Family Nursing & Home Care

Policy and Procedures for Falls Prevention and Management in Older Adults

November 2023

Document Profile

Document Registration	Added following ratification
Type	Policy and Procedure
Title	Policy and Procedure for Falls Prevention and Management in Older Adults
Author	Ann Morgan
Category clinical / corporate / education / Health & Safety / HR / Info Governance	Clinical
Description	Policy and procedure regarding the identification and management of those older adults identified as being at risk from falls
Approval Route	Organisational Governance Approval Group Chief Executive Officer
Approved by	Organisational Governance Approval Group (OGAG) Chief Executive Officer (CEO)
Date approved	OGAG 1/11/23 CEO 6/11/23
Review date	3 years from approval
Document Status	This is a controlled document. Whilst this document may be printed, the electronic version posted on the intranet is the controlled copy. Any printed copies of this document are not controlled. As a controlled document, this document should not be saved onto local or network drives but should always be accessed from the intranet.

Version control / changes made

Date	Version	Summary of changes made	Author
6th November 2023	1	New Policy	Ann Morgan

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1. INTRODUCTION

1.1 Rationale

FNHC is committed to supporting Islanders to 'age well.' This policy and procedure is underpinned by international evidence based best practice. This is to enable employees to identify a person at risk of falls, how to reduce risk of falls and injury, and how to reduce risk of harm occurring should a fall be sustained and post fall management. The ultimate aim is to reduce risk, avoid hospital admissions and improve quality of life of the people of Jersey.

"A fall is an event which results in a person coming to rest inadvertently on the ground or floor or other lower level. Falls, trips and slips can occur on one level or from a height" (World Health Organisation 2021).

Falls occur in 30% adults over 65 years of age and if they do fall the risk of further falls increases to 70% (Ganz 2020). The older population is living longer with increasingly complex health and social needs, with 81% of the FNHC Community Nursing caseload identified as being over 65 years old in 2023. Falls account for one of the highest call out rates for the Jersey Ambulance Service.

Falls are the most reported type of patient safety incident in healthcare. The human cost of falling includes distress, pain, injury, loss of confidence, loss of independence and mortality. Up to 90% of older patients who fracture their neck of femur may fail to recover their previous level of mobility or independence (NPSA 2007; 2009). Falling also affects the family members and carers of people who fall. Of all fractures in the elderly, 87% are attributable to falls (Ambrose et.al 2015).

Globally falls are ranked as the world's second leading cause of unintentional injury deaths and are the main cause of morbidity for some age groups and sectors. Older people aged 60 and over have the highest risk of death or serious injury from falls and the risk increases with advancing age.

Every year more than 684,000 people die as the result of a fall, and an estimated 172 million more are left with short or long-term disability – a shocking statistic that represents substantial human suffering: in comparison, 410,000 people died from Malaria in 2019 (World Health Organisation 2020).

There is a significant link between frailty and falls. Frailty doubles the risk of recurrent falls (Chu et al 2021).

'Frailty' is a term that's used a lot, but is often misunderstood. When used properly, it refers to a person's mental and physical resilience, or their ability to bounce back and recover from events like illness and injury (Age UK, 2020). Older people are more likely to experience frailty (British Geriatric Society, 2023).

Frailty is also described as 'a long term condition in which multiple body systems gradually lose their built in reserves, resulting in an increased risk of unpredictable deterioration from minor events. This can be sudden loss of independence and adverse health outcomes following a comparatively minor stressor such as an acute infection or injury' (NHS England 2017). This results in what is described as 'a state of increased vulnerability for developing dependency or mortality when exposed to a stressor' (Montero-Odasso 2022).

Prevention and reversal of frailty helps people to live independently for longer and helps reduce demand for emergency care and long term support (British Geriatric Society 2023). Frailty costs UK healthcare systems £5.8 billion per year. Around 47% hospital inpatients over 65 years are affected by frailty (Doody et al 2022).

The World Health Organization (WHO 2021) recommend the global community should actively look for opportunities to reduce the growing harm, suffering and loss that result from falls.

United Nations Decade of Healthy Ageing 2021-2030 and WHO step safely campaigns are significant drivers for global changes in Health and Social policy.

The World Guidelines for Falls Prevention and Management (2022) recommends that all older adults should be advised on falls prevention and physical activity and that opportunistic case finding for falls risk is recommended for community dwelling older adults as many falls can be prevented (Montero-Odasso et al.2022). Identifying frailty and falls risks enables proactive interventions to reduce risk with associated expensive demands on health and social care. Craig et.al, (2013) identified the high costs of falls divide between health at 40 % and social care at 60 %. It is also identified that managing the risk factors for falls has wider benefits for individuals, giving improved physical and mental health with better quality of life.

Jersey Care Commission 'Standards for Home Care' (2022) mandate that care/support workers will be appropriately trained and competent to meet the health, wellbeing and physical needs of people who receive care. They also recommend having a falls prevention policy and procedure in place.

1.2 Scope

This policy applies to all staff working in Adult Services delivering care / supporting community dwelling older adults.

Younger adults could be considered appropriate for assessment should their level of need indicate this.

1.3 Role and Responsibilities

Chief Executive Officer

The CEO is accountable to ensure that responsibilities for Health and Safety are effectively assigned, accepted and managed at all levels within the organisation consistent with good practice.

Director of Governance and Care

The Director of Governance and Care is responsible to the committee for ensuring FNHC works in an efficient, safe and healthy manner. They are responsible for overseeing the monitoring of the effectiveness of this policy through the relevant governance and quality meetings.

Registered Managers, Line Managers and Team Leaders

The responsibility for the implementation of this policy lies with the Registered managers, line managers and Team Leaders.

Team Leaders are responsible for bringing this policy to the attention of their staff and providing evidence that the document has been cascaded within their team or department. Team Leaders need to ensure that this document is effectively implemented and that staff have the knowledge and skills to implement the policy and provide training where gaps are identified.

The responsibility for the introduction of this policy to new staff lies with the line manager and should be included in the local induction process for new staff.

Employees' responsibilities (permanent, temporary, agency, locum, those on secondment or volunteers)

- Staff have a responsibility to carry out relevant risk assessments and to ensure appropriate actions are taken.
- Staff should complete all relevant training, as discussed with their manager and in line with the requirements of their post.

