

GUIDELINES FOR THE PREVENTION AND MANAGEMENT OF FALLS IN THE ELDERLY

RESIDENTIAL CARE



THE ROYAL BOURNEMOUTH
AND CHRISTCHURCH HOSPITALS
NHS TRUST



INTRODUCTION TO THE GUIDELINES

The issues around elderly people falling and their subsequent injuries have become more and more a focus of public and political attention. From being a Cinderella subject of a Cinderella specialty it is now gaining momentum and the interest of Purchasing Authorities.

It is from this background that I was approached by the Dorset Health Authority to produce an audit of elderly people falling within Dorset. A look at the available literature showed that there were few standards to audit against, and the task in hand soon became the much more challenging one of producing Guidelines for the whole County that would subsequently be audited.

Falls are most often multifactorial in their origin and the only way to deal with them satisfactorily is in a multidisciplinary, multiagency approach. With this in mind, a Steering Group was convened and the skeleton of the Guidelines produced.

These were to be simple, attractive, relative and as effective as current literature allowed.

The enormity of the task was emphasised by the Group's wish for some form of guideline to be accessible to all involved in the care of elderly people throughout Dorset. Thus, the sub-groups of Residential Care, Primary Care, Accident and Emergency and Secondary Care performed in a simmering multidisciplinary, multiagency way as the steering group.

Patients' views were sought via the Community Health Council and, as with all clinical decisions, falls interventions and treatments should be with the full consent of the patient.

The distillate of the Group's workings was presented at a workshop in the autumn of 1999 to trial run the Guidelines with those who will be using them. The success on the day and the reception of the Guidelines reflected the hard work put into each group especially by their respective chairmen.

A full implementation programme has been developed to ensure that the Guidelines are in place in all areas in an appropriate and timely manner.

The Guidelines are summarised as an algorithm and presented with supporting information including recommended assessment tools. Decisions (diamonds and blue) and processes (rectangle and yellow) guide the user appropriately through the falls preventative measures, assessments and treatment. Please see key on page 1.

These are the finished products..... for now. Guidelines must be regularly reviewed and improved through audit and the comments of those using them. We hope to produce these updates as and when indicated and needed. These will, I hope, not be the final version. The work continues.

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WORKING GROUP MEMBERSHIP

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ACKNOWLEDGEMENTS

These Dorset-wide Falls Guidelines were developed by the Residential Care Working Group. The Group was composed of representatives from primary and secondary health care, residential care homes and Social Services. All members of the working group gave their expertise and time enthusiastically and generously, without which these guidelines would not be available today.

