Greater Manchester Falls Prevention Awareness Week:

Online Bitesize Lunchtime Learning session

Friday 22nd September

12:05-12:20pm
The World Guidelines for Falls Prevention and Management for Older Adults
(Prof Chris Todd, The University of Manchester)

12:20-12:35pm
Medicines and Falls
(Đula Alićehajić-Bečić, Wrightington, Wigan & Leigh NHS Foundation Trust)

12:35-12:50pm
Move More/GM Active initiatives: Physical Activity & Long-term Health Conditions
(Dr Kristen Hollands, Salford University)

GREATER MANCHESTER
DOING HEALTH DIFFERENTLY

#FallsPreventionAwarenessWeek

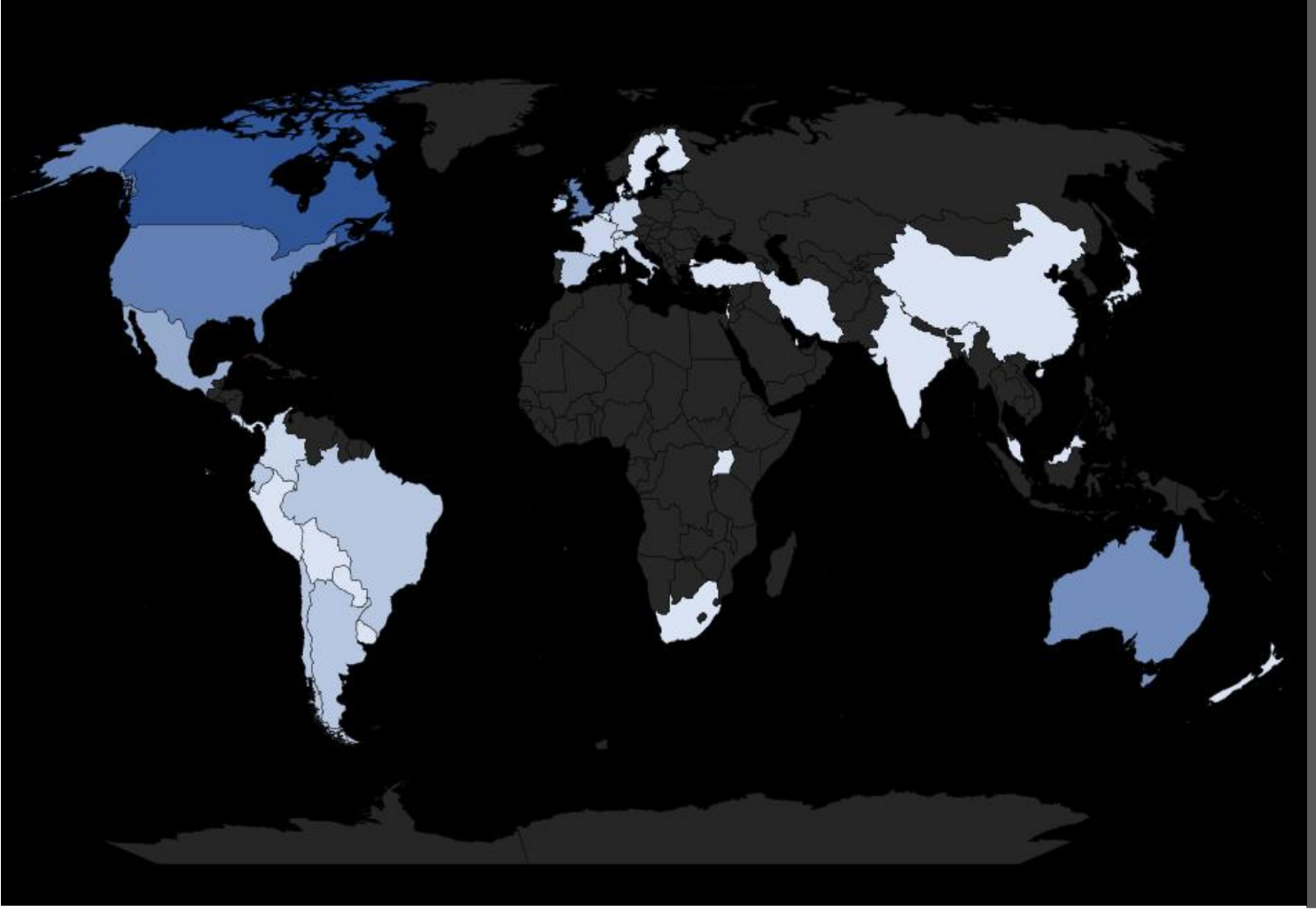
#ThinkFalls

World Guidelines for Falls Prevention and Management for Older Adults

Chris Todd
School of Health Sciences
The University of Manchester

on behalf of Montero-Odasso M, van der Velde N, Martin F, Petrovic M, Tan MP, Ryg J, Aguilar-Navarro S, Alexander NB, Becker C, Blain H, Bourke R, Cameron I , Camicioli I, Clemson L, Close J, Delbaere K, Duan L, Duque G, Freiberger E, Ganz D, Gómez F, Hausdorff J, Hogan D, Hunter S, Jauregui J, Kamkar N, Kenny RA, Lamb S, Latham N, Lipsitz L, Logan P, Lord S, Mallet L, Marsh D, Milisen K, Moctezuma-Gallegos R, Morris M, Nieuwboer A, Perracini M, Pieruccini-Faria F, Pighills A, Said C, Sejdic E, Sherrington C, Skelton D, d'Souza S, Speechley M, Stark S, Todd C, Troen B, van der Cammen T, Verghese J, Vlaeyen E, Watt J, Masud T and the Task Force on Global Guidelines for Falls in Older Adults.

This research is part supported by NIHR ARC-GM (NIHR200174) & Chris Todd's NIHR Senior Investigator Award (NIHR200299). The views expressed are those of the authors and not necessarily those of the National Institute for Health and Care Research, National Health Service, Department of Health and Social Care, or its partners.



Our initiative in numbers

- ***96** world experts*
- ***40** countries involved*
- ***36** Societies/Agencies collaborating*
- ***25** steering committee members*
- ***12** working groups + 1 cross-cutting theme*
- ***11** Systematic reviews performed*

https://worldfallsguidelines.com/

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BGS British Geriatrics Society Improving healthcare for older people

CGS·SCG CANADIAN GERIATRICS SOCIETY LA SOCIÉTÉ CANADIENNE DE GÉRIATRIE

International Association of Gerontology and Geriatrics Founded 1950

FFN Fragility Fracture Network

DGG

MSGM Malaysian Society Of Geriatric Medicine

CGS·SCG CANADIAN GERIATRICS SOCIETY LA SOCIÉTÉ CANADIENNE DE GÉRIATRIE

ALMA Academia Latinoamericana de Medicina del Adulto Mayor

SEMEG Sociedad Española de Medicina Geriátrica

EUGMS European Union Geriatric Medicine Society Fostering geriatric medicine across Europe THE EUGMS

aimss Australian Institute for Musculoskeletal Science

AGS Geriatrics Healthcare Professionals

Valpreventie.be Centre of Expertise for Fall and Fracture Prevention Flanders

ProFouND Prevention of Falls Network for Dissemination

NOTES FOR USE OF THE 'ProFouND Falls Prevention Press Release, Leaflet and Poster'

Conceptual Framework

Five core elements:

1. **Overall recommendations**: to reduce the risk of falling for ALL older adults
2. **Assessment**: to identify tools suitable to assess an individual's specific and modifiable fall risk factors to enable a person-centered approach to design an intervention
3. **Risk Stratification**: to identify tools suitable to assess an individual's likely level of risk so as to apply proportionate further assessment and interventions
4. **Interventions**: to evaluate available and feasible interventions for reducing fall risk.
5. **Personalized approach**: to customize diagnosis and management of fall risk based on patient comorbidities, values, preferences, and individual needs.

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12 Working Groups

Plus a cross-cutting theme on patient perspectives across all working groups.

Working Group 1. Gait and Balance Assessment Tools to Assess Risk for Falls

Leaders:
Dr. Tahir Masud and Dr. Jesper Ryg

Working Group 2. Polypharmacy, Fall Risk Increasing Drugs, and Falls

Leaders:
Dr. Mirko Petrovic, Dr. Louise Mallet, and Dr. Nathalie van der Velde

Working Group 3. Cardiovascular Risk Factors for Falls

Leaders:
Dr. Lewis Lipsitz and Dr. Rose Anne Kenny

Working Group 4. Exercise Interventions for Prevention of Falls

Leaders:
Dr. Stephen Lord, Dr. Catherine Sherrington, and Dr. Dawn Skelton

Working Group 5. Falls in Hospitals and Nursing Homes

Leaders:
Dr. Gustavo Duque, Dr. Koen Milisen, Dr. Cathy Said, Dr. Meg Morris, and Dr. Ellen Vlaeyen

Working Group 6. Cognition and Falls

Leaders:
Dr. Neil B. Alexander, Dr. Susan Hunter, Dr. Manuel Montero-Odasso, and Dr. Joe Verghese

Working Group 7. Falls in Parkinson's Disease + Related Disorders

Leaders:
Dr. Richard Camicioli, Dr. Jeffrey Hausdorff, and Dr. Alice Nieuwboer

Working Group 8. Falls and Technology

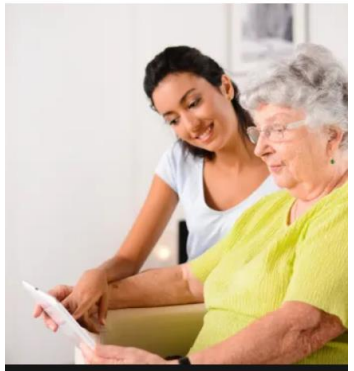
Leaders:
Dr. Tischa van der Cammen, Dr. Ervin Sejdic, and Dr. Clemens Becker

Working Group 9. Falls in Developing Countries

Leaders:
Dr. Maw Pin Tan and Dr. Jose Fernando Gomez-Montes

Working Group 10. Multifactorial Interventions

Leaders:
Dr. Manuel Montero-Odasso, Dr. Pip Logan, Dr. Mark Speechley, Dr. Nathalie van der Velde, Dr. Jennifer Watt, and Dr. Ian Cameron