- All members of staff are responsible for taking appropriate action immediately following any adverse incidents. They should also report the incident via Assure and ensure they note all their actions they have put in place.
- Staff have a responsibility to ensure any slip and trip hazard in the workplace is identified, reported and rectified.
- Staff have a responsibility to ensure where deficiencies are identified, appropriate risk assessments and risk reduction action plans are in place to reduce falls and ensure the best practice principles are applied, with managerial support if necessary

Falls Practitioner

- Responsible for assessing need and planning and coordinating care for the service users referred to them.
- They work in a multi-disciplinary and agency way working across traditional boundaries of primary, acute and community settings.
- Act as a source of expertise and support for staff and service users.
- Contribute to staff training and education regarding frailty and falls.
- Lead falls policy and procedure reviews
- Conduct and report upon audit

Advanced Clinical Practitioners

- Support Falls Practitioners with multifactorial assessments and medication reviews.

2. POLICY

All older adults who come into contact with FNHC adult services should have level of risk for falls assessed as per the risk stratification decision tree, see appendix 2.

Staff should be:

- aware of various falls risks
- able to assess clinical frailty and recognise associated risks
- aware of risk factors affecting bone health and vulnerable groups
- knowledgeable about local available resources
- able to offer advice on falls prevention and physical activity
- access suitable patient information literature and web resources

Older patients (or younger if clinically indicated) will be referred for multifactorial fall risk assessment (MFRAT) by FNHC Falls Practitioner where intermediate and high risk of falls has been determined.

Multifactorial interventions are the actions taken that help to reduce, remove or manage an individual's risk factors for falling. Multifactorial interventions are usually delivered by the multidisciplinary team alongside the agreement and participation of the patient. "A multifactorial risk assessment by an appropriately skilled and experienced clinician (usually in a specialist falls service) should be offered to older people who have had one or more falls in the past year or demonstrate abnormalities of gait and/or balance. This assessment should be part of an individualized, multifactorial intervention (NICE 2019)".

Assessments should clearly identify risk factors and demonstrate suitable action plans to reduce, remove or manage the risk. This should be clearly discussed with the patient and documented in the relevant patient records.

3. PROCEDURE

3.1 Assessments

Engaging older adults is essential for prevention of falls and injuries: understanding their beliefs, attitudes and priorities about falls and their management is crucial to successfully intervening.

When having contact with adults over 65 years of age enquire about their falls history in the previous year as well as their balance and gait and fear of falling (see appendix 2 for Risk Stratification Decision Tree). Some adults will be referred to FNHC because of the consequences of falling whilst others are referred with other nursing, therapy and care needs and they should also be opportunistically asked about falling as part of their holistic assessment.

A person centred approach should be taken that is:

- **Predictive:** utilisation of available information to determine an individual's risk of falls and fall-related injuries.
- **Preventative:** focused on intention to prevent falls and related injuries whilst optimising functional ability.
- **Personalised**: utilisation of identified fall risks factors and other relevant clinical information, such as cognition, to develop individualised fall prevention plans.
- **Participatory**: intervention goals and plan developed in collaboration with the older adult, and others as they wish, to consider priorities, values and resources, such as carer support.

(Montero-Odasso et al 2022)

People often minimise risk and avoid discussing frailty and falls due to fear of losing independence. This can lead to isolation and increases risks. When enquiring about falls history use 'three key questions' to increase sensitivity:

- Have you fallen in the past year?
- Do you feel unsteady when walking or standing?
- Do you worry about falling?

Where there are concerns regarding gait and balance the use of any of the following tools will inform risk assessment:

- Gait Speed Test (appendix 4)
- Timed Up and Go (TUG) (appendix 5)
- 30 Second Sit to Stand Test (appendix 6)

The British Geriatric Society recommends, as the most suitable test, the use of the Gait Speed (taking more than 5 seconds to walk 4 m using usual walking aids if appropriate) or the Timed Up and Go Test (with a cut off score of 10s to get up from a chair, walk 3m, turn round and sit down), (Turner 2014). The World Guidelines for Falls identify Gait Speed Test as their first choice for assessment due to its predictive ability and simplicity (Montero-Odasso et al 2022).

Where there has not been a fall in the past year and there are no other concerning factors such as balance and / or fear of falling the person is deemed low risk.

To determine if an individual is high or intermediate risk when they have fallen in the past year assess the fall severity considering:

- Injury
- ≥2 falls last year
- Frailty (see appendix 3)
- Lying on the floor unable to get up
- Loss of consciousness / suspected syncope

If yes to any of the above then they are high risk, if no they are intermediate risk.

3.2 Falls risk stratification and associated actions for older adults

Level of Risk	Actions
1. Low risk for falls No fall in past year	Primary prevention • Offer education on falls prevention and exercise for general health / falls prevention. • Provide and talk through 'Get up and Go' or FNHC 'Watch Your Step' booklets. • Provision of literature and information regarding local preventative services such as Fit for Life programme run through HCS Physiotherapy Department or Move More Jersey exercise programmes.
2. Intermediate risk for falls Fall in past year • Gait & balance impaired • Fear of falling	Secondary prevention to improve a major risk factor • Offer education on falls prevention and exercise for general health / falls prevention. • Provide and talk through Get up and Go' or FNHC 'Watch Your Step' booklets. • Refer with consent to Falls Practitioner for targeted multifactorial risk assessment. • Review in one year by Falls Practitioner (Montero-Odasso et al, 2022, NICE 2019).
3. High risk for falls Fall in past year • Injury≥2 falls last year • Frailty (see appendix 3) • Lying on the floor unable to get up • Loss of consciousness / suspected syncope	Secondary prevention and treatment • Refer with consent to GP for comprehensive assessment and medication review (letter template on EMIS). • Refer with consent to Falls Practitioner for multifactorial assessment **OR** if the patient is being treated by Rapid Response Team and Reablement (RRRT) liaise with their coordinator to allocate RRRT Allied Health Professional to complete assessment. • Follow up in 90 days by Falls Practitioner (Montero-Odasso et al, 2022, NICE 2019).

3.3 Medications and Falls

'All patients should have their medications reviewed with respect to their propensity to cause falls. The history should establish the reason the drug was given, when it started, whether it is effective and what its side effects have been. An attempt should be made to reduce the number and dosage of medications and ensure they are appropriate, and not causing undue side effects.

