1-1-2006

Knowing what you need to know about needs assessment

Nicholas Marosszeky
University of Wollongong, marossz@uow.edu.au

Mark D. Rix
University of Wollongong, mrix@uow.edu.au

Alan G. Owen
University of Wollongong, aowen@uow.edu.au

Knowing what you need to know about needs assessment

Abstract

This paper reviews the scientific literature on needs assessment of individuals living in the community. Providing an overview of the field with a focus on capturing useful information for planning health interventions in the community, this paper will highlight:

- The current policy context that underpins the importance of needs assessment in health care;

- Key papers and basic theoretical concepts that can guide a coherent approach to community care needs assessment, including Bradshaw, 1972 and Stevens & Gabbay, 1991;

- The development of semi-structured interviews in mental health as a focus for designing new tools - with the Camberwell Assessment of Need (CAN) being the most well known;

- How to deal with the organisational issues involved with the assessment of unmet need in the community;

- The current evidence base for developing a national approach to needs assessment;

- And a brief look at the latest self-reported needs assessment instruments.

N Marosszeky, M Rix, and A Owen. Centre for Health Service Development, University of Wollongong, New South Wales.

Knowing What You Need to Know About Needs Assessment.

Abstract

This paper reviews the scientific literature on needs assessment of individuals living in the community. Providing an overview of the field with a focus on capturing useful information for planning health interventions in the community, this paper will highlight:

- The current policy context that underpins the importance of needs assessment in health care;

- Key papers and basic theoretical concepts that can guide a coherent approach to community care needs assessment, including Bradshaw, 1972 and Stevens & Gabbay, 1991;

- The development of semi-structured interviews in mental health as a focus for designing new tools - with the Camberwell Assessment of Need (CAN) being the most well known;

- How to deal with the organisational issues involved with the assessment of unmet need in the community;

- The current evidence base for developing a national approach to needs assessment;

- And a brief look at the latest self-reported needs assessment instruments.

Introduction

The background to this paper includes earlier work by the Centre for Health Service Development (CHSD) at the University of Wollongong, undertaken as a series of linked studies using data from functional dependency measures to develop decision support and demand management tools in community care (Eagar et al., 2003; Eagar et al., 2006; Green et al., 2006). Continuity between the studies has been provided by the CHSD's core research themes, its focus on sub- and non-acute care, and research that is practical and applied (CHSD, 2006).

As part of this sequence of research in 2005, the CHSD undertook an updated and detailed literature search into the topic of needs assessment i.e. "the assessment of individuals to determine the proper level of services needed" (US National Library of Medicine, MeSH Browser). The literature search strategy covered both the scientific and grey literature, using the COSI Model (Bidwell and Jensen, 2004). It included a number of drills and layers to ensure exhaustive coverage. These were:

Scientific Literature

- Scientific Literature Search (MEDLINE, PsycINFO)
- Evidence Based Health Care Search (Cochrane Library)

Grey Literature

- Surface WEB (GOOGLE, wiseNUT)
- Deep WEB (Complete Planet)
- Country by Country (e.g. Health Departments, National Libraries, Key Universities)
- Specific Sites (OMNI, Grey Literature Report)
- Commercial Web Sites (e.g. AMAZON.com)
- Other Areas (International Conferences and Professional Associations)

Traditional Methods

- Hand searching of key journals (e.g. Cancer, BMJ)
- Ask the Experts" – Consultation

This paper highlights what we know about needs assessment, as a result of this body of work, including the 2005 literature search. It aims to provide a primer into the area of individual needs assessment; with a particular focus on frail aged people and people with a disability, in primary and community care.

Policy Context

Current practice is characterised by: (1) *"substantial variation in assessment processes for older people with health and disability needs*"; and (2) *"considerable delays between identification of the need for assessment and the person receiving that assessment, and also between receiving the assessment and the identified needs being addressed" (page ix)* (NZ Guidelines Group, 2003).

In response, policy development has focused on assessment processes and the standardisation of assessment tools, the most well documented framework being the Single Assessment Process in the United Kingdom (http://www.dh.gov.uk/PolicyAndGuidance/HealthAndSocialCareTopics/SocialCare/SingleAssessmentProcess/fs/en).

Another useful source of information on design parameters and assessment frameworks is in the United States, where the Aging and Disability Resource Center (ADRC) runs an assessment tools matrix; which collects information on assessment instruments used in a number of different states (http://www.adrc-tae.org).

The key challenge for managers in this area has been identified by Ljunggren, (2004) *as "to ensure that the client centred assessment takes place within a 'whole system' that delivers the right assessment at the right time." (page 67, Ljunggren, 2004)*

At the policy level, the New Zealand Guidelines Group has produced an important document on <u>Assessment Processes for Older People</u> (2003) summarizing the scientific evidence on assessment frameworks. This work is useful for the design of assessment systems, and key

policy development concepts can be found in an article by Weissert, Chernew and Hirth, 2003.

Key Papers and Theoretical Concepts

Definition of Need

The seminal paper on concepts of need is by Bradshaw, 1972 who describes four types: Normative Need, Comparative Need, Expressed Need and Felt Need.

