

# Falls and Fracture Prevention in Nursing and Residential Homes

## Guide to Assessment and Intervention (use in conjunction with “Fall and Fracture Risk” Assessment)

| <b>PROBLEM</b><br>(as per risk assessment) | <b>SUGGESTIONS FOR INTERVENTION</b>  | <b>REFERRAL OPTIONS</b>   |
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| <b>1. History of Falling</b>               | Older people with history of falls are at an increased risk of falling again. Review incident and establish cause of the fall if possible. Discuss how to prevent future falls. Discuss fear of falling and realistic preventative measures such as calling for assistance. Appropriate walking aids will aid confidence.  | Physiotherapist/<br>GP/ Falls Clinic at Maidenhead, Bracknell or Slough/ Falls Co-ordinator |
| <b>2. Agitation &amp; Confusion</b>        | Carry out Mental Test Score and Barthel score. Does the resident have an acute infection or illness? Is there a problem with constipation? Observe and monitor levels of agitation and/or confusion and explore strategies that will enhance resident's involvement in daily routines. Be aware that increased levels of confusion with enhanced agitation episodes can result in challenging behaviour. Provide a calm environment (do not raise voice to resident). Consider high level staff supervision. Do not restrict resident's movement with bed rails or tables etc.(consider Care Home Policy on restraint) Create a safe environment, ie bed always at lowest level. Consider nursing patient on a mattress on the floor. Consider distraction techniques such as soothing music. Reconsider the need of medication that will increase dependency and lower functional skills (if resident is using this). Review resident's daily routines and monitor mental test score with Barthel scores to ensure that functional skills reflect mental agility. | GP/ family<br>Refer to Care Home Policy on restraint  |
| <b>3. Vision</b>                           | Raise awareness of risks due to blurring and difficulty in judging distance.<br>Advise disuse of bifocals/ varifocals as research shows that these increase falls risk. Separate glasses for reading and distance are safer. If resident does not wish to do this, advise to be very careful, especially when first wearing them.<br>Advise to concentrate on walking and be deliberate/ cautious, especially in new situations and on uneven surfaces. Advise on use of contrasting colours to show risk areas e.g. top of stairs. Ensure spectacles are cleaned regularly.<br>Vision tested and corrected in the past year?<br>Check Diabetes and Glaucoma are monitored regularly<br>Does patient have cataracts?   | Optician/ GP (for referral to eye clinic)/ Falls Co-ordinator                               |

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|  | Ensure good lighting and remove clutter. Ensure personal effects are within the reach of the resident.<br>Ensure buzzer is within reach and in good working order.   |   |
| <b>4. Toileting</b>                                | Does the resident have a urinary tract infection? Research shows that people with bladder infection, urinary incontinence/ frequency or need for assisted toileting have an increased risk of falling. Adhere to regular toileting routine. Exclude constipation.  | GP/ District Nurse  |
| <b>5 &amp; 7 Transfers</b>                         | Teach about risk, assist when necessary<br>Refer for more detailed assessment on transfers and gait, balance and strength exercises / environmental modifications to increase safety, when appropriate.<br>Use appropriate moving & handling equipment.  | Physiotherapist / Falls Clinic/ falls co-ordinator/ OT/ falls prevention exercise |
| <b>6 &amp; 7. Mobility</b>                         | Teach about the risk, and how to manoeuvre safely. Assist where necessary. Remove hazards. Lighting bright enough? Footwear safe? Refer for assessment for gait, balance and strength exercises and/or walking equipment. Promote specific falls prevention exercise by trained individual, when available. It has been shown that older people with gait instability and lower limb weakness are an increased risk of falling.  | Physiotherapist /Falls Clinic/ falls co-ordinator/ OT/ falls prevention exercise  |
| <b>8 &amp; 9 History of low trauma fracture(s)</b> | Those people who have had past low trauma fractures resulting from a simple fall, bump or knock are at increased risk of fracturing again. Those people whose mother suffered a hip fracture after age 50 are also at higher risk. See literature form National Osteoporosis Society on Calcium and Vitamin D and <i>Medical Management Flowchart on "Osteoporosis in Care Homes"</i> .  | GP for consideration of osteoporosis medication/ Falls Clinic                     |
| <b>10. Smoking</b>                                 | Smoking has a toxic effect on bone tissue and smokers are therefore at increased risk of osteoporosis.   | It is never too late to give up!<br>GP  |
| <b>11. Low body weight</b>                         | A weight below 57 kg (=8 stone 9 lbs) is significantly associated with increased hip fracture risk. Increase calorie intake by offering a well balanced diet with ie full fat milk/ cheese. Offer favourite foods and/ or food supplements when necessary.   | GP/ dietician   |
| <b>12&amp; 13. Poor calcium intake</b>             | Adults need at least 700mg Calcium/ day and 1200mg/ day when osteoporotic. The maximum intake is 2000-2500mg/ day. Many people in Care Homes do not get the required amount, usually due to poor health, poor absorption and/ or poor appetite. These residents should be considered for a Calcium supplement such as Calcichew- D3. See guidance from National Osteoporosis Society for good sources of calcium and also ' <i>Osteoporosis in Care Homes' Medical Management Flowchart</i> .<br>Those residents on bone building drugs such as Alendronate and Risedronate should also be considered for Calcium supplementation unless their intake is good. | GP/ Dietician/ falls co-ordinator   |