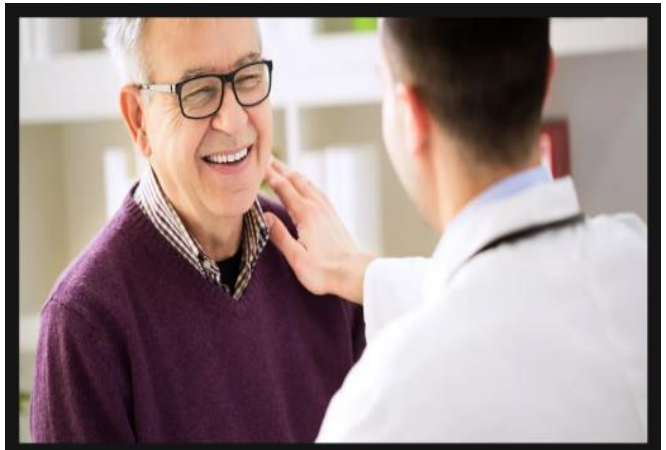


Working Group 11. Cross-Cutting theme: older person & stakeholder perspective

Leader: Dr. David B. Hogan

Working Group 12. Fear of Falling

Leaders:
Dr. Ellen, and Dr. Kim
Member:
Dr. Ryota Sakurai, Dr. Chris Todd, Dr. Rixt Zijlstra, Dr. Mae Lim, Dr. Toby Ellmers, Dr. David B. Hogan



Cross-Cutting theme: older person & stakeholder perspective

Leader: Dr. David B. Hogan

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Process and Timeline 2019-2022

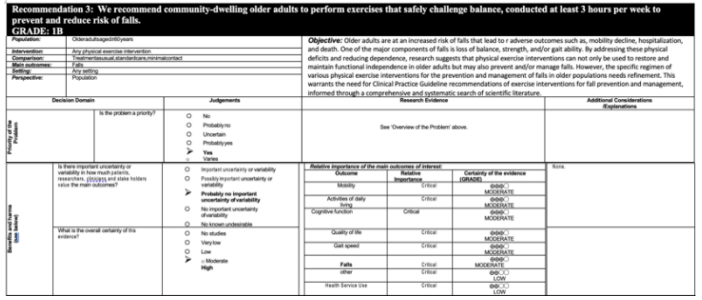
Gaps & desired evidence

Literature searches

PubMed

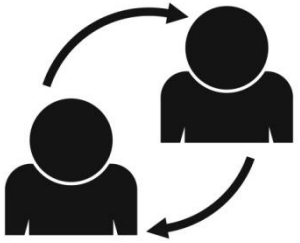
Identify & review best evidence

Grade evidence



Preliminary recommendations

Delphi process



Revised recommendations

Web-based voting

Final Recommendation

Hierarchy of the Evidence

Modified GRADE System

Strength of Recommendation	**1**	**Strong**: benefits clearly outweigh undesirable effects
	2	**Weak, or conditional**: either lower quality evidence or desirable and undesirable effects are more closely balanced
Quality of evidence	**A**	**High:** "further research is unlikely to change confidence in the estimate of effect"
	B	**Intermediate:** "further research is likely to have an important impact on the confidence in the estimate of effect and may change the estimate"
	C	**Low:** "further research is very likely to have an important impact on the confidence in the estimate of effect and is likely to change the estimate"
No evidence Available	**E**	**Experts:** "When the review of the evidence failed to identify any quality studies meeting standards set or evidence was not available, recommendations were formulated expert consensus"

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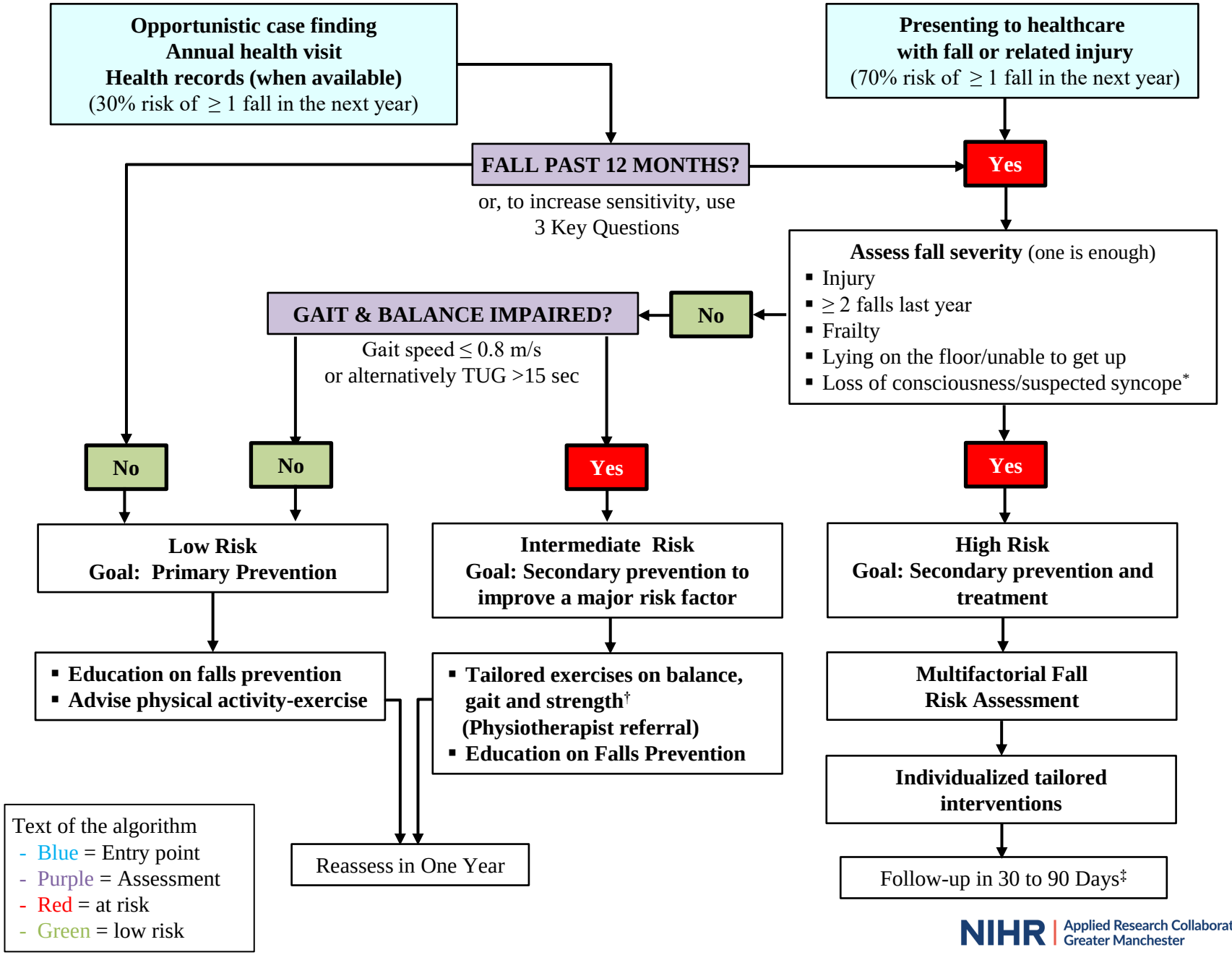
WHAT IS NEW?

- **2 ENTRY POINTS**
- **LOW RISK**
  -1/3 who are deemed *low risk* experience a fall.
  -Low risk individuals are offered exercise and education.
- **INTERMEDIATE RISK**
  -Individuals who benefit from tailored exercise or physio referral
  -Not frail, no recurrent falls
- **HIGH RISK**
  -Offer Comprehensive Geriatric Assessment
  -Multidomain interventions
  -Close follow up - high risk of injury or recurrence-
- **FALLS SEVERITY REDEFINED**



