Guideline Summary NGC-9643

Guideline Title

Bibliographic Source(s)

Guideline Status
This is the current release of the guideline.

Scope

Disease/Condition(s)
- Medication-related problems
- Influenza
- Invasive pneumococcal disease
- Shingles (herpes zoster)
- Injuries from falls
- Visual and hearing impairment
- Dementia

Guideline Category
Prevention
Risk Assessment
Screening

Clinical Specialty
Family Practice
Geriatrics
Infectious Diseases
Internal Medicine
Nursing
Ophthalmology
Optometry
Pharmacology
Physical Medicine and Rehabilitation
Preventive Medicine
Psychiatry
Psychology

Intended Users
Advanced Practice Nurses
Health Care Providers
Occupational Therapists
Optometrists
Pharmacists
Physical Therapists
Physician Assistants
Physicians
Psychologists/Non-physician Behavioral Health Clinicians
Public Health Departments
Social Workers

**Guideline Objective(s)**
- To facilitate evidence-based preventive activities in older age in primary care
- To provide a comprehensive and concise set of recommendations for patients in general practice with additional information about tailoring risk and need
- To provide the evidence base for which primary healthcare resources can be used efficiently and effectively while providing a rational basis to ensure the best use of time and resources in general practice

**Target Population**
Individuals aged ≥65 in the Australian population, including Aboriginal and Torres Strait Islander peoples

**Interventions and Practices Considered**
1. Pharmacist review of medications
2. Immunisation
   - Influenza vaccine
   - Pneumococcal polysaccharide vaccination (23vPPV)
   - Herpes zoster vaccine (shingles)
3. Identification of risks of falls
4. Screening for falls risk (e.g., ‘timed up and go test’ [TUGT])
5. Preventive interventions for falls and falls risk reduction (e.g., exercise program, vitamin D, medication review, advice on eyeglasses, occupational therapy referral)
6. Visual acuity assessment and visual impairment case finding
7. Screening for hearing loss
8. Case finding for dementia
9. Early intervention and prevention of dementia through increased physical activity, social engagement, and cognitive training and rehabilitation

**Major Outcomes Considered**
- Risk for falls
- Incidence of eye disease and blindness
- Risk for dementia

**Methodology**

**Methods Used to Collect/Select the Evidence**
- Hand-searches of Published Literature (Primary Sources)
- Hand-searches of Published Literature (Secondary Sources)
- Searches of Electronic Databases

**Description of Methods Used to Collect/Select the Evidence**

**Sources of Recommendations**
The recommendations in these guidelines are based on current, evidence-based guidelines for preventive activities. The Taskforce focused on those most relevant to Australian general practice. Usually this means that the recommendations are based on Australian guidelines such as those endorsed by the National Health and Medical Research Council (NHMRC).

In cases where these are not available or recent, other Australian sources have been used, such as guidelines from the Heart Foundation, Canadian or United States preventive guidelines, or the results of systematic reviews. References to support these recommendations are listed. However, particular references may relate to only part of the recommendation.
Number of Source Documents
Not stated

Methods Used to Assess the Quality and Strength of the Evidence
Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

<table>
<thead>
<tr>
<th>Level</th>
<th>Explanation</th>
</tr>
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<tbody>
<tr>
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  - Non-randomised, experimental trial  
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  - Interrupted time series without a parallel control group |
| IV    | Case series with either post-test or pre-test/post-test outcomes |

Practice Point: Opinions of respected authorities, based on clinical experience, descriptive studies or reports of expert committees

Methods Used to Analyze the Evidence
Review of Published Meta-Analyses
Systematic Review

Description of the Methods Used to Analyze the Evidence
Not stated

Methods Used to Formulate the Recommendations
Expert Consensus

Description of Methods Used to Formulate the Recommendations

These Guidelines for preventive activities in general practice, 8th edition, have been developed by a taskforce of general practitioners (GPs) and experts to ensure that the content is the most valuable and useful for GPs and their teams. The guidelines provide an easy, practical and succinct resource. The content broadly conforms to the highest evidence-based standards according to the principles underlying the Appraisal of Guidelines Research and Evaluation.

