

NZ Guidelines Group

Needs Assessment for the Over 65s

Overview of Literature
to inform the Guidelines Development Team

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Dr. Judith A. Davey
Director
New Zealand Institute for Research on Ageing
Victoria University of Wellington
DDI: 04 463 6746
Email: Judith.Davey@vuw.ac.nz

Purpose

This overview report is intended to raise issues and explore questions of relevance to the Guidelines Development Team (GDT) as they work towards the definition of guidelines for needs assessment for the over 65 age group in New Zealand. In the very simplest form, the report aims to provide information which will help the GDT to address the central question “what works best and in what situations?”

Method

A literature search on needs assessment for older people, conducted through medically-oriented databases, produced a very large number of responses. Therefore only “review” papers, which appeared to examine multiple studies, were selected for the literature analysis. This produced 180 items, of which 80 were summarized by Kim Chilman Blair according to a template supplied by NZGG. The higher-level overview, guided by the summaries, but using full-text material for 60 items, was conducted by Judith Davey of the New Zealand Institute for Research on Ageing. An interim report was presented to the GDT on Friday 19 July and discussion surrounding this helped in refining the scope of the overview report.

The Framework

The overview report follows the framework set out in the NZGG’s PECOT diagram, which lays out the process of needs assessment from the selection of participants to outcomes. Given its scope, the report should not be seen as a comprehensive literature review and is not able to identify significant gaps in the material as a whole. It does, however, raise issues relevant to the evaluation of overseas studies and their applicability in New Zealand situations.

The report is in two main parts. The first looks at the characteristics of the people being assessed which are important to the assessment process. The second follows the steps of the needs assessment process, from selection of candidates to outcomes.

Part 1 - Characteristics of the people being assessed

Under “Population”, the PECOT diagram lists some characteristics of people 65 and over who are being assessed. Disability status and ethnicity are specified. None of the studies examined identified people whose disability began before the age of 65. Onset of disability is a question not only of relevance to needs assessment and treatment protocols, but also to policy regimes in this country. An issue for the GDT is whether people with disabilities come within its scope as they turn 65.

The overseas literature rarely includes material on ethnic groups of special relevance to New Zealand, especially Maori. In the selection examined only two papers focused on groups other than white Europeans – one a study of Asian Pacific Islanders living in the USA and another of black Americans (Tanjisiri, Wallace and Shibata 1995; Schoenberg, Coward, Gilbert and Mullens 1997). However, these, and other papers acknowledge the ethnic dimension and the significance of cultural differences, especially the risk of deprivation among minority ethnic groups. Of particular interest is the fact that Australian health screening for older people (described below) begins at age 55 for Aboriginal and Torres Strait Island people, as against age 75 for the general population (Byles 2000). This is relevant for New Zealand, given the lower life expectancy for Maori and the earlier onset of age-related problems in this population. It does not appear, however, that cultural factors are well covered in needs assessment processes and work specific to the New Zealand context may be required.

Additional personal characteristics are significant in needs assessment. Firstly, although ‘older people’ are defined as 65 plus, most of those requiring special care and support are much older than this. General population screening in Australia and the UK begins at 75 and entry into residential care usually occurs after the age of 80. This suggests a breakdown of the 65 plus group by age, distinguishing between the ‘young-old’ most of whom are independent and the ‘old-old’ who are much more likely to require special care.

Given the gender balance of the older population, women tend to predominate in needs assessment studies. Gender is, however, an important characteristic and gender differences are acknowledged in the literature, for example in the long-range antecedents of functional capacity (Atchley and Scala 1998) and spiritual well-being (Isaia, Parker and Murrow, 1999). Some studies looked at one gender group only. A health diary was used in screening, health promotion and early identification of risk among older women in the USA (Pizzi and Wolf 1998). Two studies focused on the use of

comprehensive geriatric assessment for older men, pointing out health risks specific to males (Ingram et al 2002; Bakshi and Miller 1999).

Living arrangements and location of residence are additional characteristics which are especially relevant to needs assessment. Household composition, especially whether a patient is partnered or unpartnered, may determine the availability of care at home, and those living alone may be especially vulnerable. Location of residence relates to access to support in the community and also to medical services. Rural location was found to be a risk factor in a USA study of nutritional well-being (Schoenberg, Coward, Gilbert and Mullens 1997).

