

# 1 Assessment

*Rob Butler & Brice Pitt*

---

*Location of assessment • History • Mental state • Physical examination  
• Investigations • Formulation • Rating instruments • Conclusion*

---

Old age psychiatry is general adult psychiatry adapted to later life, and has come into being chiefly because of the spectacular increase in the proportion of the population surviving into the senium (over the age of 65 and beyond) (Box 1.1). Many people become mentally ill for the first time in late life, partly because of vicissitudes such as bereavement and infirmity, and partly because of pathological changes in the brain reflected in delirium and the dementias.

In old age, psychiatry is modified by the frequency of physical illness (including sensory deficits) and organic mental changes. Organic and functional illness often coexist. Older people present their troubled feelings as physical symptoms more often than younger patients. Some others are complained of, rather than as presenting complaints in their own right. So, it is necessary to evaluate the history given by relatives and carers as well as the patients themselves. Because of the growth of dependency with advancing years, the complex situations arising from the needs of patients and their carers (not necessarily identical) need appraisal. In practical terms this means that cognitive assessment and physical examination are essential. Since many patients are unable, or unwilling, to come to a surgery or an out-patient department, there is an important place for domiciliary assessment. Finally, as with general medicine, unusual presentations of disorders encountered in younger people, such as pseudo-dementia and somatisation, are more common.

## **Box 1.1 Features of old age psychiatry**

The older population is growing  
Older people may have more losses and be more isolated  
Physical illness is more common  
Carers often play key roles  
Cognitive testing and physical examination are very important  
Assessments are usually carried out at home

## Location of assessment

Old age psychiatrists, at least in the UK, often see the patient in the first instance at home. This saves the patient from having to come to the hospital and enables the problem to be assessed where it presents. Assets and liabilities, such as a lunch club two doors away, a loose stair rod or a hole in the carpet, are readily identified. Evidence of dysfunction such as squalor, rotting food, an empty larder and the taps left on, can all be noted. It is particularly useful to look at the medications that the patient is currently taking, or has taken, or which belong to other members of the household (Box 1.2). Evidence of help provided by the family, or home helps, with the management of correspondence or accounts, evidence of enjoyment of TV or recorded music and availability of a telephone or alarm system, all help to indicate the quality of life and amenities. If neighbours or family are in attendance, their attitudes, feelings and readiness to cope can be ascertained. Although domiciliary visits are sometimes seen as time-consuming and costly, it may be possible to reach a decision at the time of the best action (which of course includes inaction). It is, as a rule, inappropriate to have more than two people visit a patient at home. Brice Pitt recalls an occasion when he visited a patient, accompanied by several medical students, and a neighbour called the police believing she was being invaded by a gang!

By contrast, out-patient departments suffer from the vagaries of ambulance transport, the unwillingness of many patients to attend, and their being unsettled by the journey and a strange clinical environment if they do so. Physical examination and blood taking are a little easier than at home, but less information may be forthcoming. A good compromise is attendance at a day hospital for assessment, which allows activities of daily living and social behaviour to be observed and a medical assessment to be conducted under less pressure of time. The day hospital is a good setting for multi-disciplinary assessment. Of course, it is sometimes necessary to admit a patient to hospital. This offers the advantages of a safe environment, day and night nursing observations and a complete

### **Box 1.2 Advantages of home assessments**

- More convenient (usually) for the patient
- More relaxing for the patient
- Living conditions can be seen
- Activities and social activities can be assessed
- Medications can be examined

break for the patient and their carer. Liaison assessments are an important part of old age psychiatry, and are covered in Chapter 14.

### **Interviewing relatives and carers**

In old age psychiatry, it is often particularly helpful to interview a carer, or another involved individual. This initial meeting can establish a rapport which will prove important for future help and support. The carer needs to be asked questions about the patient and themselves, and their relationship with the patient (Box 1.3). This will help to establish how much the information may be influenced by the relationship or situation. Useful addresses are listed in the Appendix (see also Chapter 18).

