to understand and implement this Guideline.

7.0 Procedure

The steps below outline the procedure to be followed for screening people for history of falls or risk of falling on admission if their Health Status Changes, their functional ability or their environment changes, as part of their risk assessment process. (Integrated Risk Management Policy and Procedure Older People services, 2010)

Falls Risks and the effectiveness of interventions are affected by the person's cognitive status as some interventions are less effective particularly if adherence is limited. Safety plans need to be tailored to individual needs

Patients determined to have confusion, short-term memory loss, poor safety awareness, and/or a tendency to 'wandering' are considered "high fall risk". Additional safety precautions for high fall risk patients may be utilised e.g. having patient in an easily observed area, ensuring suitable footwear and bed.

Be Aware that screening methods may under or over estimate an individuals risk of falling therefore clinical judgement is also required.

Use of Observation/Restraint Guidelines may also be considered.

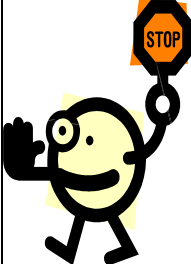
Steps to Screening Assessment and Interventions (Falls Algorithm – Appendix 1)

7.1 Step 1

April 2015


Screen the older person

A falls risk screening should be carried out on all patients aged 65 years and over as part of the admission process using the screening Questions from the strategy Preventing Falls and Fractures in Ireland's aging population (2008) Strategy. (**Appendix 2 Box 1**)



If the patient answers yes to any of the screening questions apply orange band

If the patient has a single explained (i.e. tripped over object, clothing etc.) test for Gait and balance apply orange alert band only if they fail gait and balance test.



The assessment of falls risk and the effectiveness of interventions (single and multi-factorial) can be affected by the person's cognitive status, as some interventions are less effective, particularly if adherence is limited. Therefore, assessment of falls risk should include use of a standardized and validated tool to detect cognitive impairment e.g MMSE, (Mini Mental State Examination, Folstein, 1975) and the application of these recommendations tailored to the individual accordingly.

7.2 Step 2

Document outcome

Following the initial screening document the outcome, If No history of falls, - Give health and well being advice.

If the person has had a Single Explained Falls Carry out timed Get up and Go test

(**Appendix 2, Box 2**)

- If the person passes the Timed Get up and Go Test, Give health and well being advice and assess periodically.
- If the person demonstrates unsteadiness performing the test (fail the test) they should have a multifactorial fall risk assessment carried out in line with the National Strategy and where indicated to have multifactorial interventions.

If the person has unexplained falls or Recurrent falls, Fear of falling, difficulties with walking or balance a multifactorial risk assessment should be carried out and should incorporate the following

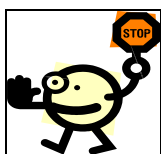
- History of falls.
- Characterizes of fall was it a slip trip or fall , fear of falling , questioning in relation to any difficulties in walking or with their balance,
- Medications.
- Environmental issues.
- Feet and footwear
- Vision Impairment
- Related medical history ,
- Social factors ,
- Dietary intake including hydration.

7.3 Step 3

Multifactorial Assessment /Comprehensive Assessment

If the person has, unexplained falls, recurrent falls, Fear of falling, difficulty with walking or balance and has failed the Get Up and Go Test notify attending medical/surgical team that patient is at risk of falling then proceed as follows:

- A multifactorial assessment should be carried out by the appropriate members of the multidisciplinary team (**Appendix 2 Box 3**) See also (**Assessment and Intervention Pathway Appendix 6**)
- As part of this multifactorial assessment please consider, as relevant, the intrinsic, extrinsic and environmental risk factors (**Appendix 3**) and the safety of the environment (**Appendix 4**)
- Following this assessment the patient will be offered the appropriate interventions to address the risk factors identified. (**Appendix 2 Box 4**)
- If a concern exists about Osteoporosis being a risk factor the admitting nurse assess for same –see(**appendix 5**)
- An **Assessment and Intervention Pathway** Referral form (**Appendix 6**) provides guidance to inform appropriate interventions for identified risk factors



Note:

In the situation of a fall /reported fall a Clinic incident form should be completed and submitted via Q pulse

8.0 Post Fall Guidance (**Appendix 7**)

8.1 A Patient Who has fallen unobserved.

If a fall occurs while a patient is an in patient the nurse on duty will:

- Call for help
- Carry out an initial assessment and first aid if necessary
- Do not attempt to move the patient until sufficient help is available
- Do not manually lift the patient from the floor unless in an emergency situation *e.g. fire, explosion*. In the event of cardiac arrest, patients can be resuscitated on the floor (if this is the starting position).
- If the patient is uninjured and has recovered sufficiently, he/she may be able to get up themselves by rolling onto all fours or into a kneeling position and pulling themselves in a sitting position with the aid of a chair or stool.
- If the patient is unable to get up themselves from the floor, then a mechanical aid **must** be used. E.g. hoist. If the patient is in a confined space a sliding devices can be used to move them to a more comfortable area.
- Patients family to be contacted as soon as possible
- Initiate pathway for patient who have had a slip trip of fall (**Appendix 7**)
- Incident form will be filled completely and accurately and submitted to Clinical Nurse Manager
- Contact Doctor on call with relevant information.