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WG/domains	Area or Domain	Recommendation	Grade
WG 1 Gait and Balance Assessment Tools to Assess Risk for Falls	Stratification	We recommend including gait speed for predicting falls risk.	1A
		As an alternative the Timed Up and Go Test can be considered, although the evidence for fall prediction is less consistent.	1B
	Assessment	We recommend that Gait and Balance should be assessed.	1B
WG 2 Polypharmacy, Fall Risk Increasing Drugs, and Falls	Assessment	We recommend assessing for fall history and the risk of falls before prescribing potential fall risk increasing drugs (FRIDs) to older adults.	1B
	Assessment	We recommend the use of a validated, structured screening and assessment tool to identify FRIDs when performing a medication review or medication review targeted to falls prevention in older adults.	1C
	Intervention	We recommend that medication review and appropriate deprescribing of FRIDs should be part of multidomain falls prevention interventions.	1B
	Intervention	We recommend that in long-term care residents, the falls prevention strategy should always include rational deprescribing of fall-risk-increasing drugs.	1C
WG 3 Cardiovascular Risk Factors for Falls	Assessment	We recommend, as part of a multifactorial falls risk assessment, that a cardiovascular assessment that initially include cardiac history, auscultation, lying and standing orthostatic blood pressure, and surface electrocardiogram should be performed.	1B
	Assessment	In the absence of abnormalities on initial cardiovascular assessment, no further cardiovascular assessment is required, unless syncope is suspected (i.e. recurrent unexplained falls).	1C
	Assessment	We recommend that the further cardiovascular assessment for unexplained falls should be the same as that for syncope, in addition to the multifactorial falls risk assessment.	1A
	Intervention	We recommend that management of orthostatic hypotension should be included as a component of multidomain intervention in fallers.	1A
	Intervention	We recommend that interventions for cardiovascular disorders identified during assessment for risk of falls should be the same as that for similar conditions when associated with syncope, in the addition to other interventions based on the multifactorial falls risk assessment.	1B
WG 4 Exercise Interventions for Prevention of Falls and Related Injuries	Exercise Intervention	We recommend exercise programmes for fall prevention for community-dwelling older adults which include balance challenging and functional exercises (e.g. sit-to-stand, stepping), with sessions three times or more weekly which are individualised, progressed in intensity for at least 12 weeks and continued longer for greater effect.	1A
	Exercise Intervention	We recommend inclusion, when feasible, of Tai Chi and/or additional individualised progressive resistance strength training.	1B
	Exercise Intervention	We recommend individualised supervised exercise as a falls prevention strategy for adults living in long-term care settings.	1B
	Exercise Intervention	We recommend that adults with PD at an early to mid-stage and with mild or no cognitive impairment are offered individualised exercise programmes including balance and resistant training exercise	1A
	Exercise Intervention	We conditionally recommend that adults after a stroke participate in individualised exercise aimed at improving balance/strength/walking to prevent falls	2C
	Exercise Intervention	We recommend that adults after sustaining a hip fracture participate in individualised and progressive exercise aimed at improving mobility (i.e. standing up, balance, walking, climbing stairs) as a fall prevention strategy.	1B
	Exercise Intervention	We conditionally recommend that such programmes after a hip fracture be commenced as in-patients and be continued in the community.	2C (In-patients) & 1A (Community)
	Intervention	We recommend that community-dwelling adults with cognitive impairment (mild cognitive impairment and mild to moderate dementia) participate in exercise to prevent falls, if willing and able to do so.	1B
WG 5 Falls in Hospitals and Care Homes	Hospital Assessment	We recommend that hospitalised older adults >65 years of age have a multifactorial falls risk assessment. We recommend against using scored falls risk screening tools in hospitals for multifactorial falls risk assessment in older adults.	2B
	Hospitals management and interventions	We recommend that tailored education on falls prevention should be delivered to all hospitalised older adults (≥65 years of age) and other high-risk groups.	1A
	Hospitals management and interventions	We recommend that personalised single or multidomain falls prevention strategies based on identified risk factors or behaviours (or situations) be implemented for all hospitalised older adults (≥65 years of age), or younger individuals identified by the health professionals as at risk of falls.	1C (Acute care) & 1B (Sub-acute care)
	Care homes assessment	We recommend against falls risk screening to identify care home residents at risk for falls and we recommend that all residents should be considered at high risk of falls.	1A
	Care homes assessment	We recommend performing a multifactorial falls risk assessment at admission to identify factors contributing to fall risk and implementing appropriate interventions to avoid falls and fall-related injuries in care home resident older adults.	1C
	Care homes assessment	We recommend conducting a post-fall assessment in care home residents following a fall in order to reassess fall risk factors, adjust the intervention strategy for the resident and avoid unnecessary transfer to acute care.	E
	Care Homes Management and Interventions	We recommend a multifaceted approach to falls reduction for care home residents including care home staff training, systematic use of a multidomain decision support tool and implementation of falls prevention actions	1B
	Care homes management and interventions	We recommend against the use of physical restraints as a measure for falls prevention in care homes.	1B
	Care homes management and interventions	We recommend nutritional optimisation including food rich in calcium and proteins, as well as vitamin D supplementation as part of a multidomain intervention for falls prevention in care home residents.	1B
	Care homes management and interventions	We recommend including the promotion of physical activity (when feasible and safe) as part of a multidomain falls prevention intervention in care homes.	1C
WG 6 Cognition and Falls	Cognition Assessment	We recommend that routine assessment of cognition should be included as part of multifactorial falls risk assessment in older adults.	1B
	Cognition Assessment	We recommend including both the older adult's and caregiver's perspectives, when creating the individual falls prevention care plans for adults with cognitive impairment since this strategy has shown better adherence to interventions and outcomes.	1C
WG 7 Falls and PD and Related Disorders	Assessment	We conditionally recommend a falls risk assessment for older adults with PD, including a self-report 3-risk factor assessment tool, which includes a history of falls in the previous year, FOG in the past month, and slow gait speed	2B
	Management and Intervention	We conditionally recommend that older adults with PD be offered multidomain interventions	2B
	Management and Intervention	We recommend that adults with PD at an early to mid-stage and with mild or no cognitive impairment are offered individualised exercise programmes including balance and resistance training exercise.	1A
	Management and Intervention	We conditionally recommend exercise training, targeting balance and strength, be offered to people with complex phase PD if supervision by a physiotherapist or other suitably qualified professional is available.	1C
WG 8 Falls and Technology	Assessment and Interventions	We conditionally recommend using telehealth and/or smart home systems (when available) in combination with physical exercise as part of the falls prevention programmes in the community.	2C
	Interventions	Current evidence does not support the use of wearables for falls prevention. Emerging evidence show that when wearables are used in exercise programmes to prevent falls, they may increase participation.	2C
WG 9 Falls in Low- and Middle-Income Countries	Implementation	Local context needs to be considered when implementing fall prevention programmes in LMIC.	1B
	Assessment	We conditionally recommend prioritising assessments of risk factors for cognitive impairment, obesity including sarcopenic obesity, diabetes, lack of appropriate footwear and environmental hazards as falls risk factors in LMIC	2C
	Assessment	We conditionally recommend that in LMIC settings clinicians and caregivers use validated tools that are freely available in their country of residence to assess mobility, dependent on resource availability.	E
WG 10 Multifactorial Assessment and Interventions for Falls (Environment recommendations informed by the ad hoc expert group on Environment and Falls)	Multifactorial Assessment	We recommend multiprofessional, multifactorial assessment should be offered to community-dwelling older adults identified to be at high risk of falling, to guide tailored interventions.	1B
	Multidomain Interventions	We recommend multidomain interventions, informed by a multiprofessional, multifactorial falls risk assessment, should be offered to community-dwelling older adults identified to be at high risk of falling.	1B
	Multifactorial (Environmental) Assessment	We recommend identification of an individual's environmental hazards where they live and an assessment of their capacities and behaviours in relation to them, by a clinician trained to do so, should be part of a multifactorial falls risk assessment.	1B
	Multifactorial (Environmental) Interventions	We recommend modifications of an older adult's physical home environment for fall hazards that consider their capacities and behaviours in this context, should be provided by a trained clinician, as part of a multidomain falls prevention intervention.	1B
WG 11 Older Adults' Perspectives on Falls	Stratification	We recommend clinicians should routinely ask about falls in their interactions with older adults.	1A
	Assessment	As part of a comprehensive fall assessment, clinicians should enquire about the perceptions the older adult holds about falls, their causes, future risk, and how they can be prevented.	1B
	Interventions	A care plan developed to prevent falls and related injuries should incorporate the goals, values and preferences of the older adult.	1B
WG 12 Concerns about Falling and Falls	Assessment	We recommend including an evaluation of concern about falling in a multifactorial falls risk assessment of older adults	1B
	Assessment	We recommend using a standardised instrument to evaluate concerns about falling such as the Falls Efficacy Scale International (FES-I) or Short FES-I in community-dwelling older adults.	1A
	Assessment	We recommend using the FES-I or especially the Short FES-I for assessing concerns about falling in acute care hospitals or long-term care facilities.	1B
	Assessment	We recommend exercise, cognitive behavioural therapy and/or occupational therapy (as part of a multidisciplinary approach) to reduce fear of falling in community-dwelling older adults.	1B

KEY MESSAGES

Falls and injury prevention need to be addressed at the point of care and from a multidisciplinary perspective.

- Opportunistic case finding is necessary as older adults may not present following a fall and may be reluctant to report falls
- This has been highlighted by the Low- and Middle-Income Countries group, due to the lack of resources to address falls in annual health visit
- Tailored multidomain interventions should be offered to high risk individuals, delivered by a multidisciplinary team if available

KEY MESSAGES

Engaging older adults themselves is an integral part of preventing falls, and understanding their beliefs, attitudes, and priorities is key for successfully intervening.

- Engaging older adults can improve intervention adherence
- Older adult's knowledge and attitudes about falls will determine whether, or what type, of therapeutic interventions they would be willing to engage in
- For those with cognitive and functional limitations, care plans will also require the involvement of caregivers

KEY MESSAGES

Low risk does not mean no risk.

- Up to 30% of community-dwelling older adults who fall do *not* have a history of falls or gait/balance problems
- These falls are not benign, since 60% have injuries associated with them
- Case finding systems or screening algorithms did not offer management to this this group
- Education on fall prevention and exercise should be offered

KEY MESSAGES

Multidomain interventions (e.g., a combination of interventions tailored to the individual), when followed and delivered, are effective for reducing the rate of falls in intermediate to high-risk community older adults.

- Multidomain Interventions:
  - Interventions (such as exercise, home-hazard modification or medication review) prescribed or provided to each individual are matched to their risk of falls profile
  - Individually-tailored interventions – therefore individuals are likely to receive different combinations of interventions

- Multiple Component Interventions:
  - Individuals receive a fixed combination of two or more fall prevention interventions – all participants receive the same intervention
  - E.g.: Exercise & education, exercise & home safety, exercise & psychological interventions

KEY MESSAGES

Managing many of the risk factors for falls (e.g. gait and balance problems) have wider benefits beyond falls prevention such as improved intrinsic capacities (physical and mental health), functioning and quality of life.

- We recommend exercise programmes for fall prevention for community-dwelling older adults which include balance challenging and functional exercises (e.g. sit-to-stand, stepping), with sessions three times or more weekly which are individualised, progressed in intensity for at least 12 weeks and continued longer for greater effects.

KEY MESSAGES

In the hospital and care home settings, all older adults should be considered high risk and will benefit from a multifactorial falls risk assessment and tailored multidomain interventions.

- A multifactorial falls risk assessment should be done at admission and for care homes be repeated at least once annually or when the residents' condition changes
- Cognitive status (i.e. delirium or dementia) should be considered when implementing the education programmes
- Hospitals should have protocols, policies and/or procedures for the prevention of falls consistent with best practice guidelines
- Promotion of exercise training as part of a multidomain falls prevention intervention in care homes, to those who are willing and able to participate

KEY MESSAGES

Vitamin D supplementation to prevent falls should be reserved for those at risk of vitamin D deficiency.

- Follow local guidelines to assess vitamin D status in community dwellers based on local guidelines
- If at high risk for deficiency (care home residents, home bound, very frail), measurement is not indicated as standard vitamin D supplementation applies
- Evidence shows that vitamin D can prevent falls in residential care, probably because levels are very low among residents

KEY MESSAGES

Concerns about falling and falls

- **Strong recommendation.** Include an evaluation of concerns about falling in a multifactorial falls risk assessment of older adults
- **Strong recommendation.** Use a standardized instrument to evaluate concerns about falling such as the Falls Efficacy Scale -International (FES-I) or Short FES-I in community-dwelling older adults.

KEY MESSAGES

We should assess for fall history and risk before prescribing potential fall risk increasing drugs (FRIDs)

- Strong evidence that a structured approach improves FRID identification and that medication review and deprescribing of FRIDs can significantly reduce fall risk

- Medication-review tools are suitable to systematically identify medication-related fall risks in older adults and to optimize deprescribing.

- We recommend that in long-term care residents, the falls prevention strategy should always include rational deprescribing of fall-risk-increasing drugs

KEY MESSAGES

Application of some of these recommendations may need modification to meet the needs of older people in Low- and Middle-Income Countries (LMIC).