## **History**

### **Setting**

Usually, it is best to see patients on their own first. It is important to recognise and respect the patient's right to tell their own story. Indeed, unless severely cognitively impaired and unwilling to cooperate, patients must be asked for their permission for information to be given by others. Older people may be deaf or dysarthric and these deficits need to be recognised and allowed for if they cannot be remedied, e.g. by finding a hearing aid (even an ear trumpet) or retrieving false teeth. Very old people may be somewhat over-awed by respect for doctors and will be helped to be at their ease if the doctor does not take up too commanding a position (e.g. sitting by the patient rather than behind a desk) and is friendly and informal. Sitting slightly below the patient (rather than looming intimidatingly), with the light on one's

#### **Box 1.3 Questions for carers**

Relationship to the patient  
Amount of care provided  
Degree of stress they are under  
What help they can be offered  
Understanding of the patient's illness  
What expectations they have from services  
Their awareness of support or voluntary organisations  
Their knowledge of the illness

**Box 1.4 Key features of the history**

The patient must be at ease, seeing and hearing the doctor  
Why is the individual presenting now?  
Activities of daily living  
Is there a carer? What is their situation?  
What was the patient's highest level of functioning?  
What is the housing and income position?

face, enables the patient to feel less threatened and helps the hard of hearing to read lips (Box 1.4).

**History of presenting complaint**

As always in medicine, we want to know not only the nature of the presenting complaint, but why it is presenting now. Is this a new problem, or have circumstances altered so that an old problem has come to the fore (e.g. a wife with dementia whose husband has recently died)? The history is likely to include disturbance of feelings, cognition (especially memory) and activities of daily living. It is important to establish how patients usually cope with the latter, and to what extent they rely on others. For those who rely heavily on others, there may have been a change in the pattern of care, such as a new home help or the suspension of a day service.

**Family history**

There may be a relevant history of psychiatric illness, e.g. dementia (having to go into a home in late life) or depression (taking a long time to recover from childbirth, unexplained time off work, electroconvulsive therapy, suicide). A history of early deprivation, such as the death of the patient's mother, may be relevant to subsequent coping. Siblings may still be alive and in contact with the patient.

**Personal history**

A personal history puts the patient and their problems in context. Events which happened many years ago may have important implications for the present. The patient's level of education and occupational history are useful indications of what might be expected by way of recreational interest (e.g. reading, playing bridge or doing crossword puzzles). It is recognised that the less well educated, and ostensibly less intelligent, perform less well on cognitive tests such as the Abbreviated Mental Test

Score (AMTS; Hodkinson, 1973) or the Mini-Mental State Examination (MMSE; Folstein *et al*, 1975). It is worth asking how the patient spent the Second World War years (e.g. evacuation, refugee or national service). The ability to cope with five years active service in the army without incident is one indication of stability and resilience. Few older people are still at work, so work difficulties are rare, although forced retirement may have been distressing and couples may have problems in adjusting to seeing more of each other when neither is at work.

### **Past psychiatric history**

A previous history of psychiatric illness may be informative, though this is frequently not volunteered, or the details are highly obscure, either because the patient or the family are not very keen on disclosing them or because it was all a long time ago and much has been forgotten.

### **Medical history**

Old people have, of course, lived a long time and their present general practitioner may have little or no awareness of past disorders, though some information may be buried in bulky packages of notes. Where the previous record is exceedingly slender, the fact that a patient is presenting at all is likely to be highly significant.

### **Medications**

With a multiplicity of disorders, or symptoms, may come polypharmacy. Patients are often perplexed about what the different drugs they take are for, and when they should be taking them. It may be evident that they comply well with some medications and not others. On the whole, for example, analgesics are more readily taken than antipsychotics. Despite the general aversion to benzodiazepine tranquillisers, there is still a great willingness to take and prescribe benzodiazepine hypnotics, which may either have side-effects or withdrawal effects if suddenly discontinued (e.g. on admission to hospital). Iatrogenic falling, drowsiness and confusion are all common in old age. A wide range of over-the-counter medications are ever more available and there is the possibility of ill effects from interactions.