Falls can be caused by almost any drug that acts on the brain or on the circulation. Usually the mechanism leading to a fall is one or more of:

- Sedation, with slowing of reaction times and impaired balance,

- Hypotension, including the 3 syndromes of paroxysmal hypotension – Orthostatic hypotension (OH), vasovagal syncope (VVS) and Carotid sinus hypersensitivity (VD-CSH)
- Bradycardia, tachycardia or periods of asystole

Falls may be the consequence of recent medication changes, but are usually caused by medicines that have been given for some time' (British Geriatric Society, 2011).

Where there are concerns about medication / polypharmacy refer to GP for medication review.

To aid medicines' risk assessment see appendix 6 for STOPP START medication review and screening tool (NHS England 2017) and / or www.medichec.com (South London and Mawdsley NHS Trust). See also FNHC Medicines Policy (2020).

3.4 Patient falls during visits / clinic attendance

In the event of a patient fall in the community (home visit or clinic):

- Always check the area first in order to ensure your own safety.
- An immediate assessment of any injury or harm should be done using the ABCDE approach, taking action as necessary to make the individual safe.
- Do not attempt to move the person unless it is safe to do so, particularly if head injury, cervical spine injury or fracture to any part of the body is suspected – if in doubt always call for assistance via 999.
- If the person is unable to get off the floor call 999.
- If the fall was unwitnessed and the patient is unable to tell you the circumstances around the fall, assume a head injury and act accordingly.
- Undertake and record observations (NEWS2, GCS, BP, HR, RR, Temp, O_2 saturations and BM) as able.
- At an appropriate time revisit the risk stratification decision tree (appendix 2) with the patient and make referrals as appropriate in line with the procedure in section 3.
- Always record your actions in patient records, inform your shift coordinator and complete an incident report using the online Assure reporting system.
- For all witnessed falls in the home the registered manager should notify the Jersey care commission via the notification system.

3.5 Training

All staff need to be aware of this policy, the procedures and their responsibilities.

Various methods of internal communication are utilised to raise staff and managers awareness including booklets / leaflets, face to face training, the use of e-learning and through the Falls Practitioners and Practice Development Clinical Nurse Specialist.

Staff also have a responsibility to identify specific learning needs with their line manager.

4. CONSULTATION PROCESS

Name	Title	Date
Rosemarie Finlay	CEO	22/08/23
Claire White	Director of Governance and Care	
Tia Hall	Operational Lead, Adult Services	
Clare Stewart	Operational / Clinical Lead Out of Hospital Services	
Elspeth Snowie	Head of Quality and Safety	
Rachel Foster	Quality and Performance Development Nurse	20/09/23
Teri O'Connor	Home Care Manager	22/08/23
Michelle Margetts	DN Team Leader	
Jo Champion	DN Team Leader	
Angela Stewart	DN Team Leader	
Jay Clark	DN Team Leader	
Louise Hamilton	RRT Team Leader	
Paul Gartshore	Falls Practitioner	
Justine Bell	Head of Education and Development	

5. IMPLEMENTATION PLAN

Action	Responsible Person	Planned timeline
Email to all staff regarding policy	Admin Assistant	Within 2 weeks following ratification
Policy to be placed on procedural documents library	Head of Quality and Safety	Within 2 weeks following ratification
Embed in practice through communications: Team meetings and handovers	Team Leaders Practice Development CNS	Within 2 weeks following policy being uploaded and then ongoing.

Action	Responsible Person	Planned timeline
Posters / Display boards One to one meetings / Supervision Inclusion in safe handling training	Falls Practitioner Head of Education and Development	
Support for staff using updated EMIS templates for: • Enquiry about falls history at holistic assessment • Falls risk stratification and assessment	Practice Development CNS Falls practitioner	Within two weeks of ratification and then ongoing
Use of Virtual College for staff to access Power Point presentation regarding frailty and falls	Practice Development CNS Falls practitioner	

6. MONITORING COMPLIANCE

Annual audits:

- to identify number of over 65 year old service users being asked about falls history and associated risk assessments to be completed annually from representative sample of caseloads.
- to complete against Assure incident reports.

7. EQUALITY IMPACT STATEMENT

Family Nursing & Home Care is committed to ensuring that, as far as is reasonably practicable, the way services are provided to the public and the way staff are treated reflects their individual needs and does not discriminate against individuals or groups on any grounds.
This policy document forms part of a commitment to create a positive culture of respect for all individuals including staff, patients, their families and carers as well as community partners. The intention is to identify, remove or minimise discriminatory practice in the areas of race, disability, gender, sexual orientation, age and 'religion, belief, faith and spirituality' as well as to promote positive practice and value the diversity of all individuals and communities.

The Family Nursing & Home Care values underpin everything done in the name of the organisation. They are manifest in the behaviours employees display. The organisation is committed to promoting a culture founded on these values.

Always:

- ✓ Putting patients first
- ✓ Keeping people safe
- ✓ Have courage and commitment to do the right thing
- ✓ Be accountable, take responsibility and own your actions
- ✓ Listen actively
- ✓ Check for understanding when you communicate
- ✓ Be respectful and treat people with dignity
- ✓ Work as a team

See Appendix 1 for the Equality Impact Assessment for this policy.

8. GLOSSARY OF TERMS

Carotid sinus hypersensitivity - Carotid sinus hypersensitivity (CSH) is currently defined as ≥3 s asystole, and/or ≥50 mmHg drop in systolic blood pressure (BP) in response to carotid sinus massage (McDonald et al, 2016).

Fall – an event which results in a person coming to rest inadvertently on the ground or floor or other lower level. Falls, slips and trips can occur on one level or from a height (WHO 2021).

Frailty – A state of increased vulnerability for developing dependency or mortality when exposed to a stressor. (Montero-Odasso et al 2022)

Gait speed assessment - Gait speed is the time one takes to walk a specified distance on level surfaces over a short distance. This is not a measure of endurance. A distance of 3-10 meters is measured over a level surface with 2 meters for acceleration and 2 meters for deceleration.

