CLINICAL PRACTICE GUIDELINES

The Assessment, Management and Prevention of Falls in the Elderly

in the South Western Sydney Area Health Service.

An initiative of the

Injury Advisory Committee

Important note:

This document is produced as a guide to enhance the implementation of best practice principles. It should serve as a supplement to the clinicians' judgement in each individual case.

The guidelines contained within this document are based upon a combination of the best available evidence at the time of writing and the expert opinion of a multidisciplinary panel. They are not meant to be prescriptive.

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This document has been developed to provide evidence-based recommendations about the assessment and management of elderly patients at risk of falls within the South Western Sydney Area Health Service (SWSAHS). It encompasses recommendations based upon published literature coupled with expert local experience. Electronic databases and the Internet were searched for English language material produced between 1980 and 2001. This document will, in time, be updated to incorporate new evidence, as it becomes available.

The guidelines use a four point rating system to identify the evidence base for key decision points. The rating system is recommended by the National Health and Medical Research Council (NHMRC)[1].

I	*Evidence Obtained From A Systematic Review Of All Relevant Randomised Control Trials*
II	*Evidence Obtained From At Least One Properly Designed RCT*
III-1	*Evidence Obtained From Well-Designed Pseudo-Randomised Controlled Trials (Alternate Allocation Or Some Other Method)*
III-2	*Evidence Obtained From Comparative Studies With Concurrent Controls & Allocation Not Randomised (Cohort Studies), Case-Control Studies, Or Interrupted Time Series With A Control Group*
III-3	*Evidence Obtained From Comparative Studies With Historical Control, Two Or More Single-Arm Studies, Or Interrupted Time Series Without A Parallel Control Group*

Level I and II publications represent the gold standard of evidence. However, where this level of evidence is not available it is appropriate to base intervention upon the available evidence levels. Where there is insufficient evidence upon which to base recommendations, the expert opinion of key stakeholders in the multidisciplinary field of aged care, community agencies, general practitioners and the emergency department has been sought and consensus achieved as to the best practice principles.

This document provides clinicians within the South Western Sydney Area Health Service (SWSAHS) with evidence based information about the needs of elderly patients presenting to the Emergency Department at risk of falls and is aimed at optimising the process of assessment, referral and intervention.

These guidelines highlight areas of knowledge and also areas where our knowledge is poor and further research required. These guidelines will be evaluated to determine their impact upon clinicians, referral patterns and patient outcomes.

The project team involved in the preparation of this document is the Injury Advisory Committee of the SWSAHS. This Committee is comprised of medical, allied health and nursing experts from a range of specialties, including trauma, emergency, general practitioners, public health and pre-hospital care providers. It reports directly to the Clinical Council of the SWSAHS. The Injury Advisory Committee is grateful to all those who have contributed their time and expert opinion to the development of this publication.

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Summary and Guidelines

Falls in the elderly represents a major public health problem in Australia, especially as the size of our elderly population increases. The significance of falls risk increases from the age of 65 years, with further sharp increase amongst the old, elderly individuals aged above 75 years.

These clinical practice guidelines are intended for utilisation by practitioners from all disciplines that are faced with elderly patients presenting with falls and related injury. The scope of the document is wide-ranging, encompassing risk assessment, primary and secondary prevention strategies, as well as aspects of outpatient / community care referral and follow-up.

Guidelines

The following points represent a summary of the guidelines presented within this document. Each recommendation should be carefully considered in terms of the specific patient presentation and local circumstances. To better understand the context of each of these guidelines, the reader should refer to the appropriate section of the document. The evidence base for each guideline is included below the guideline. If there is no evidence base rating attached to the guideline the guideline was developed from input from key stakeholders.

FALLS PREVENTION

Principal Guideline

- Elderly persons presenting to Health Care providers should be assessed in terms of the presence of intrinsic risk factors and causes of falls. Identified factors should be investigated, managed and / or referred to specialist multidisciplinary aged care providers.

  Level I Evidence

Intrinsic Factor Interventions

- Individualised exercise programs for the elderly can improve balance, mobility and reaction time, reduce the incidence of fall related injury.

  Level I Evidence

- Adverse effects of medications are a potentially reversible factor in reducing falls risk and should be included in multidisciplinary falls interventions.

  Level II Evidence

- Osteoporosis should be identified and treated. Secondary causes of osteoporosis should always be excluded or treated.

  Level I Evidence

- Treatment of malnutrition can assist in maintaining bone mineralisation, reducing the risk of osteoporosis and minimising the risk of falls related injury.

