# Health assessment of elderly patients



#### Len C Gray, PhD, FRACP, is Professor in Geriatric Medicine, University of Queensland.

### Jonathan W Newbury,

MD, FRACGP, is Associate Professor, Spencer Gulf Rural Health School, Department of General Practice and Rural Health, University of Adelaide, South Australia.

**BACKGROUND** Comprehensive health assessment of the elderly in primary care will become a more important element of general practice as population aging proceeds and evidence of efficacy emerges.

**OBJECTIVE** This article describes approaches to provision of health assessment in primary care based on the best available evidence.

DISCUSSION Current best practice includes the use of structured health assessment protocols, an integrated multidisciplinary approach, targeting patient groups with intermediate levels of disability and handicap, in-home assessments and carefully structured follow up mechanisms.

Older patients are likely to represent an increasing proportion of the caseload of general practitioners into the future. The Australian population is currently aging with the proportion of the population aged 65 years and over expected to increase from 12% in 1996 to 15.9% in 2016.<sup>1</sup> More importantly, the proportion of very old people aged 80 years and older will increase from 2.6 to 3.9% of the population. This very old population has a high rate of illness and disability with associated very high rates of hospital and residential care utilisation.<sup>23</sup> Of those very old people living in the community, 46% of men and 59% of women live alone <sup>1</sup>.

Very old people present some particular challenges to GPs. They often have multiple illnesses with associated disability and dependence on others. Assessment of medical problems in isolation, without consideration of functional abilities and their interaction with family members and their living environment, may yield suboptimal results. Yet comprehensive assessment is difficult to achieve in traditional office practice. Many disabled older people struggle to visit the office and the process of evaluation is time consuming and potentially financially unrewarding in the standard fee for service arrangements.

# What is health assessment?

In this article, we use the term 'health assessment' to reflect a structured approach to assessment of older people using standardised protocols. Such approaches are now widespread in specialist aged care practice and are used by individual practitioners and multidisciplinary teams.

The Enhanced Primary Care package (EPC), introduced in 1999 by the Commonwealth Department of Health and Aged Care,<sup>4</sup> included an example of such an approach – 'Health assessments for people age 75 years and over' (75+ health assessment) – as well as multidisciplinary care plans and case conferences. These were designed to provide preventive care, facilitate joint work by GPs with nursing and allied health professionals, and to improve access to health services by the elderly and people with chronic conditions.

# Why conduct health assessments?

Health assessments of older people have two important functions:

- the identification of clinical problems including disability and psychosocial issues which may be overlooked in less structured approaches. Typical examples include incontinence and cognitive impairment, and
- the assessment of risk of preventable disorders and adverse events. Examples include the risk of fall related injury and malnutrition (see the article *Malnutrition in older people* by Renuka Visvanathan page 799 this issue).

There are two important dimensions to prevention:

• primary prevention through identification of risk and

taking appropriate action, and

 assessment of established illness and disability that may lead to subsequent deterioration or adverse events.

Two Australian randomised controlled trials (RCT) of health assessment of the elderly have been completed. Newbury et al<sup>5</sup> found no reduction in mortality nor the number of problems in the intervention group compared to the control group. The intervention group did report an improvement in self rated health, reduction in depression score and reduced number of falls. The second trial, involving older veterans and war widows, suggested a small positive effect of health assessments on quality of life for those remaining in the community.<sup>6</sup>

A meta regression analysis of preventive home visits for the elderly demonstrated a reduction in mortality in younger study populations (mean age <80 vs. >80) and functional decline was reduced in populations with lower mortality rates.<sup>7</sup> Stuck et al<sup>7</sup> also found decreased functional decline and decreased nursing home admissions in studies employing a multidimensional assessment combined with regular home visits to follow up problems. This retrospective analysis does not necessarily indicate what intervention is useful among the very old portion of the 75 years and over population, or in the subset of the population with a higher mortality rate.

