

# Unit D514 Design, agree and adapt a physical activity programme with older adults with a history or high risk of falls

## Introduction

In everyday clinical practice, presentation following a fall represents a critical point in the health of an older person. Falls are not accidents but are the symptomatic manifestation of underlying causal factors. Falls, fall related injuries and the fear associated with falling or postural instability have a significant cost to the National Health Service, the individual and their family and carers. Exercise has been shown to have a central role to play in preventing and managing falls. The provision of specific, progressive strength and balance exercises tailored to individual need and delivered by specialist exercise professionals is positioned as a core component of multi-factorial interventions to prevent and manage falls in frailer older people.

Advanced instructors who are responsible for designing, delivering, monitoring and evaluating structured, individualised physical activity programmes for patients/clients with a history or high risk of falls, must have a range of appropriate knowledge and skills that are aligned with current evidence-based, best practice guidelines. These instructors should have established close liaison with falls and fracture and rehabilitation services in their local area and with relevant carers where appropriate with agreement.

This unit is designed to cover the multi-factorial nature of falls prevention and management, including the skills and knowledge required to prescribe safe and effective exercise programmes for this patient/client group. These programmes must be based on relevant information from assessment, diagnosis and treatment/management as well as on a sound understanding of the risk factors and risk stratification involved. There are particular challenges associated with the physical activity management of this client group as they may have movement control, balance and gait problems associated with ageing, inactivity, significant loss of muscle strength and power; visual, vestibular or proprioceptive disorders and neuromuscular/cognitive effects resulting from inappropriate medication. They may also have psychological issues such as fear of falling, loss of confidence, feelings of isolation and dependence. An understanding of the aims of rehabilitation, and the potential effects of therapy led approaches, assessed through relevant outcomes will inform and integrate the physical activity intervention for both clients and professionals involved.

The unit is divided into two parts. The first part (pages 2 and 3) describes the two things you have to do. These are:

**D514.1 Design and agree a physical activity programme with patient/client with a history or high risk of falls**

**D514.2 Deliver, review and adapt a physical activity programme with patient/client with a history or high risk of falls**

The second part (pages 4 – 7) covers the unit specific knowledge and understanding you must have.

### Target Group

This unit is for advanced fitness instructors who plan, conduct and review programmes to address the needs of patients/clients with a history or high risk of falls. They will normally be working without direct supervision.

### Linked Units

This unit is one of a suite of Level 4 national occupational standards and should only be attempted on completion of the core Level 3 physical activity and exercise units.

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## D514.1

### Design and agree a physical activity programme with patients/clients with a history or high risk of falls

#### The National Standard

##### What you must do

To meet the national standard, you must:

1. establish an effective working relationship with the patient/client, relevant carers and appropriate health care professionals
2. collect, record and interpret **information** about your patients/clients with a history of falls or fracture or high risk of falls using safe and appropriate risk assessment **methods**
3. stratify and manage the patient/client according to current risk assessment and management guidelines and protocols
4. follow the correct procedures and protocols for working with health care professionals, including those for confidentiality
5. establish and agree the patient/client's readiness to participate and identify barriers to habitual physical activity
6. plan and agree goals that are appropriate to your patient/client's risk stratification and their current level of ability
7. plan and prepare objectives, activities and delivery methods that are appropriate to your patient/clients' risk stratification goals and condition
8. design and agree a programme adapted to your patient/clients using relevant principles of training

##### What you must cover

This element covers the following:

###### a information

- 1 personal goals
- 2 referral form
- 3 informed consent to transfer medical information/participate
- 4 medical and falls history and medication
- 5 functional capacity
- 6 assessment of risk during exercise
- 7 current and previous physical activity history and preferences
- 8 social and psychological considerations

and the following:

###### b methods

- 1 reports
- 2 interview
- 3 questionnaires
- 4 observations
- 5 functional and psychological assessments
- 6 risk assessment and management

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## D514.2

### Deliver, review and adapt a physical activity programme with patient/clients with a history or high risk of falls

#### The National Standard

##### What you must do

*To meet the national standard, you must:*

1. assess progress, monitor and manage risk to patient/clients throughout the programme
2. manage medical complications and emergencies until appropriate medical help is available
3. deliver planned activities to your patient/clients with a history or high risk of falls, adapting and tailoring activities according to individual risk stratification, needs, abilities and any assistance required
4. communicate and consult with patient/clients on issues to do with their physical activity programme and progress
5. provide appropriate attention to patient/clients with common co-morbidities
6. support patient/clients in a way which will promote sustained change in physical activity levels, including recommendation/referral to appropriate exit routes and involving relevant carers where appropriate with agreement
7. enable patient/clients in self-management, involving carers where appropriate and with agreement
8. monitor patient/clients progress against agreed goals, adapt the programme accordingly and where appropriate, refer on to other health or exercise settings
9. provide ongoing reports to communicate outcomes to the appropriate health care professional

##### What you must cover

*You must meet the standard opposite.*

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## What you must know and understand