The dimensions addressed are:
- Scope and purpose
- Clarity of presentation
- Rigour of development
- Stakeholder involvement
- Applicability
- Editorial independence

The Red Book maintains developmental rigour, editorial independence, relevance and applicability to general practice.

Screening Principles
The World Health Organization (WHO) has produced guidelines for the effectiveness of screening programs. The Taskforce has kept these and the United Kingdom National Health Services' guidelines in mind in the development of recommendations about screening and preventive care.

Rating Scheme for the Strength of the Recommendations

<table>
<thead>
<tr>
<th>Grades of Recommendations</th>
</tr>
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<tbody>
<tr>
<td>Grade</td>
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<tr>
<td>A</td>
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</table>
**Cost Analysis**

A formal cost analysis was not performed and published cost analyses were not reviewed.

**Method of Guideline Validation**

Peer Review

**Description of Method of Guideline Validation**

Not stated

**Recommendations**

**Major Recommendations**

The levels of evidence (I-IV, Practice Point) and grades of recommendations (A-D) are defined at the end of the "Major Recommendations" field.

General practitioners (GPs) may consider a pharmacist medication review. The most successful interventions have been delivered by small numbers of pharmacists working in close collaboration with primary care doctors (III,C) (Holland, Smith, & Harvey, 2006). The review should include consideration of the need for each medication; issues around patient compliance and understanding of the medication; screening for side effects, particularly falls and cognitive impairment; and consideration of the use of aids such as dosette boxes and Webster packaging. A review of the combined anticholinergic load and sedative load of the medications may also be done, as anticholinergic and sedative loads increase the rate of confusion and other adverse side effects.

**Immunisation**

Immunisation is recommended for adults aged 65 years and over, according to the Australian Government Department of Health and Ageing Australian Immunisation Handbook.

**Immunisation: Preventive Interventions in Older Age**

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Technique</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vaccination: influenza</td>
<td>Annual influenza vaccination in the pre-flu season months. (III,C)</td>
<td>Jefferson et al., 2010</td>
</tr>
<tr>
<td>Vaccination: pneumococcal</td>
<td>Pneumococcal polysaccharide vaccination (23vPPV) is recommended for the prevention of invasive pneumococcal disease. (II,B)</td>
<td>Moberley et al., 2008</td>
</tr>
<tr>
<td>Vaccination: herpes zoster</td>
<td>A single dose of zoster vaccine is recommended for adults aged 60 years and over. (II,B)</td>
<td>Harpaz, Ortega-Sanchez, &amp; Seward, 2008</td>
</tr>
<tr>
<td></td>
<td>See also the NGC summary of the Royal Australian College of General Practitioners (RACGP) guideline Communicable diseases.</td>
<td></td>
</tr>
</tbody>
</table>

**Falls and Physical Activity**

Advice about moderate physical activity is recommended for all older people (Health Education Authority, 1999; Panel on Prevention of Falls in Older Persons, 2011). (A)

**Falls: Identifying Risks**

<table>
<thead>
<tr>
<th>Who Is at Risk of Falls?</th>
<th>What Should Be Done?</th>
<th>How Often?</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Risk</td>
<td>Screen for falls and risk factors for falls.* (I,A)</td>
<td>Every 12 months</td>
<td>Panel on Prevention of Falls in Older Persons, 2011; Gillespie et al., 2003; Chang et al., 2004</td>
</tr>
<tr>
<td>Moderately High Risk</td>
<td>Screen for risk factors and involve in preventive activities.* (I,A)</td>
<td>Every 6 months</td>
<td>National Falls Prevention for Older People Initiative, 2004; Gillespie et al., 2003</td>
</tr>
</tbody>
</table>

*If the person has inadequate sun exposure, vitamin D supplement should be recommended to reduce the risk of fracture (Bischoff-Ferrari et al., 2004).