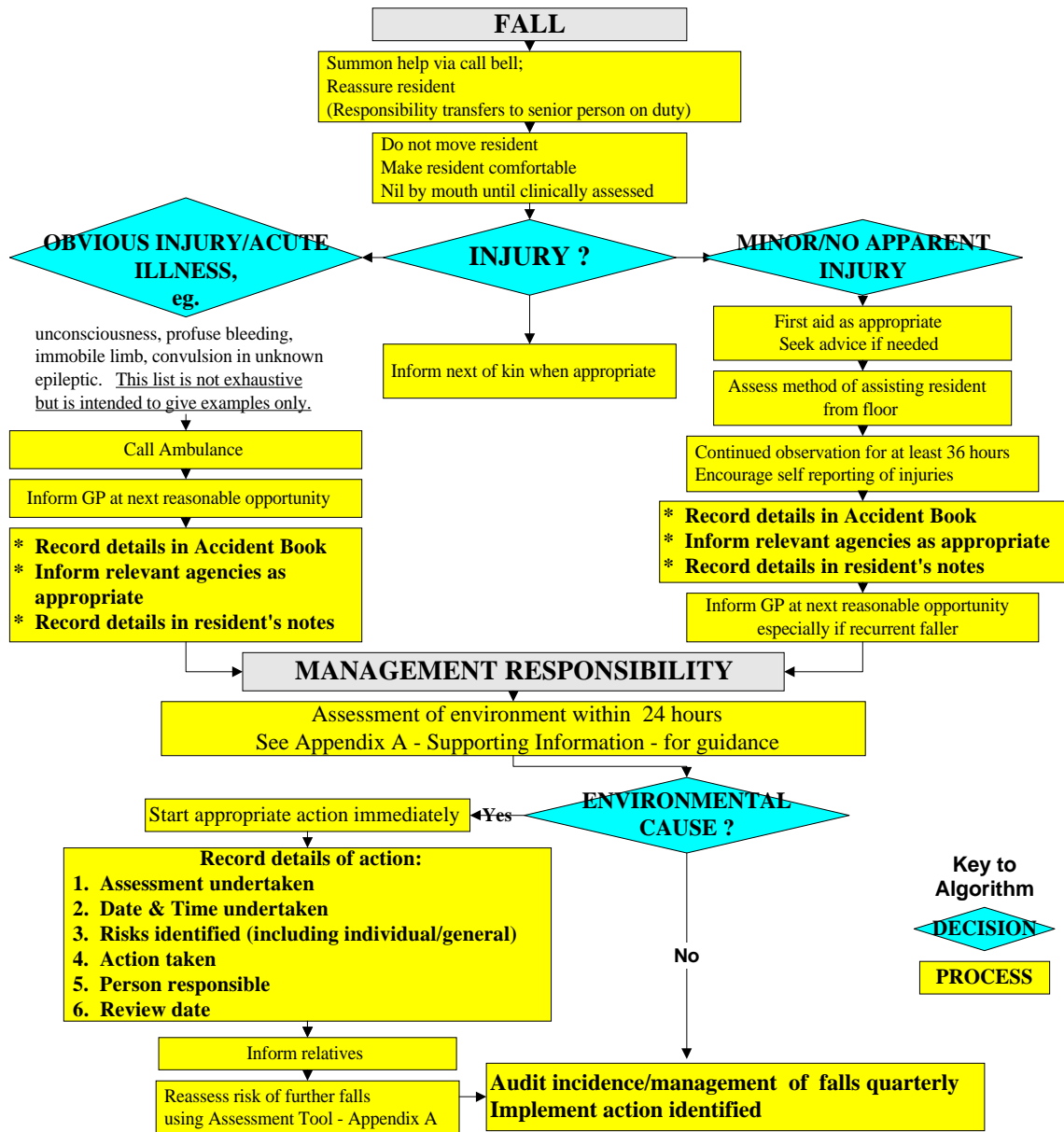
The Group would like to thank the following:

- All the professionals who reviewed the draft Guidelines and submitted valuable information and comment;
- Dr Peter Overstall, Dr Jed Rowe, Consultant Physicians in Elderly Medicine and Dr John Stevens, Consultant Obstetrician and Gynaecologist and Clinical Effectiveness Lead for Poole Hospital NHS Trust for their valuable Peer Review of the Guidelines;
- Osteoporosis Dorset, Straken Limited and Robinson Healthcare Ltd for their support in the development of the Guidelines.

**GUIDELINES FOR THE PREVENTION AND MANAGEMENT OF FALLS IN RESIDENTIAL CARE SETTINGS.
ALL STEPS SHOULD BE DONE WITH THE CONSENT OF THE RESIDENT**

**Individual falls and nutritional risk assessments on admission and at regular intervals (dependent on need), at least 3/12.
See Appendices B & C for example of recommended Assessment Tools**

- MAINTAIN A SAFE ENVIRONMENT**
- * Care setting orientation including the grounds
 - * Access to toilet facilities
 - * Access to call bell
 - * Bed/chair at appropriate height
 - * Suitable furniture/flooring
 - * Clothing/footwear
 - * Lighting
 - * Staff education
 - * Equipment for manual handling
 - * Hazards including in the grounds
 - * Bed/wheelchair brakes
 - * Use only prescribed mobility aids
- NB. See Appendix A - Supporting Information - for guidance**