To achieve these desirable outcomes (ie. identification of clinical problems and assessment of risk of preventable disorders) requires the multidimensional assessment of a standardised protocol combined with the rigorous follow up process of a care plan. Stuck et al<sup>8</sup> concluded these results should drive policy in countries where preventive home visit programs for the elderly exist (Australia, Britain and Denmark).

# Which patients should be assessed?

Comprehensive health assessments are time consuming and therefore expensive. In general, intensive interventions should be targeted to those patients with complex problems that are likely to benefit from the process. Targeting in specialist aged care practice, particularly in the hospital setting, has been associated with more effective use of practitioner time and other resources.

The high prevalence of illness and disability in the very old underpins the choice of the 75+ health assessment. Activities of daily living (ADL) instruments have been extensively used to assess function in the elderly. The basic ADL instrument consists of 10 items including bathing, dressing, walking and continence.<sup>9</sup> The basic ADL instrument was designed to assess the chronically ill elderly and only captures disability at a severe level. The instrumental ADL instrument measures higher functions and consists of eight items including transport, shopping and housekeeping.<sup>10</sup>

However, evidence does not uniformly support the targeting of 75+ health assessments to the frail elderly.<sup>11-13</sup> Inclusion of relatively independent very old people may attenuate the benefits. Studies that have excluded the more independent elderly have reported positive results.<sup>14,15</sup> Bula et al<sup>16</sup> performed a secondary analysis of a previous RCT,<sup>17</sup> and found health assessment improved functional status in the subset with only instrumental ADL impairment more than in the entire study population.

These studies raise the possibility that the best functioning elderly do not benefit from a 75+ health assessment as their functional impairments are not significant enough to measure an improvement after the assessment. This is consistent with the opinion of some Australian GPs who are sceptical about the benefits of 75+ health assessments for their patients. On the other hand, those who have very poor function may not benefit because they are too disabled to be assisted by an annual assessment process and are already on the 'slippery slope' to nursing home admission.

## Mechanisms for conducting an assessment

The 75+ health assessment enables GPs to undertake an in-depth assessment of patients aged 75 years and over in the context of their social and physical environment with the aim of minimising potential health risks and improving health outcomes. The Medicare Benefits Schedule describes the assessment as including medical, functional, psychological, and social/environment components.<sup>18</sup> Data collection at home can be undertaken on behalf of the GP by nursing or allied health staff and reviewed by the GP later with the patient. These approaches are underpinned by evidence from trials of assessment processes.

The 75+ health assessment is one of numerous methods developed for assessment of frail, older people. A comprehensive review of such methods was conducted recently in New Zealand as a preliminary step to development of a standardised approach in that country.<sup>19</sup> An Italian study<sup>14</sup> produced significant benefits using the interRAI home care assessment tool that is now in wide-spread international use.<sup>20</sup> Some Australian services have adopted screening ('INI' [initial needs identification]) and assessment ('ONI' [ongoing needs identification]) tools.

Useful guides on 'How to do a 75+ health assess-

ment' using standardised assessment protocols have been previously published in Australian Family Physician<sup>21</sup> and in a recent Australian geriatrics textbook.<sup>22</sup> Ideally, the assessment should be conducted in the patient's usual living environment, and if there is any degree of dependence on others or evidence of cognitive impairment, in association with a close relative or friend. While the procedure can be conducted by a GP alone, there may be advantages in conducting the process in partnership with another health professional. Introduction of nursing or allied health expertise into the process may result in a more rounded evaluation, increase the efficiency of the process and initiate ongoing cooperative community/allied health service provision.

## Recommendations

The following recommendations are broadly based on our field experience and the evidence presented in this article. It is suggested that GPs:

- target health assessments particularly to older people with mild to moderate disability
- develop a screening strategy to identify these patients in the practice. Consider a file review of all existing very old patients who have not already been assessed. (Computerised prescribing packages will report a list of all patients over a specified age)
- where possible, work with existing community service staff to conduct health assessments. Alternatively engage appropriately trained practice nurses to support the process
- develop a multidisciplinary care plan. Aim for an integrated approach with other services to promote sharing of assessment information and avoid duplication
- include a home assessment in the protocol with regular reviews for high risk individuals
- use specialist geriatric assessment services for patients with very complex problems, particularly where situations are unstable.

