

## International research

# The General-practice Users' Perceived-need Inventory ('GUPI'): a brief general practice tool to assist in bringing mental healthcare needs to professional attention

Catharine McNab BA LLB (Hons) MSc (Hons)  
Research Fellow

Graham Meadows MD MPhil MBChB MRCP (UK) MRCPsych FRANZCP  
Professor

Department of Psychological Medicine, Monash University, Melbourne, Australia

### ABSTRACT

**Objective** The General-practice Users' Perceived-need Inventory ('GUPI') is a practical instrument to identify perceived need for mental healthcare in general practice. Empirical findings reported here explore the utility and acceptability of the GUPI.

**Design and setting** Criterion validity and test-retest-reliability studies in metropolitan general practices in Melbourne, Australia.

**Participants** One-hundred and twenty-two attendees at general practices examined cross-sectionally; 83 examined longitudinally.

**Main outcome measures** Performance of the GUPI against the 12-item Somatic and Psychological Health Report (SPHERE) questionnaire and general, emotional and physical ill-health items from the Short Form Health Survey.

**Results** Perceived need declared through the GUPI was positively associated with combined psychological and somatic SPHERE caseness, and higher scores on Health Survey items. Sensitivity of the measure for both these proxies of psychiatric caseness was good. A subset of three items has performance in psychometric terms

largely equivalent to the five-item version. Within a reliability study, where a general practitioner consultation occurred within the time frame of the test and retest design, overall perceived need reduced in frequency over time. Stability through time was associated with perceived need for medication.

**Conclusion** Perceived need as ascertained by the GUPI is associated with poorer general health, physical and emotional difficulties, and likely psychiatric caseness. The instrument may be useful in three- or five-item forms, the latter allowing for ultra-brief administration in combination with symptom and/or disability measures. Reassurance or treatment may account for a downward trend of perceived need through time. This instrument extends the range of brief mental healthcare needs assessment instruments available for general practice use.

**Keywords:** mental disorders, mental health services, needs assessment, primary healthcare, psychometrics

## Introduction

### Assessing mental healthcare needs in primary care

One in three patients attending Australian general practice have common forms of depressive, anxiety or somatoform disorders, and 10–25% have depressive disorders severe enough to justify evidence-based treatment.<sup>1</sup> Treatment of depression, in contrast, accounts for less than 4% of consultations in Australian general practice.<sup>2,3</sup> Reducing this disparity may be helped by developing structured screening and assessment instruments suitable for primary care, and efforts in this direction have typically involved development of brief symptom scales.<sup>4,5</sup>

The utility of symptom detection is limited, however, unless it is then followed by the development of a shared understanding of needs, based on which an appropriate clinical intervention can be delivered. Given that symptom measures do not examine the degree to which particular mental health needs are perceived, the assessment of perceived need may facilitate both the development of this shared understanding and the provision of suitable clinical services.

Existing needs assessment tools are inappropriate for general routine use within primary care. Such measures, which include the Cardinal Needs Schedule, the Medical Research Council (MRC) Needs for Care Assessment Schedule, the Camberwell Assessment of Need, and the Bangor Assessment of Need Profile typically assume pre-existing mental health difficulties, and/or are completed by clinicians rather than consumers.<sup>6–10</sup> The needs assessed within them include both mental health and related needs, such as domestic skills and access to transport and amenities; given the diversity of potential reported needs, these measures are lengthy (e.g. Cardinal Needs Schedule: 62 min; Camberwell Assessment of Need: 25 min; Bangor Assessment of Need Profile: 20 min). The Two-Way Communication Checklist (2-COM) is a recently developed measure of perceived need in patients with schizophrenia that represents a substantial improvement in terms of brevity; however, it continues to take approximately 13 minutes to administer.<sup>11,12</sup>

Evidence from the Australian National Survey of Mental Health and Wellbeing (NSMHWB), the largest epidemiological survey conducted in Australia to date, has provided some indications as to the likely utility of direct enquiry into perceived need for mental healthcare in the general population. The

needs assessment instrument developed for that survey, the Perceived Need for Care Questionnaire (PNCQ), assessed five domains of perceived need: information, medication, counselling or psychotherapy, social interventions and skills training. It categorised each of these as being at a level of no need, unmet need, partially met need, or fully met need; where need was unmet or partially met, it assessed barriers to care.<sup>13</sup> Formal psychometric evaluation prior to adoption for the survey supported construct validity and showed it to have acceptable reliability.<sup>14</sup>

The PNCQ is currently being used within several services research projects in Australia, North America, and Africa, either as a computer-assisted interview or in its paper form used by trained interviewers. It is a brief and simple measure in its computer-assisted form, typically taking less than two minutes to administer.<sup>15</sup> The paper form of the PNCQ, in contrast, is a 17-page instrument and requires considerable training in administering the skip rules; its routine use in primary care settings is therefore inappropriate.