SUPPORTING INFORMATION FOR THE ALGORITHM

ENVIRONMENT

- Call bell system needs to be in a good state of repair;
- Beds should be left in the appropriate position for the patient;
- Chairs should be appropriate to the patient's needs;
- Floors should be non-glare and non-slippery with spills cleaned and hazards identified;
- Lighting should be sufficient both day and night for patients to orientate themselves;
- Distances should not be too far to toilet facilities;
- Walking aids should be kept within patients' reach;
- Avoid clutter.

SAFETY CARE PRACTICES

- Good patient orientation to the home;
- Call bells within patient reach with instructions on use having been given;
- Anticipate patients' need for help;
- Drinks, books etc. within easy reach of patient;
- Investigate any cause of patient restlessness;
- Warn patients if they may need to go to the toilet more frequently;
- Ensure the patient is wearing safe clothing and footwear;
- Ensure the patient is wearing the correct glasses for distance vision;
- Ensure seating is of the correct type, height etc. and is comfortable;
- Each patient should have a movement and mobility assessment completed with the correct equipment being used, eg, hoist etc;
- Staffing levels should reflect resident dependency.

RISK ASSESSMENT TOOLS

- Copies of recommended falls risk assessment tools can be found as Appendix B.

DIET

- Nutritional risk assessment tool can be found as Appendix C. In addition, residents should be weighed monthly and any change >3kg investigated. It is also important that all residents should have access to nutritionally suitable menus and adequate fluids.

OBSERVATION

- Close observation of patients who have fallen whether injured or apparently uninjured is essential for at least 36 hours following the fall.

STAFF EDUCATION

This should be available for all staff and include:

- The medical cause of falls;
- Maintaining a safe environment;
- Safety care practices;
- Risk assessment;
- Communication;
- Patient/carer education;

AUDIT

- Accident forms/books should be audited. The minimum audit criteria should include; cause of fall (where known); time of fall; location of fall; type of injury sustained;
- Feedback should be given to staff with trends being identified and addressed;
- Audits should be used as a way to move forward in falls prevention and not to compare one area with another.

A report highlighting the need for clinical audit of accident rates in the nursing home setting sets out clearly and concisely how to undertake and report audit and the benefit to residents and staff - please contact the Author : Michelle Wade, Matron, The Magna Nursing Home, Arrowsmith Road, Canford Magna, Tel: (01202) 601831

FALLS RISK FACTOR ASSESSMENT - GUIDELINES FOR COMPLETION

Not all elderly people have a significant risk of falling so before we can implement a plan of action to reduce hip fractures we must first identify those at high risk of falling.

FIRST COMPLETE THE TRANSFER AND MOBILITY SCORES:

Transfer score =

(0 = unable, 1 = major help needed, 2 = minor help needed, 3 = independent)

Mobility score =

(0 = immobile, 1 = independent with aid of wheelchair, 2 = walks with help of one person, 3 = independent)

ADD THE TRANSFER AND MOBILITY SCORES

Transfer + Mobility scores =

NOW ANSWER THE FOLLOWING QUESTIONS:

Score: Yes = 1 No = 0

| | YES | NO |
|---|--------------------------|--------------------------|
| 1. Has the resident had a fall within the last 3 months? | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Do you think the resident is agitated? | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Do you think the resident is visually impaired to the extent that everyday function is affected? | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Do you think the resident is in need of especially frequent toileting? | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Do you think the resident has a transfer and mobility score of 3 or 4? | <input type="checkbox"/> | <input type="checkbox"/> |

RISK FACTOR ASSESSMENT SCORE (Questions 1 - 5) =

Recommend hip protectors for a score of 2 or more.

NB: This Risk Assessment Tool is easy to use but validation has not been completed. It is based on the 'Stratify' Assessment Tool, which is validated.