Normative need is defined by *expert opinion* regarding appropriate standards, required levels of service and what constitutes an acceptable health status level for a community. Normative needs are based on standards laid down on the basis of experience and consultation. Providers are authorised to allocate specific classes of resources on the basis of their special expertise and base their prescriptions on normative need. ***At the individual level, normative needs are often assessed by the use of standard assessment tools.***

Comparative need defines need objectively, by considering matches (or mismatches) between levels of health and morbidity and the availability of health services. Unless there is an objective standard that can be applied, there is no basis for comparisons to be made. Comparative need is assessed via methods that compare the health status of different communities or population groups or individuals and the health services that are available to those communities, population groups or individuals. A region, population group or person is considered to be in 'need' if they have more health problems, or less access to health services, than other regions, population groups or individuals. At the population level, the programs' service components form part of the overall distribution of resources and is based on
comparative need. ***At the individual level, comparative needs are also assessed by the use of standard***
***assessment tools.***

Expressed need defines need in terms of what services people use. It is based on what you can infer about a person or a community through observing their use of services. A community or person who uses a lot of services is assumed to have high need. A community or person who does not is assumed to have low needs. However, expressed need is influenced by the availability of services - if one community has many, well distributed resources, its population is likely to use more services than a community with few services. Expressed need can be seen to vary by area, and by the number of services received by individuals.

Felt need recognises that there are subjective elements to the notion of 'need' and defines it in terms of what individuals state their needs to be or say they want. The range of felt needs are identified at the local, state and national levels by having a mix of consumer and carer representatives on the relevant advisory structures. ***Getting input to programs through using the direct experience of people who can articulate felt needs is an accepted way to balance other inputs from experts*** and comparative data on (dis)advantage, and utilisation data on who currently gets what.

(From Eagar et al., 2004)

This influential, sociological perspective of need in Bradshaw's 1972 paper was discussed by Stevens and Gabbay (1991) in their important article "Needs Assessment needs assessment". They highlighted the key distinction between need, demand and supply. Their conceptualisation of these issues has been neatly updated by Ljunggren (2004) in a diagram reproduced below:

Figure 1: The diagram by Ljunggren (2004) highlighting the distinction between need, demand and supply
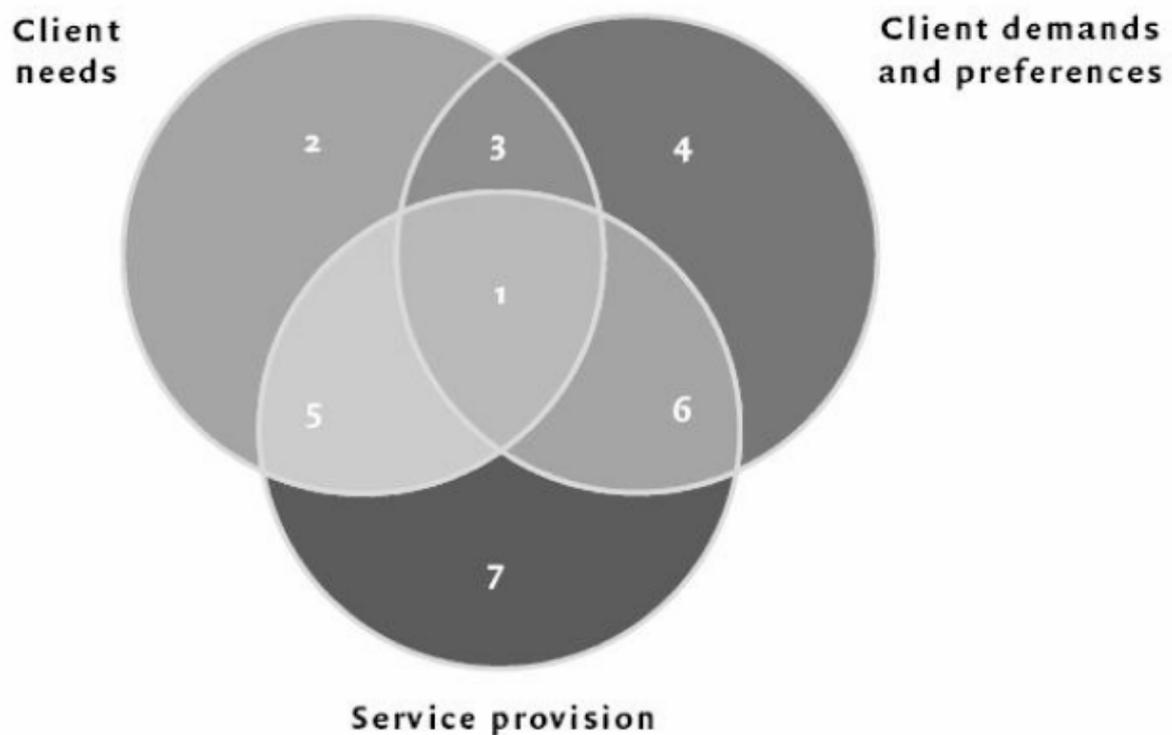
Other useful conceptualisations of need are to be found in the Single Assessment Process in the UK which outlines seven key issues when examining need. (Single Assessment Process for Older People, 2004). They are:

- The nature of the presenting need
- The significance of the need for the older person
- The length of time the need has been experienced
- Potential solutions identified by the older person
- Other needs experienced by the older person
- Recent life events experienced by the older person
- The perceptions of family members and carers

The Camberwell Assessment of Need for the Elderly (CANE) (Slide 13) development team (Orrell and Hancock, 2004) also describe various definitions of need:

- Hierarchies of need
- Lower and higher needs – fundamental and complex
- Needs and the relationship with well-being and ill health
- Needs as wants

- Needs as personally defined personal perceptions
- Needs and the relationship to appropriate interventions