**Falls: Preventive Interventions**

<table>
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<tr>
<th>Intervention</th>
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<th>References</th>
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</thead>
<tbody>
<tr>
<td>Screening for falls risk</td>
<td>Ask the following 3 screening questions: 1. Have you had 2 or more falls in the past 12 months? 2. Are you presenting following a fall? 3. Are you having difficulty with walking or balance?</td>
<td>National Falls Prevention for Older People Initiative, 2004; Gillespie et al., 2003; Coleman et al., 2004; Hodge et al., 2007; Weiner et al., 2004; &quot;Guideline for the prevention of falls,&quot; 2001; Podsiadlo &amp; Richardson, 1991; National Collaborating Centre for Nursing and Supportive Care</td>
</tr>
</tbody>
</table>
If the answers to any of these are positive:
- Obtain relevant medical history, complete a physical examination, and perform cognitive and functional assessments.
  - Determine multifactorial fall risk:
    - History of falls
    - Multiple medications, and specific medications (e.g., psychotropic medications and opioid-containing analgesic agents)
    - Impaired gait, balance and mobility
    - Impaired visual acuity, including cataracts
    - Issues with bifocal or multifocal spectacles use
    - Reduced visual field
    - Other neurological impairment
    - Muscle weakness
    - Cardiac dysrhythmias
    - Postural hypotension
    - Foot pain and deformities and unsafe footwear
    - Home hazards
    - Vitamin D deficiency

There are many fall risk assessment tools. However, reports from researchers are variable, so no single tool can be recommended for implementation in all settings or for all subpopulations within each setting. A quick screening tool is the ‘timed up and go’ test (TUGT), which involves looking for readiness as the older person gets up from a chair without using his or her arms, walks 3 metres and returns. The usefulness of timing this test as a predictor of falls has been questioned.

Simple alternatives to the TUGT are the repeated chair standing test and the alternate step test. The repeated chair standing test measures how quickly an older person can rise from a chair five times without using the arms. A time of >12 seconds indicates an increased fall risk. The alternate step test measures how quickly an older person can alternate steps (left, right, left, etc.) onto an 18 cm high step a total of eight times. A time >10 seconds indicates an increased fall risk. The Quickscreen assessment tool, developed and validated for use in an Australian population, includes these tests as well as simple assessments of medication use, vision, sensation and balance.

See also the NCC summary of the RACGP guideline Urinary incontinence.

Falls risk reduction
- Prescribe or refer for a home-based exercise program and/or encourage participation in a community-based exercise program. In either case, exercises for preventing falls needs to include medium-intensity to high-intensity balance training (i.e., exercises must be undertaken while standing and challenge balance), and be of long duration, preferably ongoing. Exercise programs targeting non-English speaking patients may need to address cultural norms about appropriate levels of physical activity.

  - Physical activity recommendations for older adults from the American College of Sports Medicine and American Heart Association are:
    - Do moderately intense aerobic exercises 30 min/day, 5 days/week or vigorous aerobic exercise 20 min/day, 3 days/week.
    - Do 8 to 10 muscle strength training exercises, 10 to 15 repetitions of each exercise 2 to 3 times/week.
    - If at risk of falling, perform balance exercises and have a physical activity plan.

- Review medications and discontinue centrally acting medications where clinically appropriate

- Consider prescribing vitamin D for people with vitamin D levels <50 nmol/L for older people living in the community (III,C) and consider routinely prescribing vitamin D (unless contraindicated) for all older people living in residential aged care (I,B), as routine sun exposure in residential aged care may not be feasible.

- See also the NCC summary of the RACGP guideline Osteoporosis.

  - Refer people with painful feet or foot deformities to podiatry for intervention.
  - Provide advice on the dangers of bifocal and multifocal glasses when walking outdoors (as these blur ground-level obstacles) and recommend the wearing of single lens glasses when outdoors.
  - Identify cataracts and refer for cataract extraction.
  - Refer people with a history of recent falls for an occupational therapy home assessment.

Visual and Hearing Impairment
Visual acuity should be assessed from age 65 years using the Snellen chart (B) in those with symptoms or who request it. There is no evidence that screening of asymptomatic older people results in improved vision (Smeeth & Iliffe, 2006).