8.2 A Patient you observe Falling

This is a hazardous situation. The key objective is to guide the patient onto the floor

If the patient is at a distance from you, do not reach out and try and grab the

If the patient is beside you when they begin to fall then release your grip on the and stand slightly behind the patient and to the side with your feet in a wide base and the patient to slide to the floor.

patient
patient
allow

Remember to bend your knees while lowering the patient. |If possible support the patient's head. Do not attempt to support he full weight of the patient.

N.B Should this patient require transfer another Health Care facility or Dept the patients Safety Alert form (**Appendix 8**) should accompany them.

The following details should be included in the incident report

Signs or Symptoms
Previous Fall
Location of fall
Time of Day
Activity at time of fall
Trauma both physical and psychological
Environmental Factors i.e. no hand rails , trailing leads etc
Residents factors i.e. no footwear , stocking feet etc
Harm/no harm

Documentation and reporting

Documentation in the individual's notes should facilitate communication and continuity of care between interdisciplinary team members while meeting legal documentation requirements. The healthcare provider should provide all relevant information to individuals for the prevention and management of falls along with maximising opportunities for teaching and learning of the individual and/or their carers. Reporting and recording of all falls must be carried out in line with Incident and Near Miss Reporting Policy, Sligo General (Q pulse, 2009, COR-RM-002)

9.0 Implementation Plan

- This guideline will be approved by the Operational Governance Team(OGT) & Hospital Management Committee(HMC)
- Document Control: The guideline will be available via Q pulse.
- Roll out of the guideline will be through the UNO/SM, & Clinical Nurse Managers (CNM's) in each unit using team meetings and Educations sessions
- Falls Steering group will review guideline two yearly /carry out amendments identified based on best practice during the two year period
- Education and Awareness module delivered to all staff in the acute setting to increase awareness about the problems of falls To include:
 - National Strategy
 - Falls guideline for the Acute Hospital setting
 - Analysis of current service and Gaps in the service
 - To include seven steps to good reporting
 - Screening Method
 - Appropriate pathways of referral following harm/no harm or non fall & Documentation

10.0 Monitoring and Audit

A system of Audit will be developed. Incident forms should be audited. The minimum audit criteria should include:

- The number of recorded falls, location of fall, time, contributing factors and type of injury sustained
- Feedback should be given to staff with trends being identified and addressed
- Monitor the implementation of the procedure
- Review audit results in order to make service improvements where necessary.

11.0 References

American Geriatric Society British Geriatrics Society and American Academy of Orthopaedic Surgeons Panel on Falls Prevention (2001). Journal of American Geriatric Society 49:662-672

Best practice guidelines on using restraint on adult patients in Sligo General Hospital (2008) CLN-GEN-020.

Clinical Practice Guidelines for the Assessment and Prevention of falls in Older People. (2004) Commissioned by the National Institute for Clinical Excellence (NICE)

Dewings Wandering Risk Assessment Tool (2008)

Folstein MF, Folstein SE, McHugh PR (1975). ""Mini-mental state". A practical method for grading the cognitive state of patients for the clinician". Journal of Psychiatric Research **12** (3): 189–98
Integrated Risk Management Policy and Procedure, Older Person Services (HSE). 2010

Incident and Near Miss Reporting Policy Sligo General (2009, COR-RM-002)

National Service Framework for Older People (DOH 2004) Modern Standard and Service Models

Strategy to Prevent Falls and Fractures in Irelands, Aging Population (2008). Health Service executive /Dept Of Health & Children /National Council Aging and Older People

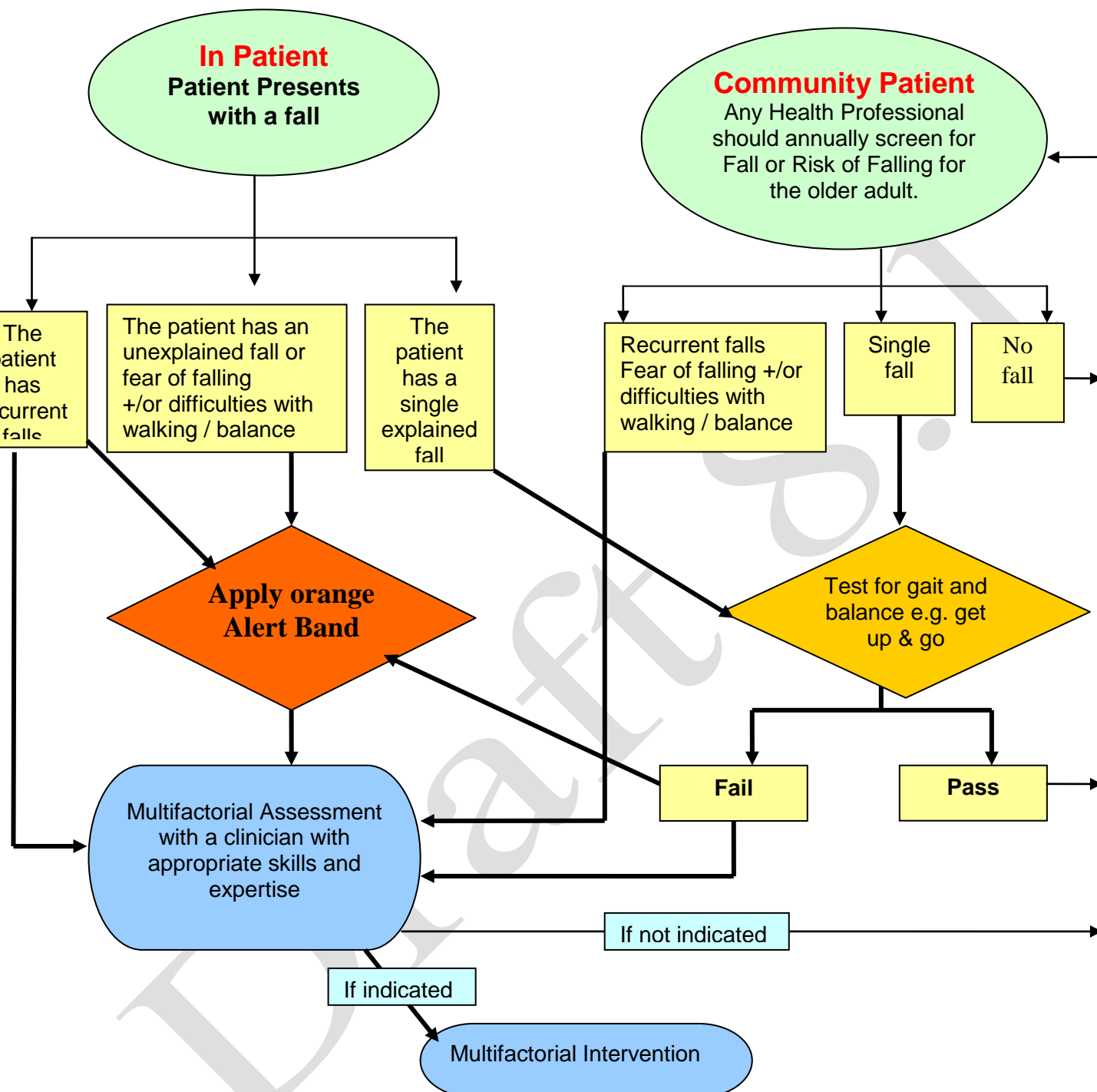
STARS User Manual Version 2.10 (February 2009)