Individualised multifactorial interventions - intervention with multiple components that aims to address the risk factors for falling identified as part of the risk assessment process. This may include a medicines review, strength and balance training, optimising hydration

Multifactorial falls risk assessment - assessment with multiple components that aims to identify a person's risk factors for falling

Older person – regarded as those ages 65 years or older, but in some circumstances, age 60 years may be more appropriate depending on the context and health expectancies. (Montero-Odasso et al 2022)

Polypharmacy - Polypharmacy is the concurrent use of multiple medications. Although there is no standard definition, polypharmacy is often defined as the routine use of five or more medications, including over-the-counter, prescription and/or traditional and complementary medicines used by a patient. (WHO 2019).

Postural Hypotension, also known as **Orthostatic Hypotension** (OH) – a sustained reduction of systolic blood pressure of at least 20 mmHg or diastolic blood pressure of 10 mmHg within 3 minutes of standing, or of tilting the body (with the head up) to at least a 60° angle on a tilt table (Freeman et al. 2011, cited by NICE 2013). One minute of standing probably detects nearly all cases but three minutes of standing helps establish the severity (Figueroa et al 2010).

Sarcopenia – A condition characterised by an age-associated loss of skeletal muscle mass / function but also associated with low physical activity levels (Montero-Odasso et al 2022)

Timed up and go test (TUG) - Simple screening test that is a sensitive and specific measure of probability for falls among older adults

Vasovagal syncope (VVS) Syncope (pronounced sin-co-pee) is the medical term for a brief loss of consciousness (fainting). It comes from the Greek word ‘synkoptein’, meaning ‘to cut short’ (NHS 2021).

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10. APPENDICES

Appendix 1 Equality Impact Screening Tool

Stage 1 - Screening			
Title of Procedural Document: Policy for falls prevention and management			
Date of Assessment	17.4.2023	Responsible Department	Adult Services
Name of person completing assessment	Ann Morgan	Job Title	Practice Development CNS

Does the policy/function affect one group less or more favourably than another on the basis of :		
	Yes/No	Comments
• Age	Yes	Aimed at older adults >65years
• Disability Learning disability; physical disability; sensory impairment and/or mental health problems e.g. dementia	No	
• Ethnic Origin (including hard to reach groups)	No	
• Gender reassignment	No	
• Pregnancy or Maternity	No	
• Race	No	
• Sex	No	
• Religion and Belief	No	
• Sexual Orientation	No	
If the answer to all of the above questions is NO, the EIA is complete. If YES, a full impact assessment is required: go on to stage 2, page 2		

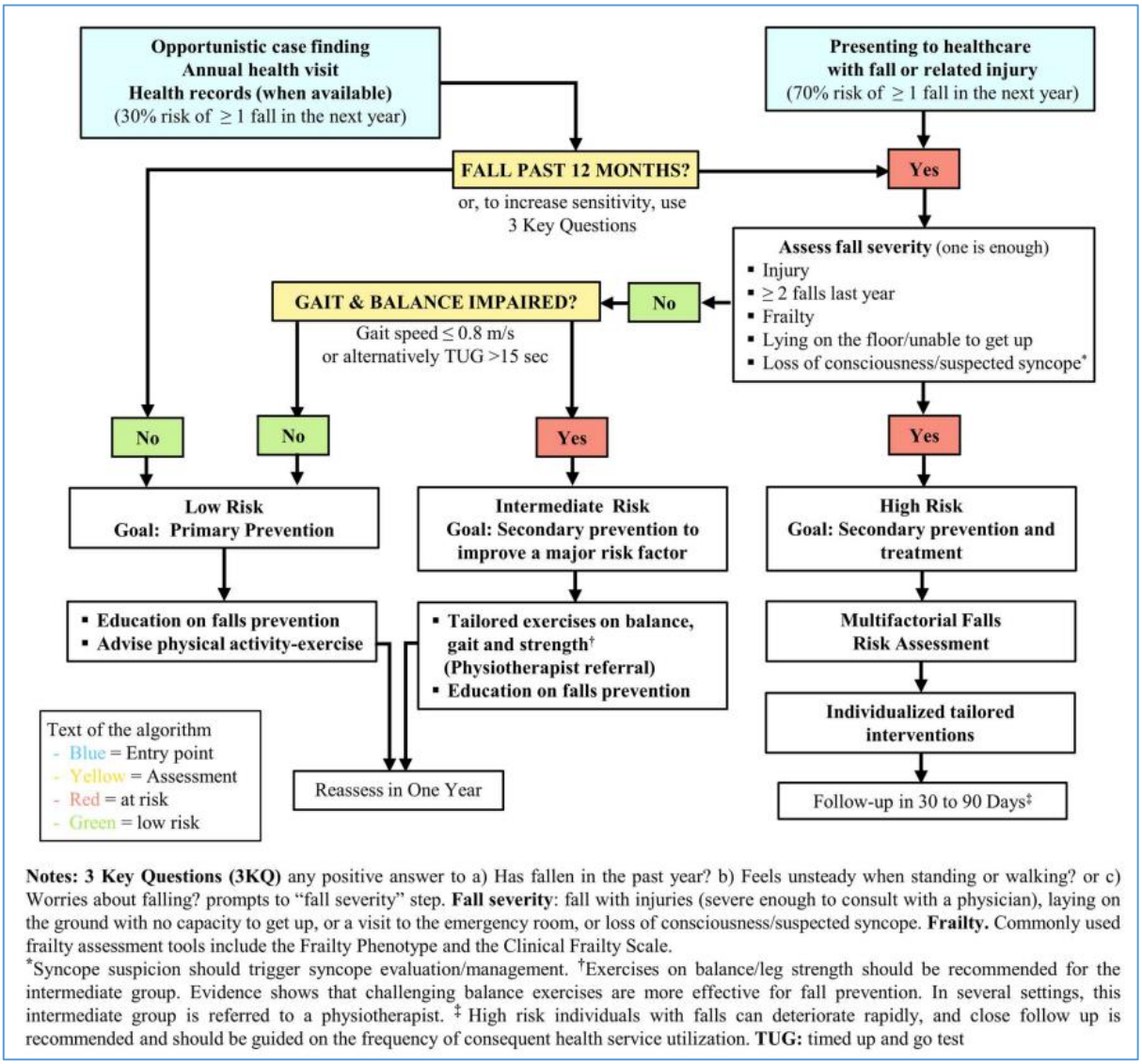
Stage 2 – Full Impact Assessment			
What is the impact	Level of Impact	Mitigating Actions (what needs to be done to minimise / remove the impact)	Responsible Officer Head of Quality and Safety
Only applies to older adults	Low	Children's team to review need for guidance for children and young people	