FALLS RISK ASSESSMENT

NAME:

DOB:

LOCATION:

| | | | | | | |
|--------------------------------------|-------------------|----------|--|--|--|--|
| SEX ↓ | TEST DATES | = | | | | |
| Male | | 1 | | | | |
| Female | | 2 | | | | |
| AGE | | | | | | |
| 60 – 70 | | 1 | | | | |
| 71 – 80 | | 2 | | | | |
| 81 + | | 1 | | | | |
| GAIT | | | | | | |
| Steady | | 0 | | | | |
| Hesitant | | 1 | | | | |
| Poor Transfer | | 3 | | | | |
| Unsteady | | 3 | | | | |
| SENSORY DEFICIT | | | | | | |
| Sight | | 2 | | | | |
| Hearing | | 1 | | | | |
| Balance | | 2 | | | | |
| FALLS HISTORY | | | | | | |
| None | | 0 | | | | |
| At Home | | 2 | | | | |
| In Ward | | 1 | | | | |
| Both | | 3 | | | | |
| MEDICATION | | | | | | |
| Hypnotic | | 1 | | | | |
| Tranquillisers | | 1 | | | | |
| Hypotensives | | 1 | | | | |
| Diuretics | | 1 | | | | |
| MEDICAL HISTORY | | | | | | |
| Diabetes | | 1 | | | | |
| Organic Brain Disease / Confusion | | 1 | | | | |
| Fits | | 1 | | | | |
| MOBILITY | | | | | | |
| Full | | 1 | | | | |
| Uses Aid | | 2 | | | | |
| Restricted | | 3 | | | | |
| Bed Bound | | 1 | | | | |
| HOME | | | | | | |
| Stairs | | 1 | | | | |
| Level Access | | 0 | | | | |
| PATIENT'S VIEW | | | | | | |
| At Risk | | 1 | | | | |
| Not at Risk | | 0 | | | | |
| TOTAL SCORE | | | | | | |
| SIGNATURE | | | | | | |
| PRINT NAME | | | | | | |

USE THIS SCALE TO IDENTIFY PATIENT'S VIEW. ASK CARER IF APPROPRIATE

| | | | | | |
|---|-------------------|----------------------|---------------------------|--------------|--|
| In the next month how likely do you think you will fall while moving about indoors or outdoors? | | | | | |
| Very likely 4 | Quite likely 3 | Slightly likely 2 | Not very likely 1 | Total | |
| How concerned about falling do you feel? | | | | | |
| Very concerned 4 | Quite concerned 3 | Slightly concerned 2 | Not concerned 1 | Total | |
| How afraid of falling do you feel? | | | | | |
| Very afraid 4 | Quite afraid 3 | Slightly afraid 2 | Not afraid ¹ 1 | Total | |
| 1-3 no risk 4-12 at risk | | | | | |

TOTAL SCORES OF FALLS RISK ASSESSMENT:

3 – 8 LOW RISK 9 – 12 MEDIUM RISK 13 + HIGH RISK

| LOW RISK | |
|---|--|
| <i>RESIDENT</i> | <i>COMMUNITY</i> |
| <ol style="list-style-type: none"> 1. Explain to the patient the importance of asking for help when walking 2. Ensure call bell is to hand 3. Use variable height bed and leave the bed in the lowest position when the patient is unattended 4. Maintain frequent checks on the patient 5. Use a chair of appropriate design for the patient. | <p>Consider:</p> <ol style="list-style-type: none"> 1. Environment e.g. furniture height / suitability, lighting, loose mats, rails etc 2. Clothing – appropriate, footwear, etc 3. ADL's – storage height, carrying, picking things up, taking rubbish out, hanging washing out etc 4. Communication aids – phone access, Careline, pull cord 5. Assess suitability of mobility aids already in place or future issue 6. Explain to the patient the importance of asking for help when needed. |
| MEDIUM RISK | HIGH RISK |
| <i>RESIDENT AND COMMUNITY</i> | <i>HIGH RISK RESIDENT AND COMMUNITY</i> |
| <p>ALL OF THE ABOVE PLUS:</p> <ol style="list-style-type: none"> 6. Adequate nutrition and fluids 7. Consider appropriate exercises to improve and maintain balance, muscle strength and gait 3. Refer to Physiotherapist or OT | <p>ALL OF THE ABOVE PLUS:</p> <ol style="list-style-type: none"> 9. Higher level of supervision and/or medication/health Review |