Conflict of interest: none.

#### References

- Australian Institute of Health and Welfare. Older Australia at a glance. In: Gibson D, Benham C, Racic L, eds. Canberra: AIHW, 1999.
- Australian Institute of Health and Welfare. Australian hospital statistics 2000–2001. AIHW cat no. HSE 20. Canberra: AIHW, 2002.
- Australian Institute of Health and Welfare. Residential aged care services in Australia 2000-2001: a statistical overview. Canberra: AIHW, 2002.
- Commonwealth Department of Health and Aged Care. Medicare Benefit Schedule Book. November 1999 edn. Canberra:

Commonwealth Department of Health and Aged Care, 1999.

- Newbury J, Marley J, Beilby J. A randomised controlled trial of the outcome of health assessment of people aged 75 years and over. Med J Aust 2001;175:104–107.
- Byles J, Tavener M, O'Connell R, et al. Randomised controlled trial of health assessments for older Australian veterans and war widows. Med J Aust 2004;181:186–190.
- Stuck A, Egger M, Hammer A, Minder C, Beck J. Home visits to prevent nursing home admission and functional decline in elderly people. J Am Med Assoc 2002;287:1022–1028.
- Stuck AE, Egger M, Hammer A, Minder CE, Beck JC. Home visits to prevent nursing home admission and functional decline in elderly people: systematic review and meta-regression analysis. JAMA 2002;287:1022–1028.
- 9. Mahoney F, Barthel D. Functional evaluation: the Barthel Index. Md State Med J 1965;14:61-65.
- Lawton M, Brody E. Assessment of older people: self maintaining and instrumental activities of daily living. Gerontologist 1969;9:179–186.
- Stuck A, Minder C, Peter-Wuest I, et al. A randomised trial of inhome visits for disability prevention in community dwelling older people at low and high risk for nursing home admission. Arch Intern Med 2000;160:977-986.
- Byles J. A thorough going over: evidence for health assessments for older persons. Aust N Z J Public Health 2000;24:117-123.
- Elkan R, Kendrick D, Dewey M, et al. Effectiveness of home based support for older people: systematic review and metaanalysis. BMJ 2001;323:719–724.
- Bernabei R, Landi F, Gambassi G, et al. Randomised trial of impact of model of integrated care and case management for older people living in the community. BMJ 1998;316:1348-1351.
- van Rossum E, Frederiks C, Philipsen H, Portengen K, Wiskerke J, Knipschild P. Effects of preventive home visits to elderly people. BMJ 1993;307:27-32.
- Bula C, Berod A, Stuck A, et al. Effectiveness of preventive inhome geriatric assessment in well functioning, community dwelling older people: secondary analysis of a randomised trial. J Am Geriatr Soc 1999;47:389-395.
- Stuck A, Aronow H, Steiner A, et al. A trial of annual in-home comprehensive geriatric assessments for elderly people living in the community. N Engl J Med 1995;333:1184–1189.
- Medicare Benefit Schedule Book. November 2000 edn. Canberra: Department of Health and Aged Care, 2000.
- Martin JO, Martin IR. Assessment of community dwelling older people in New Zealand: a review of comprehensive and overview assessment tools. Available at: www.nzgg.org.nz/guidelines/0030/Final\_Report\_tools\_review.pdf.
- Hirdes JP, Fries BE, Morris JN, et al. Integrated health information systems based on the RAI/MDS series of instruments. Health Manage Forum 1999;12:30–40.
- Newbury J, Marley J. 75+ health assessments. Aust Fam Physician 2001;30:82–87.
- Ratniake R, ed. Textbook of geriatric medicine. 1st edn. McGraw Hill, 2002.

#### Email: lgray@soms.uq.edu.au

AFP