12.0 Production/Consultation Trail:

Steering Group SGH Fall prevention, comprising:

- Dr John Doherty, Consultant Physician.
- Ms Una Dunne-Shannon Fracture Prevention Strategy
- Ms Geraldine Delorey HPU Older Adult
- Ms Anne Marie Loftus Director of Nursing/Midwifery Sligo General Hospital
- Ms Charlotte Hannon NPDU, SGH
- Ms Mairin Rooney Physiotherapy manager SGH
- Mr John Mc Elhinney Risk Advisor
- Ms Ann Hayes, UNO/SM
- Ms Lynn McLaughlin, Senior Physiotherapist, SGH
- Ms Sharon Richardson, Community OT.

Also consulted: Pat McLoughlin CNM2 Medical 7
Domhnall McLoughlin Asst General Manager, SGH
Kate Bree, ADoN Nurse Practice Development Unit, SGH
Maura McGettrick, Specialist Coordinator, CNME Sligo/Leitrim
Bridie Rooney Osteoporosis CNS,
Mary Durkin ADoN Night Duty SGH

Falls Algorithm**Recurrent Falls:**

Two or more falls in the previous year

Unexplained Fall:

No clear history of accidental slip or trip and in cognitively normal person

Explained Fall:

An accidental fall (slip/ trip) in cognitively normal person

BOX 1

'Screen' for Fall or Risk of Falling

Patient and/or carer is asked if the patient has fallen in the past year

If a patient and or carer has fallen they are asked about the frequency and characteristics of their fall(s)

Patient is asked if they have a fear of falling

Patient is asked if they have experienced difficulties in walking or with their balance

BOX 2

Test for Gait and Balance

Get up and go

The patient is asked to do the following

To sit in a chair

To get up without using their arms or any or any other device.

To take several steps

To return to the chair

To sit back down without using their arms or any device

The test should be completed within (14 seconds)

Other tests with proven validity may be used.

BOX 3

Multifactorial Assessment

Identification of falls history

Review of medication(s) and their dose(s)

Assessment of gait, balance and mobility and lower extremity joint function

Assessment endurance

Assessment of osteoporosis risk

Assessment of vision

Examination of neurological function, muscle strength, proprioception, reflexes and tests of cortical, extrapyramidal and cerebellar function

Assessment of cognitive function

Screening for depression

Assessment of postural blood pressure

Assessment of heart rate and rhythm and evidence of structural heart disease

Assessment of heart rate and rhythm and evidence of structural heart disease

Assessment of heart rate and blood pressure responses to carotid sinus stimulation if appropriate

Assessment of home hazards

Assessment of the older person's perceived functional ability and fear relating to falling

Assessment of urinary incontinence

Assessment of Vitamin D deficiency

Assessment of foot problems and footwear

BOX 4

The multifactorial intervention includes assessment of known fall risk factors and management of those risk factors identified in the multifactorial assessment (Box 3)
Multifactorial Intervention
Withdrawal or minimisation of psychoactive medications
Withdrawal or minimisation of other culprit medications
Gait, Strength and balance training
Prescription and teaching in the use of assistive devices and Occupational Therapy
Treatment of osteoporosis
Management of neurological disorders
Management of cognitive impairment
Management of depression
Management of postural hypotension
Management of other cardiovascular abnormalities
Adaptation or modification of home environment
Management of functional disability
Management of fear of falling
Management of urinary abnormalities
Assessment of Vitamin D deficiency
Management of foot problems and footwear
Management of other relevant acute or chronic medical conditions

Risk Factors

There are 3 types of risk factors – intrinsic and extrinsic and environmental . Examples as follows:

Intrinsic	Extrinsic
Muscle Weakness History of falls Gait and Balance deficit Visual deficits Arthritis Depression Cognitive impairment Age >80 yrs Urinary Incontinence Orthostatic or postprandial hypotension Dizziness Fear of falling Limited activity (Institutional Setting) Hearing Age related changes	Use of assistive devices Impaired Activities of daily living High Level of activity (Community Setting) Medication Polypharmacy Psychotropic drugs Class 1a antiarrhythmic medications Diuretics Digoxin Footwear Environmental Enviromental hazards Home hazards

Appendix 4

Environmental Considerations

Considerations Staff in delivery of their daily duties should be observant of the residents environment for hazards that may cause them to fall .They should modify or rearrange the environment to remove or minimise the hazard and report to the DON/CNM. If the issues reported are not acted up on the reason must be documented.	YES	NO	Action Needed	Actions Carried out (Date)

Signage				
All signs, are clearly visible Exit signs Toilet Signs Treatment room.				
All signage is in large letters and positioned at eye level for all age groups on all doors				
Floor Surfaces				
Are surfaces anti slip				
Do floors have a matted finish which is not glary				
Is routine cleaning of floors done in a way to minimise risk to residents e.g. well signed out of hours				
Are "wet floor" signs readily available and used promptly in the vent of a spillage				
Floor is clean and dry				
Floor is clear of personal items				
Flooring is level and free of tripping hazards, such as broken tiles or thresholds that are above the level of the floor				
Furniture				
Is Furniture secure enough to support a patient should they lean on or grab for balance and equipment is sturdy and wheels are locked				
Are bed side lockers or table available to patients so they can put things on safely without undue stretching and twisting				
Furniture and equipment is suitable for specific needs of the unit Correct chair and bed heights?				
Chairs, recliner chairs, wheelchairs are suitable and available with correct footplates				
Are foot stools in good repair				
Call bell/light/ water within reach				
Bed in low position				
Is space available for footstools when required				
Is there space at the bed for proper footing and balance				
Door handles are secure				
Corridors				
Are hallways and corridors kept clear of obstacles?				
Handrails in halls present, accessible and properly secured to wall				
Is there adequate space for mobility aids				
Is there adequate storage space for equipment				
Are ramps and lifts available as an alternative to stairs				
Do steps have an non slip edging in contrasting colour				
Is there enough room fro two people with frames and wheel chairs to pass each other				
Bathrooms and Toilets				
Correctly fitted grab bars or hand rails positioned and secured in the toilet shower and bath				
Floors are non slip				

Baths /Showers have non slip treatments and or mats				
Raised toilet seat available				
Is the toilet seat at a height that allows easy transfer				
Toilets surround and or grab rails are available in toilet				
There is room for a seat in or near the shower				
All call bells accessible from sitting position in the shower area				
All lights are working properly and areas are well lit				
Lighting				
Is lightening in all areas at a consistent level so that patients are not moving from darker to lighter areas or vice versa				
Accessible light switch at room entrance				
Night lights in bathroom				
Steps – contrast marking for stair edges, continuous handrails, adequate lighting.				
Are all switches marked with luminous tape for easy visibility				
Patients Foot wear and Clothing				
Do slippers have non-slip soles/ are sensible well fitting shoes worn? Are laces fastened?				
Patients clothing does not drag on the floor				
Is there a lengthy distance to sitting areas?				
Is there a lack of rest areas?				
Security Of the Environment				
Are all exists from the facility secured to prevent confused patients leaving				
Other				

SGH/OLHM BONE DENSITOMETRY REFERRAL – DXA SCAN

Phone: 071 9820478 (Mo-Th 9a.m.-1p.m.), Dr. Carmel Slike, Consultant Rheumatologist

CONSULTANT REFERRALS SGH, to be referred to Bridie Rooney, CNM 11, Osteoporosis Service
SGH, Bleep 711, Ext 2493 (Mo+Wed 9a.m.-5p.m.), Dr. John Doherty, Consultant
Physician/Geriatrician