Moving beyond personal characteristics, the circumstances of people at the time of needs assessment – where and when the assessment takes place - are especially important. The primary distinction in the literature is between people living in the community and those in hospital or residential care. The GDT is likely to be most interested in the former group, which can be further subdivided. A large group of older people, especially the younger group may come into the needs assessment process simply by virtue of age, as in the screening programmes described below. Secondly, they may be primary care patients, and several studies focus on needs assessment carried out by GPs (Trilling 2001; Miller et al 2000). A third category is people who are eligible for some type of care or support services. Those in the second or third groups may come to the attention of specialist health professionals through referral, as their needs increase and part of the assessment may include consideration of entry into residential care (Challis and Hughes 2002).

There is a considerable literature on needs assessment carried out for institutionalized populations, at the time of admission to hospital after injury or acute illness (Aminzadeh and Dalziel 2002) and also of people in residential care (Achterberg et al 1999; Hawes et al 1997). Much of this may not be of direct interest to the GDT except for needs assessment as part of discharge planning, when older people may be returning to community living. This aspect of needs assessment did not figure in the literature reviewed for this report, but is an area which may require further investigation.

Part 2 - Characteristics of the assessment process

This section follows the steps of the assessment process from initial selection, which has been covered in the previous section. Selection may, however, not be a one-stage process. Often pre-screening or even pre-assessment is part of the process. Where does the assessment take place? This relates to circumstances at the time of assessment, which has also been discussed above. The literature shows that there may be differences in assessments which take place in a medical setting as against the individual's own home (Perkins 1991).

The Screening-Needs Assessment Continuum

What is the difference between screening and assessment? Fletcher (1998) defined screening as “the identification of precursors of disease in asymptomatic people”, but went on to define screening of older people as “the identification of disability to identify service and treatment needs”, which sounds very much like needs assessment. Carpenter (1996) defined assessment as “the formal means of examining the health status of a person against expected norms”, which sounds rather like screening. But Carpenter also said that assessment must include some expectation of and mechanism for effective treatment. So there seems to be some ambiguity in these definitions and there is certainly no standard method for either screening or assessment. It is probably more useful to think of a continuum from general population screening, through assessment protocols related to “simple” needs and further to assessment of more complex needs. The literature contains examples of studies which can be located at various positions along this continuum.

Population-based and age-related screening occurs in New Zealand in relation to breast and cervical cancer testing. But examples of wholesale health screening for older people come from the UK and Australia. Since the early 1990s the UK Government has offered screening to everyone at age 75. This is voluntary and up to 50% of elderly people refuse the offer, but one study showed that those who declined were no different from those who accepted (Perkins 1991). The contract obliges GPs to offer patients over 75 a health check and a home visit. Studies of the system show that it is rare to find people with serious unrecognized problems - most patients who do not visit doctor are healthy. Unreported conditions are often seen as normal to the ageing process and are more common among people already seeing doctors. The British experience therefore suggests that elderly people on the whole can be relied upon to assess their health correctly. Some of the problems identified by health workers may not be considered important by the older people themselves and the screening may

arouse anxiety. A better approach, suggested by Perkins (1991), might be to make it easier for people to raise health problems, which are causing concern, with professionals.

In 1999, the Australian government introduced a Medicare Benefit to provide annual health assessments for all people 75 plus¹ (Byles 2000). These include health, physical, psychological and social functioning (including social support) and are done either in consulting rooms or homes. Post-screening interventions include community support services and advice from nurse practitioners. It may be helpful to the GDT to find out more about the progress and outcomes of this Australian initiative.

An innovative example of periodic self-screening is use of health diaries by female patients in the USA, in the belief that early identification of risks and disease is linked to improved outcomes (Canam and Acorn 1999). In this case nurse practitioners work with patients, on the basis that they are well placed to engage in health promotion and screening activities with older female clients and to advocate for them. This method of screening could then lead to health promotion plans and also help in coordinating interdisciplinary services.

As well as mass screening, there are several examples of programmes focused on specific states or conditions. One example is Schoenberg et al (1997), which looked at nutritional risk and screened community-dwelling elders by race and in both urban and rural settings. Poor nutrition was shown to be associated with increased morbidity and mortality and decreased quality of life.