*To be competent in this unit, you must know and understand the following:*

- K1 Government policy and published national guidelines for falls prevention and management.
- K2 Awareness of national agencies, organisations and literature relating to falls and fracture prevention and management and the adaptations for exercise for older adults.
- K3 Relevant medico-legal requirements.
- K4 How to interact appropriately with general practitioners, other health care professionals, personnel and relevant carers, where appropriate with agreement, involved in the process of falls prevention and management.
- K5 Ensure patient/client information and consent, meeting recommended guidelines, is received prior to advising, prescribing or instructing exercise.
- K6 The protocol to follow when dealing with patients/clients who have been transferred from a range of health settings and those who are self-referred.
- K7 Understand the importance of an agreed link with a named health professional(s) from the secondary and/or primary care setting and relevant carer(s).
- K8 Barriers to communication with referred patients/clients and the communication skills needed to overcome these, including relevant carers with agreement.
- K9 How to identify when to refer to other physical activity or health care professionals patient/clients whose relevant health risk factors fall outside the areas for which you are competent.
- K10 Ethical considerations involved in falls prevention and management, including respecting inter-professional boundaries and patient/client confidentiality.
- K11 Methods of information collection and interpretation, appropriate storage of confidential records and management processes encountered in running falls prevention and management exercise sessions.
- K12 Current relevant structures of the National Health Service, the names and functions of different relevant medical organisations and service providers.
- K13 Prevalence and consequences of falls and falls related injury.
- K14 Risk factors for falls and fractures.
- K15 How physical activity may influence the other risk factors.
- K16 Anatomy and physiology of the neurological, musculoskeletal, cardiovascular, pulmonary and endocrine systems.
- K17 Causes, presentation, assessment of treatment/intervention of the following:
  - General medical examination to exclude unrecognised illness which may explain fall (e.g.

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stroke, myocardial infarction, anaemia, thyroid disease etc)

- Cognition
- Postural blood pressure assessment
- Cardiovascular examination, ECG and other relevant tests
- Neurological examination
- Gait and balance assessment
- Locomotors system examination
- Visual assessment

K18 Investigations for patients who fall

- Mini-mental state questionnaire
- Confidence in balance questionnaire
- Blood tests
- Resting and standing BP
- Get up and go test (timed or untimed); 1800 turn, functional reach
- Muscle weakness; asymmetry; joint problems in lower limbs and feet
- Snellen vision chart; visual acuity e.g. depth perception
- Specialised investigations for falls (e.g. ECG and where appropriate, echocardiography and HOLTER monitoring and for falls associated with syncope, tilt table testing and carotid sinus massage etc)

K19 Interventions for falls prevention and management:

- Multi-factorial versus single interventions
- Targeted
- Individual versus population approaches

K20 The range of medication/co-morbidities and their exercise considerations.

K21 Components of falls management within the clinical setting (Phases 1-3).

K22 Stratifying and managing an individual's falls and fracture risk, risk during the exercise session and the risk as a result of future disease progression using the appropriate tools validated in a range of settings (e.g. community/nursing home).

K23 Acute responses and chronic adaptations to aerobic endurance, balance and strength training and the implications for individual cardiovascular, pulmonary, articular, neuromuscular or metabolic diseases.

K24 Beneficial effects of physical activity/exercises on the prevention and management of falls.

K25 Contra-indications to exercise which need to be taken into account for the patient a history or high risk of falls.

K26 Initial assessment including appropriate assessment of exercise level using recognised functional, submaximal assessment.

K27 On going screening process prior to each exercise session.

K28 How to set up and manage a safe physical activity environment relevant for a

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patient/client with a history or high risk of falls.

K29 Both group and individual exercise programming principles for patient/client with a history or high risk of falls, following guidelines.

K30 Monitoring intensity methods e.g. perceived exertion and degree of balance support.

K31 Exercise considerations for patient/client with, for example

- Parkinson's Disease
- Cerebrovascular Disease e.g. Stroke
- Dementia
- Osteoporosis
- Osteo/rheumatoid arthritis
- Ischemic Heart Disease
- Peripheral Vascular Disease
- Chronic Obstructive Pulmonary Disease (COPD)
- Peripheral neuropathy (Diabetic)
- Visual/proprioceptive/vestibular disorders
- Visual Impairment (cataracts, glaucoma, macular degeneration etc)
- Auditory impairment

K32 How to determine and adapt appropriate progressive physical activity programmes appropriate to falls management and medical condition(s) using results from the physical / exercise assessments, medical information, national guidelines, consultation and patient/client aims.

K33 The motivational processes, models and techniques involved in behavioural change for the referred patient/client to encourage long term beneficial lifestyle changes.

K34 Mental health and mental health promotion in a population with a history or high risk of falls.

K35 How to communicate and consult effectively with the referred patient/client about their programme and progress.

K36 How to manage medical complications until appropriate medical help is available e.g. postural hypotension, hypoglycaemic event.

K37 How to manage emergencies until appropriate medical help is available e.g. a fall or fall-related injury.

K38 The management, evaluation and reporting of information, in verbal and written formats.

K39 How to use and adapt a system for monitoring and recording the patient/clients progress and updating their physical activity programme.

K40 How to evaluate the effectiveness of a falls exercise service (i.e. community-based/ 'Phase IV').