Beyondblue, the Australian national depression initiative, commissioned the development of a brief version of the PNCQ as part of its substantial programme of research into mental health in primary care. The use within primary care screening and assessment of a brief perceived mental health need measure, in addition to symptom scales, was proposed as a means to assist in the routine monitoring of clinical course and service response in both research and clinical settings, particularly with respect to examining levels of met and unmet need and barriers to care.

### Aims

This paper reports the development of the General-practice Users' Perceived-need Inventory ('GUPI'), which represents a brief paper form of the PNCQ. A study is reported based in primary care that provides some empirical assessment of the PNCQ in terms of user-centredness, feasibility, utility, and psychometric properties, as guided by published criteria for evaluating such measures.<sup>16</sup> While the GUPI is not considered solely as a screen for psychiatric problems, the utility of the measure would be supported by evidence of at least some association between the GUPI categories and the presence of mental health problems (criterion validity); test–retest reliability is also considered.

## Method

### Development

The development phase involved trialling a series of draft versions in consultation with general practitioners (GPs), mental healthcare professionals, and primary mental healthcare consumers, resulting in the GUPI (see Appendix 1). The GUPI enquires into domains of perceived need common with those assessed by the PNCQ, and also into barriers to receiving care where a need is identified. This paper concentrates on properties of the perceived need component of the measure.

### Study procedure and setting

Three general practices in Melbourne took part in the study. Forms outlining the study were displayed at reception, and receptionists invited consecutive attendees to participate in the study. Consenters were approached by researchers in waiting rooms before their GP consultation; questionnaires were administered in quiet rooms within the general practice, in the presence of the researcher. The study was approved by the University of Melbourne Human Research Ethics Committee.

### Measures

At time 1, participants were administered a battery of pencil-and-paper tests, including:

- a demographics questionnaire (assessing age, gender, employment status, occupation, higher educational level, marital status, and number of children)
- a feedback questionnaire, exploring consumer perceptions of the GUPI's acceptability and utility
- measures of likely mental health problems chosen for brevity and practicality, in order to examine criterion validity
- the Somatic and Psychological Health Report ('SPHERE'), a 12-item questionnaire assessing psychological and somatic symptoms indicating common mental disorders in general practice<sup>17</sup>
- three items of the Short-Form Health Survey ('SF-8'), canvassing general health (scored on a six-point Likert scale), and role limitations resulting from physical and emotional health problems (scored on five-point Likert scales)<sup>18</sup>
- the GUPI.

An average of seven days later (time 2) (standard deviation (sd) = 0.74, range = 6–10), participants

were telephoned for administration of the time 2 GUPI.

Concurrent criterion-related validity was examined using SPHERE 'caseness', and continuous scores on the three items taken from the SF-8 Health Survey. Test-retest reliability was examined using GUPI responses at times 1 and 2.

## Results

### Participants

One-hundred and ninety-seven GP attendees were approached, and 122 agreed to participate in the study (62%); 83 of these participants were available for retest. Participants' mean age was 45 years (sd = 16.12), and 77% of the sample was female. The modal employment status was that of pensioner (33.6% of the sample), followed by working full-time (24.6%).

### Utility of the GUPI: the results from the feedback questionnaire

The large majority of participants rated the GUPI as easy to understand (92.6% of responders responded 'agree' or 'strongly agree' with this statement), and easy to complete (95.3% responded 'agree' or 'strongly agree'). A majority described it as useful for them to complete (62.1% responded 'agree' or 'strongly agree'). Participants generally regarded the GUPI as possibly helpful in communicating concerns they might have to GPs (45.2% responded 'agree' or 'strongly agree', 27.9% responded 'neither agree nor disagree'), and a similar number reported that they would be prepared to complete the GUPI every time they visit a GP (43.2% responding 'agree' or 'strongly agree', 26% reporting 'neither agree nor disagree').

### Descriptive statistics of GUPI responses

Fifty-nine percent of participants indicated some form of need on the GUPI at either time 1 or time 2. Chi-square analysis did not reveal any association between demographic variables and perceived need. Of participants who reported need on the GUPI, the modal barrier reported to accessing means of meeting need was a preference to manage oneself (38.3% at time 1). At time 1, reporting of perceived need on each item was as follows: item 1, 50%; item 2, 45.1%; item 3, 36.9%; item 4, 11.5%; and item 5, 25.4%.