The continuum concept is illustrated in two-step screening – in the case of Aminzadeh and Dalziel's study (2002) in an emergency department setting. Older people are over-represented and have distinct patterns of emergency department presentation. They are at increased risk of adverse outcomes following emergency admission and additional risk factors – living alone, lack of social support - need to be investigated. The study suggests a two-step screening, using a comparatively simple tool (Identification of Seniors at Risk). Patients identified as high risk then progress to a clinician for in-depth assessment

One end of the continuum is therefore illustrated by wholesale population screening (as in the UK and Australia) which will cover a lot of healthy people and would be expensive to do with a multi-disciplinary team and in any great depth. There are clearly questions to be asked about the cost-effectiveness of mass screening. At the other extreme are in-hospital programmes (associated with either admission or discharge) where teams are on hand and can more easily confer and plan treatment/interventions. Between the two extremes are a variety of possible needs assessment approaches. Screening may precede assessment, allowing the identification of people/groups most in need of help and/or who would benefit most from in-depth assessment and intervention (Borok et al 1994). The tools used may also vary. Screening tends to include functional rather than medical assessment – looking at problems in everyday living, such as mobility, sight and hearing – rather than bio-medical testing.

The Assessors

The literature identifies a range of people who carry out health/needs assessments. These include nurses, doctors, health visitors, occupational therapists, psychologists, social workers, lay researchers/volunteers and office staff, in addition to the patients themselves and their families/caregivers. Several studies note differences in observations by patients, nurses and families (Applegate, Blass and Williams 1990). The main issues surround self assessment, carers' assessment and mixed versus single discipline teams.

Self-assessment is often recognized as part of the process, especially in relation to the use of ADL measures (Bennet 1999). Self-assessment may be at best a weak correlate of functional status and often needs to be checked by an observer, such as a caregiver or health professional. Carers are frequently involved, especially where patients are severely disabled or cognitively impaired, but it is not always clear from the literature if this was the case. Some studies suggest that it may be important to corroborate the self-assessment responses of patients who may rate themselves as more independent than family/caregivers would do, while spouses may under-report functional losses (Applegate, Blass and Williams 1990).

Several important issues arise around proxy assessments, such as whether carers will over or underestimate capacity as compared to patients or health professionals (Davis 2001). Commentators emphasize the need to take into account the caregiver's relationship with the patient, their coping

¹ The age for Aboriginals and Torres Strait Islanders is 55 plus.

skills and burden state. Both self and caregiver judgments are likely to differ from clinical results, but both need to be balanced to improve accuracy of overall needs assessment.

Multi-disciplinary teams are more likely to be used in a hospital or residential care settings rather than in the community, for convenience and cost-effectiveness. A typical team includes a geriatric nurse practitioner, geriatrician and social worker. Sometimes both home and medical settings are used (Perkins 1991). The literature provides considerable support for multi-disciplinary groups in needs assessment, pointing out the limitations of single-discipline approaches (but rarely including patients or carers in the mix) (Fleming, Evans, Weber and Chutka 1995). Yet despite these calls, when Morris et al (1997) examined 21 random control trials in the areas of needs assessment, only two used multi-disciplinary teams.

What skill and knowledge does an assessor need? The literature suggests that they need suitable tools, training in them and a broad view of the relevant factors (Landi 2001). The latter can also be obtained by using multi-disciplinary teams - clinical judgment alone may not be sufficiently accurate to discriminate between people who have needs from those who do not.

Scope of the Assessment

The literature contains examples of screening and assessment, from the very general to those related to specific conditions or looking only at specific aspects of well-being. What aspects of need should be included and what excluded? There is a clear preference among practitioners for multi-dimensional approaches, incorporating physical, psychological and social aspects (usually availability of care, social support and possibly living arrangements, especially living alone), functional, disease and environmental measures. One study concentrated on a spiritual well-being scale in a community setting and called for more awareness of the spiritual aspects of care, which are not generally included in needs assessments (Isaia, Parker and Murrow, 1999). Among those examined, the study with the widest scope was one which measured caregivers' quality of life. This took place in Canada and included caregivers of patients of all ages (Canam and Acorn 1999). It suggested that quality of life should include qualitative and quantitative, objective and subjective, physiological and psychological measures, with social and financial/material well-being components, including family and patient perspectives.

But while all pay homage to need for multidimensional assessment, many then criticize it or find it unreliable (Aminzadeh 2000; Morris et al 1997). Fletcher (1998) found that in multi-dimensional studies it was difficult to attribute benefits to any particular component of the package and there was not enough data to examine elements of assessment separately. Applegate et al (1990) found multi-faceted instruments cumbersome and time consuming and Byles (2000), after reviewing a range of studies, found the results inconclusive.