**TIMES UNSUPPORTED STEADY STANDING (TUSS)
ASSESSMENT OF BALANCE & FUNCTION 180° TURN**

TUSS: Assessment used: YES NO
 At Risk: YES NO
RESULT:

TURN: Assessment used: YES NO
 At risk: YES NO
RESULT:

ENTER THE RISK STATUS AND APPROPRIATE ACTION ON THE RESIDENT'S CARE PLAN

Dyer J. & Mitchell E. (1999)

¹Simpson.J.M.(1996) Paper presented at ACPSIEP conference Edinburgh – not published

TIMED UNSUPPORTED STEADY STANDING (TUSS)

The ability to stand unsupported is a prerequisite for the satisfactory performance of many functional activities. Inability to stand steadily whilst unsupported is associated with an increased risk for falling (Studenski 1994). Similar test to TUSS have been described (Bohannon 1993, 1996), and standing balance is a component of the Rivermead Mobility Index (Collen et al 1990), the performance Oriented Assessment of Mobility (Tinetti 1986) and the Berg Balance Scale (Berg 1995). The repeatability and choice of timed end points for the TUSS have been established (Simpson and Worsfold 1996).

Procedures

The patient is seated with a table, bed, or the back of a sturdy chair in front of her.

She is wearing her usual footwear.

Her chair is high enough to allow her to get up with minimal effort or else she is assisted to standing.

Preparation

Before assuming the starting position the test is described to her: 'Soon you are going to stand up holding onto the table. Once you are steady I shall say 'START'. Then you are to put your hands by your sides and stand as long as you feel safe and steady. As soon as you feel unsteady you must put your hands back onto the table. (These words exactly please) Are you clear about what you are going to do?

Starting position:

Standing holding onto the table, bed or chair. The subjects places her feet comfortably apart – a functional position

Instructions:

If necessary remind the patient what to do 'In a moment I am going to say 'START'. Then you are going to let go of the table and keep standing. As soon as you feel unsteady put your hands back on the table'

Timing:

Start timing as you say 'START'. Stop timing as soon as the patient places her hands on the table OR until she has stood steadily for 60 seconds – whichever occurs first. **Record the time in seconds.**

Familiarisation Trial:

Perform one untimed practice attempt of this test to ensure patient's understanding; the patient holds on as soon as she feels unsteady. The patient should be discouraged from trying to combat wobbling before steadying herself. This is essential to ensure comparable end points to the test.

Allow the patient to sit for as long as she needs (within reason!) before the actual test to reduce fatigue.

PROGRESSION OR MODIFICATION:

Functional Reach. Once the person can do TUSS with ease for at least one minute then progress to FR.

Timed Supported Steady Stand (One) If the person cannot stand unsupported then allow her to place one hand, on the table and stop timing when, on feeling unsteady, she replaces the other on the table:

Time Supported Steady Stand (Two) If she is extremely unsteady, help her up to stand with two hands on the table. Start timing as soon as she is steady and stop when she wished to do so or when 3 minutes has been reached. (End points have not been systematically established).

For balance exercise purpose the BoS can be decreased: feet together, stride standing, tandem standing.