Critique of needs assessment

While there is a good deal of consensus around the original Bradshaw framework, the field of needs assessment also has plenty of scope for contested territory, with the strongest logical critique in the literature being articulated by Rosalie Kane (1999) in the American context of long term care (LTC). She notes that:

"The LTC literature is replete with references to 'unmet need'. Fulfilling such needs as eating, eliminating bodily wastes, and being clean is rarely seen as controversial. Further, many would argue that nobody with a disability should be isolated and incommunicado for lack of help in getting out of bed. No people with Alzheimer's disease should be left to survive unaided in their homes and communities. Presumably some unmet need will always be present in the community, because many problems evolve in social isolation, but once an unmet need is identified, some response is warranted, and any good program will strive to eliminate unmet need. However, measuring unmet need is difficult and introduces an element of subjectivity in distinguishing between a 'need' and a 'desire'." (page 305-306, Kane, 1999)

If needs arise in social isolation, it becomes hard to target the causal factors, which appear much further upstream than the relatively narrow focus of a program can 'target'. If it is often difficult to untangle need from desire, then the purpose of assessment becomes to find the best indicators of expressed need within the framework of the relevant program. Kane goes on to note that needs are consequently hard to manage, can be open ended, and always open up the possibility that thorough assessment will find new ones.

"Furthermore, it would be virtually impossible for programs to meet the full range of perceived unmet needs associated with LTC. The resources required would be open-ended and the demand hard to predict. Moreover, as new needs are identified and met - for example, needs for ambulation assistance to get outdoors, need for interpreter and communication assistance - the further identification of those needs would be stimulated by the providers addressing them. Fixing professional responsibility to eliminate unmet need is particularly difficult for home care because the providers often have limited resources and are circumscribed authority. In some instances, tangible needs could be better met in an institutional setting, but the consumers choose home care knowing some of their needs will remain unmet. Of interest is whether home care agencies should refrain from providing care unless their personnel are confident all needs can be met." (page 306, Kane, 1999)

The risks involved in thorough needs assessment are considerable for narrowly focussed and under-resourced programs, because stark choices may be revealed instead of avoided and the realities of inadequate resources may have to be directly confronted. Kane then develops her argument further by pointing out that needs are often confounded by service delivery issues; a problem akin to the experimental scientific flaw of confounding the dependent with the independent variable when testing a hypothesis.

"In any event, 'need' definitions tend to rely on the judgment of experts as to what services are required in the actual circumstances, and they, in turn, tend to be influenced by existing program categories." (page 306, Kane, 1999)

Kane then points to the possibility of a way through this logical problem by using the judgement of experienced assessors as the 'gold standard' against which to measure the salience of need. This incorporates the service delivery or program perspective, but mediated through the assessor. This avoids the logical trap of implying that a person has high levels of need because they are receiving a large amount of a particular service, by adopting a focus on key observable or predictable indicators that are strongly linked to the absence of help in meeting the underlying need.

"Clearly, experts would benefit by a framework in which they are expected to make judgments. A parsimonious approach to defining unmet need seems indicated. It might be prudent to adopt a stringent view of unmet need, perhaps along the lines of Allen and Mor (1997), who developed an approach to identifying negative consequences (e.g., being hungry for more than a fixed time period) linked to failure to get help with each ADL need." (page 306, Kane 1999).

These quotes highlight the (inherent) subjective nature of holistic and person centred / consumer focused, needs assessment and the natural tension with service provision and limited resources. (This can be also seen in the diagram by Ljunggren [2004] presented above.)

Kane's solution in following the work of Allen and Mor (1997) leads down the path of needs identification i.e. standard questions with thresholds or trigger items about specific needs. This approach has been followed by Owen, Poulos, Eagar et al., 2001; Lima and Allen, 2001; La Plante et al., 2004.

There is a considerable body of work that can provide a source of questions for needs identification questions in community and primary care settings, with the following sources being extremely useful: Jette et al., 1986; Calkins et al., 1994; Fleming et al., 1995; Maly et al., 1997; Philp, 1997; Jacob and Palmer, 1998; Williams et al., 2002; Stuck et al., 2002; Iliffe et al., 2004.

Assessment Domains

A consensus on the domains or issues to assess in a formal needs assessment process is emerging and was first reported on by Philp, 1997. Dr. Ian Philp, from Sheffield University in the UK, went on to become the national advisor on services to older people at the time of the development of the UK's Domains of the Single Assessment Process (Single Assessment Process for Older People, 2004). Other groups have reached similar conclusions: Stewart et al., 1999 (as reported by Stevenson, 1999); Literature Review: Initial Needs identification (Owen, Poulos, Eagar et al., 2001); Shimanouchi et al., 2001; the 75+ Health Assessment (Newbury and Byles, 2002); The National Framework for Comprehensive Assessment in the HACC Program, Resource Kit (Department of Health and Ageing, 2006); Assessment Process for Older People (New Zealand Guidelines Group, 2003); Martin and Martin 2003; and the InterRAI range of instruments for older people (http://www.interrai-au.org/).