So assessments are recommended to be broad – in terms of who is involved and in terms of the range of measures included – but there are problems with both aspects and frequently reviewers find the results of studies inconsistent or even contradictory.

Tools for Needs Assessment

The choice of tools and instruments for needs assessment for older people is very broad on a range of dimensions. The tools include both formal and informal measures. They allow for input from both professionals and lay people – patients, families and carers – or a mixture of all. Some well-tested tools appear frequently in the literature, such as the MMS (mini-mental state). Others have been developed for specific situations, such as tests for older drivers (Trilling 2001). Adding to the complexity are examples where the same tool may be administered by different types of people, and this can affect the results, e.g. self versus interviewer administration. Personal characteristics, such as gender and socio-economic status are also sources of variation. Recognising this diversity, one article suggested that functional assessment tools should be viewed like any other medical test and that health professionals should always be aware of their strengths and weaknesses, validity and reliability, sensitivity and specificity (Applegate, Blass and Williams 1990).

CGA (Comprehensive Geriatric Assessment)

A primary distinction can be made between broad-based general assessment tools and those designed for specific purposes – either in relation to a specific set of needs, a specific condition or a specific group of older people. Among the former is CGA (Comprehensive Geriatric Assessment), which is frequently mentioned in the literature as an ad hoc and variable collection of measures, administered in a variety of setting and by a wide range of people. Sometimes a home visit may be incorporated in the assessment. Sometimes the situations of caregivers may be taken into account. Any assessment by a multi-disciplinary team or one with a multi-dimensional scope could therefore be

seen as CGA, by definition. CGA is thus not a single tool but rather an approach, which can include a variety of instruments as seem appropriate to the circumstances. For example, if general testing indicates cognitive impairment, then further psychometric testing can be added. The following studies are grouped according to whether they support or challenge the CGA approach.

Among the studies which favour CGA, Altkorn et al 1991 describe its use to determine whether a change in living situation is required and to identify risk factors. They lay out a very comprehensive assessment process, which, although it takes place in a hospital out-patient setting, has some features of more general relevance. Each patient was assessed by a multi-disciplinary team (psychiatrist, geriatrician and neurologist), was administered a series of tests and received a home visit by a geriatric nurse specialist. In this visit the nurse interviewed both patient and caregiver, observed the patient's ability to function at home and inspected living areas for physical hazards as well as assessing diet, drug regime and non-medical factors. This study saw evaluation of the home environment as central to CGA and concluded that the home visit improved overall quality of assessment, even though medical risk factors loomed larger in the findings.

A paper by three geriatricians (Rockwood, Silvius, and Fox 1998) favoured the use of CGA in a consultation setting, using a broad scope of assessment – mental status, emotional status, communication, mobility, balance, bowel/bladder function, nutrition, ADLs, social situation and quality of life. It recommended interviewing patient, family and care providers. The practitioners saw CGA as complementing traditional history taking and physical examination at a first visit and also as a tool for screening and route to diagnosis in a practice context.

Fleming et al 1995 also took a broad view, supportive of CGA. They considered that whether a vulnerable older person could remain in a home setting depended more on available caregiver support and degree of functional limitation than on actual medical conditions. Thus needs assessment was incomplete without some evaluation of the well-being of the primary care-giver.

Bakshi and Miller 1999 concluded that CGA does improve the total well-being of older people, but suggested that it can be applied at different levels according to the situation of individual patients. Those with complex medical and social problems could receive detailed CGA, whereas for healthy older people with minimal problems and good social support systems a more cursory evaluation might suffice. CGA is rarely used in primary care, but a similar two-stage process is recommended to GPs in one study (Miller et al 2000).