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| <b>14. Low vitamin D</b>                       | <p>Like Calcium, Vitamin D is essential for health bones. Only about 10% of daily Vitamin D comes from food, the remainder from action of sunlight on skin. Normally about 20-30 minutes/ day on bare arm, face and legs during the summer months provides enough Vitamin D the whole year round. However, unlike young people, older people are less efficient in storing Vitamin D for the winter months and many need supplementation. This applies especially to Care Home residents many of whom rarely get outside. See guidance by national osteoporosis Society on Vitamin D as well as <i>'Osteoporosis in Care Homes' Medical Management Flowchart.</i></p> | GP/ Falls Co-ordinator            |
| <b>15. Medications</b>                         | <p>Ask about symptoms of dizziness. Identify type of medication being described and if appropriate ask GP to review medication. A total of four different medications/ day is associated with increased falls risk. See <i>'Medication &amp; The Risk of Falls in the Older Person'</i> advice sheet. Current or past use of corticosteroids (ie Prednisolone) for longer than 3 months is associated with increased risk of fracture.</p>  | GP                                |
| <b>15. Central Nervous System Suppressants</b> | <p>Identify type of medication being prescribed, i.e. hypnotics, anti-depressants, anti-psychotics. These drugs especially are associated with increased risk of falling. Discuss normal changes in sleep patterns with ageing and teach sleep promoting behaviours such as a hot drink at bed time. See <i>'Medication &amp; The Risk of Falls in the Older Person'</i> advice sheet.</p>  | GP<br>See medication advice sheet |
| <b>16 A &amp; B. Postural Hypotension</b>      | <p>Teach to sit quietly for a couple of minutes for blood pressure to recover, before getting up. Tensing and relaxing arms and legs also helps. Extra pillows to raise head or consider raising bed if severe. Avoid dehydration. Refer to GP practice for medication review if appropriate. Refer to GP when patient has fall due to loss of consciousness as these residents must be seen in the Syncope Clinic.</p>   | GP/ Falls Clinic/ Syncope Clinic  |
| <b>17. Alcohol Intake</b>                      | <p>Teach regarding immediate and long-term fall risk, dulling of neurological capacity from alcohol. More than one small glass of wine/ small sherry/ small amount of spirits/ _ pint lager/ beer per day, increases falls risk. Longer clearance times in old age and potential interaction with medication. Too much alcohol is also damaging to the skeleton but the odd glass of red wine actually helps bone tissue!</p>   | GP/ Family and other visitors     |
| <b>18. Hearing</b>                             | <p>Has the hearing been corrected to the extent possible? Does the resident have wax in ears? Does the resident have a hearing aid? Is it in working order? Lower voice and speak in best ear.</p>  | District Nurse/ GP/ Audiology     |