### **Alcohol history**

Admission to hospital for alcohol-related disorder declines with ageing, but alcohol misuse is not unknown in older people (see Chapter 11). A long habit may continue and become difficult when medications are added, or some lonely, depressed older people may start drinking

for the first time. Since this information is rarely volunteered it must be asked for (e.g. the four CAGE screening questions; Ewing, 1984).

### **Activities of daily living**

Is the patient independent or in sheltered housing? Is their environment clean and are they well nourished? How often, if at all, does a carer (family, friend or home help) need to shop, draw a pension, pay the rent, cook meals, do laundry or escort the patient?

### **Social history**

Though poverty is rarer in old age than it used to be, many older people need to live frugally to eke out their retirement or occupational pension, and such savings as they may have. They are more likely to have lived in their own homes a long time, and to own them. Any threat to this security by pressure to move because of infirmity, or a landlord's desire to increase the rent, may be extremely stressful, as may income tax and local tax demands. Sometimes there are relatives in financial need with expectations of their aged parents which may colour their attitudes to nursing home care. Some of the oldest people have bad memories from before the Second World War of means testing, or 'the workhouses', which may make them very reluctant to consider going into a home, even when the need is great. For all these reasons, judicious inquiry about income, assets, obligations and expenditures is useful. In the morbidly depressed, fears of privation and ruin may be unjustified. A very important question is who owns the property or who holds the tenancy. Is the old lady living with her daughter, or her daughter with her? Even now, the oldest people are likely to be living in the least suitable accommodation, with ancient and unsafe wiring, poor lighting and heating, insufficient hot water, outdoor lavatories, many levels and steep steps. Yet, understandably, there is a considerable attachment to the home they are familiar with.

What does the patient do for leisure and pleasure? Have they any hobbies, do they socialise? Are there any particularly close friends or confidants? Very isolated old people are at considerable risk if they become infirm.

### **Premorbid personality**

It is difficult to establish the premorbid personality reliably, but the effort to do so by recourse to the opinions of others may be useful. For example, learning that chronically miserable and hypochondriacal Mrs Jones was by no means always like this, but on the contrary was, until three years ago, lively, sociable and neighbourly, may sharpen

therapeutic endeavours. It is probably easier to get accurate information about how outgoing or otherwise the patient was than other aspects of personality.

## Mental state

### Appearance and behaviour

The mental state examination will first take account of the patient's appearance (Box 1.5). Are there obvious signs of neglect such as dirty clothes, features and fingers, matted hair, or is the patient clean and well groomed? Is the manner confident, sociable, exuding bonhomie and well-being, or the opposite, with extravagant 'illness behaviour' – stumbling, shaking, subsiding helplessly? Is the patient fully alert, animated and articulate, or clouded, placid and lacking in spontaneity? Are there any impairments of vision, hearing or mobility?

### Speech

Is the history spontaneous, pertinent, consistent and insightful, or hesitant, circumstantial, unfocused? Are questions understood and answers adequate, relevant and informative? If not, is the patient deaf, dysphasic, demented, delirious or disaffected?

### Mood

Depressed older people may well not say they are miserable, but worry about physical disorders, poverty, mugging, loneliness or, if specifically asked, admit that they are unable to enjoy themselves. Suicide is relatively common in later life and the inquiry is incomplete without questions about whether life seems worth living and whether there is, or has been, suicidal intent. Anxiety in older people is often regarded as natural or appropriate and is underestimated. It is particularly likely to cause the sufferer to become house bound, so an inquiry about whether the subject goes out and if not, why not, is important.