Other commentators criticize CGA as being cumbersome and time consuming and because it may be difficult to isolate the effect of each component (Applegate et al 1990). The broader the assessment, the more inconclusive the result was the conclusion of Byles (2000). The use of differing methodologies, patient selection criteria and intervention strategies make it difficult to compare study results (Gold and Bergman 2000). Poor compliance with CGA recommendations is a widespread finding. Aminzadeh (2000), in a Canadian study, interviewed nurses, doctors, health care workers and patients and found adherence rates of around 50%. The conclusion was that inconsistency and non-adherence to discharge plans are major barriers to success in needs assessment

The critics call for a range of improvements to the CGA process, including better communication between doctors, patient empowerment, simplification of care plans for both patients and doctors, better cost-effectiveness tests, the involvement of caregivers and community participation

In summary, there appears to be a clear preference among practitioners for a multi-dimensional needs assessment instrument, taking into account functional, disease, social and environmental measures. This is most commonly referred to as CGA although studies also refer to Comprehensive Functional Assessment (Applegate Blass, and Williams 1990) and Multi-dimensional Assessment (Fletcher 1998). There also seems to be some evidence that CGA (and presumable action based on it) reduces the risk of mortality, acute hospitalization and other adverse health outcomes. However, few studies have been able to demonstrate the validity and reliability of CGA along very old persons in the community. Perhaps it is because of non-adherence, rather than defects in the measurement tools, that results of needs assessment are so inconsistent. This places emphasis on interventions and their results, which are returned to below.

GEM (Geriatric Evaluation and Management)

GEM is discussed in the literature as a form of assessment, but it is more accurately the process which goes on in GEM units in the USA and thus provides another example of the difficulty of distinguishing between assessment and intervention. Several studies compare the results for patients who go through the GEM process with those for people in "normal" care (Feussner 1991; Weuve,

Boult and Morishita 2000). The problems of comparison mirror those for CGA, with similar variations in efficacy and inconclusive findings. An interesting aspect of the studies of GEM is a focus on caregiver burden. One study (Weuve et al 2000) concluded that GEM helped to protect caregivers, especially the less experienced ones, from increasing burden. However, the conclusions of Canam and Acorn (1999) challenge this. They suggest that GEM might increase the burden by making more demands on caregivers' assistance.

RAI (Resident Assessment Instrument) and MDS (Minimum Data Set)

The RAI is used in the USA as part of the OBRA reforms (Omnibus Budget Reconciliation Act), which aimed to address needs of older people in residential settings, following decades of ineffective health care (Hawes et al 1997). Part of the reforms specified the compulsory use of a comprehensive evaluation tool, the RAI. Given that this tool is aimed at the residential care population, research related to it is not directly relevant to the GDT. However, it has been adapted for use in the community (Morris et al 1997) and certain features are worth noting. The process itself is one of these. The RAI is based on caregiver observations, describing the functions of residents on a comprehensive basis. These measures are mainly medical, apart from "background and customary routines". The RAI produces a MDS (minimum data set), with a comprehensive picture of each resident's status, which is used to develop Resident Assessment Protocols (RAP) in 18 condition-focused areas for the additional assessment of identified problems (not all potential areas are covered, e.g. pain). These in turn inform an individual care plan for each resident – intended to diminish gaps between needs and care provided and hence improve the quality of care (Achterberg et al 1999). The MDS is repeated yearly so there is a monitoring function, using outcome measures such as effects on health and quality of life. This is an example where the care plans themselves, which are the interventions, are not described in any depth. The study gives all credit for any improvement in care to the RAI, which actually goes only as far as defining the RAPs, and talks about "implementing RAI" rather than the care plans themselves. Hawes et al (1997) are more correct in their statement that the "comprehensiveness and accuracy of care plans improved" through the use of RAI.

The MDS tool has been adapted to measure the efficacy of care in the community – the MDS-HC (Landi et al 2001; Morris et al 1997) and there is also a UK version (Challis and Hughes 2002). The MDS-HC sets up a database, which can be used to guide care planning, hence leading to better implementation of home care interventions and better outcomes. A study in Italy (Landi et al 2001) of older people eligible for a home care programme, involved a MDS-HC group and one receiving "usual care" (assessment using ADLs, IADLs and, MMS). During a one-year follow-up, MDS-HC (in other words the group whose assessment was based on this tool) reduced the risk of hospital admission and length of stay in community-dwelling patients. The MDS-HC group also showed less physical and cognitive decline. In this example, the design was not that of a treatment group and a control group, but rather comparisons between two types of assessment – no detail was given about different types of intervention. Studies of MDS-HC also acknowledge problems with reliability and validity when used by untrained staff.