Patient name:	Referring Doctor:
Address:	Address:
PCN:	Date:
D.O.B.:	Signature:
<input type="checkbox"/> Woman aged 65 or older or man aged 70 or older (first DXA scan in the lifetime)	
<input type="checkbox"/> Younger adults (woman under age 65 or man under age 70) with one or more of the following: (first DXA scan in the lifetime, please tick all that apply)	
<input type="checkbox"/> Fragility fracture (= fall from the standing height) – site, year.....	
<input type="checkbox"/> Vertebral fracture/osteopenia on x-ray (please send x-ray report)	
<input type="checkbox"/> Parental or sibling history of fragility fracture (especially hip fracture)	
<input type="checkbox"/> Long term oral corticosteroids <input type="checkbox"/> Celiac disease <input type="checkbox"/> Hyperthyroidism	
<input type="checkbox"/> Inflammatory disease (e.g. RA) <input type="checkbox"/> Chronic liver disease <input type="checkbox"/> Hyperparathyroidism	
<input type="checkbox"/> Propensity to falls <input type="checkbox"/> Inflammatory bowel disease <input type="checkbox"/> Male hypogonadism	
<input type="checkbox"/> Renal disease <input type="checkbox"/> Chronic respiratory disease <input type="checkbox"/> Anorexia nervosa	
<input type="checkbox"/> Decreased mobility (MS/stroke/other) – details:	
<input type="checkbox"/> Medication(s) associated with low bone mass or bone loss (e.g. aromatase inhibitor, medroxyprogesterone acetate) – details:	
<input type="checkbox"/> Woman during the menopausal transition with one of the above and/or any of the following (first DXA scan in the lifetime):	
<input type="checkbox"/> Low body weight (BMI <19) <input type="checkbox"/> Premature menopause (onset < age 45)	
<input type="checkbox"/> Previous DXA scan - date, location, result: (to allow valid comparison between different DXA, repeat scans <u>have to be done on the same make of</u> <u>the machine</u> and ideally also on the same model and in the same facility)	
<input type="checkbox"/> Current osteoporosis treatment	
<input type="checkbox"/> Alendronate <input type="checkbox"/> Risedronate <input type="checkbox"/> Ibandronate <input type="checkbox"/> Zolendronate <input type="checkbox"/> HRT	
<input type="checkbox"/> Strontium ranelate <input type="checkbox"/> Raloxifene <input type="checkbox"/> Calcitonin <input type="checkbox"/> PTH-analogue	
<input type="checkbox"/> Calcium <input type="checkbox"/> Vitamin D <input type="checkbox"/> Alfacalcidol <input type="checkbox"/> Calcitriol <input type="checkbox"/> Other	
Other indication for DXA/additional information/relevant meds:	
N.B. The assessment of clinical risk factors for fracture will be performed along with the DXA scan. The risk of osteoporosis is increased in patients who smoke or drink heavily. First investigation for back pain or kyphosis is plain x-ray. There are always patients not matching these criteria and they can always be discussed. 10-year fracture probability (FRAX) can be calculated on: www.shef.ac.uk/FRAX	

Assessment Tool/Referral Form

Assessment Criteria Risk Factors	Provide Details	Interventions Required	Referral Option if service available	Date of Referral	Follow -up (Date)
HISTORY OF FALLING 1 or more times last year		<ul style="list-style-type: none"> • Review incident • Discuss fear of falling & Preventative Measures. • Perform Timed Get up and go test 	Medical Team Physiotherapist Occupational Therapist Continence Advisor Other Health Professional		
LOSS OF CONSCIOUSNESS/ BLACKOUTS		<ul style="list-style-type: none"> • Medical check 	Consultant Geriatrician Syncope Clinic		
MEDICATIONS Take ≥ 4 medications per day		<ul style="list-style-type: none"> • Identify type of medication & review • Ask about dizziness symptoms 	Pharmacist Medical/ Surgical Team		
CENTRAL NERVOUS SYSTEM DEPRESSIONS Use of 1 or more for longer than 2 weeks (hypnotics, antidepressants, sleeping pills, Antipsychotics)		<ul style="list-style-type: none"> • Review medication • Discuss changing sleep patterns – normal Ageing 	Medical/ Surgical Team Pharmacist		
ALCOHOL INTAKE >1 unit of alcohol per day: ½ pint beer or small glass of wine – pub measurements		<ul style="list-style-type: none"> • Teach immediate & long-term fall risk due to dulling of neurological capacity from alcohol 	Nurse Medical Dr		
POSTURAL HYPOTENSION ≥ 2 mmHg drop between lying & standing BP or symptomatic i.e. dizziness on standing/sitting		<ul style="list-style-type: none"> • Consider raising head of mattress if severe • Review medications • Teach to stabilise self after changing positions & before walking 	Medical /Surgical Team Pharmacist		
VISION Test difficulty in reading newspaper/book, can't recognise objects across room, wears bifocals		<ul style="list-style-type: none"> • Recent eye test? Refer to Optometrist • Test vision/eyes & advise care using bi-focals especially on stairs • Advise to concentrate on walking & be deliberate/cautious especially in new situations 	Optometrist		

HEARING Has difficulty in hearing conversational speech		<ul style="list-style-type: none"> • Remove wax • Check if hearing has been tested if no refer to audiologist • Lower voice 	Audiologist if wearing a hearing aid refer to hearing therapist		
WALKING/GAIT Balance Unsteady on feet, shuffles, takes uneven steps, housebound Time get up and go Test of 30 seconds		<ul style="list-style-type: none"> • Physiotherapy assessment for range of Movement, strength & balance • Physiotherapy intervention • Appropriate selection/use of assistive equipment 	Physiotherapist		
BALANCE Needs to hold onto furniture, requires stick/walker		<ul style="list-style-type: none"> • Physiotherapy assessment • Teach about risk & how to manoeuvre safely • Consider environmental modifications for ADLs 	Physiotherapy		
CONTINENCE STATUS <i>Frequency, Stress incontinence. Nocturia</i>		Screen by PHN	Continence Advisor, GP		
TRANSFERS Lack of control when moving between surfaces		<ul style="list-style-type: none"> • Physiotherapy /OT assessment/ • Transfer practice and exercise • Consider environmental changes 	Physiotherapist Occupational Therapist Other Health Professional		
ENVIRONMENTAL HAZARDS Slip/trip hazards,		<ul style="list-style-type: none"> • Identify the need for environmental modifications/ assistive technology Personal Emergency Response System	Occupational Therapist		
FOOTWEAR FOOT PROBLEMS Poor footwear Corns Callus Fungal Infections		Identify if foot problems are interfering with balance or making walking difficult	Podiatry		
ENVIRONMENTAL Leaflet if yes refer to OT		Assessment of Environmental audit			
OSTEOPOROSIS RISK		Identify If patient has had fragility fracture Family history of osteoporosis Long term oral steroids Inflammatory disease Screening Tool	Osteoporosis Nurse Specialist		