A useful list of assessment domains comes from the team that developed the Camberwell Assessment of Need for the Elderly (CANE and CANE-S) (Walters et al., 2000; Orrell and Hancock, 2004). It covers the following domains:

1. Accommodation

2. Household activities
3. Food
4. Self Care
5. Caring for another
6. Daytime activities
7. Memory
8. Eyesight / hearing / communication
9. Mobility
10. Continence
11. Physical Health
12. Drugs
13. Psychotic Symptoms
14. Psychological Distress
15. Information
16. Deliberate self-harm
17. Accidental self-harm
18. Abuse / Neglect
19. Behaviour
20. Alcohol
21. Company
22. Intimate Relationships
23. Money
24. Benefits

Carer's Items

A. Carer's need for information
B. Carer's psychological distress

As well as the content of assessment tools, the additional dimension of assessment to consider is the administration mode, and for that area of research the following references shed light on the key issues: Smeeth et al., 2001; Alessi et al., 2003; Stewart et al., 2003; as well as highlighting future directions (Fries et al., 2002; Fries et al., 2004).

Semi-Structured Interviews

The literature review undertaken by the CHSD into this area in 2005 used electronic databases (MEDLINE via OVID, PsycINFO via OVID). It found formal and informal needs assessments in the fields of mental health, geriatrics, cancer care, brain injury and children with special needs. Most of the work regarding individual and standardised needs assessments had been done in the field of mental health. The three major instruments are:

- Camberwell Assessment of Need (Phelan et al., 1995)
- MRC Needs for Care Assessment Schedule (Brewin et al., 1987; Bebbington et al., 1996)
- The Cardinal Needs Schedule (Marshall et al., 1995)

Of the three, the Camberwell Assessment of Need (CAN, CANSAS) (Phelan et al., 1995, Slade et al., 1999) is the most well-known. It is the product of intense activity in needs assessment in British psychiatry in the late 1980s and into the 1990s. That period produced three highly related, formal needs assessments; as well as a strong theoretical and

philosophical base (see Mangen and Brewin, 1991; Brewin, 1992; Marshall, 1994; Sartorius, 2000; Orrell and Hancock, 2004). Recently, Joska and Flisher et al., 2005 have summarised the use of mental health needs assessments in population and clinical studies. The CarenapD (McWalter et al., 1998) illustrates the common heritage in the related field of dementia.

The following figure examines the design features of these standardised assessments of need in mental health, highlighting the use of a semi-structured interview approach, attempts to measure both MET and UNMET need, the use of severity thresholds; as well as the role of clinical judgement in defining the domains of need.

Figure 2: Comparison of the standardised assessments of need in mental health – the Camberwell Assessment of Need, the MRC Needs for Care Assessment, and the Cardinal Needs Schedule.

	Camberwell Assessment of Need	MRC Needs for Care Assessment #	Cardinal Needs Schedule
Mode of Administration	Semi-Structured Interview	Semi-Structured Interview	Semi-Structured Interview
List of Domains / Areas of Functioning	✓	✓	✓
Number of Domains	22	21	15
Explicit Questions	✓	✗	✗
Linked to Interventions	✗	✓	✓
Based on Clinician Opinion	✓	✓	✓
Based on Consumer / Carer Opinion	✓	NA	NA
Use of measurement tools	✗	✓	✓
Severity Criterion	✗	✗	✓
Met Needs	✓	✓	✗
Unmet Needs	✓	✓	✓
Rating System	✓	✓	✓
Item Response Range	0 - 2 plus not known	0 - 2 plus 3 secondary	1 or 2 plus suspendend
Item Response Category Descriptors	No need, Met need, unmet need (Plus - not known)	No need, met need, unmet need (Plus - Overprovision, Future Need, Lack of Performance)	Needs, Placement Failure (Plus - suspended)

In general, these instruments require a detailed, semi-structured interview and may not be suitable in all assessment situations (e.g. over the telephone). Incorporating the direct examination of a client's own perceived needs is one solution to understanding unmet need as discussed below.