Other needs assessment tools

Several other assessment tools, more limited in their scope frequently appear in the literature – ADLs, SF-36 and QOL measures. ADLs and IADLs are frequently part of community-based CGA but may also be used independently. They have been criticized as sole measure of functional state (Bennet 1999) mainly because they are self-reported and because questions can be phrased differently or interpreted differently. For example - "can you perform (task)" may receive a different response from "do you need help with (task)?" Hence the recommendation that the 'soft' ADL measures should be supplemented by tests of performance.

SF-36 or Medical Outcomes Study Short Form is also used alongside other measures (Morris et al 1997). This has been found useful in assessing longitudinal changes – measuring outcomes following an intervention. Many measures have been developed for quality of life (QOL) and these can include both subjective and objective indicators. In the literature reviewed there are studies of QOL measures related to caregivers (Fleming et al 1995) and special measures for oral QOL (Jones 1998).

ACOVE (Assessing Care of Vulnerable Elders) is a recently developed measure which aims to identify older people living in the community who are at risk of functional decline (Westropp 2002). The approach is to use indicators rather than clinical guidelines in the assessment of health status and QOL. However the indicators suggested are all related to medical factors.

The literature includes a range of studies which focus on a specific condition in older people, sometimes in the context of a wider assessment and sometimes alone. In one of these, specific questionnaires relating to osteoporosis were used to measure QOL in patients with this condition and

compared to the more generic SF-36 (Morris and Masud 2001). The writers suggested that these should be used together. Oral QOL measures were compared in another study and their uses explored in screening, in the evaluation of care, in research and practice (Jones 1998). There are also several specific measures of cognitive impairment, including the widely used MMS (mini-mental state) and DSM-111 (Barberger-Gateau and Fabrigoule 1997).

FAST (Functional Assessment of Self-reliance on Tasks) provides an example of a general tool used in a specific situation (Head et al 2000). It has been used as an outcome measure for functional status in vision rehabilitation, but uses ADLs and IADLs to measure change pre- and post-treatment. The paper concludes that FAST is a reliable and valid measure and assists clients in their training, clinicians in meeting clients needs and administrators in describing the efficacy of training programmes. Another similar situation is the use of CGA in an appraisal of elderly cancer patients, which included ADL and IADL, MMS and GDS (Geriatric Depression Scale) (Repetto et al 2002). A general assessment was felt to be beneficial because of high rates of co-morbidity in this group. Further examples of assessment tools being used in specific situations include the assessment of older drivers by GPs (Trilling 2001), a spiritual well-being scale (Isaia, Parker and Murrow 1999) and measures of nutritional risk (Schoenberg et al 1997)

Can one tool be used for all? The “holy grail” of needs assessment for older people is a tool which can be used in all circumstances and which is consistent and comparable as well as effective and reliable. There are claims in the literature for such a tool and calls for standardization (Challis and Hughes 2002). Morris et al (1997) claimed that MDS-HC is applicable in community, institutional and multi-country settings and considered that a trained clinician could follow a common examination protocol anywhere in the world. And Landi et al (2001) felt that a standardized assessment scale would develop communication between those who care for old people in different settings, improve clinical judgment and stimulate progress towards a common clinical language and descriptors of disability.

There are various reasons why this much-sought-for outcome situation has not been achieved, some of which have been outlined above – the assessment/intervention interface, for example. There are questions about consistency, cost-effectiveness, inconclusive results and efficacy (Borok et al 1994). Are tools being used consistently and in the ways they were originally intended?

Despite the desirability of having a simple standard tool for GPs to perform needs assessment in the community, there are real limitations in the form of costs and training (to promote consistency in use and interpretation) and implications for time, workload and reimbursement (Miller, Zylstra and Standridge 2000). Standard CGA tools may be impractical for use by primary-care physicians because of their length and complexity (Fleming et al 1995). A condensed version of CGA would meet some concerns, but could result in important dimensions of needs assessment being excluded.

Interventions following assessment

The administration of needs assessment tools and instruments will not, in itself, improve the well-being of older people. This depends on subsequent interventions – on action arising from the findings or recommendations of needs assessment procedures. In the literature, assessment and intervention is frequently conflated, with assertions that such and such an instrument produced such and such outcomes. Is the needs assessment process itself an intervention? How are interventions decided on? If assessment is rigorous but then decisions on interventions are idiosyncratic, then how will assessment and outcomes be linked? At what stage does diagnosis take place? It would be helpful if the literature were more specific about the post-assessment stage of recommendations and referrals and subsequent interventions and service delivery. It may be because the intervention stage is much harder to track and to control than the administration of a standard tests and the recording of the results. Subsequent consultation with a doctor or geriatrician is usually the basis for ongoing action and this may take the form of small ad hoc, sporadic measures which are not formally recorded.