#### **Box 1.5 Key features of the mental state examination**

Establish sight or hearing difficulties  
Anxiety symptoms are common  
Be aware of masked depression  
Ask about suicidal ideation  
A full cognitive examination is essential

**Abnormal beliefs**

Paranoia may compound deafness, be a phase of dementia, colour severe depression or be a prime symptom of schizophrenia. In dementia or delirium, strangers may be recognised warmly as friends or family, and those nearest and dearest may be perceived as alien.

**Abnormal perceptions**

Auditory hallucinations are common in paraphrenia, but less so in dementia. Visual hallucinations, however, especially towards evening, are not uncommon in dementia and may be taken so seriously that patients believe they have to make provision for the intruder (e.g. providing meals!).

**Cognition**

Cognitive assessment should include orientation in time, place and person; recent and long-term memory; concentration; language; praxis and simple calculation. These are incorporated in a brief form in the MMSE (Folstein *et al*, 1975). An estimation should also be made of intelligence and judgement. Even in those who appear cognitively intact it is important to test cognition, but try not to alienate or alarm the patient by direct or challenging questions. It can be helpful to warn patients not to be insulted by some of the questions, and not to worry about the ones they can not answer. Deaf, drugged and disaffected older people tend to perform less well than they should.

**Insight**

People with early dementia may admit that their memory is faulty but later revert to defensive denial. Depressed older people tend to emphasise their infirmity and incompetence. Anxiety may be attributed to physical illness or environmental hazards (stairs, mugging). Insight is rare in mania and paraphrenia.

## Physical examination

The assessment is incomplete without a physical examination. This may not be appropriate in the patient's home, although at the very least vision, hearing, speech and mobility should be noted. At out-patients, day hospital or on admission, a full physical examination should be undertaken. Pay particular attention to the patient's general state of nutrition, health, signs of injury or self-neglect, and

disability limiting function or causing distress and affecting mood or cognition.

## Investigations

In a clinical setting, investigations include weight, TPR (temperature, pulse and respiration rate), urine testing, blood tests for haematology, B12, folate, syphilis serology and chemical profile (urea and electrolytes, liver function tests and thyroid function tests) and a chest X-ray. Brain imaging is required where there is cognitive impairment, especially when it takes a rapid or unusual form, and to exclude space occupying lesions, including haematoma, hydrocephalus and cerebral infarction (see Chapter 12).

## Formulation

The history, mental state, physical examination and investigations conclude with a formulation. This includes: a brief resume of the above; differential diagnosis; aetiology; management plans; and prognosis.

## Diagnosis

The current diagnostic systems are the *International Classification of Diseases and Related Health Problems* (ICD-10; World Health Organization, 1993) and the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV; American Psychiatric Association, 1994). The ICD-10 criteria for mental disorders are covered in the relevant chapters of the book. Neither classification includes a separate section for mental disorders of older age nor a diagnosis of paraphrenia (see Chapter 10). ICD-10 has one axis (for mental disorders) while DSM-IV has five axes: I, clinical syndromes; II, personality disorders and mental retardation; III, physical disorders or conditions; IV, psychosocial and environmental problems; V, global assessment of functioning.

## Rating instruments

Rating instruments are often used in old age psychiatry. They should be used in addition to, rather than instead of, a history, mental state and physical examination. They offer the advantages of being comprehensive (they do not forget to ask things) and repeatable (particularly useful to look back at). For example, it is important to remember that a diagnosis of dementia is not made just on a score

of less than 24 on the MMSE (Folstein *et al*, 1975), but is arrived at after taking the full range of clinical information into account. That being said, a score of less than 24 on the MMSE is a useful measure. It is a good idea to complete a cognitive scale, and a depression scale where appropriate, as part of every assessment.

### **Cognitive scales**

Cognitive rating instruments are a means of organising the assessment of cognition, and giving a numerical value to overall function (Box 1.6). Scores are affected by previous levels of education and intelligence, as well as familiarity with the culture and language in which they are given. Ceiling and floor effects mean that patients with severe cognitive impairment (floor) or mild (ceiling), lose discrimination. In clinical practice, it is probably best to use one instrument routinely and become familiar with it, since they all have strengths and weaknesses. In research, shorter cognitive instruments are often used for screening, so that subjects with less than a cut-off score can be identified for further assessment.