		Can include younger adults if level of dependency indicates	

Monitoring of Actions
The monitoring of actions to mitigate any impact will be undertaken at the appropriate level

Appendix 2 Risk stratification decision tree

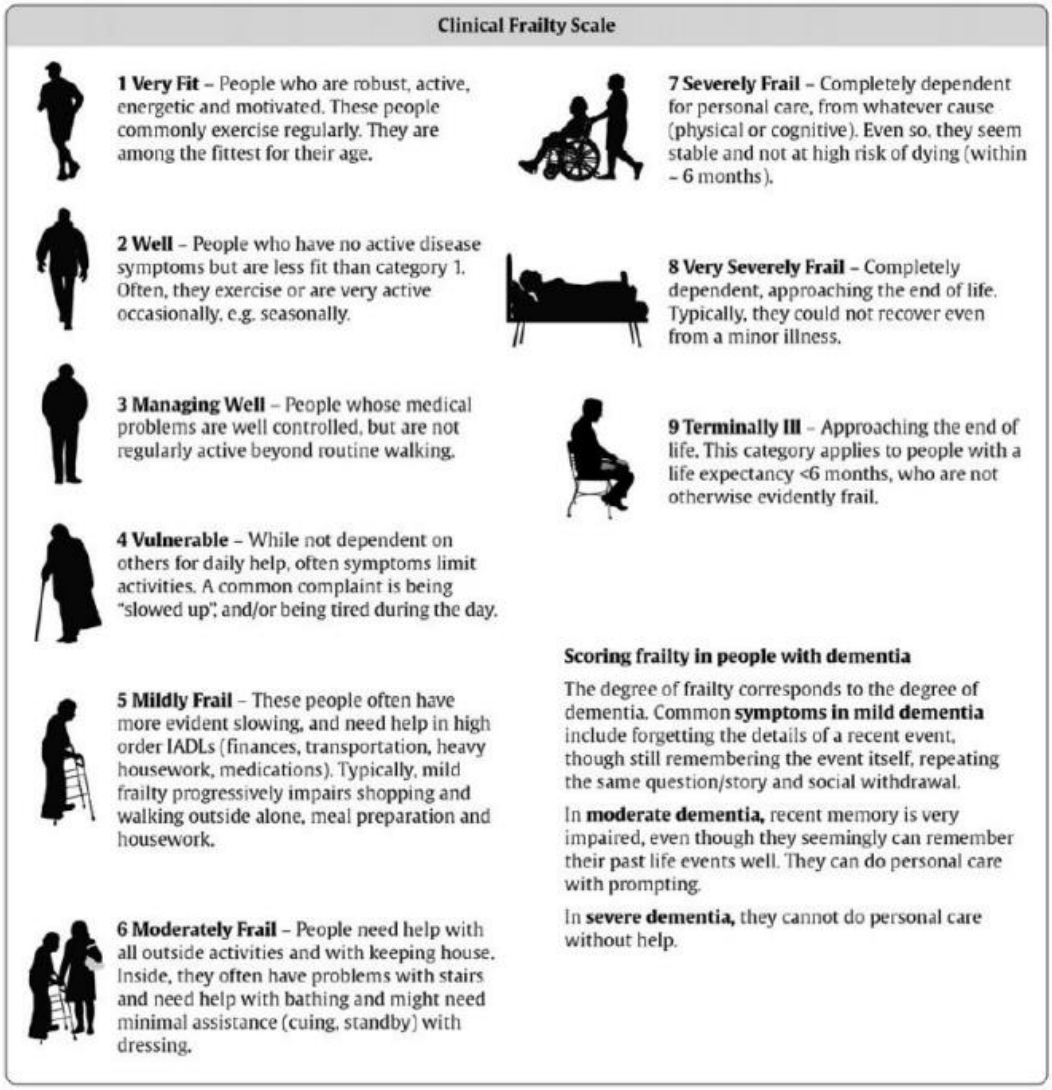
(Based on Montero-Odasso et al 2022)



Notes: 3 Key Questions (3KQ) any positive answer to a) Has fallen in the past year? b) Feels unsteady when standing or walking? or c) Worries about falling? prompts to "fall severity" step. **Fall severity**: fall with injuries (severe enough to consult with a physician), laying on the ground with no capacity to get up, or a visit to the emergency room, or loss of consciousness/suspected syncope. **Frailty.** Commonly used frailty assessment tools include the Frailty Phenotype and the Clinical Frailty Scale.

*Syncope suspicion should trigger syncope evaluation/management. †Exercises on balance/leg strength should be recommended for the intermediate group. Evidence shows that challenging balance exercises are more effective for fall prevention. In several settings, this intermediate group is referred to a physiotherapist. ‡ High risk individuals with falls can deteriorate rapidly, and close follow up is recommended and should be guided on the frequency of consequent health service utilization. **TUG:** timed up and go test

Appendix 3 Clinical Frailty Score (Rockwood et al., 2005)



Clinical Frailty Scale

1 Very Fit – People who are robust, active, energetic and motivated. These people commonly exercise regularly. They are among the fittest for their age.

2 Well – People who have no active disease symptoms but are less fit than category 1. Often, they exercise or are very active occasionally, e.g. seasonally.

3 Managing Well – People whose medical problems are well controlled, but are not regularly active beyond routine walking.

4 Vulnerable – While not dependent on others for daily help, often symptoms limit activities. A common complaint is being "slowed up", and/or being tired during the day.

5 Mildly Frail – These people often have more evident slowing, and need help in high order IADLs (finances, transportation, heavy housework, medications). Typically, mild frailty progressively impairs shopping and walking outside alone, meal preparation and housework.

6 Moderately Frail – People need help with all outside activities and with keeping house. Inside, they often have problems with stairs and need help with bathing and might need minimal assistance (cuing, standby) with dressing.

7 Severely Frail – Completely dependent for personal care, from whatever cause (physical or cognitive). Even so, they seem stable and not at high risk of dying (within ~ 6 months).

8 Very Severely Frail – Completely dependent, approaching the end of life. Typically, they could not recover even from a minor illness.