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DIVISION OF GERIATRIC MEDICINE**

ASSESSMENTS OF BALANCE AND FUNCTION: THE 180 DEGREE TURN

Staggering on turning is predictive of recurrent falls (Tinetti 1986). Elderly people rated as abnormal on turning are more likely to experience falls (Topper et al 1993). Taking more than 12 steps to turn 360 degrees is strongly associated with recurrent falls Lipsitz et al (1991). Taking more than 5 steps to turn 180 degrees increases the relative risk of two or more falls by 1.9 (Nevitt et al 1989). The 180-degree turn has acceptable intra and inter observer repeatability (Nevitt et al 1989). It is more functional than turning through 360. Between observer and test retest repeatability of the revised version of the test (below) have been examined. The results are very good (papers in preparation).

Preparation

The person is seated with a chair facing her and tables or the back of chairs or other stable handholds to either side. She is wearing her usual footwear. (Unless this is unsafe).

Her chair is high enough to allow her to stand up with minimal effort or assistance.

Initial instructions

Before assuming the starting position the test is described to her and demonstrated.

Soon you are going to stand up, you can hold onto the table / chair if you want to.

Once you are steady I shall say NOW.

Then you are going to put your hands by your sides
and step around on the spot until.

[you are standing facing me, I shall be down there {indicate}**] OR

[you are standing with your back to that chair].

then stop.

Remember to keep your hands by your sides

But if you really must you can hold onto the chair / tables

Are you clear about what you are going to do?

*[** Patients with memory difficulties will understand this command best. Be sure you stand in the correct position!]*

Starting position

Standing holding onto the table or chair.

If necessary she is helped to get into this position

Instructions:

Ready? Now If necessary add 'Step around until you face me'

It is not a timed test – instructions should not be given such that a need for speed is implied, avoid saying 'Go'

The person should be discouraged from holding on

The (friendly) commands 'Hands down' 'No cheating' 'No holding' may be used. The test becomes invalid if the person holds on for support. Quickly touching a support is allowed – the number of times this is done is recorded.

Scoring:

A step = any attempt on the person's part to shift her body weight.

Start counting with the first step. Count ALL number of steps taken to complete the 180 degrees turn.

EXCEPT any steps backward towards the chair or forwards toward you. Do not allow pivoting

Do not give feedback in terms of number of steps taken. Do so relative to last performance: 'better that' 'much better than last time'

Record the number of steps to complete the turn
 the number of times the person touches the chair
 any invalid trials i.e. the person supported herself

Goal that the person can complete the task in 5 steps or less with ease.