- Local context needs to be considered when implementing fall prevention programmes in LMIC, using culturally sensitive strategies, and tailored to local levels of expertise and resource availability
- Cognition, obesity, diabetes, lack of appropriate footwear, and environmental hazards should be prioritized as falls risk factors in LMIC
- Clinicians and caregivers in LMIC settings should preferably use validated tools that are freely available in their country of residence to assess mobility and fall risk

LIMITATIONS AND NEXT STEPS

1. Worldwide representation; however, one continent, Africa, is underrepresented.

2. Panel of older adults with lived experience was composed of English speaking older adults residing in high-income nations. More diverse feedback is needed.

3. Our recommendations and accompanying algorithm are pragmatic and deemed to be easy to apply and adaptable to older persons' needs, in different scenarios, BUT no formal testing and validation was performed.

LIMITATIONS AND NEXT STEPS

4. Finally, we have tried to address areas where remaining knowledge gaps were detected, including technology, but evidence was still too scarce to provide strong recommendations.

5. Many areas for future research
   - Wearables
   - Dual-task gait test for prediction/stratification
   - Research on implementation

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https://worldfallsguidelines.com/

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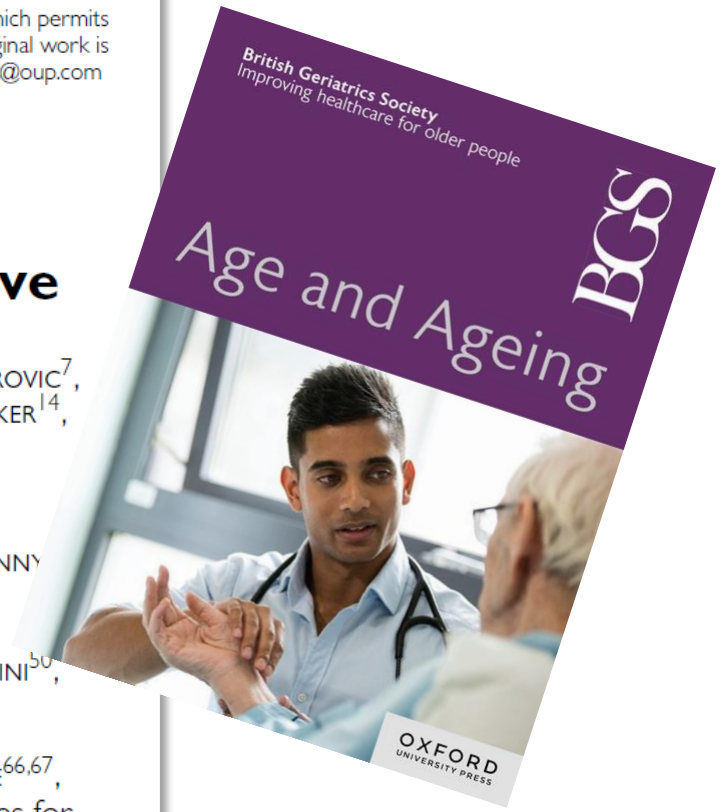
GUIDELINE

World guidelines for falls prevention and management for older adults: a global initiative

Manuel Montero-Odasso[1,2,3,†], Nathalie van der Velde[4,5,†], Finbarr C. Martin[6], Mirko Petrovic[7], Maw Pin Tan[8,9], Jesper Ryg[10,11], Sara Aguilar-Navarro[12], Neil B. Alexander[13], Clemens Becker[14], Hubert Blain[15], Robbie Bourke[16], Ian D. Cameron[17], Richard Camicioli[18], Lindy Clemson[19], Jacqueline Close[20,21], Kim Delbaere[22], Leilei Duan[23], Gustavo Duque[24], Suzanne M. Dyer[25], Ellen Freiberger[26], David Ganz[27], Fernando Gómez[28], Jeffrey M. Hausdorff[29,30,31], David B. Hogan[32], Susan M.W. Hunter[33], Jose R. Jauregui[34], Nellie Kamkar[1], Rose-Anne Kenny, Sarah E. Lamb[35], Nancy K. Latham[36], Lewis Lipsitz[37], Teresa Liu-Ambrose[38], Pip Logan[39], Stephen R. Lord[40,41], Louise Mallet[42], David Marsh[43], Koen Milisen[44,45], Rogelio Moctezuma-Gallegos[46,47], Meg E. Morris[48], Alice Nieuwboer[49], Monica R. Perracini[50], Frederico Pieruccini-Faria[1,2], Alison Pighills[51], Catherine Said[52,53,54], Ervin Sejdic[55], Catherine Sherrington[56], Dawn A . Skelton[57], Sabestina Dsouza[58], Mark Speechley[3,59], Susan Stark[60], Chris Todd[61,62], Bruce R. Troen[63], Tischa van der Cammen[64,65], Joe Verghese[66,67], Ellen Vlaeyen[68,69], Jennifer A. Watt[70,71], Tahir Masud[72], the Task Force on Global Guidelines for Falls in Older Adults[‡]



chris.todd@manchester.ac.uk

HEALTHY AGEING RESEARCH GROUP

NIHR | Applied Research Collaboration Greater Manchester

NFPCG
National Falls Prevention Coordination Group

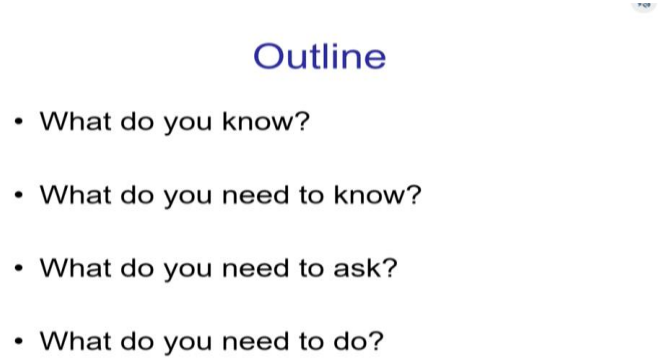
NHS
Wrightington, Wigan and Leigh Teaching Hospitals
NHS Foundation Trust

GM Falls Prevention Awareness Week – Medicines and Falls

Đula Alićehajić-Bečić, Consultant Pharmacist Frailty, WWL Teaching Trust
dula.alicehajic-becic@wwl.nhs.uk, twitter @dula79

Learning objectives

- By the end of this session you will be able to
  - Discuss how medicines affect falls risk
  - Identify Falls Risk Increasing Drugs (FRIDs)
  - Understand what the options are when looking after patients on FRIDs who are at risk of falls
  - Apply evidence to clinical example



Baseline assessment of competence

Falls and Medicines | Present mode (sli.do)

What is a fall?

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.

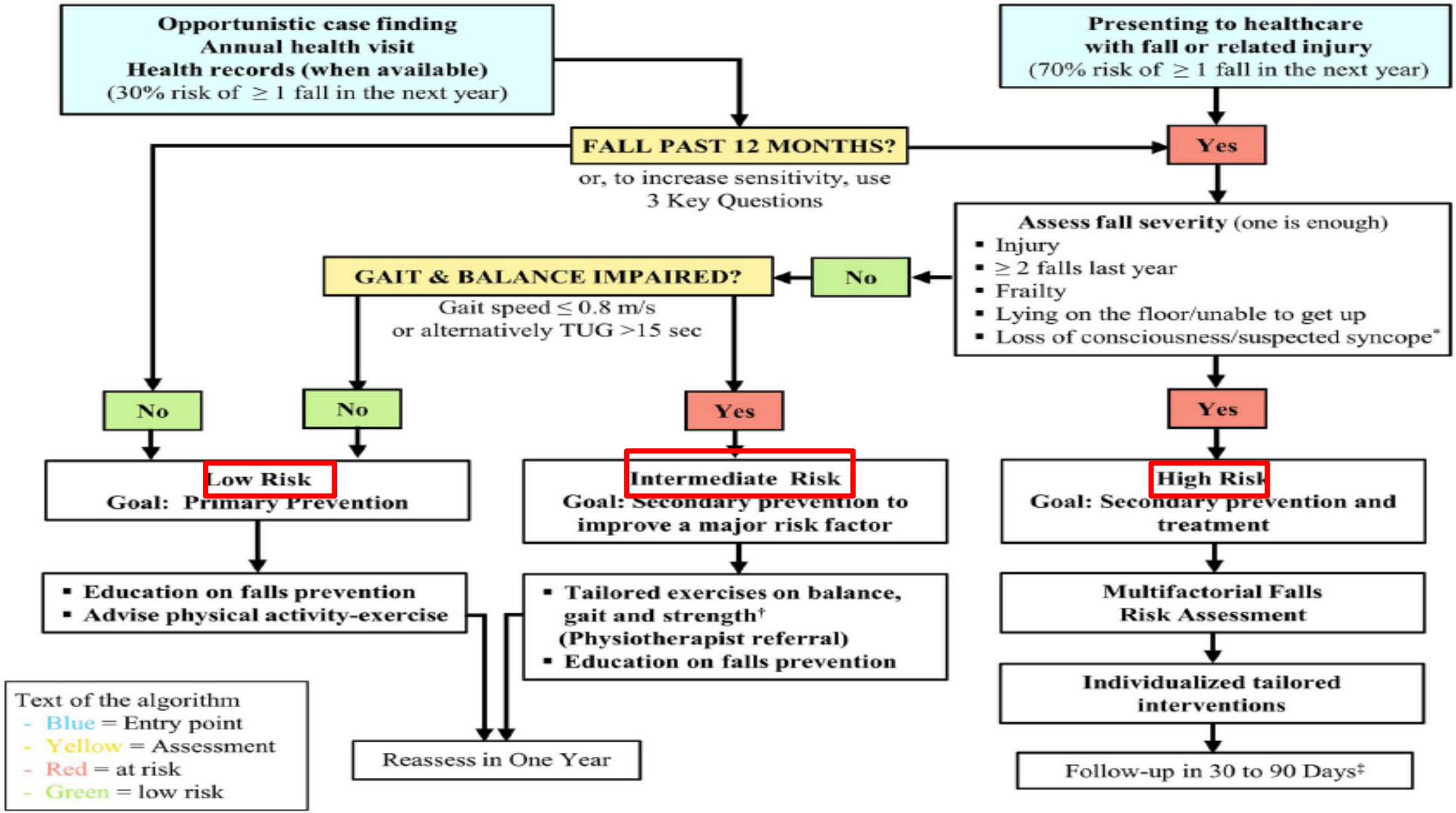
In **moderate dementia**, recent memory is very impaired, even though they seemingly can remember their past life events well. They can do personal care with prompting.