Priority of Need

Another important issue for community care programs operating in a context of finite resources is to find the means for efficient and reliable demand management, which has been conceptualised as 'needs prioritization'. However as Moseley and Heaney 1994 noted, in the Performance Improvement Quarterly, *"Needs prioritization is a key element because it helps the performance technologist select the best means to go from a to b. Unfortunately, it is not widely reported in practice." (page 73, Mosely and Heaney, 1994)*
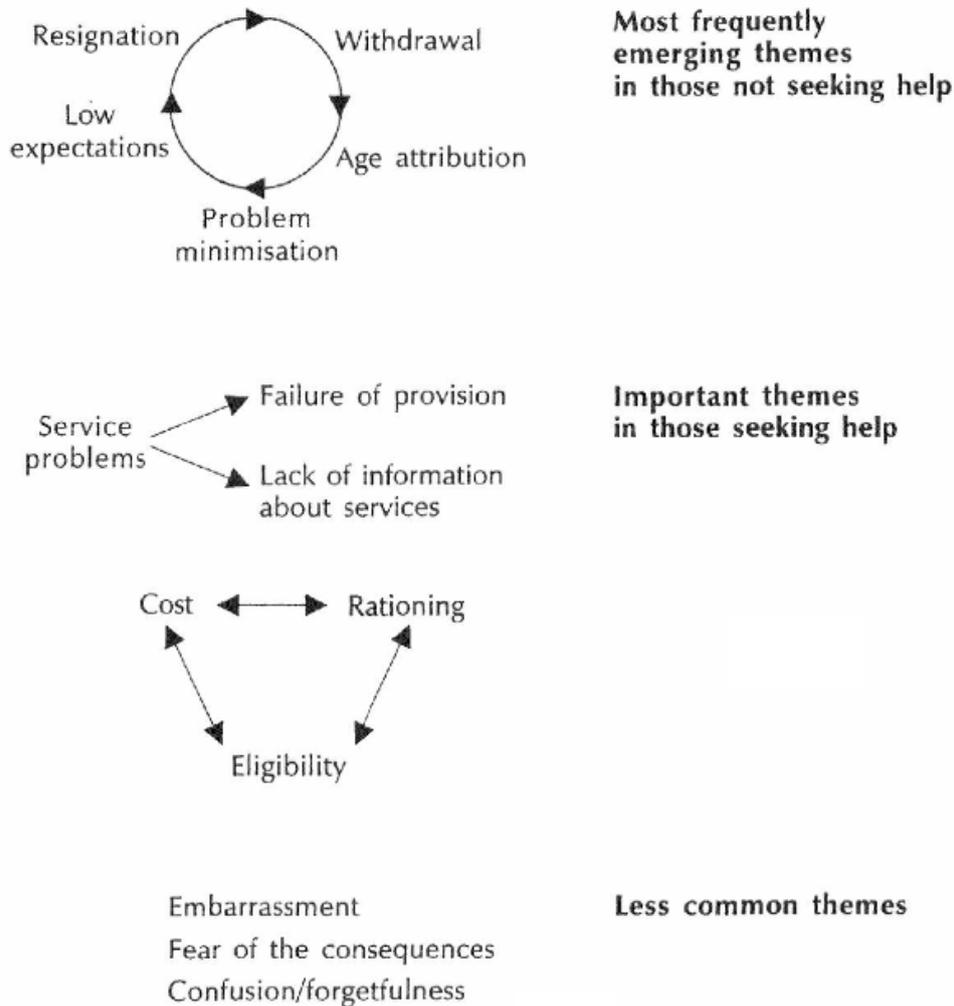
In the literature search, only one prioritization study was found which produced some quantifiable data. It was the Arkansas Order of Selection Project (Bolton et al., 1995). Other recent work by the CHSD that is currently in press (Stevermuer et al., 2006) illustrates how routinely collected indicators, selected from an evidence-linked item bank, can generate a priority rating category represented by a derived data item. The paper illustrates three case study examples where an empirical approach to the development of priority rating tools has proven useful in clinical decision making and active demand management at the service entry point in community care.

Unmet Need

The predictive value of measuring unmet needs is discussed in a recent paper by Blazer et al., 2005, which reported that a person's perceptions of unmet basic needs (finances, shelter, heating) can predict mortality ten years later for community dwelling elderly persons (65 years and older). This finding was independent of the effects of race and ethnicity.

Walters and Iliffe (2004) provide a useful diagram summarising their qualitative research into barriers to meeting needs in primary care (Walters et al., 2001).

Figure 3: Diagram from the qualitative research of Walters and Iliffe (2004), an analysis of barriers to meeting needs in primary care

Resignation — Withdrawal
Low expectations — Age attribution
Problem minimisation

Most frequently emerging themes in those not seeking help

Service problems — Failure of provision / Lack of information about services

Important themes in those seeking help

Cost ⟷ Rationing
Eligibility

Embarrassment
Fear of the consequences
Confusion/forgetfulness

Less common themes

 "This illustrates how, for the majority of patients who had not sought help, the overlapping themes of resignation, social withdrawal, low expectations, age attribution and problem minimisation were dominant. For those who had actively sought help, the themes were more oriented around services with issues such as costs, rationing or eligibility for services, failure of service provision or lack of information about services." (page 17, Walters and Iliffe, 2004)

This work also supports Kane's observation that needs often arise in a context of social isolation.

Finally, Harvey Whiteford (2000) in his book chapter also makes an important point for policy makers on the ethical and resource allocation implications of unmet need, namely that:

"A clinician's decision to undertake one particular type or occasion of service is a decision not to undertake another. The cost of giving up this next best alternative, the opportunity cost, does concern governments and third-party payers. Rational decision-making about which services should be provided is needed, especially in regard to people whose need will be unmet (McGuire, Henderson & Mooney, 1988)." (page 9, Whiteford, 2000)

Evidence Base

Emerging from the scientific evidence base, two key challenges for developing a national approach towards needs assessment can be identified:

- Firstly, a recent systematic review by Gilbody et al., 2005 found no evidence to support the use of outcome measurement and needs assessment in the field of mental health. This review has been challenged in the literature by Greenhalgh et al., 2005, who refer to a paper by Lambert et al., 2003. Perhaps the best way to view Gilbody et al., 2005 is as a call to improve study design by using cluster randomisation (ie. randomisation by clinician or practice).

- Secondly, another major research gap and limitation is that there is *"Insufficient information about whether an assessment should be a single process from screening to the more in-depth assessment, or discrete assessments along the continuum of care"* (page 67, NZ Guidelines Group, 2003).

From a strictly scientific stand-point, national approaches to needs assessment are breaking new ground and moving beyond the available evidence-base. However, once common national systems are in place, these scientific and methodological issues will be more easily studied and current policy dilemmas more able to be empirically resolved.