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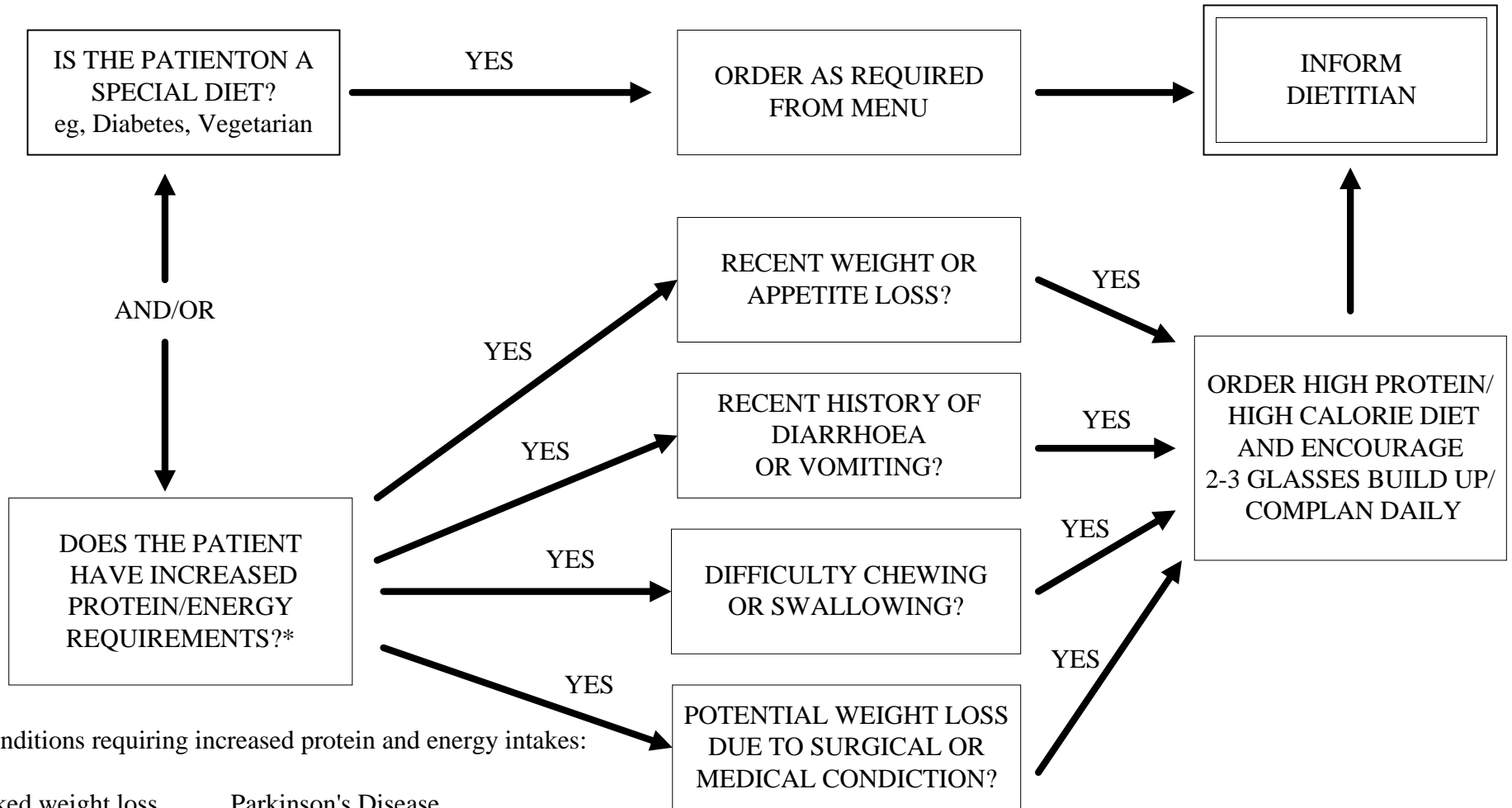
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Revised 31.3.98, 11.5.98

ACTION PLAN



* Conditions requiring increased protein and energy intakes:

- | | |
|--------------------|-----------------------------|
| Marked weight loss | Parkinson's Disease |
| Pressure Sores | Motor Neurone Disease |
| Cancer Cachexia | Inflammatory Bowel Disease |
| Infection/Sepsis | Cystic Fibrosis |
| Trauma and Injury | History of Anorexia, Nausea |
| Major Surgery | Diarrhoea |
| Fractures | |

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Grading of evidence in brackets

- I = evidence from well designed, randomised controlled trials (RCTs), meta analyses or systematic reviews of RCTs**
- II = Evidence from prospective studies (non-randomised controlled trials or good observational studies)**
- III = Evidence obtained from retrospective and cross-sectional studies**
- IV = Evidence obtained from expert committee reports or opinions and/or clinical experience of respected authorities**

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Information on an independent learning pack on reducing the risk of falls by elderly people in hospitals is available from Joy Warren, Ward Sister, Barnes Ward, Dorset County Hospital Dorchester DT1 2JY, Tel:01305 254771.

USEFUL ADDRESSES

Age Concern Aid Call
Freepost (Ex 2356)
Newton Abbot
Devon
TQ13 7BR
TELEPHONE: 0345 413103

Produce Falls leaflets

Health Education Authority's Older People Programme
TELEPHONE: 0171 413 2036

To obtain the leaflet 'Avoiding slips, trips and broken hips'.