9 Terminally Ill – Approaching the end of life. This category applies to people with a life expectancy <6 months, who are not otherwise evidently frail.

Scoring frailty in people with dementia

The degree of frailty corresponds to the degree of dementia. Common **symptoms in mild dementia** include forgetting the details of a recent event, though still remembering the event itself, repeating the same question/story and social withdrawal.

In **moderate dementia,** recent memory is very impaired, even though they seemingly can remember their past life events well. They can do personal care with prompting.

In **severe dementia,** they cannot do personal care without help.

Downloadable App

Appendix 4 Gait Speed Test (Physiopedia) Change to 4m walk test

The 4 Metre Walk Test is a performance measure used to assess walking speed in meters per second over a short distance. It can be employed to determine functional mobility, gait, and vestibular function.

This is not a measure of endurance.

Walking Speed m/s - Household Ambulator <0.40 m/s; Limited Community

Ambulator 0.40 to <0.80 m/s; Community Ambulator ≥0.80 m/s

Calculating Gait Speed - total distance/time. For example: if you did a 10-meter gait speed test and it took you 7 seconds, the equation would like: 10 meters / 7 seconds = 1.4 meters per second.

Equipment Required

- Stopwatch
- A clear pathway with set distance (6, 8, 10 meters in length depending on distance tested)
- Set-Up
- Measure and mark a clear path of at least 10-meters in length
- Add a mark at 2-metres
- Add a mark at 8-metres

Scoring

- The total time taken to ambulate 6 meters is recorded
- Timing starts when the toes pass the 2-meter mark
- Timing stops when the toes pass the 8-meter mark
- The 6m is then divided by the total time taken (in seconds) to completed
- The total time is recorded in m/s

Instructions

- The individual walks without assistance for 10 meters, with the time measured for the intermediate 6 meters to allow for acceleration and deceleration
- Assistive devices may be used, but must be kept consistent and documented for each test
- Start timing when the toes pass the 2-meter mark
- Stop timing when the toes pass the 8-metre mark
- Can be tested at either preferred walking speed or maximum walking speed (ensure to document which was tested)
- Perform three trials and calculate the average of three trials

Patient Instructions

Normal comfortable speed: “I will say ready, set, go. When I say go, walk at your normal comfortable speed until I say stop”

You Tube clip here

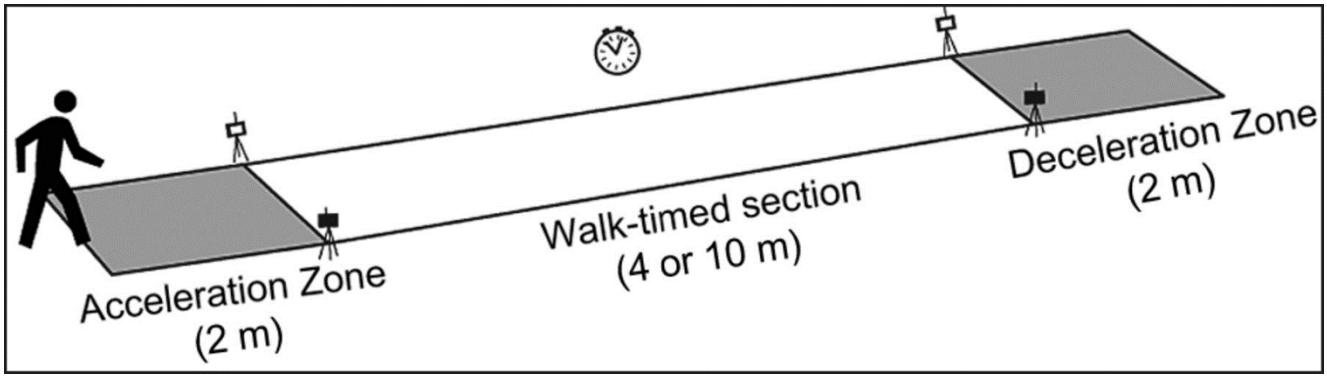


Figure taken from Respiratory Care

Appendix 5 Timed Up and Go Test

Physiopedia - Timed Up and Go Test (TUG)

TUG test is to determine fall risk and measure the progress of balance, sit to stand and walking.

Simple screening test that is a sensitive and specific measure of probability for falls among older adults.

Materials Needed

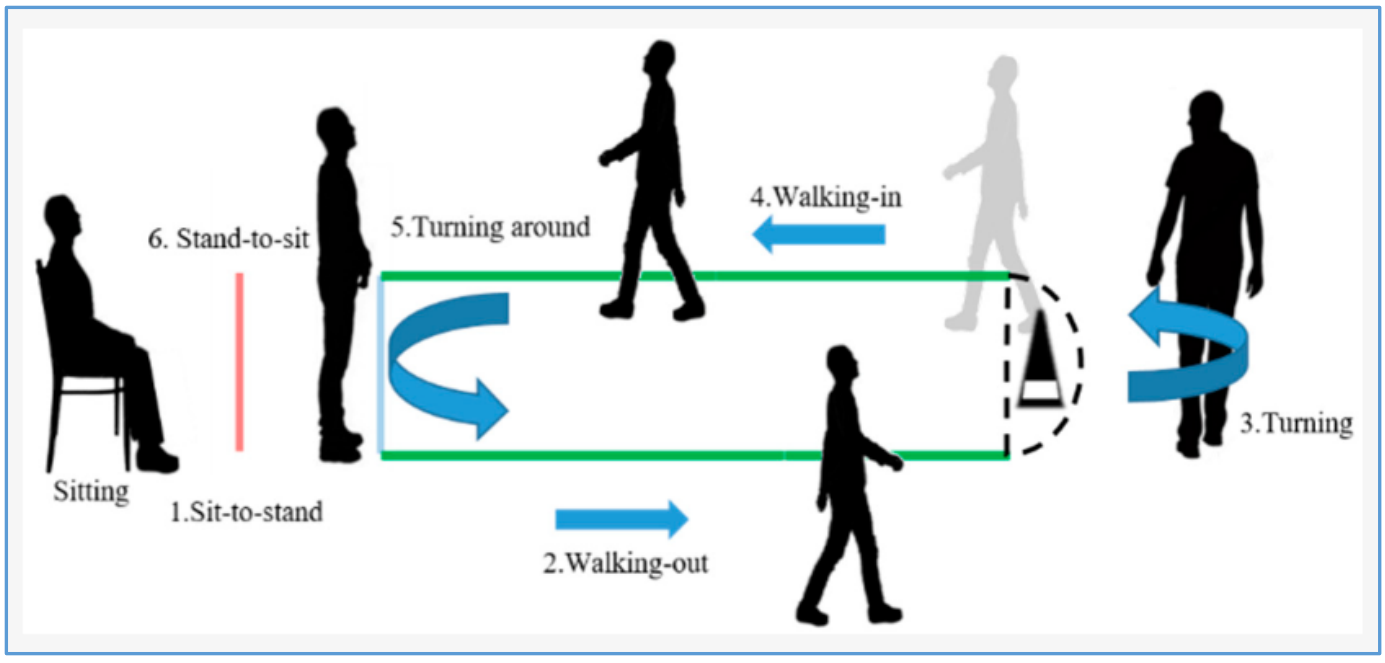
- One chair with armrest
- Stopwatch
- Tape (to mark 3 meters)