The Latest Self-Report Instruments

One promising area is the development of self-report or perceived needs assessments. These new instruments include:

- 2-COM (van Os et al., 2002) *(A 19 item self report instrument (based on CAN data) used to assist with patient and professional communication in mental health.)*
- Perceived Need for Care Questionnaire (PNCQ) (Meadows et al., 2000) *(Population survey questions to assess perceived need for information, medication, counselling, social interventions and skills training associated with mental health care. Used in the Australian National Health Survey of Mental Health and Well-Being.)*
- Cancer Needs Questionnaire – Short Form (McLachlan et al., 2001) *(A 32 item self-report instrument for cancer patients, covering perceived need in five domains: psychological, health information, physical and daily living, patient care and support; and interpersonal communication. Plus two further questions on sexual and spiritual needs.)*
- Needs Assessment for Advanced Cancer Patients (NA-ACP) (Rainbird et al., 2005) *(A 132 item self-report instrument (long version) for patients with advanced incurable cancer. Covering seven domains of need: Medical Communication / Information; Psychological / Emotional; Daily Living; Financial; Symptoms; Spiritual; and Social.)*
- Needs-Based Quality of Life Instruments (McKenna et al., 2004) *(Provides a list of needs-based quality of life instruments for the following diseases: Ankylosing Spondylitis; Behcet's Disease; Diabetic Foot Ulcers; Urge Incontinence; Male Erection Difficulties; Migraine; Pulmonary Hypertension; Psoriatic Arthritis; Psoriasis; Adult Growth Hormone Deficiency; Atopic Dermatitis; Depression; Rheumatoid Arthritis; Recurrent Genital Herpes; Systemic Lupus Erythematosus;*

Urogential Atrophy; Venous Leg Ulcers. Plus instruments for Carers of Patients with Alzheimer's Disease, Parents of Children with Atopic Dermatitis and Adolescents.)

- Perceived needs following head injury survey (Corrigan et al., 2004) *(A 13 item self-report instrument used in a follow-up survey one year after traumatic brain injury, examining whether help was received or needed in 13 areas of functioning.)*

However, care needs to be taken with the application of any self-report, quality of life / health status instrument with those clients with cognitive impairment (see the health technology assessment by Riemsma et al., 2001).

Assessment in an Electronic Age

Finally, the design of assessment tools for use in an electronic and web-based environment has the potential for overcoming the challenges of covering many interventions across different settings; and with the measurement of outcomes for consumers.

With agreed data transmission standards (i.e. the way that information is moved around), and standardised data items (i.e. a common data item pool), a common language of assessment may yet emerge. That would then lead to the possibility of comparing 'like with like' and to methods of measuring the outcomes of definable interventions against commonly understood and shared benchmarks of quality, safety or functional gain.

A millennial vision of an electronic future should be viewed with scepticism by all those who cannot program their new DVD recorder. But if the quality and commonality of information and evidence can improve, and a logical research pathway be designed, then the promise of an evolving and improving 'system' of needs assessment may indeed be realisable.

Conclusion

This paper highlighted a number of key issues from the scientific and grey literature. These included:

- key policy developments, like the Single Assessment Process in the United Kingdom;
- the major conceptual distinction between need, demand and supply;
- the subjective nature of holistic and person centred / consumer focused, needs assessment and the natural tension with service provision and limited resources;
- a useful critique of needs assessment by Kane, 1999;
- an emerging consensus on assessment domains and the needs identification approach;
- significant research and development work undertaken in the field of mental health;
- the linkage of unmet needs with social isolation;
- research gaps in the scientific evidence base;
- as well as the latest trends in the areas of: need prioritisation, self-report or perceived needs assessment, and electronic / web-based assessment platforms.

By highlighting these issues this paper provides useful background knowledge for designers of needs assessments for frail aged people and people with a disability living in the community.

References

Alessi CA, Josephson KR, Harker JO, et al (2003) *The yield, reliability, and validity of a postal survey for screening community-dwelling older people*. J Am Geriatr Soc. Vol. 51, pp.194-202.

Allen SM and Mor V (1997) *The prevalence and consequences of unmet need: Contrasts between older and younger adults with disability*. Medical Care. Vol. 35, pp.1132-1148.

Bidwell S and Jensen MF (2004) *Using a Search Protocol to Identify Sources of Information: the COSI Model*. In Topfer, L-A and Auston I (Eds) Etext on Health Technology Assessment (HTA) Information Resources. Bethesda, MD: National Information Center on Health Services Research and Health Care Technology (NICHSR), US National Library of Medicine.

Blazer DG, Sachs-Ericsson N and Hybels CF (2005) *Perception of unmet basic needs as a predictor of mortality among community-dwelling older adults*. Am J Public Health. Vol. 95, pp.299-304.

Bolton B, Bellini J and Neath J (1995) *The Arkansas Order of Selection Project: Rationale, assumptions, and objectives*. Journal of Rehabilitation Administration. Vol. 19, pp.3-14.

Bradshaw J (1972) *The concept of social need*. New Society. Vol. 3, pp.640-643.

Brewin CR (1992) *Measuring individual needs for care and services*. In Thornicroft G, Brewin CR and Wing J (Eds) Measuring mental health needs. London: Royal College of Psychiatrists (Gaskell).
Calkins DR, Rubenstein LV, Cleary PD, et al (1994) *Functional disability screening of ambulatory patients: A randomized controlled trial in a hospital-based group practice*. J Gen Intern Med. Vol. 9, pp.590-592.

Centre for Health Service Development (2006) *2005 Annual Report*. Centre for Health Service Development, University of Wollongong.

Department of Health and Ageing (2006) *National Framework for Comprehensive Assessment in the HACC Program: Resource Kit*. Canberra: Department of Health and Ageing.

Eagar K, Cromwell D, Owen A, Senior K, Gordon R and Green J (2003) *Health Services Research and Development in Practice: an Australian experience*. Journal of Health Services Research and Policy. Vol. 8, Suppl 2, pp. 366.1-366.7.

Eagar K, Lyn V and Garrett P (2004) *Health Planning: An Australian perspective*. Sydney: Allen and Unwin.

