Movement At the Coal Face!

Background considerations in relation to the application of appropriate exercise interventions to reduce fall risks and fall related injuries.
Exercise and Falls Reduction
Factors for Consideration

- Target groups
- Settings - rural & remote, metro
- Programs & purpose of exercise intervention
- Screening and Assessments
- Barriers to participation
- Personnel & training issues

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- Streamlining of services - referral mechanisms
- Guidelines
- Quality control
Overall Aims and Objectives

1. Reduce injuries that result from falls by increasing the number of people undertaking appropriate exercise programs.

2. Improve the identified falls related physiological problems with exercise strategies that reduce the individuals’ potential risk of sustaining a fall.

3. Design & provide programs for individuals that provide the proper amount of physical activity to attain maximal benefits at lowest risk.
Falls Reduction - Exercise Provision

Streamlining / Stages / Bridges

**Level 1**
Protection & Reducing fall related risks

**Level 2**
Community normal functional activities

**Level 3**
Prevention & Rehabilitation

**Target groups**
- Fit, active and independent
- Community normal
- Frail
- Limited capacities

**Settings**
- Fitness centre
- Community based
- Hospital rehabilitation
- Residential care

**Providers**
- Fitness leaders (cert 3 & 4)
- Physiotherapists
- Exercise physiologists
- Human movement
- Volunteers

**Other considerations**
- Partnerships, Referral mechanisms, Responsibilities, Liabilities, Infrastructure, Support & Sustainability. Promotion/ awareness raising, Guidelines
Target Groups

Different levels
Different programs
Different personnel
Target Groups

Level 1
- Very fit, healthy, active and independent

Level 2
- Average fitness level / moderately healthy managing normal daily activities

Level 3
- Frailer - multiple health / activity issues with limited capacities

The level of risk is not the same for all people especially older adults with changes over time, ongoing assessments often need to be undertaken
The metropolitan, rural & remote areas... different settings but the same issues and requirements at a variety of levels.
Settings

- Hospitals
- Rehabilitation facilities
- Fitness centres
- Community facilities
- Home
- Residential care
Screening and Assessments

Predictors highly associated with falls are multifactorial and not all older adults fall for the same reason.
Assessments at Different Levels

Physical performance decline (conditions)

Difficulty in task performance

Independent Active Living

High fall risk

ADL Dependence

Cognitive decline
Validated Falls Risk Assessments

Examples

Many measures for falls, the choice is dependent on the setting, level of ability of target group etc.

Examples:

- PPA - Physiology profile assessment - Lord
- Simple PPA - GP assessment - Tiedeman
- FRAT pack (falls risk assessment tool)
- 3 - gait / mobility/ efficacy - Tinetti
- * Senior fitness test
- * Berg & FAB balance scales
- ABC confidence scale etc. etc.
PROGRAMS

One program does not suit all

“Emphasis should be placed on factors that result in permanent lifestyle change to encourage a lifetime of physical activity.”

Pollock M., Gaesser G.
In the current literature the following kinds of exercise have been found to impact on fall and falls injury rates:

- Programs incorporating balance, strength, flexibility and endurance training have resulted in a trend towards reduced falls rates.
- Balance training, e.g. Tai Chi, has been shown to result in reduced multiple falls rates in active independent older adults.
- Strength training and cardiovascular fitness (endurance) training, done in combination, have been shown to have a protective effect on falls risks.
- Individually tailored exercise programs incorporating balance, strength and cardiovascular training have had a significant impact of reduction of fall risk factors (2 years ongoing benefit), this is important for the less active and people with more risk factors.
Program Considerations

Older adults have many activity levels and different interests

Many variables in

- abilities
- health status
- exercise needs
- priorities
- expectations & perceptions
- education
- life experiences
- culture
- attitude
- motivation
- personality traits

- A variety of appropriate exercise programs are needed to reduce fall risk and associated fall related injuries.
- Some programs need to be very specific to the identified falls deficits and tailored to suit the individuals level of ability whilst others can be more general dependent on health state, fitness level and lifestyle.
Program Selection

Many different exercise and training programs developed from research; different focus & elements for different target groups; conducted by different professionals organisations.