Hearing loss is a common problem among older individuals and is associated with significant physical, functional, and mental health consequences. Annual questioning about hearing impairment is recommended with people aged 65 years and over. (B)

In some states and territories, there are legal requirements for annual assessment (e.g., driving over age 70 years) (Austroads, 2012).

Eye disease and visual impairment increase threefold with each decade of life after age 40 years. They are often accompanied by isolation, depression and poorer social relationships, and are strongly associated with falls and hip fractures (Taylor & Keeffe, 2002). It should be determined whether the patient is wearing an up-to-date prescription, and whether there is a possibility of falls because they are no longer capable of managing a bifocal, trifocal or multifocal prescription. People at greater risk of visual loss are older people and those with diabetes and a family history of vision impairment.

### Visual and Hearing Impairment: Identifying Risks

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>People ≥65 years</td>
<td>Screen for hearing impairment. (II,B) Every 12 months</td>
<td>USPSTF, 2011</td>
</tr>
</tbody>
</table>

### Visual and Hearing Impairment: Preventive Interventions

<table>
<thead>
<tr>
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<tr>
<td>Visual impairment case finding</td>
<td>Use a Snellen chart to screen for visual impairment in the elderly if requested or if indicated by symptoms. There is no evidence that screening asymptomatic older people results in improvements in vision.</td>
<td>Smeeth &amp; Iliffe, 2006; Patterson, &quot;Screening,&quot; 1994</td>
</tr>
<tr>
<td>Hearing impairment screening</td>
<td>A whispered voice out of field of vision (at 0.5 metre) or finger rub at 5 cm has a high sensitivity for hearing loss, as does a single question about hearing difficulty.</td>
<td>USPSTF, 2011; Patterson, &quot;Prevention,&quot; 1994</td>
</tr>
</tbody>
</table>

### Dementia

With people aged over 65 years, clinicians should be alert to the symptoms and signs of dementia. These may be detected opportunistically and assessed using questions addressed to the person and/or their carer. (C)

### Dementia: Identifying Risks

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Average Risk</td>
<td>No evidence of benefit from screening (II,C)</td>
<td>n/a</td>
<td>Boustan et al., 2003; National Collaborating Centre for Mental Health, 2007</td>
</tr>
<tr>
<td>Moderate Risk</td>
<td>Case finding and early intervention (III,C)</td>
<td>n/a</td>
<td>Gao et al., 1990; Lautenschlager et al., 1996; Lenor et al., 2011</td>
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#### Dementia: Preventive Interventions

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<td>Case finding and confirmation</td>
<td>Ask ‘How is your memory?’ and obtain information from others who know the person (e.g., repeating questions, forgetting conversations, double buying, unpaid bills, social withdrawal).</td>
<td>University of New South Wales, 2011</td>
</tr>
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<td>Other symptoms may include a decline in thinking, planning and organising and reduced emotional control or change in social behaviour affecting daily activities. Not everyone with dementia has memory problems as an initial symptom (C). Other clues are missed appointments (receptionist often knows), change in compliance with medications and observable deterioration in grooming, dressing.</td>
<td>Brodaty et al., 2002; De Lepelere et al., 2005</td>
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<tr>
<td></td>
<td>Over several consultations, obtain the history from the person and family/carer, and perform a comprehensive physical examination. Undertake cognitive assessment using:</td>
<td>Brodaty et al., 2002</td>
</tr>
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<td></td>
<td>Mini-Mental State Examination (MMSE) at <a href="http://www.minimental.com">www.minimental.com</a></td>
<td>Brodaty et al., 2002</td>
</tr>
<tr>
<td></td>
<td>Clock drawing test</td>
<td>Kirby et al., 2001</td>
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<td>Information and Universal Dementia Assessment Scale at <a href="http://www.infohdementia.org">www.infohdementia.org</a> au/understanding</td>
<td>Storey et al., 2004</td>
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Definitions:

Levels of Evidence

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Grades of Recommendations

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<td>A</td>
<td>Body of evidence can be trusted to guide practice</td>
</tr>
<tr>
<td>B</td>
<td>Body of evidence can be trusted to guide practice in most situations</td>
</tr>
<tr>
<td>C</td>
<td>Body of evidence provides some support for recommendation(s) but care should be taken in its application</td>
</tr>
<tr>
<td>D</td>
<td>Body of evidence is weak and recommendation must be applied with caution</td>
</tr>
</tbody>
</table>

Clinical Algorithm(s)

None provided

Evidence Supporting the Recommendations

References Supporting the Recommendations


Austroads. Assessing fitness to drive for commercial and private vehicle drivers: medical standards for licensing and clinical management guidelines. [Internet]. Austroads; 2012 [accessed 2012 Jul 01].