Eagar K, Owen A, Marosszeky N, Poulos R (2006) *Towards a measure of function for Home and Community Care Services in Australia: Part 1 – development of a national standard approach*. Australian Journal of Primary Health. Vol. 12, pp. 73-81.

Fleming KC, Evans JM, Weber DC, et al (1995) *Practical functional assessment of elderly persons: A primary-care approach*. Mayo Clin Proc. Vol. 70, pp.890-910.

Fries BE, James M, Hammer SS, et al (2004) *Is telephone screening feasible ? Accuracy and cost-effectiveness of identifying people medically eligible for Home- and Community-Based Services*. <u>The Gerontologist</u>. Vol. 44, pp.680-688.

Fries BE, Shugarman LR, Morris JN, et al (2002) *A screening system for Michigan's Home- and Community-Based Long-Term Care Programs*. <u>The Gerontologist</u>. Vol. 42, pp.462-474.

Gilbody SM, House AO and Sheldon TA (2005) *Outcome measures and needs assessment tools for schizophrenia and related disorders (Review) - The Cochrane Collaboration*. Oxford: John Wiley & Sons, Ltd.

Green J, Eagar K, Owen A (2006) *Towards a measure of function for Home and Community Care Services in Australia: Part 2 – evaluation of the screening tool and assessment instruments*. <u>Australian Journal of Primary Health</u>. Vol. 12, pp. 82-91.

Greenhalgh J, Long AF and Flynn R (2005) *The use of patient reported outcome measures in routine clinical practice: lack of impact or lack of theory ?* <u>Social Science & Medicine</u>. Vol. 60, pp.833-843.

Iliffe S, Lenihan P, Orrell M, et al (2004) *The development of a short instrument to identify common unmet needs in older people in general practice*. <u>British Journal of General Practice</u>. Vol. 54, pp.914-918.

Jacob GM and Palmer RM (1998) *Tools for assessing the frail elderly. Geriatric evaluation focuses on improving quality of life*. <u>Postgraduate Medicine</u>. Vol. 104, pp.135-138.

Jette AM, Davies AR, Cleary PD, et al (1986) *The Functional Status Questionnaire: reliability and validity when used in primary care*. <u>J Gen Intern Med</u>. Vol. 1, pp.143-149.

Joska J and Flisher AJ (2005) *The assessment of need for mental health services*. <u>Soc Psychiatry Psychiatr Epidemiol</u>. Vol. 40, pp.529-539.

Kane RA (1999) *Goals of home care: Therapeutic, compensatory, either or both ?* <u>Journal of Aging and Health</u>. Vol. 11 pp.299-321.

Lambert MJ, Whipple JL, Hawkins EJ, et al (2003) *Is it time for clinicians to routinely track patient outcome ? A meta-analysis*. <u>Clin Psychol Sci Prac</u>. Vol. 10, pp.288-301.

LaPlante MP, Kaye SH, Kang T, et al (2004) *Unmet need for personal assistance services: Estimating the shortfall in hours of help and adverse consequences*. <u>The Journals of Gerontology</u>. Vol. 59B, No.2, pp.S98-S108.

Lima JC and Allen SM (2001) *Targeting risk for unmet need: Not enough help versus no help at all*. <u>The Journals of Gerontology</u>. Vol. 56B, No.5, pp.S302-S310.

Ljunggren G (2004) *Needs Assessment*. In Nies H and Berman PC (Eds) <u>Integrating services for older people: A resource book for managers</u>. Dublin, Ireland: European Health Management Association.

Maly RC, Hirsch SH and Reuben DB (1997) *The performance of simple instruments in detecting geriatric conditions and selecting community-dwelling older people for geriatric assessment*. Age and Ageing. Vol. 26, pp.223-231.

Mangen S and Brewin CR (1991) *The Measurement of Need*. In Bebbington PE (Ed) Social Psychiatry: Theory, Methodology and Practice. New Brunswick, NJ: Transaction Publishers.

Marshall M (1994) *How should we measure need ? Concept and practice in the development of a standardized assessment schedule*. Philosophy, Psychiatry and Psychology. Vol. 1, pp.27-36.

Martin GJO and Martin IR (2003) *Assessment of community dwelling older people in New Zealand: A review of the tools*. Wellington NZ: New Zealand Guidelines Group.

McKenna SP, Doward LC, Meads D, et al (2004) *Summary of needs-based quality of life instruments*. Value in Health. Vol. 7, Suppl 1, pp.S39-S40.

McLachlan SA, Allenby A, Matthews J, et al (2001) *Randomized trial of coordinated psychosocial interventions based on patient self-assessments versus standard care to improve the psychosocial functioning of patients with cancer*. J Clin Oncol. Vol. 19, pp.4117-4125.

McWalter G, Toner H, McWalter A, et al (1998) *A community needs assessment: The Care Needs Assessment Pack for Dementia (CarenapD) - Its development, reliability and validity*. International Journal of Geriatric Psychiatry. Vol. 13, pp.16-22.

Meadows G, Burgess P, Fossey E, et al (2000) *Perceived need for mental health care, findings from the Australian Survey of Mental health and Well-being*. Psychological Medicine. Vol. 30, pp.645-656.

US National Library of Medicine (2006) *Medical Subject Headings (MeSH) Browser*. Bethesda, MD: US National Library of Medicine. Retrieved July 14, 2006 from US National Library of Medicine Web site: http://www.nlm.nih.gov/mesh/MBrowser.html

Moseley JL and Heaney MJ (1994) *Needs assessment across disciplines*. Performance Improvement Quarterly. Vol. 7, pp.60-79.