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

* 1. Canadian Study on Health & Aging, Revised 2008.
2. K. Rockwood et al. A global clinical measure of fitness and frailty in elderly people. CMAJ 2005;173:489-495.

- A fall is defined as an unintentional or unexpected loss of balance, resulting in coming to rest on the floor, the ground or an object below knee level (NICE 2020)
- Fall (e.g. collapse, legs gave way, "found lying on the floor") is a frailty syndrome as defined by British Geriatric Society as is susceptibility to side effects of medication (e.g. confusion with codeine, hypotension with antidepressants)

World guidelines for falls prevention and management for older adults



NICE Multifactorial Falls Risk Assessment

- Mr T had a fall in the early hours of this morning
- His daughter found him when she came to make his breakfast
- What would your assessment consist of?
    - Identification of Falls History
    - Assessment of gait, balance and mobility, muscle weakness
    - Assessment of functional ability and fear relating to falling
    - Assessment of visual impairment
    - Assessment of cognitive impairment and neuro exam
    - Cardiovascular exam
    - **Medication review**
    - Assessment of urinary incontinence
    - Assessment of osteoporosis risk
    - Assessment of home hazards

NICE Quality Statement 2: Older people at risk of falling are offered a multifactorial falls risk assessment.

Which of the following groups of medication are associated with highest risk of falls?

[Falls and Medicines | Present mode (sli.do)]

How do medicines cause falls?

- Mechanism usually one or more of:
  - Sedation (slowed reaction times/ impaired balance)
  - Hypotension/ postural hypotension
  - Bradycardia, tachycardia or asystole
- Useful references:

FallSafe resources - original | RCP London -Medicines and Falls in Hospital: Guidance Sheet

SPS Cardiovascular disease in older people living with frailty-Optimising medicines in multimorbidity and polypharmacy

Medicines and falls 8 23.pdf (rpharms.com)

Which medicines cause falls? Sedation

- Benzodiazepines e.g. temazepam
- Z drugs e.g. zopiclone, zolpidem
- Tricyclic Antidepressants e.g. amitriptyline (anticholinergics)
- Mirtazapine
- Sedating antihistamines e.g. chlorphenamine
- Opioids e.g. morphine, oxycodone
- Some antipsychotics e.g. chlorpromazine
- Carbamazepine
- Gabapentin/ pregabalin
- Duloxetine
- Memantine

MEDICATION GROUP		COMMONLY USED MEDICATIONS WITHIN THE GROUP	EFFECTS ON FALLS RISK
Sedatives: Benzodiazepines		Temazepam, Nitrazepam Diazepam, Lortemazepam Chlordiazepoxide, Flurazepam, Lorazepam, Oxazepam, Clonazepam	Drowsiness, slow reactions, impaired balance. Caution in patients who have been taking them long term.
Sedatives: "Zs"		Zopiclone, Zolpidem	Drowsiness, slow reactions, impaired balance.
Sedating antidepressants (tricyclics and related drugs)		Amitriptyline, Dosulepin Imipramine, Doxepin Clomipramine, Lofepramine, Nortriptyline, Trimipramine Mirtazapine, Mianserin Trazodone	All have some alpha blocking activity and can cause orthostatic hypotension. All are antihistamines and cause drowsiness, impaired balance and slow reaction times. Double the rate of falling.
Opiate analgesics		All opiate and related analgesics – Codeine, Morphine, Tramadol	Sedate, slow reactions, impair balance, cause delirium.

Medicines and Falls in Hospital: Guidance Sheet RCP 2011

Anticholinergic burden impact on patient outcomes

Exposure to anticholinergic and sedative burden[b] is associated with a

60% ↑

increase in fall-related hospitalisations

Use of medicines with anticholinergic effects for ≥ 3 months has a

50% ↑

increased risk of dementia compared to non-use

Exposure to anticholinergic and sedative burden[b] is associated with a

30% ↑

increase in mortality for older people

[b] Based on the Drug Burden Index (DBI), which measures cumulative exposure to medicines with anticholinergic and sedative effects

Anticholinergic Burden Scale
Calculator available via Medichec

Limited data so unable to score		Drugs with AEC score of 0		Drugs with AEC score of 1	Drugs with AEC score of 2	Drugs with AEC score of 3
Alendronic Acid	Ramipril	Alprazolam	Lovastatin	Amiodarone	Amantadine	Alimemazine (trimeprazine)
Allopurinol	Rivaroxaban	Amlodipine	Lurasidone	Aripiprazole	Chlorphenamine	Amitriptyline
Anastrozole	Rosuvastatin	Amoxycillin	Meloxicam	Bromocriptine	Desipramine	Atropine
Apixaban	Spironolactone	Aspirin	Metoclopramide	Carbamazepine	Dicycloverine (dicyclomine)	Benztropine
Baclofen	Tamoxifen	Atenolol	Metoprolol	Citalopram	Dimenhydrinate	Chlorpromazine
Bisoprolol	Topiramate	Atorvastatin	Moclobemide	Diazepam	Diphenhydramine	Clemastine
Bumetanide	Tizanidine	Buproprion	Morphine	Domperidone	Disopyramide	Clomipramine
Captopril	Verapamil	Cepahlexin	Naproxen	Fentanyl	Levomepromazine (methotrimeprazine)	Clozapine
Carbimazole	Zopiclone	Cetirizine	Omeprazole	Fluoxetine	Olanzapine	Cyproheptadine
Carvedilol	Zotepine*	Chlordiazepoxide	Paracetamol	Fluphenazine	Paroxetine	Dothiepin
Chlortalidone		Cimetidine	Pantoprazole	Hydroxyzine	Pethidine	Doxepin
Clarithromycin		Ciprofloxacin	Pravastatin	Iloperidone	Pimozide	Hyoscine hydrobromide
Clonazepam		Clopidogrel	Propranolol	Lithium	Prochlorperazine	Imipramine
Codeine		Darifenacin	Rabeprazole	Mirtazapine	Promazine	Lofepramine
Colchicine		Diclofenac	Ranitidine	Perphenazine	Propantheline	Nortriptyline
Dabigatran		Diltiazem	Risperidone	Prednisolone	Quetiapine	Orphenadrine
Dexamethasone		Enalapril	Rosiglitazone	Quinidine	Tolterodine	Oxybutynin
Dextropropoxyphene		Entacapone	Simvastatin	Sertindole	Trifluoperazine	Procyclidine
Digoxin		Fexofenadine	Theophylline	Sertraline		Promethazine
Erythromycin		Fluvoxamine	Thyroxine	Solifenacin		Trihexyphenidryl (benzhexol)
Flavoxate*		Furosemide	Tramadol	Temazepam		Trimipramine
Hydrocodone		Gabapentin	Trazodone			
Irbesartan		Gliclazide	Trimethoprim			
Lansoprazole		Haloperidol	Trospium			
Levetiracetam		Ibuprofen	Venlafaxine			
Metformin		Ketorolac	Valproate			
Methocarbamol		Lamotrigine	Warfarin			
Methotrexate		Levadopa	Ziprasidone			
Nitrofurantoin		Lisinopril	Zolpidem			
Oxcarbazepine		Loperamide				
Oxycodone		Loratadine				
Phenytoin		Lorazepam				
Pregabalin		Losartan				

Which medicines cause falls? Hypotension

Diuretics
Beta-blockers
ACEI/ Angiotensin II antagonists
Alpha-blockers
Calcium channel blockers
Vasodilators e.g. nitrates
Centrally-acting e.g. moxonidine
Tricyclic antidepressants
SSRIs e.g. citalopram
SNRIs e.g. venlafaxine
MAOIs
PD medication
Prochlorperazine
Some antipsychotics

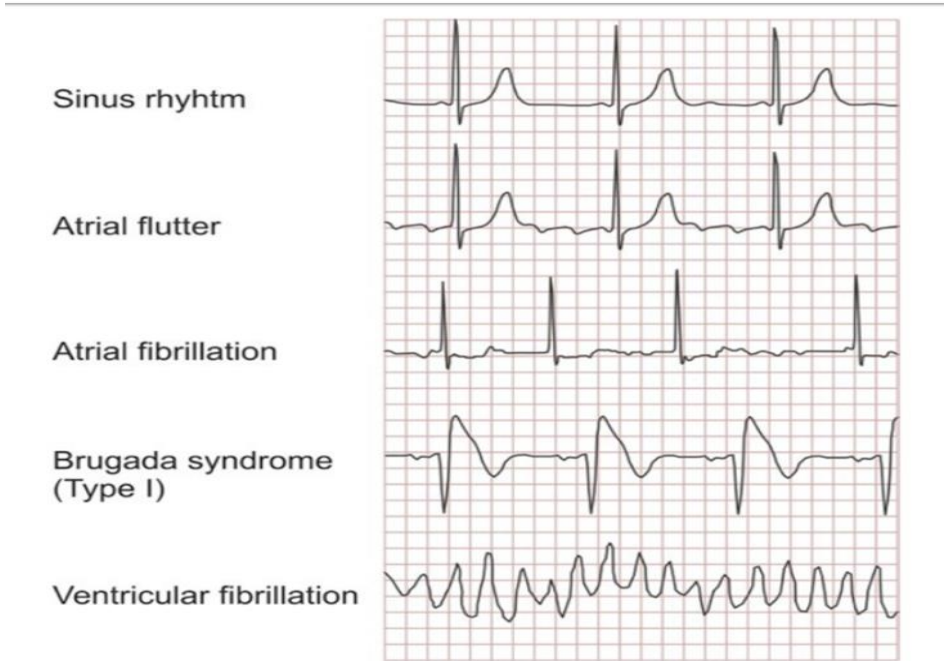
Ensure lying/standing BP is Checked in anyone over 65years of age presenting with a fall

Table 1. Challenges in the therapeutic management of CVD in older people

- Heterogeneity of older people: In relation to health, functioning, resilience to stressors, there is a wide variation between older people of a similar age therefore assessing their cardiovascular risks and benefits from therapy needs an individualised approach.
- Limitations of current research evidence and the application to frailty
- Increased risk of ADEs due to age-related physiological (pharmacokinetic and pharmacodynamic) changes that alter drug handling
- Presence of frailty syndromes that increase vulnerability to ADEs
- Various health, functional and psychosocial circumstances that impact on the patient's willingness and capability to take/use medicines as prescribed
- Limited life expectancy in frailty alters the risk: benefit ratio for patient outcomes.
- Shift in care goals from preventative to mainly palliative in later years. Outcomes set in clinical trials for younger people often differ from the outcomes important to older people.