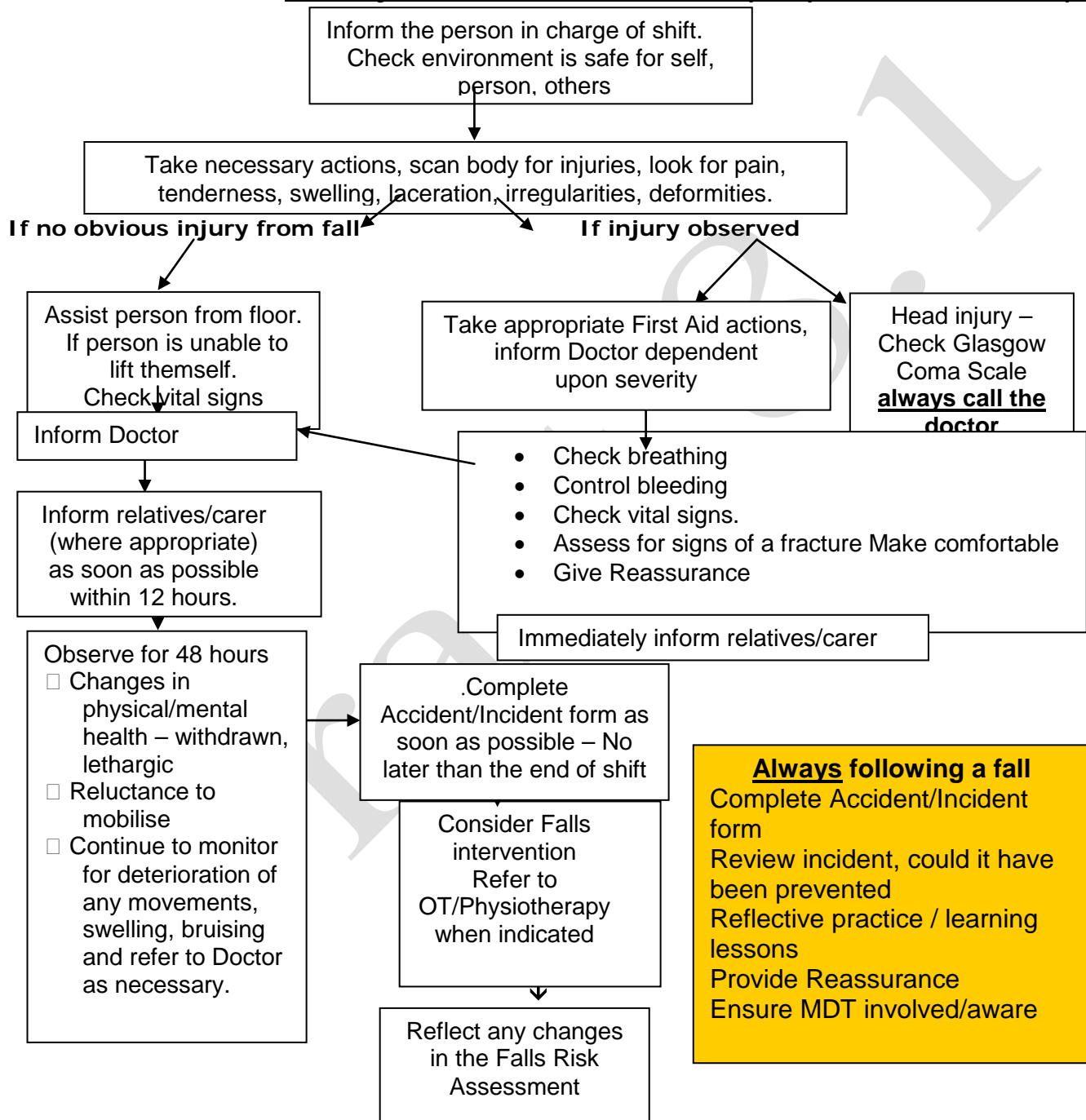
Assessment /Intervention Pathway This May Be Photocopied

Signature_____

Date:

Appendix 7

Pathway for Patient who has had a slip, trip, or fall while in hospital



Appendix 10 Intentional Rounding Chart (Sample)

[illegible]

Appendix 11 Safety Alert Form

Please Complete or Affix Addressograph		Hospital /Residential Setting:
Surname:		
Forename :		
Date of Birth :	Age :	Ward/Unit :
Hospital Number		