New Zealand Guidelines G (2003) *Best Practice Evidence-Based Guideline - Assessment processes for older people*. Wellington NZ: New Zealand Guidelines Group.

Newbury J, Byles J and Ratnaike RN (2002) *Functional Assessment: 75+ Health Assessment in Australia*. Practical guide to geriatric medicine. Sydney: The McGraw-Hill Companies, Inc.

Orrell M and Hancock G (2004) *CANE: Camberwell Assessment of Need for the Elderly. A needs assessment for older mental health service users*. London: Royal College of Psychiatrists (Gaskell).

Owen A, Marosszeky N, Ramsay L, et al (2005) *Carer eligibility and needs assessment for national respite for carers program: Consultation paper*. Centre for Health Service Development, University of Wollongong

Owen A, Poulos R, Eagar K, et al (2001) *Literature Review: Initial Needs Identification (Primary Care Partnerships: Better Access to Services Project).* Centre for Health Service Development, University of Wollongong

Phelan M, Slade M, Thornicroft G, et al (1995) *The Camberwell Assessment of Need: the validity and reliability of an instrument to assess the needs of people with severe mental illness.* British Journal of Psychiatry. Vol. 167, pp.589-595.

Philp I (1997) *Can a medical and social assessment be combined ? Journal of the Royal Society of Medicine.* Vol. 90, (Suppl 32), pp.11-13. Rainbird KJ, Perkins JJ and Sanson-Fisher RW (2005) *The Needs Assessment for Advanced Cancer Patients (NA-ACP): A measure of the perceived needs of patients with advanced, incurable cancer.* A study of validity, reliability and acceptability. Psycho-Oncology. Vol. 14, pp.297-306.

Riemsma RP, Forbes CA, Glanville JM, et al (2001) *General health status measures for people with cognitive impairment: Learning disability and acquired brain injury.* Health Technology Assessment. Vol. 5, No. 6

Sartorius N (2000) *Assessing needs for psychiatric services.* In Andrews G and Henderson S (Eds) Unmet need in psychiatry: Problems, resources, responses. Cambridge: Cambridge University Press.

Shimanouchi S, Uchida E, Kamei T, et al (2001) Development of an assessment sheet for home care. International Journal of Nursing Practice. Vol. 7, pp.140-145.

Single Assessment Process for Older People (2004) *Guidance for Local Implementation (Revised and updated).* United Kingdom: Department of Health.

Slade M, Beck A, Bindman J, et al (1999) *Routine clinical outcome measures for patients with severe mental illness: CANSAS and HoNOS.* British Journal of Psychiatry. Vol. 174, pp.404-408.

Smeeth L, Fletcher AE, Stirling S, et al (2001) *Randomised comparison of three methods of administering a screening questionnaire to elderly people: Findings from the MRC trial of the assessment and management of older people in the community.* BMJ. Vol. 323, pp.1-7.

Stevens A and Gabbay J (1991) *Needs assessment needs assessment.* Health Trends. Vol. 23, pp.20-23.

Stevenson J (1999) *Comprehensive Assessment of Older People (Briefing Paper 2).* London: King's Fund (Rehabilitation Programme).

Stevermuer T, Owen A, Williams K and Masso M (2006) *Priority Rating for Community Care.* Australian Health Review. (in press)

Stewart K, Challis D, Carpenter I, et al (1999) *Assessment approaches for older people receiving social care: Content and coverage.* International Journal of Geriatric Psychiatry. Vol. 14, pp.147-156.

Stewart K, Hughes J, Challis D, et al (2003) *Care management for older people: Access, targeting and the balance between assessment, monitoring and review.* Research policy and planning. Vol. 21, pp.13-22.

Stuck AE, Egger M, Hammer A, et al (2006) *Review: Home visiting with multidimensional assessment and multiple visits is effective in low risk elderly people.* Evidence - Based Medicine. Vol. 7, pp.148.

van Os J, Altamura AC, Bobes J, et al (2002) *2-COM: An instrument to facilitate patient-professional communication in routine clinical practice.* Acta Psychiatr Scand. Vol. 106, pp.446-452.

Walters K and Iliffe S (2004) *The CANE in primary care settings: Its feasibility and utility as a research and clinical tool.* In Orrell M and Hancock G (Eds) CANE: Camberwell assessment of need for the elderly. London: Royal College of Psychiatrists (Gaskell).

Walters K, Iliffe S, Orrell M (2001) *An exploration of help-seeking behaviour in older people with unmet needs.* Family Practice. Vol. 18, pp.277-282.

Walters K, Iliffe S, See Tai S, et al (2000) *Assessing needs from patient, carer and professional perspectives: the Camberwell Assessment of Need for Elderly people in primary care.* Age and Ageing. Vol. 29, pp.505-510.

Weissert W, Chernew M and Hirth R (2003) *Titrating versus targeting home care services to frail elderly clients.* Journal of Aging and Health. Vol. 15, pp.99-123.

Whiteford H (2000) *Unmet needs: A challenge for governments.* In Andrews G and Henderson S (Eds) Unmet need in psychiatry: Problems, resources, responses. Cambridge: Cambridge University Press.

Williams EI, Fischer G, Junius U, et al (2002) *An evidence-based approach to assessing older people in primary care (Occasional Paper 82).* London: Royal College of General Practitioners.