Method

- Patients wear their regular footwear and can use a walking aid, if needed.
- The patient starts in a seated position
- The patient stands up upon therapist's command: walks 3 meters, turns around, walks back to the chair and sits down.
- The time stops when the patient is seated.
- Be sure to document the assistive device used.

Note: A practice trial should be completed before the timed trial

YouTube clip here



Appendix 6 30 Second Chair Stand

ASSESSMENT

30-Second Chair Stand

Purpose: To test leg strength and endurance

Equipment: A chair with a straight back without arm rests (seat 17" high), and a stopwatch.

NOTE: Stand next to the patient for safety.

① Instruct the patient:

1. Sit in the middle of the chair.
2. Place your hands on the opposite shoulder crossed, at the wrists.
3. Keep your feet flat on the floor.
4. Keep your back straight, and keep your arms against your chest.
5. On **"Go,"** rise to a full standing position, then sit back down again.
6. Repeat this for 30 seconds.

② On the word "Go," begin timing.

If the patient must use his/her arms to stand, stop the test. Record "0" for the number and score.

③ Count the number of times the patient comes to a full standing position in 30 seconds.

If the patient is over halfway to a standing position when 30 seconds have elapsed, count it as a stand.

④ Record the number of times the patient stands in 30 seconds.

Number: _____ Score: _____

Patient _____

Date _____

Time _____ ☐ AM ☐ PM

SCORING

Chair Stand Below Average Scores

AGE	MEN	WOMEN
60-64	< 14	< 12
65-69	< 12	< 11
70-74	< 12	< 10
75-79	< 11	< 10
80-84	< 10	< 9
85-89	< 8	< 8
90-94	< 7	< 4

A below average score indicates a risk for falls.

Appendix 7 Medication Information

STOPP START Information

STOPP: Screening Tool of Older People's Potentially Inappropriate Prescriptions

The following drug prescriptions are *potentially* inappropriate in persons aged □ 65 years of age

Drug name or class (+ examples)	+ Condition	= Risk / reason
Cardiovascular		
Digoxin >125µg/day	Low GFR	*Toxicity*
Diuretic (monotherapy)	Hypertension	*Safer, more effective alternatives*
Thiazides (bendroflumethiazide)	Gout	*Exacerbation of gout*
Non-cardioselective Beta-blocker (propranolol, carvedilol, sotalol etc)	Wheeze (COPD/asthma)	*Bronchospasm*
Beta blocker + verapamil	Any	*Heart block*
Diltiazem or verapamil	Heart failure	*Exacerbation of heart failure*
Calcium channel blockers	Chronic constipation	*Exacerbation of constipation*
Aspirin + Warfarin	Without gastro-protection	*Gastrointestinal bleeding*
Dipyridamole (monotherapy)	Stroke	*No evidence for efficacy*
Aspirin	Peptic ulcer	*Bleeding*
	>150mg/day	*Bleeding, no evidence for increased efficacy*
	Without arterial occlusive disease	*Not indicated*
	Dizziness, without stroke as cause	*Not indicated*
Warfarin >6 months	1st deep vein thrombosis	*No proven benefit*
Warfarin >12 months	1st pulmonary embolus	*No proven benefit*
Aspirin, clopidogrel, dipyridamole or warfarin	Any bleeding disorder	*Bleeding*
Central Nervous System & Psychotropics		
Tricyclic antidepressants (amitriptyline, imipramine etc)	Cognitive Impairment	*Worsening cognitive impairment*
	Glaucoma	*Exacerbation of glaucoma*
	Cardiac arrhythmia	*Pro-arrhythmic effects*
	Constipation	*Exacerbation of constipation*
	+ Opiate or calcium channel blocker	*Severe constipation*
	Prostatism or urinary retention	*Urinary retention*
Benzodiazpines >1 month	Any	*Prolonged sedation, confusion, impaired balance, falls*
Neuroleptics >1 month (haloperidol, rispderidone etc)	If used as hypnotics	*Confusion, hypotension, extrapyramidal side effects, falls*
	Parkinsonism	*Extra-pyramidal symptoms*
Prochlorperazine & chlorpromazine	Epilepsy	*Lower seizure threshold*
Anticholinergics (Procyclidine, orphenadrine, trihexyphenidyl)	To treat extra-pyramidal side-effects of neuroleptics	*Anticholinergic toxicity*
Selective serotonin re-uptake inhibitors (SSRIs, fluoxetine etc)	Current or <2 months Hyponatraemia	*Further hyponatraemia*
Old antihistamines (cyclizine, chlorpheniramine, alimenazine etc)	>1 week use	*Sedation & anti-cholinergic side effects*
Gastrointestinal		
Constipating drugs (Loperamide or codeine phosphate)	Unexplained diarrhoea	*Delayed diagnosis, exacerbate constipation + overflow diarrhoea,*

STOPP: Screening Tool of Older People's Potentially Inappropriate Prescriptions

The following drug prescriptions are *potentially* inappropriate in persons aged □ 65 years of age