Outcomes

The analysis of the process of needs assessment would be made clearer if interventions were seen as the **outputs** of the administration of tests and assessments. The **outcomes** are then the results of the assessment plus intervention process, which will be measured by improvements in the well-being and quality of life of the older people involved. In practice, there are a range of outcome measures and indicators used in the literature, with a tendency to use those which are most easily measured – mortality, hospital and residential care admission. These can be classified as institutional outcomes, which also include length of stay in hospital, and cost effectiveness (almost always to the funder). Other common outcome measures are clinical (morbidity, mortality, measures of disability) and functional (physical and mental capacity). Less common are personal outcome measures, which

include patient/caregiver satisfaction/self-assessed quality of life, or objective QOL measures. It would help in designing improved needs assessment processes to know what contributes to patient and carer satisfaction, if people understand the needs assessment process and if they have realistic expectations of it.

Comparisons

There are several ways in which comparisons can be made to gauge the validity of needs assessment processes. These include formal controls, as in random control trials, informal or quasi controls and trend analysis. Some experiments compare two types of assessment rather than one group with the tool and the other without (Landi 2001). The literature shows considerable variation in the rigour of comparison and whether statistical testing of outcomes is undertaken or possible, all of which contributes to difficulty in evaluating the research. Needs assessment for older people is clearly an area in which the strict scientific model is difficult to apply, as compared, for example to double-blind drug trials. This is because of the multi-dimensional nature of older people's needs, the frequency of co-morbidity and multiple disabilities and the range of disciplines involved in assessments and care.

There are few longitudinal studies in the needs assessment area and this lack is noted by commentators, making it difficult to predict care needs and to evaluate long-term outcomes. Atchley and Scala's study (1998), however, explores the long-range antecedents of functional capacity through a 16-year period. This suggests that an early warning system could be useful in predicting future disability and identifying candidates for intervention. However, the study was limited by erosion of the study population through death and unwillingness to continue.

Timescale

The PECOT diagram includes the timescale of the assessment process, in terms of follow-up after assessment and intervention. The literature shows that the period varies considerably, with time scales of three months, six months and a year common. In the selection of studies considered, three years was the longest follow-up period mentioned.

Administrative Factors

In addition to the elements of the process which have been cited, it would be useful to include the administrative processes surrounding needs assessment. Funding arrangements can influence level and rigour of assessment and bias choices of intervention. They can produce incentives and disincentives for health professionals and patients. Regulations, including requirements for privacy, can limit the desirable amount of involvement and consultation, for example, with carers.

Conclusion - Needs Assessment – the process and the purpose

Three main conclusions arise from this overview of a limited range of the vast literature on needs assessment for people 65 and over. Firstly, there is a great deal of emphasis on assessment tools and instruments, as the balance of the report shows. A wide variety of approaches are subsumed under the heading of CGA. The scope of assessment varies considerably, although physical, cognitive, psychological and social factors are usually included when the assessment is labeled 'comprehensive'. As Applegate et al (1990) conclude – the type of assessment and tools to be used depends on who is doing it and in what setting, for example is it in the community or in an institution, in a therapeutic or rehabilitative context?

Secondly, there is a tendency in the literature to concentrate on the assessment tools rather than on the interventions which follow. There is evidence that action may be idiosyncratic and ad hoc and also that the recommendations arising from assessment may not be adhered to, by patients and caregivers and/or health professionals. This contributes to inconclusive and sometimes contradictory results when assessment processes and instruments are evaluated.

Thirdly, the type of needs assessment and the tools used will also depend on what the purpose is, and the literature suggests a range of these –

- General population screening – for early detection and prevention
- Screening on admission – to decide on treatment regimes in hospital
- Research – to find out more about conditions and treatment in general (not individual)
- Setting up databases – to facilitate care planning
- Administrative tool to improve cost effectiveness and policy-making
- Base-line measurement for future individual monitoring (clinical)
- Tracking people in vertically integrated healthcare systems

- Assessment to maximize independent living
- Deciding on a regime of care
- Diagnosis.

There is clearly no simple answer to the question “what works best and in what situation?” This is inevitable in an area as complex as the provision of high-quality and humane care to meet the needs of older people.

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