The Big Questions
Which prescription?
- Protection and reducing falls risks
- Rehabilitation and prevention of further falls
Which program for which target group,
What assessments to use,
What exercise personnel to provide the programs etc.
Program levels - group and individual?
Exercise Programs

Fall Reduction Community Examples

- "No Falls" - Victoria; "Steady Steps" - Queensland
- "Upright and Active" - NSW; "Stepping On" - NSW
- "Stay on Your Feet" - NSW & Western Australia
- "Stepping out" - NSW
- Better Balance - South Australia
- Fallproof - America - (Program & training)
Exercise Programs

Strength Training examples
- Living longer - Living Stronger
- Staying Active Staying Strong

Individual Home examples
- Otago
- Staying Active - Staying Safe

Older Adult Community program examples
- Healthy Lifestyle
- SHARE
- Active over 50's
- EMMA training package - South Australia
Barriers

Inactivity leads to a downward spiraling effect, increasing the falls risks
Background Issues

- The Individuals’ Perspective - conditions, attitudes and abilities
- Organisations Perspective
- Environment and Settings
- Provision of the Exercise Program
  - Screening & Assessments
  - Training - credentials, level of skills required
  - Programs - provision, costs, access, type
  - Quality control - sustainability issues,
  - Responsibility, safety and insurance
Identified Barriers to Participation

- Financial constraints
- Access to venues
- Transport issues
- Limited appropriate programs
- Limited trained personnel
- Limited referral mechanisms
- Lack of awareness in the overall community
- Lack of commitment by individuals /organisations (sustainability issues)
- Lack of interest and motivation
- Language
The Individuals’ Perspective
Reasons for Being Inactive

Fear of……..

- Falling (previous experience or increased frailty)
- Failure & not being able to keep up with others
  - Not being able to cope or having the ability to undertake tasks
  - Exacerbation of conditions and associated factors eg. Pain
- Having sufficient energy to undertake program
Reasons for Being Inactive

Concepts ......

Self

Efficacy - Balance & self confidence issues -
(social esteem, self awareness etc.)

Exercise Perception

Previous bad experiences with exercise

Personality differences

Attitudes

• Denial - not me ...not my problem!

■ Out of habit, unskilled and sedentary, not interested

• Lack of commitment and self discipline

• Lack of understanding (insight) of the issues
Reasons for Being Inactive

Health and physical factors

- Chronic conditions eg. Musculo skeletal, neuromuscular, neurological, metabolic issues etc.
- Altered mental states eg. Depression, dementia
- Reduced physical activity level with associated functional limitations

Other

- No ongoing support ...infrastructure\peer support\Access / transport/ costs
- No suitable exercise programs
Exercise Personnel

Providing the appropriate program and working with appropriate fitness / health professionals is necessary for best results.
Fitness Leaders Accreditation

- Fitness Australia National Registration
  An overview of the National Fitness Professional / Trainer Registration

- The National Fitness Registration Scheme ensures:
  - A safe minimum standard of knowledge and skills for fitness instructors and fitness trainers.
  - Uniformity between states and territories.
  - Registration standards - categories of registration and training required for registration.
Fitness Leaders Accreditation

- Activities currently recognised by all States and Territory Registration bodies:
  - Fitness Instructor
  - Gym Instructor
  - Group Exercise Instructor
  - Aqua Instructor
  - Fitness Trainer
  - Personal Trainer
  - Older Adults
Fitness Leaders Accreditation

- **Group Instructor:**
  - Group exercise instructors are trained to plan and conduct safe, effective, and enjoyable exercises for groups of low risk individuals.

- **Gym Instructor**
  - Gym instructors are required to plan, lead, and instruct exercise programs for conditioning, flexibility and strength, as well as perform assessments on low risk individuals.

- **Aqua Instructor**
  - Aqua instructors are required to plan and instruct water based classes for low risk individuals.
Fitness Leaders Accreditation

- **Personal Trainer**
  - Personal trainers are required to work independently with a variety of low risk individuals or groups as well as to plan, conduct, evaluate, assess and work under guidelines set by a medical or allied health professional.

- **Older Adults**
  - Fitness trainers registered to work with older adults deal with fitness based activities for groups or individuals with specific requirements related to the older adults needs, abilities or medical conditions including some information on people with special needs.
Consider the predisposing, enabling & reinforcing factors to

1. Raise the awareness in the overall community BUT have a focus also on reaching the individual

2. Provide the relevant information and reasons to remain strong and active

3. Provide the appropriate leadership, support and skills application to reduce falls risks and injuries

4. Assist the individual believe that what they are doing has value and reduces their falls risk which in turn helps maintain their quality of life

5. Provide ongoing support structures and quality control