#### *Abbreviated Mental Test Score*

One of the simplest and longest established cognitive tests is the Abbreviated Mental Test Score (AMTS; Hodkinson, 1973). This is widely used in geriatric departments in the UK and, being short, is quite popular in general practice. It is designed for use in hospital and needs some adaptation for subjects at home (e.g. identification of a doctor and a nurse and the name of the hospital are inappropriate questions). It is almost entirely an orientation and memory test, although counting backwards from 20 may be regarded as a test of concentration. For all its limitations it is of some value, particularly

#### **Box 1.6 Summary of cognitive tests**

- AMTS – cut-off 7 or 8/10, a few minutes to use but only covers memory and orientation
- MMSE – cut-off 24/30, takes 5–10 minutes to complete, a standard baseline test
- CAPE – information/orientation sub-scale has 12 questions
- CAMCOG – wide ranging test of cognition takes approximately 40 minutes to complete
- Clock drawing test – a revealing test of praxis, offers qualitative as well as quantitative information

when repeated. Scores of seven or less in a cooperative patient suggest cognitive impairment.

### ***Mini-Mental State Examination***

Probably the most widely used cognitive test in old age psychiatry is the MMSE (Folstein *et al*, 1975). Its main strengths are that it covers the basic cognitive functions reasonably comprehensively in 10 minutes or so, and is well established internationally. It covers the following areas of cognition.

*Orientation* – the MMSE begins with five items of orientation in time and five in place, but does not test orientation in person. How much credit to give to approximately correct answers is a matter of common sense, for example to be one day out on the date is normal, and should not be marked incorrect unless it is a notable date such as Christmas or the patient's birthday. It is not generally known that the seasons change on 21 March, June, September and December. Ignorance of the month is more allowable if it has only just changed. Ignorance of location may be more significant when patients do not know they are at home, than in an accident and emergency department after a road traffic accident.

*Memory* – apple, book and coat are easier to register and therefore preferable to an address. Their initial letters provide a mnemonic for the more observant. If alternative words are then used the loss of the mnemonic aid may affect performance. The MMSE measures registration and recall, but not long-term memory.

*Concentration* – the MMSE gives the same mark of five points if the patient can do five successive serial seven subtractions or spell 'world' backwards, even though these tasks are complicated and the skills rather different. Simple calculation can be tested using an easier sum (e.g. 15 – 8), while concentration can be tested by reciting the months of the year backwards. The Cambridge Examination for Mental Disorders of the Elderly (CAMCOG) (see below) only uses the numerical test.

*Language* – naming a pencil and watch may be too easy to detect nominal aphasia and should be followed by questions about less common names (e.g. a watch face or hands). Repetition of the sentence 'no ifs, ands or buts' is more appropriate for someone familiar with this warning from childhood than someone who has never heard it before. The paper folding task should not be prompted after the initial instructions. It tests understanding of language as well as praxis and memory.

*Praxis* – copying the intersecting pentagons tests constructional apraxia. It is quite a difficult test and can be followed by an easier test or the clock drawing test

*Gnosis* – recognition is tested in the more extensive CAMCOG by using pictures, small objects and commands.

***Other cognitive scales***

The comprehensive Clifton Assessment Procedures for the Elderly (CAPE; Pattie & Gilleard, 1979) and Cambridge Examination for Mental Disorders of the Elderly (CAMDEX; Roth *et al*, 1988) each include a cognitive sub-scale: the information/orientation sub-scale and CAMCOG, respectively. The information/orientation sub-scale has 12 questions, is easy to administer and widely used. CAMCOG is a more comprehensive cognitive test which covers a wide range of ability. It gives a score out of 104. With all these tests, qualitative information is often as important as scores. This is certainly the case with the clock drawing test (Ainslie *et al*, 1993). The subject is asked to draw a circle, put in the numbers and set the hands at ten minutes past eleven. It is interesting to note whether the patient starts by establishing the four poles of 12, 3, 6 and 9 and then fills in the numbers, or starts with 12 and then laboriously goes round to 11. It is surprising how often those who can tell the time will turn out to have a lot of difficulty in deciding which of the clock hands should be the longer or shorter.