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| <p><b>19. Feet and Footwear</b></p>     | <p>Promote healthy feet by daily care and inspection. Footwear should fully support the foot with laces or (Velcro) adjustable straps. Soles must be non-slip, undamaged and not too thick. No high heels! See leaflet from Natureform for some good examples of comfortable, safe footwear.</p>   | <p>District Nurse/<br/>Podiatrist/<br/>chiropracist</p> |
| <p><b>20. Environmental Hazards</b></p> | <p>Teach about risks of hazards i.e. irregular floor height. Correct if possible.<br/>Remove rugs if at all possible but failing that, secure them (double sided Velcro, adhesive or non-slip mat underneath).<br/>Follow Care Home bed-rail Policy<br/>Remove obstacles and clutter where possible. At all times ensure buzzer is within reach and keep walking aid and other personal effects close to the resident. Avoid trailing bedspreads and cables. Ensure good lighting.</p> | <p>Care Home<br/>Maintenance<br/>Team</p>               |
| <p><b>21. Fear of falling</b></p>       | <p>Can be an independent risk factor for more falls. Discuss fears and how to reduce falls risk. Suggest calling for assistance, appropriate walking aids can increase confidence.</p>   | <p>Falls Co-ordinator/<br/>Falls Clinic</p>             |

**PLEASE NOTE:**

- If a resident has multiple risk factors which may benefit from a multi-disciplinary assessment, referral should be considered to the Falls Clinic, not to separate agencies.
- For information on hip protectors or any other matter regarding falls and fracture prevention please contact the Falls Co-ordinator for advice at King Edward VII Hospital on 01753-636500
- For medication advice sheet, dietary information, falls clinic referral forms etc see East Berkshire Falls Website [www.bhps.org.uk/falls](http://www.bhps.org.uk/falls).

## Stratify scoring (Falls Risk):

5. Choose **one** of the following options which best describes the resident's level of capability when transferring from bed to chair?

Unable = 0  
Major help needed= 1  
Minor help needed =2  
Independent= 3

6. How would you describe the resident's level of mobility?

wheelchair=1

Immobile=0  
Independent with aid of  
Walks with aid of one person = 2  
Walks with walking aid= 2  
Independent = 3

### Total the transfer and mobility score and answer the next question

6a. is the combined transfer and mobility score 3 or 4?

Yes= 1      No=0

1. Has the resident had a fall in the last **3 months**?

Yes =1      No = 0

2. Is the resident agitated?

Yes= 1      No= 0

3. Is the resident visually impaired to the extent that everyday function is affected?

Yes= 1      No=0

4. Is the resident in need of especially frequent toileting?

Yes= 1      No=0

falling

**A Stratify score of 2 or above indicates a high risk of**

Developed from Oliver et al (Development and evaluation of evidence-based risk assessment tool (STRATIFY) to predict which elderly patients will fall. BMJ 315: 1049-53, 1997)

## Black scoring (Fracture Risk):

### Adapted “Black Fracture Index”

(to be used for women and men as a more suitable tool for men is as yet not available)

|              |   | Point Value                |
|--------------|---|----------------------------|
| 1            | <b>Resident’s current age?</b><br>Less than 65<br>65-69<br>70-74<br>75-79<br>80-84<br>85 or older                       | 0<br>1<br>2<br>3<br>4<br>5 |
| 2            | <b>Did the resident break any bones after age 50?</b><br>Yes<br>No/ don’t know  | 1<br>0                     |
| 3            | <b>Did his/ her mother have a hip fracture after age 50?</b><br>Yes<br>No/ don’t know                                   | 1<br>0                     |
| 4            | <b>Does he/ she weigh 125 pounds or less (9 stone)?</b><br>Yes<br>No  | 1<br>0                     |
| 5            | <b>Is she/ he currently a smoker?</b><br>Yes<br>No  | 1<br>0                     |
| 6            | <b>Does the resident usually need to use both arms to assist him/ herself in standing up from a chair?</b><br>Yes<br>No | 2 (two)<br>0               |
| <b>Total</b> |   |                            |

**Score:**

**Low Risk of fracture = 0- 3**

**Medium Risk of fracture = 4- 6**

**High Risk of fracture = 7 and above**

(from “An Assessment Tool for Predicting Fracture Risk in Postmenopausal Women by Black DM, Steinbuch M, Palermo I, Dargent-Molina P, Lindsay R, Hoseney MS and Johnell O. *Osteoporosis International* 2001 12:519-528)