  Level II evidence

Extrinsic Factor Interventions

- All patients discharged from hospital following a falls related admission should have a home visit by an occupational therapist to assess for and modify environmental hazards and behaviour.

  Level II evidence

- Hip protectors can be useful in minimising hip fractures amongst those who are at high risk of injury from falls.

  Level I evidence

- The elderly who have remained on the floor for greater than one hour post-fall should have living arrangements and social support assessed prior to discharge.

  Level IV evidence

- When home hazards have been identified as being a causative factor in a fall, it is important to address modification of these hazards to reduce the potential for subsequent falls.

  Level III-3 evidence

- Assessment of footwear needs to be included in falls risk assessment.

  Level IV evidence

PRESENTATIONS TO THE EMERGENCY DEPARTMENT

Assessment And Referral

- Referrals of people admitted to hospital with fall should be made to a coordinated multidisciplinary team, who can provide focussed, individualised interventions. This first contact should be made prior to discharge from hospital.

  Level I evidence

- An education program should be undertaken by Emergency Department staff on the importance of the assessment, investigation and treatment of falls in the elderly.

  Level IV evidence

- Emergency staff should be educated about the importance of identification of older persons who have fallen and those at risk of falls.

  Level II evidence

- Formalised referral pathways to multidisciplinary teams and General Practitioners need to be established for patients who have fallen.

  Level III-2 evidence

- Emergency Departments should have ready access to individual components of the multidisciplinary team members, (physiotherapy, occupational therapy, geriatric services, discharge planning) prior to discharge. These services assist in identifying new self-care and functional deficits, as well as social needs in order to minimise problems immediately post-discharge.

  Level II evidence

- Elderly patients with falls discharged home from the Emergency Department require follow up by a multidisciplinary team.

  Level II evidence

- Elderly patients discharged home from the Emergency Department require referral back to their General Practitioner for ongoing coordination of care.

  Level III-2 evidence

FALLS IN THE ELDERLY IN INPATIENT SETTINGS

- All older persons admitted to inpatient settings should be evaluated for falls risk. Clinical judgement should be utilised in assessing risk of falls as no current scale has proven effective in risk assessment

  Level IV evidence

- Patients who have a fall in hospital should have a post fall review. Analysis of the fall should identify those factors that are considered to be modifiable.

  Level IV evidence

- Inpatients with geriatric syndromes including falls should undergo comprehensive multidisciplinary geriatric assessments and management.

  Level I evidence

- Education and workforce training should play a role in falls prevention initiatives in hospital settings. As part of their risk management strategy, Hospitals should develop falls prevention as a written policy and workforce culture.

  Level IV evidence

- Medication review and modification to reduce risk of falls should occur for all older people requiring admission to hospital.

  Level III-3 evidence

- Delirium prevention programs should be implemented in targeted medical and surgical patients in acute hospitals

  Level II evidence

- Multifaceted inpatient fall prevention interventions should include:
  - Improved continence and regular toileting regimes
  - Nutritional and hydration assessment and management.
  - Review of sensory impairments, foot pathology and footwear.
  - Environmental interventions
  - Assessment of postural hypotension

  Level IV evidence

- Bed rest should be minimised for all older in-patients. Early mobilisation and transfer training should be incorporated in geriatric interventions for older inpatients.

  Level I evidence

- Environmental modifications to a ward hospital area should be included in multifaceted inpatient falls prevention interventions

  Level IV evidence

- Hip protectors should be considered for inpatients at high risk of falls

  Level IV evidence

FALLS IN THE ELDERLY IN RESIDENTIAL AGED CARE FACILITIES.

- Elderly nursing home residents who have previously fallen should be assessed to identify all individual risk factors, and strategies need to be implemented to decrease or eliminate these risk factors.

  Level II evidence

- Hip protection should be offered to those elderly who are at high risk of falling in residential aged care facilities.

  Level I evidence

- Medication needs to be reviewed as an integral part of falls risk assessment for residents in aged care facilities.

  Level IV evidence

- Staff in residential aged care facilities should be exposed to regular education on falls risk minimisation and issues of safety as part of a multi-factorial falls prevention programme.

  Level II evidence

- Programs for restraint reduction should be implemented in aged care facilities.

  Level II evidence

- Elderly residents of aged care facilities should be assessed for Vitamin D deficiency and poor calcium intake and given supplements where appropriate.

  Level II evidence

- Exercise programmes that aim to target falls risk factors such as strength, reaction time and balance should be included in multifaceted falls programs in aged care facilities.

  Level II evidence

- Residents and carers should be educated on the correct use of walking aids. The initiation of or change in assistive walking devices should involve medical and/or physiotherapy consultation.

  Level IV evidence