**Depression scales**

Depression questionnaires and scales help to collate symptoms and signs for screening and can be used as an aid to diagnosis. Scales are particularly useful for monitoring the course of depressive symptoms, and for research (Box 1.7).

***Geriatric Depression Scale***

The Geriatric Depression Scale (GDS; Yesavage *et al*, 1983) is designed to avoid questions concerning somatic symptoms and functions which in older patients might be accounted for by physical disorders (e.g.

**Box 1.7 Summary of depression scales**

- GDS: brief, 15 items, avoids somatic questions so good for older patients
- BASDEC: for liaison, a series of questions on cards, particularly useful with deaf subjects
- Hamilton Rating Scale: general adult scale, quantifies depression but is not a diagnostic tool
- MADRS: sensitive to change in depressive illness
- Depressive Sign Scale: nine items to help detect depression in people with dementia

sleep disturbance or weight loss). Originally a 30-item test, it now has 15 items, which enables most subjects to be scored for depression in four to five minutes. An overall score of five or more suggests the possibility of a depressive illness, though further inquiry is needed to establish a diagnosis.

### *Brief Assessment Schedule Depression Cards*

The BASDEC (Adshead *et al*, 1992) consist of a series of statements in large print on cards which are shown to the patient, one at a time, and answered 'true' or 'false'. Each true answer scores one point except 'I've given up hope' and 'I've seriously considered suicide' which score two. A score of seven or more raises the likelihood of a depressive disorder. The BASDEC was initially designed for use in liaison psychiatry where a visual aid to verbal enquiry is often helpful.

### *Other depression scales*

The Hamilton Rating Scale for depression (Hamilton, 1960), although widely used, has a number of somatic items which render it less appropriate for older subjects than the Montgomery-Åsberg Depression Rating Scale (MADRS; Montgomery & Åsberg, 1979). The MADRS, however, may not be reliably answered by patients with dementia. In this case depression may be better recognised through observing behaviours such as going off food, becoming withdrawn or poorer sleep. The Depressive Signs Scale (Katona & Aldridge, 1985) is a useful means of quantifying such phenomena.

## **Comprehensive assessments**

### *Clifton Assessment Procedures for the Elderly*

CAPE (Pattie & Gilleard, 1979) is intended to assess level of disability and estimate need for care. It consists of a short cognitive scale and a behavioural rating scale. The latter has four sub-scales: physical disability, apathy, communication difficulties and social disturbance. It is quick and easy to administer, and is widely used by professional staff and care workers (Box 1.8).

### *Geriatric Mental State*

The Geriatric Mental State (GMS), based on a semi-structured interview, and computerised as AGE CAT (Copeland *et al*, 1986), is a useful epidemiological tool which can also be used to find levels of caseness for all psychiatric disorders in old age, ranging from zero to five. Levels one and two are sub-clinical while five is the

**Box 1.8 Comprehensive assessments**

CAPE: has a 12 question information/orientation sub-scale  
 GMS: for psychiatric diagnoses, computerised as AGE CAT  
 CAMDEX: includes CAMCOG for cognitive testing  
 CARE: shortened version has 143 items and takes about 30 minutes to administer

most severe. It has an optional informant section: the History and Aetiology Schedule (HAS).

*Cambridge Examination for Mental Disorders of the Elderly*

The CAMDEX (Roth *et al*, 1988) incorporates the MMSE, the Blessed Dementia Rating Scale (BDRS; Blessed *et al*, 1968) and the Hachinski Ischaemia Score (Hachinski *et al*, 1975), in a comprehensive inquiry from the subject and informant. BDRS is a measure of activities of daily living. The Hachinski Ischaemia Score helps differentiate between vascular and Alzheimer's dementia (see Chapter 5). A notable feature of CAMDEX is CAMCOG, which is the cognitive sub-scale. CAMDEX is mainly used in research by trained non-doctors.