Farooki A. Central obesity and increased risk of dementia more than three decades later. Neurology. 2009 Mar 17;72(11):1030-1; author reply 1031. PubMed


University of New South Wales as represented by the Dementia Collaborative Research Centre - Assessment and Better Care 2011. 14 Essentials for good dementia care in general practice. NSW: The University of New South Wales; 2011.


Wyman JF, Croghan CF, Nachreiner NM, Gross CR, Stock HH, Tailey K, Monigold M. Effectiveness of education and


Type of Evidence Supporting the Recommendations

The type of supporting evidence is identified and graded for selected recommendations (see the "Major Recommendations" field).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

- Increased quality of life and improved mental and physical functioning in older age

Potential Harms

- All screening instruments used to assess dementia in general practice have high rates of overdiagnosis (false positives) and underdiagnosis (false negatives), so the full clinical presentation needs to be taken into account.

Qualifying Statements

Qualifying Statements

- The information set out in this publication is current at the date of first publication and is intended for use as a guide of a general nature only and may or may not be relevant to particular patients or circumstances. Nor is this publication exhaustive of the subject matter. Persons implementing any recommendations contained in this publication must exercise their own independent skill or judgement or seek appropriate professional advice relevant to their own particular circumstances when so doing. Compliance with any recommendations cannot of itself guarantee discharge of the duty of care owed to patients and others coming into contact with the health professional and the premises from which the health professional operates.
- Whilst the text is directed to health professionals possessing appropriate qualifications and skills in ascertaining and discharging their professional (including legal) duties, it is not to be regarded as clinical advice and, in particular, is no substitute for a full examination and consideration of medical history in reaching a diagnosis and treatment based on accepted clinical practices.
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- These guidelines have not included detailed information on the management of risk factors or early disease (e.g., what medications to use in treating hypertension). Similarly, they have not made recommendations about tertiary prevention (preventing complications in those with established disease). Also, information about prevention of infectious diseases has been limited largely to immunisation and some sexually transmitted infections (STIs).

Implementation of the Guideline

Description of Implementation Strategy

For preventive care to be most effective, it needs to be planned, implemented and evaluated. Planning and engaging in preventive health is increasingly expected by patients. The Royal Australian College of General Practitioners (RACGP) thus provides the Red Book and National guide to inform evidence-based guidelines, and the Green Book (see the "Availability of Companion Documents" field) to assist in development of programs of implementation. The RACGP is planning to introduce a small set of voluntary clinical indicators to enable practices to monitor their preventive activities.

Implementation Tools

Chart Documentation/Checklists/Forms

Resources

For information about availability, see the Availability of Companion Documents and Patient Resources fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

- Staying Healthy

IOM Domain

- Effectiveness
- Patient-centeredness
Identifying Information and Availability

Bibilographic Source(s)

Adaptation
This guideline has been partially adapted from Australian, Canadian, United Kingdom, and/or United States preventive guidelines.

Date Released
2012

Guideline Developer(s)
Royal Australian College of General Practitioners - Professional Association

Source(s) of Funding
Royal Australian College of General Practitioners

Guideline Committee
Red Book Taskforce

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Financial Disclosures/Conflicts of Interest
Not stated

Guideline Status
This is the current release of the guideline.

Guideline Availability
Electronic copies: Available in Portable Document Format (PDF) from the Royal Australian College of General Practitioners (RACGP) Web site.

Availability of Companion Documents
The following are available:
**Patient Resources**

None available

**NGC Status**

This NGC summary was completed by ECRI Institute on May 31, 2013.

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