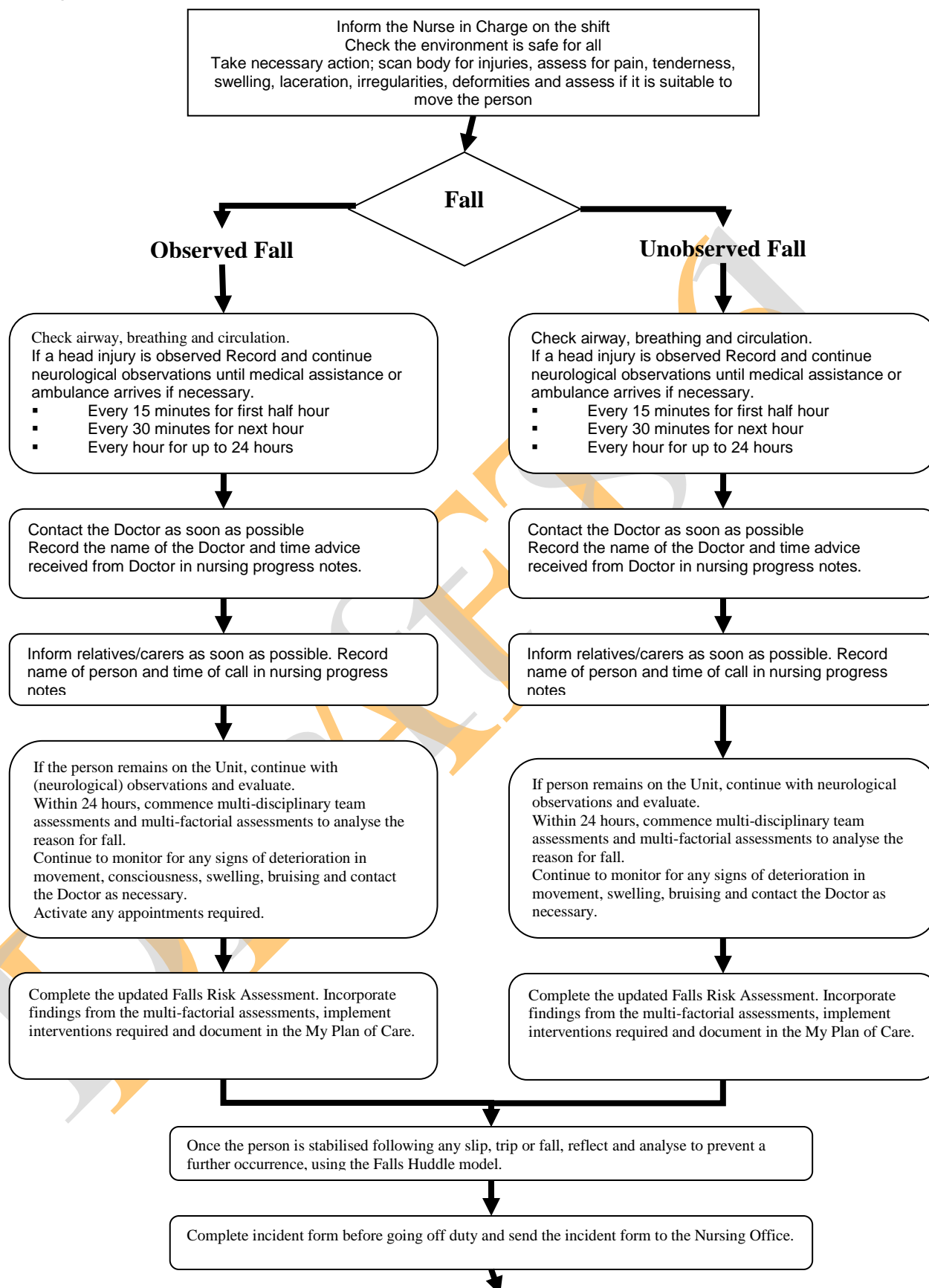
SAFETY ALERT FORM

Epilepsy/Seizures			Swallowing Difficulties		
Prone to Falls			Diabetes		
Confusion			Violence /Aggression		
Sensory Deficit: Vision			Sp eech		H ear ing
Allergies					
Other Safety Alerts					
What is currently comprising my Personal Safety: (describe briefly)					
Signatures					
Name of Assessor (Block Capitals)			Date Assessed		
Signature and Status of Assessor:					
Review Dates					
Time					
Signature					