*Comprehensive Assessment and Referral Evaluation*

The Comprehensive Assessment and Referral Evaluation (CARE; Gurland *et al*, 1984) has a shortened version, the Short-CARE, which is a semi-structured interview designed to identify and assess depression and dementia for research purposes.

**Conclusion**

The thorough assessment of an older person is an essential first step in offering the best management for their mental illness. Experience helps a professional know which parts of an assessment are particularly useful for the individual patient. However, a multi-disciplinary assessment will almost invariably offer more information. Not only does it help to view complex problems from many angles, but it also involves those offering support in management decisions. This allows a team of professionals to offer consistent and effective care.

## References

- Adshead, F., Day Code, D. & Pitt, B. (1992) BASDEC: a novel screening instrument for depression in elderly medical inpatients. *British Medical Journal*, **305**, 397.
- Ainslie, N. & Murden, R. (1993) Effect of education on the clock-drawing dementia screen in non-demented elderly persons. *Journal of the American Geriatrics Society*, **41**, 429–452.
- American Psychiatric Association (1994) *Diagnostic and Statistical Manual of Mental Disorders* (4th edn) (DSM-IV). Washington, DC: APA.
- Blessed, G., Tomlinson, B. & Roth, M. (1968) Association between quantitative measures of dementing and senile change in cerebral grey matter of elderly subjects. *British Journal of Psychiatry*, **114**, 797–811.
- Copeland, J., Dewey, M. & Griffiths-Jones, H. (1986) Psychiatric case nomenclature and a computerised diagnostic system for elderly subjects: GMS and AGE-CAT. *Psychological Medicine*, **16**, 89–99.
- Ewing, J. (1984) Detesting alcoholism: The CAGE questionnaire. *Journal of the American Medical Association*, **252**, 1905–1907.
- Folstein, M., Folstein, S. & McHugh, P. (1975) Mini-Mental State. A practical method for grading the cognitive state of patients for the clinician. *Journal of Psychiatric Research*, **12**, 189–198.
- Gurland, B., Golden, R., Teresi, J., *et al* (1984) The Short-CARE: an efficient instrument for the assessment of depression, dementia and disability. *Journal of Gerontology*, **39**, 166–169.
- Hachinski, V., Liff, L., Zilkha, E., *et al* (1975) Cerebral blood flow in dementia. *Archives of Neurology*, **32**, 632–637.
- Hamilton, M. (1960) A rating scale for depression. *Journal of Neurology, Neurosurgery and Psychiatry*, **23**, 56–62.
- Hodkinson, M. (1973) Mental impairment in the elderly. *Journal of the Royal College of Physicians of London*, **7**, 305–317.
- Katona, C. & Aldridge, D. (1985) The DST and depression signs in dementia. *Journal of Affective Disorders*, **8**, 83–89.
- Montgomery, S. & Åsberg, M. (1979) A new depression scale designed to be sensitive to change. *British Journal of Psychiatry*, **134**, 382–389.
- Pattie, A. & Gilleard, C. (1979) *Manual of the Clifton Assessment Procedures for the Elderly* (CAPE). Sevenoaks: Hodder and Stoughton.
- Roth, M., Huppert, F., Tym, E., *et al* (1988) *CAMDEX: The Cambridge Examination for Mental Disorders of the Elderly*. Cambridge: Cambridge University Press.
- World Health Organization (1993) *The ICD-10 Classification of Mental and Behavioural Disorders. Diagnostic Criteria for Research*. Geneva: WHO.
- Yesavage, J., Brink, T., Rose, T., *et al* (1983) Development and evaluation of a geriatric depression screening scale: a preliminary report. *Journal of Psychiatric Research*, **17**, 37–49.