Which medicines cause falls? Bradycardia/ Arrhythmias / Other mechanisms

- Bradycardia/arrythmia
  - Beta-blockers
  - Digoxin- also causes dizziness
  - Amiodarone
  - Flecainide
  - Anticholinesterase inhibitors e.g. donepezil
  - Tricyclic Antidepressants
- Other mechanisms
  - Hypoglycaemia e.g. insulin, sulphonylureas
  - Drug-induced parkinsonism e.g. antipsychotics
  - Neuropathy e.g. isoniazid
  - Blurred vision e.g. anticholinergics (oxybutynin), TCAs, gabapentin, pregabalin, eye preps
  - Cognitive impairment/ confusion e.g. anticholinergics



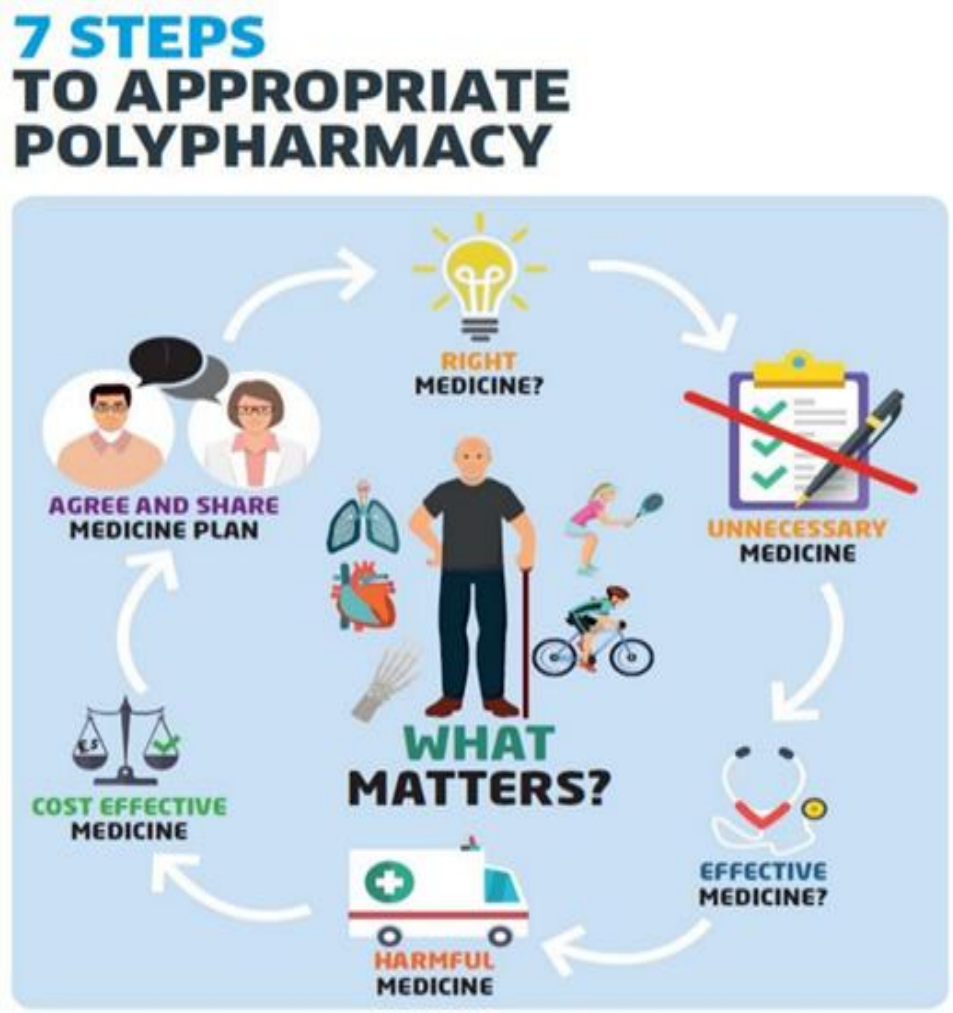
When is a fall due to medicines?

- Often falls multifactorial: medicines could be contributing

- History- when? Precipitating factors? Did the fall coincide with a new medicine or change to existing medicines?

- High level of suspicion for high-risk medicines (FRIDs) especially if newly initiated

- Look out for sedation, balance issues, hypotension, bradycardia
  - If present, could these be medicines-related?
    - Can you **stop**? Is medicine necessary?
    - Can you **switch**? Safer alternative?
    - Can you **reduce** the dose?

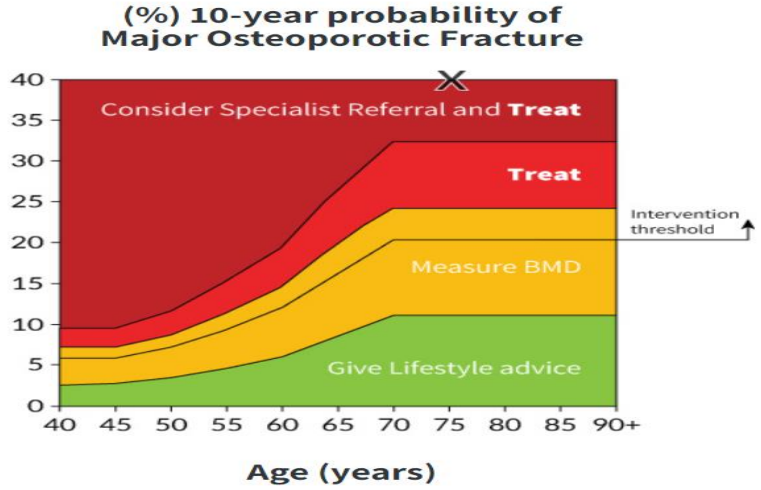


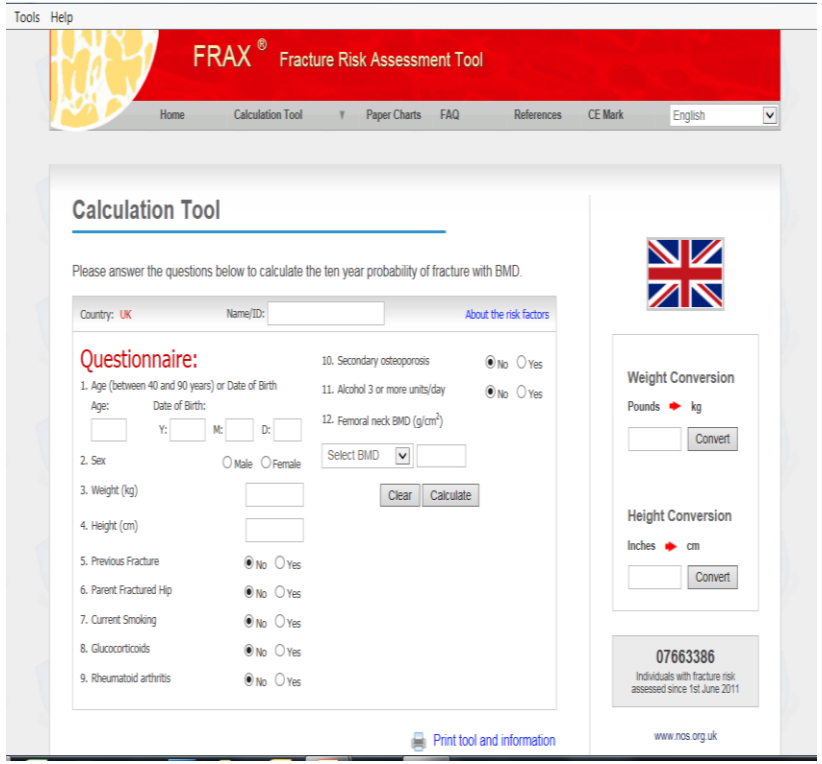
Which of the following risk factors is not accounted for by FRAX Risk Calculator?

[Falls and Medicines | Present mode (sli.do)]

Medicines associated with Fractures

Antipsychotics e.g. haloperidol
Antiepileptics e.g. carbamazepine, phenytoin, phenobarbitone, primidone, sodium valproate
Aromatase inhibitors e.g. anastrozole
Gonadotrophin-releasing hormone analogues e.g. goserelin, leuprorelin
Immunosuppressants e.g. ciclosporin, tacrolimus
Levothyroxine (excessive dose)
Loop diuretics e.g. furosemide
Medroxyprogesterone
Proton Pump Inhibitors e.g. omeprazole, lansoprazole
SSRIs e.g. fluoxetine, citalopram
Steroids
Thiazolidinediones e.g. pioglitazone





https://www.sheffield.ac.uk/FRAX/tool.aspx?country=1

Case Example – Medicines and Falls

- Mr F has been admitted with fall and confusion. He normally takes oxybutynin for his bladder, tamsulosin for BPH, amitriptyline for his back pain, amlodipine for HT and piriton for hay fever.
- His baseline CFS is 6 and he is 85
- What is your plan?
- Review significant anticholinergic load
- Check for postural drop
- Screen for causes of confusion

STOPPFall medication classes:[8]

- Benzodiazepines and benzodiazepine-related drugs
- Antipsychotics
- Opioids
- Antidepressants
- Antiepileptics
- Diuretics
- Alpha blockers used as antihypertensives or for prostate hyperplasia
- Centrally acting antihypertensives
- Sedative antihistamines
- Vasodilators in cardiac disease
- Overactive bladder and incontinence medications

STOPPFall (Screening Tool of Older Persons Prescriptions in older adults with high fall risk): a Delphi study by the EuGMS Task and Finish Group on Fall-Risk-Increasing Drugs | Age and Ageing | Oxford Academic

Take home messages

- Individualised approach is required when reviewing medication in patients who are at risk of falls
- Before prescribing any FRID, enquire about falls and consider risks/benefits of therapy
- Where FRIDs are identified
  - consider if indication is still present and valid
  - consider if safer alternatives are available
  - ensure shared decision making is practiced