OPS HSE WEST < Sligo/Leitrim & West Cava

Appendix 12: Pathway for care of older person Post Fall

A. Pathway for care of patient post fall

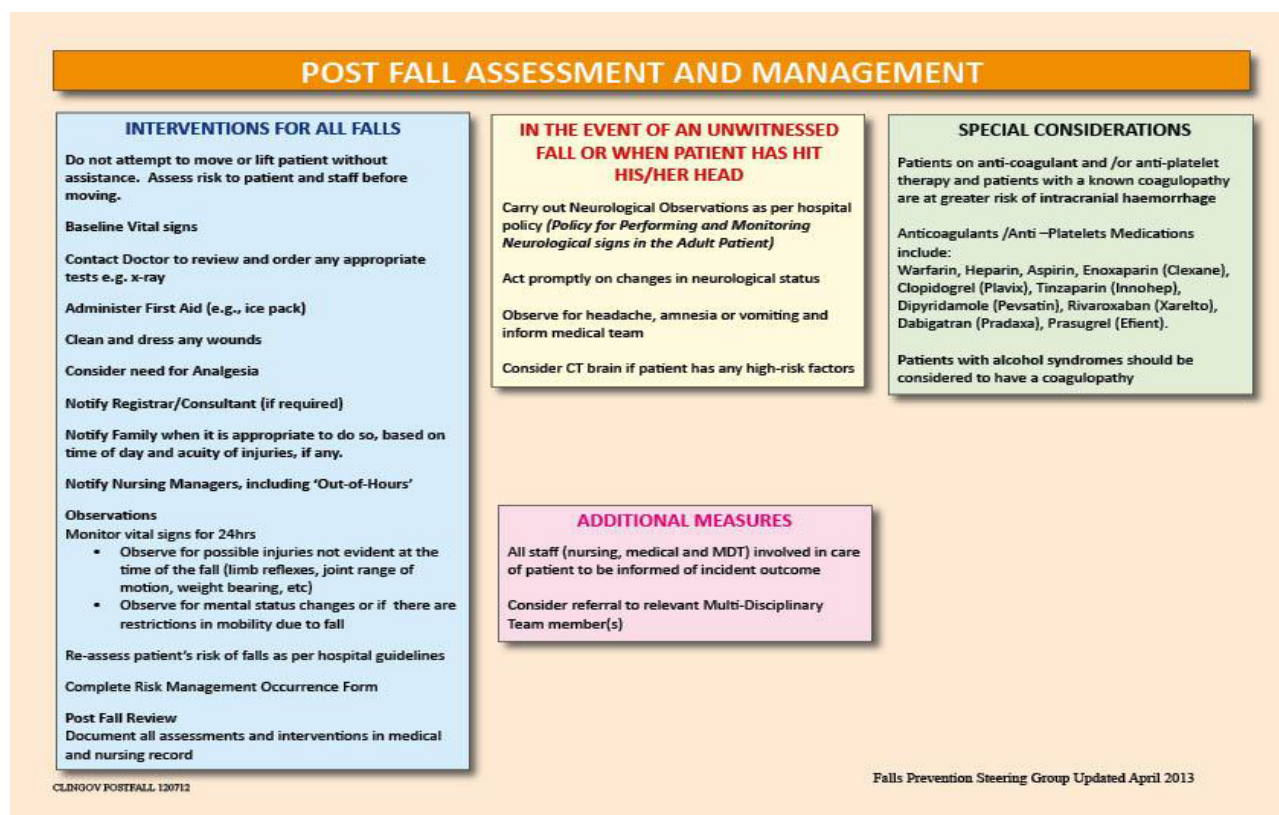


B.

C.

D. Assessment prior to contacting Doctor in Residential setting Template

Appendix 13 Post Falls assessment management pathway



Appendix 14 Nursing Assessment prior to ringing the G.P

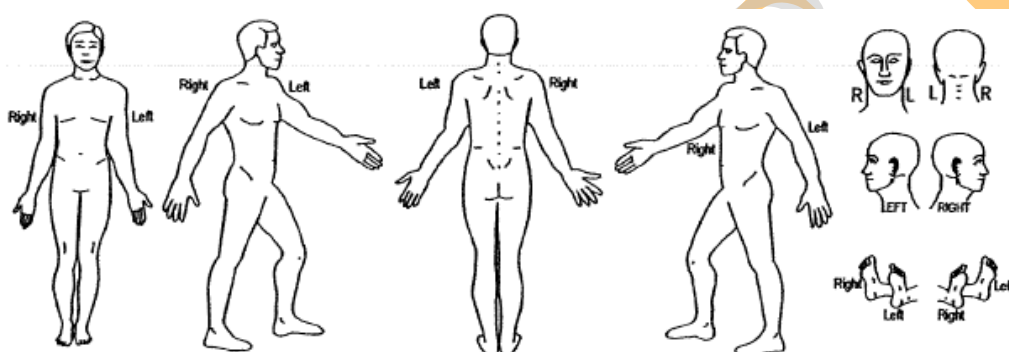
Resident Name: _____

Unit: _____

Date of Fall: _____

Time of Fall: _____

1. LOCATION: Nurse marks drawing.



Observe for any bruising, cuts and abrasions.

Assess range of movements of limbs and score any pain using pain scale rating tool 1 – 5.

1 2 3 4 5
No Pain {-----|-----|-----|-----|-----} Worst Pain

Vital signs:

Pulse: _____ Blood Pressure: _____ Temperature: _____

Name of Doctor Contacted _____ Time _____ Date _____

Doctors

Instructions _____

1 _____

2 _____

3 _____

4 _____

Nurses Signature: _____

Time: _____

Date: _____

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Useful Websites/External Resources

- Fall Prevention Centre of Excellence: www.stopfalls.org
- Falls Care Bundle: www.bgs.org.uk
- Falls Safe Project – Royal College of Physicians: www.rcplondon.ac.uk
- St Mary's In The Park: www.bonehealth.co
- St Mary's In The Park: www.foreverautumn.co
- Eat Well for Bone Health Booklet: www.paulamee.com
- Irish Heart Foundation: www.irishheart.ie
- Osteoporosis (Irl): www.irishosteoporosis.ie
- Osteoporosis (UK): www.nos.org.uk
- National Dairy Council: www.ndc.ie
- National Osteoporosis Foundation: www.nof.org
- Strategy to Prevent Falls and Fractures in Ireland's Ageing Population: www.hse.ie
- Nutrition and Osteoporosis: www.irishhealth.com
- World Health Organisation- Ageing: www.who.int/ageing
- National Institute of Aging – Exercise: www.nia.nih.gov
- Southern Health and Social Care Trust: www.southerntrust.hscni.net
- Northern Ireland Nursing Home Regional Collaborative – Falls Prevention Toolkit 2013 (HSC): www.publichealth.hscni.net
- Falls Awareness: Live Life Safely – Falls Multidisciplinary Committee, St Mary's Hospital, Phoenix Park, Dublin 20. Phone Number: 01 6250414
- Videos on Fall Prevention and How to Get Up After a Fall:
<http://www.rosipa.com/homesafety/adviceandinformation/falls/videos/falls-360.wmv>
<http://www.rosipa.com/homesafety/adviceandinformation/falls/videos/chair-360.wmv>

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