Drug name or class (+ examples)	+ Condition	= Risk / reason
		toxic megacolon in inflammatory bowel disease, delayed recovery in unrecognised gastroenteritis
	Severe infective gastroenteritis	*Exacerbation or protraction of infection*
Prochlorperazine (Stemetil) or metoclopramide	Parkinsonism	*Exacerbating parkinsonism*
High dose proton pump inhibitor > 8 weeks	Peptic Ulcer	*Dose reduction or earlier discontinuation indicated*
Anticholinergic antispasmodics (hyoscine, atropine)	Chronic constipation	*Exacerbation of constipation*
Chest		
Theophylline (monotherapy)	COPD	*Safer, more effective alternatives*
Systemic corticosteroids (instead of inhaled)	COPD	*Unnecessary exposure to longterm side-effects*
Ipratropium (nebulised)	Glaucoma	*Exacerbation of glaucoma*
Musculoskeletal		
Non-steroidal anti-inflammatory without gastric protection	Peptic ulcer /gastrointestinal bleeding	*Peptic ulcer relapse*
Non-steroidal anti-inflammatory drugs (NSAIDs) (ibuprofen, naproxen, diclofenac etc)	Mod-severe hypertension	*Exacerbation of hypertension*
	Heart failure	*Exacerbation of heart failure*
	>3 months in mild osteoarthtitis	*Simple analgesics preferable & usually as effective for pain relief*
	Chronic kidney disease	*Deterioration in renal function*
	+ Warfarin	*Gastrointestinal bleeding*
Corticosteroids (>3 months, monotherapy)	Rheumatoid Arthritis	*Major side-effects*
NSAIDs or colchicine	To prevent gout	*Allopurinol first choice prophylactic drug in gout*
Urogenital		
Bladder antimuscarinics (oxybutinin, tolterodine, solifenacin etc)	Cognitive impairment	*Increased confusion, agitation*
	Glaucoma	*Exacerbation of glaucoma*
	Constipation	*Exacerbation of constipation*
	chronic prostatism	*Urinary retention*
Alpha-blockers (doxasocin, tamsulosin, terazocin etc)	Male & urinary incontinence >1 daily	*Urinary frequency & worsening of incontinence*
	Long-term urinary catheter	*Not indicated*
Endocrine		
Glibenclamide or chlorpropamide	Type 2 diabetes mellitus	*Prolonged hypoglycaemia*
Beta-blockers (atenolol, bisoprolol etc)	Hypoglycaemia □ 1 per month	*Masking hypoglycaemic symptoms*
Oestrogens	Breast cancer	*Recurrence*
	Venous thromboembolism	*Recurrence*
Oestrogens without progestogen	Intact uterus	*Endometrial cancer*
Falling		
Benzodiazepines	Recurrent falls disorder	*Sedative, may cause reduced sensorium, impair balance*
Neuroleptic drugs	Recurrent falls disorder	*Gait dyspraxia, parkinsonism*
First generation antihistamines	Recurrent falls disorder	*Sedative, may impair sensorium*

STOPP: Screening Tool of Older People's Potentially Inappropriate Prescriptions

The following drug prescriptions are *potentially* inappropriate in persons aged □ 65 years of age

Drug name or class (+ examples)	+ Condition	= *Risk / reason*
Vasodilator antihypertensives (hydralazine, minoxidil, sildenafil etc)	>20mmHg drop in systolic blood pressure	*Syncope, falls*
Long-term opiates	Recurrent falls disorder	*Drowsiness, postural hypotension, vertigo*
Analgesia		
Long-term strong opiates	Mild-moderate pain	*World Health Organisation analgesic ladder not observed*
Regular opiates >2 weeks + no laxative	Constipation	*Severe constipation*
Long-term opiates	Dementia + not palliative + not managing specific pain syndrome	*Exacerbation of cognitive impairment*
Any duplicate drug class		
	Any	*Optimisation of monotherapy within a single drug class should be observed prior to considering a new class of drug*

Screening Tool to Alert Doctors to Right, i.e. appropriate, indicated Treatments

These medications should be considered for people □ 65 years with the following conditions, where no contraindication to prescription exists

Condition	Drug
Cardiovascular	
Atrial fibrillation	Anticoagulant
Vascular disease & in sinus rhythm	Aspirin or clopidogrel
Blood pressure >160 mmHg (consistently)	Antihypertensive
Vascular disease + independent for activities of daily + life expectancy >5 years	Statin
Chronic heart failure	Angiotensin Converting Enzyme inhibitor
Acute myocardial infarction	Angiotensin Converting Enzyme inhibitor
Chronic stable angina	Beta-blocker
Chest	
Mild to moderate asthma or COPD	Regular inhaled beta 2 agonist or anticholinergic
Moderate-severe asthma or COPD & FEV1 <50%.	Regular inhaled corticosteroid
Chronic type 1 respiratory failure (pO2 < 8.0kPa, pCO2 <6.5kPa)a	Continuous oxygen
Chronic type 2 respiratory failure (pO2 < 8.0kPa, pCO2 > 6.5kPa)	Continuous oxygen
Neuro	
Parkinson's Disease with definite functional impairment & resultant disability	Levo-dopa
Depression, moderate-severe <3 months	Antidepressant
Gastro	
Severe gastro-oesophageal acid reflux disease	Proton Pump Inhibitor
Peptic stricture requiring dilatation	Proton Pump Inhibitor
Diverticular disease with constipation	Fibre supplement
MSK	
Active moderate-severe rheumatoid disease > 12 weeks	Disease-modifying anti-rheumatic drug
Maintenance corticosteroid therapy	Bisphosphonates
Osteoporosis (previous fragility fracture, acquired dorsal kyphosis	Calcium & Vitamin D
Endocrine	
Type 2 diabetes +/- metabolic syndrome	Metformin
Diabetes + proteinuria or microalbuminuria + GFR <50ml/min	ACE inhibitor or Angiotensin Receptor Blocker
Diabetes mellitus + major cardiovascular risk factors	Statin

Key:

COPD = Chronic obstructive pulmonary disease
GFR = Glomerular filtration rate
FEV1 = forced expiratory volume in one second
MSK = Musculoskeletal

This document was amended from the original with the kind permission of the authors. For more detail & references, see:
Gallagher P, Ryan C, Byrne S, Kennedy J, O'Mahony D. STOPP (Screening Tool of Older Persons' Prescriptions) & START (Screening Tool to Alert Doctors to Right Treatment): Consensus Validation. Int J Clin Pharmacol Ther 2008; 46(2): 72 –83.
PMID 18218287