Appendix 1: Falls Risk Increasing Drugs List – Extended information

Adopted from Derbyshire Area Joint Prescribing Committee Document

Name of medication	Drug class	Effect on Falls risk	Considerations and Anticholinergic score (AEC)
ALFUZOSIN	Alpha blockers	Severe orthostatic hypotension, sedation	AEC score 0. Review indication if OH present. Stopping it may precipitate urinary retention in men.
ALIMEMAZINE	Antihistamines – phenothiazine derivative	Central sedative effect	AEC score 3 – consider review or switch to safer alternative. Rate of excretion decreases in old age.
AMIODARONE	Anti-arrhythmic	Bradycardia, other arrythmias	AEC score 1
AMISULPIRIDE	Antipsychotic	Sedation, slow reaction times, impaired balance, orthostatic hypotension	AEC score not available
AMITRIPTYLINE	Tricyclic antidepressant	Sedation (antihistamine effect), slow reaction times, impaired balance, orthostatic hypotension (alpha blocking activity), dizziness, blurred vision	AEC score 3 – consider review or switch to safer alternative. You may wish to consider gradual withdrawal if prolonged exposure – see www.medstopper.com for suggested regimen
AMLODIPINE	Calcium channel blocker	Hypotension and paroxysmal hypotension	AEC score 0
ARIPRIPAZOLE	Antipsychotic	Sedation, slow reaction times, impaired balance, orthostatic hypotension	AEC score 1
ATENOLOL	Beta blocker	Bradycardia, hypotension, carotid sinus hypersensitivity, orthostatic hypotension and vasovagal syndrome	AEC score 0. May accumulate in older patients due to renal excretion
BACLOFEN	Muscle relaxant	Sedation, reduced muscle tone	AEC score not available. Drug used in conditions which predispose to falls

Medicines and falls 8 23.pdf (rpharms.com)

Move More: Integrating Physical Activity in Long Term Care Pathways

Dr. Kristen Hollands

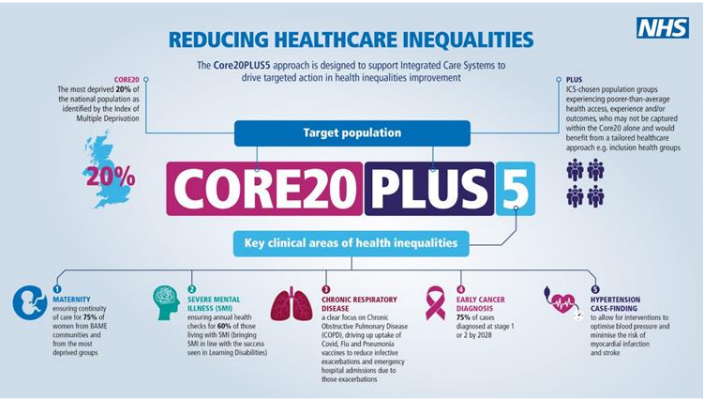
University of Salford & Keele

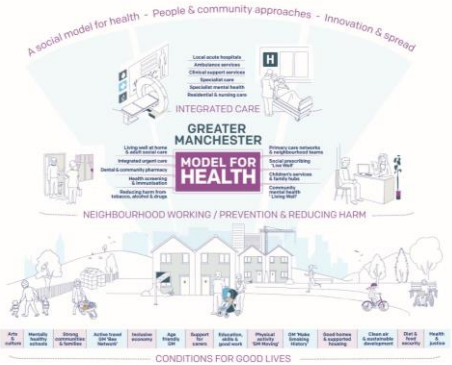
M.A.R.S

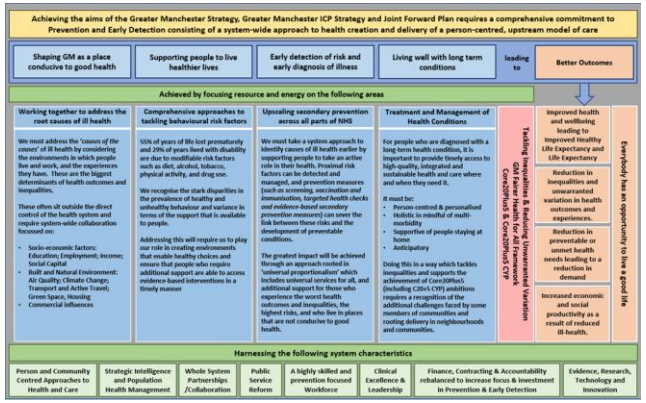
Manchester Amputation Reduction Strategy

The GM context & mission – Getting to the bottom of the matter

- Potential of Physical Activity to help prevent and manage many long term conditions underpins WHO guidelines for activity
- Yet many (of those who could most benefit) are not physically active
  - Building gyms & services and pointing at them is **not** enough
  - Address wider social determinants of health behaviour
- Harness system levers to change determinants of physical activity e.g.
  - Research & evidence
  - Whole system collaboration
  - Place based solutions







(GM ICP joint forward plan 2023-2028)

3 take-away messages

ADDRESS THE REASONS PEOPLE ARE NOT GETTING TO OTHERWISE EFFECTIVE PHYSICAL ACTIVITY INTERVENTIONS/OPPORTUNITIES

ITS ABOUT THE ACCUMULATION OF MARGINAL GAINS –EVERYONE NEEDS TO CHANGE TO CREATE THE POPULATION CHANGE IN PHYSICAL ACTIVITY BEHAVIOUR

LOOK AFTER YOURSELF FIRST – THEN OTHERS – AND ALWAYS BUILD UP FROM WHERE PEOPLE TRULY ARE

Whole systems, place-based, approaches to using physical activity to prevent and manage long term conditions

MARS: Manchester Amputation Reduction Strategy

GM Active – Active Academic Partnership

Bolton NHS Trust – community Neurorehab

Salford Royal Foundation Trust – Vascular Assessment Services

Manchester Foundation Trust – Vascular Assessment Services

The Pivot to Active Wellbeing Programme would like to thank Bury Council for permission to adapt and reproduce this model

GM ACTIVE
WE MOVE AS ONE

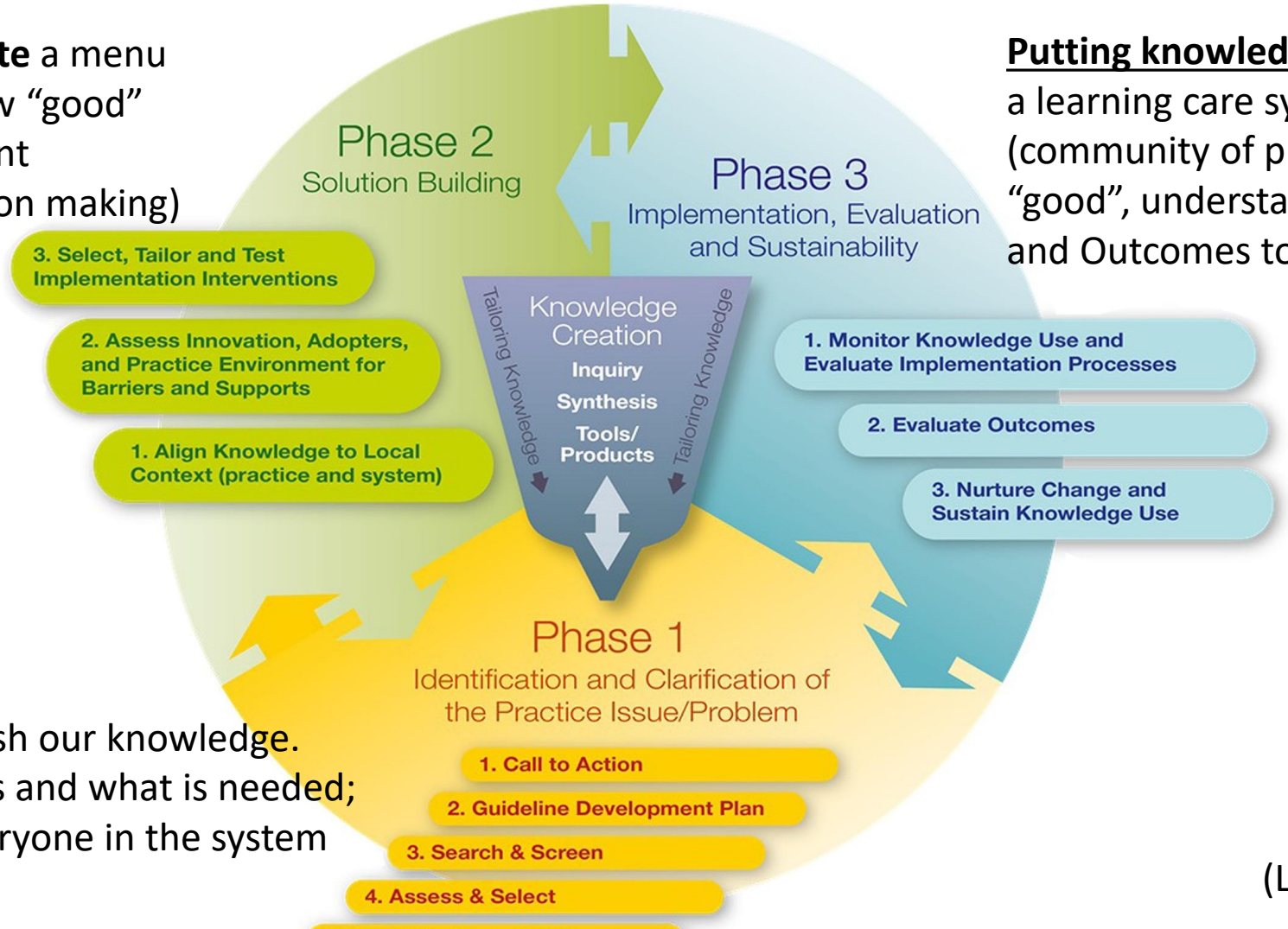
Shared aims & Shared leadership:

To understand what is needed to:

- Integrate physical activity**, within health & care pathways; supporting prevention and self-management** of long term conditions and
- make physical activity and healthy lifestyle support accessible for all communities across GM

Collaboration via Knowledge to Action Process

Support people to create a menu of solutions & think how "good" could happen in different conditions (Local decision making)



<u>Putting knowledge into action</u>– become a learning care system, share examples (community of practice), demonstrate "good", understand Context Mechanisms and Outcomes to spread good

Work together to mesh our knowledge.
Find out what matters and what is needed;
Define "good" for everyone in the system

(Lockwood et al 2016)

12 leisure providers across 10 localities
Greater Sport
Sport England
6 NHS Trusts/ICBs
6 clinical specialism MDTs
2 Universities

3 summits = 102 stakeholders
13X one to one conversations
144 questionnaire responses
Overview of reviews
Consensus roundtable = 19 stakeholders
4 locality based case studies/QI projects

Behaviour Change Wheel COM-B

What helps providers make referral and service users take-up referral?

What support do you need?

What core outcomes would be meaningful to stakeholders?

Do we compare and if so how?

How can we work better together to use Physical Activity to help manage LTCs more/to better effect for people who need it most?

Where PA is embedded in treatment pathway what has worked & failed?

CFIR – Consolidated Framework for Implementation Research

Three things we have learnt already

1

Put your own oxygen mask on first

Support yourself with good relationships across the system

2

Help others with oxygen next

Support others with your knowledge and expertise – link to system level outcomes and **determinants** of PA behaviour

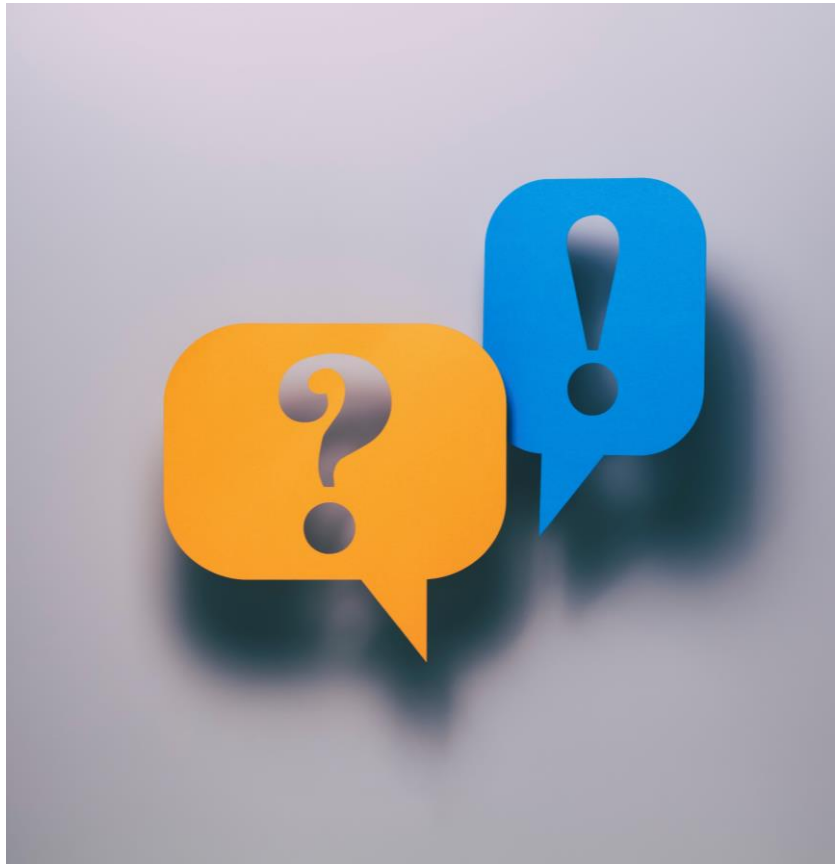
3

Start by meeting people where they are at

Help service users and providers to see movement as **SAFE, ACHIEVABLE, PERSONAL & WORTHWHILE**

The case of diabetes and falls

- Last year just over 1000 referrals were made to community provided physical activity and healthy lifestyle support services for people with diabetes
- **ONE** of those referrals came from diabetic specialist health care services
- 51 came from falls service
  - Only 5 (10%) of those took up referral
- 327 came from primary care
  - 55 (17%) took-up referral
- 414 came from SELF referral
  - 103 (25%) took-up referral



The case of PAD and uptake of physical activity referral

- Balance impairment is 3X more likely for people with confirmed PAD (Suominem et al 2008)
- PAD = increased risk of hip # (Bokrantz et al 2022)
- **NICE guideline CG147 for PAD recommendation 1.5.2: Supervised Exercise Program**
- 2 hours of supervised exercise a week for a 3-month period
- encouraging people to exercise to the point of maximal pain.

Current SEP Provision in the UK: Caldow et al 2022

- National survey of 93 vascular services
  - 48 responded (52%)
- 48% now had access to SEP
  - 77% PAD only
  - 21% integrated
- Increasing provision in the UK?
- In real terms, this is 23 programmes
- Same barriers:
  - Lack of facilities
  - Lack of qualified staff

Build it and they probably won't come!

	IC Control Group (current study)	IC Treatment Group (current study)	Harwood et al. (2016) Systematic Review of SEP for IC	Muller-Buhl et al. (2012) Community Walking Programme	Hubbard et al. (2016) CRIB
	% (eligible/total referred)	% (eligible/total referred)	% (eligible/total referred)	% (eligible/total referred)	% (eligible/total referred)
Eligibility Rate	84.6 (55/65)	89 (127/143)	Data unavailable	36 (166/462)	67 (133/198)
Consent Rate	39.5 (19/55)	28 (36/127)	24 (1820/7517)	66 (110/166)	31 (41/133)
Retention Rate	78.9 (19/19)	72 (26/36)	75 (3015/4012)	32.7 (36/110)	93 (38/41)

What questions arise from this data: What would happen if……

- Referral to physical activity and healthy lifestyle support happened earlier in ANY diagnosis (rather than waiting for a fall or other clinical change as a catalyst)?
- Many more people were supported to SELF refer to physical activity?

➢If we want to support people to change their physical activity behaviours **WE have to first change** how we support them!

How can we begin to apply the 3 things we have already learnt?

1

Put your own oxygen mask on first

Do **you** know how/where to refer to Physical Activity?

What relationships do **you** need to do your part in holistic referral?

2

Help others with oxygen next

What help do

1) Colleagues (across the system)

2) Service users

need **from you?**

3

Start by meeting people where they are at

Help service users **and** providers to see movement as

SAFE, ACHIEVABLE, PERSONAL & WORTHWHILE

The case of Neurorehab & falls

People with motor recovery goals following stroke should receive at least 3 hours a day of therapy (therapist-delivered) and should be supported to remain active for up to 6 hours a day. **[see 4.2 A]**.

Stroke services should consider building links with recreational fitness facilities such as gyms or leisure centres, or providing equipment in outpatient departments, to enable people with stroke to access treadmills and other relevant fitness equipment. **[see 4.22 I]**

People with stroke should be offered cardiorespiratory training or mixed training once they are medically stable, regardless of age, time since stroke and severity of impairment. **[see 4.17 E]**

- Rehab provision did not meet guidelines when this was 45min/day (Gittins et al 2020)
- 43% regain independent mobility (Jorgensen et al 2010)
- Falls reported 16-73% (avg 39%) (Batchelor et al, 2012)

Bolton NHS community neuro-rehab

- Catalyst/SQuIRE funded project to design and evaluate integration of HIPs (health improvement practioner) into the stroke rehab MDT
- Possible benefits
  - Secondary prevention
  - Enhanced service provision with little-no resource
  - Better supported service providers = better supported service users

What support do YOU need to go beyond sign-posting & provide holistic referral?

- Menu of PA options which are:
  - Achievable = build-up to guidelines don't aim to immediately achieve "dose"
  - Safe = evidence based and appropriate skill matched to meeting health & social needs
  - Personal = move in ways people LOVE and according to their health and social needs
- Method of navigating plentiful PA options to deliver personalised, place-based support
  - digital platforms
  - Meshing networks across the MDT
  - Regular & timely access to credible source
  - Person centred point of contact/pathway navigator
- Improved skills, knowledge, time and confidence to explore service user barriers to take-up PA referral
- Education/ Advice: diagnosis, implications, interventions (rationale & options), lifestyle, self management
- Accessibility: cost, transport

➢ **Relationships between community providers and health and social care**

Removing Barriers Associated with Risk: Consensus Statement

1. The benefits outweigh the risks

Physical activity is safe, even for people living with symptoms from multiple medical conditions.

2. The risk of adverse events is very low but that's not how people feel

Well informed conversations with healthcare professionals can reassure people who are fearful of their condition worsening, and further ensure this risk.

3. It's not as easy as just telling someone to move more

Be aware of the concerns of individuals and their carers to help build confidence

4. Everyone has their own starting point, begin there and build up gradually

5. Stop and seek medical review if...

You notice a dramatic increase in breathlessness, new or worsening chest pain and/or increasing GTN requirement, a sudden onset of rapid palpitations or irregular heartbeat, dizziness, a reduction in exercise capacity or sudden change in vision.

MSK Pain

- A temporary increase in pain is normal and does not represent tissue damage
- It will always settle back to baseline

Fatigue

- A temporary increase in fatigue is normal
- Physical activity is good for fatigue, sleep and wellbeing

Shortness of breath

- Physical activity will make people feel more breathless
- Breathlessness can be frightening
- Advise people to start low & slow level and build gradually

Cardiac chest pain

- The long term benefits far outweigh the symptoms, slight increased risk of adverse events in those with ischaemic heart disease

Falls & frailty

- Post myocardial infarction people have much to gain from building strength and balance
- Even small improvements reduce the risk of falling and improve confidence
- Activities should be tailored to the individual's functional and cognitive capacity

Dysglycemia

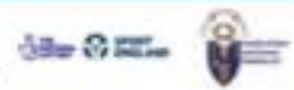
- There is a risk of short-term dysglycaemia
- Hypoglycaemia is the most common adverse event in diabetes treated with insulin or insulin secretagogues, and can occur if not managed appropriately
- The overall risk of severe hypoglycaemia is not increased
- High intensity physical activity can make blood glucose levels rise, so people with diabetes will need strategies to deal with this

Palpitations

- Increased awareness of your heartbeat during physical activity can be frightening
- Physical activity is contraindicated in people with symptomatic, uncontrolled cardiac arrhythmias, or newly identified and inappropriate medical management is needed.
- People with controlled cardiac arrhythmias benefit from regular physical activity

Cognitive impairment

- Strategies to maintain independent engagement and safety are important and people will often benefit from support from others
- Consider functional level, range of activities, communication ability, preferred environment, risk of falling and other medical conditions



3 take-away messages

ADDRESS THE REASONS PEOPLE ARE NOT GETTING TO OTHERWISE EFFECTIVE PHYSICAL ACTIVITY INTERVENTIONS/OPPORTUNITIES

ITS ABOUT THE ACCUMULATION OF MARGINAL GAINS –EVERYONE NEEDS TO CHANGE TO CREATE THE POPULATION CHANGE IN PHYSICAL ACTIVITY BEHAVIOUR

LOOK AFTER YOURSELF FIRST – THEN OTHERS – AND ALWAYS BUILD UP FROM WHERE PEOPLE TRULY ARE

Thank you for attending the session ☺

The recording and slides from today will be available soon.

For any questions and feedback, please do email me on:
Bethany.mitchell@greatermanchester-ca.gov.uk

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