## Reliability and validity of the GUIPI

### *Stability of reporting of need*

Fifty-nine percent of the sample reported need at time 1, while 35.2% reported need at time 2, a statistically significant change ( $n = 83$ ,  $P < 0.01$ , McNemar test). Those who reported need at time 1 and time 2 were significantly more likely to report a need for medication at time 1 than those who reported need at time 1 and not at time 2 (90.7% vs. 55.2%;  $\chi^2(1) = 12.12$ ,  $P < 0.001$ ). Tests for difference in reporting of perceived need across time 1 and time 2 were non-significant for four of the five GUIPI items, suggesting stability in these items measures (information:  $P = 0.55$ ; counselling:  $P = 1.00$ ; social interventions:  $P = 1.00$ ; skills training:  $P = 0.73$ ). Responses to the medication item were significantly different over time ( $P = 0.001$ ); participants' reporting of need with respect to medication fell from 45.0% at time 1 to 37.3% at time 2.

### *SPHERE results and criterion validation*

Report of both somatic and psychological symptoms beyond threshold on the SPHERE ('level 1 caseness') has the highest level of overall efficiency;<sup>17,19</sup> this paper therefore considers only SPHERE level 1 caseness. Table 1 demonstrates the sensitivity and specificity of each item, and the GUIPI as a whole. Items 1, 2, and 3 appear high in sensitivity and moderate in specificity; therefore, those who meet criteria for level 1 caseness according to the SPHERE are highly likely to report a need on items 1, 2, or 3, and those who do not reach this caseness threshold on the SPHERE are quite unlikely to report a need on these GUIPI items. Items 4 and 5 appear low in sensitivity and high in specificity; hence, there appears a low probability that individuals will report perceived need on the GUIPI, given SPHERE caseness, but a high probability that participants will not report GUIPI need if they do not report SPHERE caseness. Items 4 and 5, therefore, appear to

target individuals who do not achieve SPHERE threshold. Overall efficiency for the GUIPI is 63.1% with respect to SPHERE level 1 caseness.

Multivariate analyses of variance revealed significant relationships between time 1 perceived need and SF Health Survey scores, with those reporting need scoring higher on the general ( $F(1,116) = 13.09$ ,  $P < 0.001$ ), somatic ( $F(1,116) = 6.03$ ,  $P < 0.05$ ), and psychological ( $F(1,116) = 34.75$ ,  $P < 0.001$ ) health items.

Logistic regression was conducted to examine the degree to which GUIPI items, singly and in combination, predicted 'level 1' SPHERE caseness. No single item significantly predicted SPHERE caseness. Principal components analysis suggested a first factor of the items 1, 2, and 3, and a second factor of the remaining two items. When items loading on the first and second factors respectively were entered into a sequential logistic regression, the first block significantly predicted SPHERE level 1 caseness ( $\chi^2(3) = 23.96$ ,  $P < 0.001$ ); the second block did not contribute significantly above this ( $\chi^2(2) = 0.66$ ,  $P > 0.10$ ).

These analyses suggested that the first three items of the GUIPI alone may be valid. Using this short form of the GUIPI ('GUIPI-SF'), comparisons with criterion variables were largely unchanged. Scores on the SF-Health items were associated with GUIPI-SF perceived need (item 1:  $F(1,116) = 14.04$ ,  $P < 0.001$ ; item 2:  $F(1,116) = 6.64$ ,  $P < 0.05$ ; item 3:  $F(1,116) = 33.25$ ,  $P < 0.001$ ). 'Level 1' SPHERE caseness was related to perceived need on the GUIPI-SF ( $\chi^2(1) = 15.05$ , Fisher's  $P < 0.001$ , odds ratio = 4.92, confidence intervals (CIs) = 2.13–11.36); participants reporting perceived need on the GUIPI-SF were more likely to report level 1 SPHERE caseness than those without need. Minimal differences in sensitivity and specificity between the GUIPI and the GUIPI-SF emerged (GUIPI-SF sensitivity: 0.78, CIs 0.64–0.88; specificity: 0.58, CIs 0.47–0.69). Overall efficiency scores were marginally higher for the GUIPI-SF for SPHERE level 1 caseness (65.57%).

**Table 1** Sensitivity and specificity of the GUIPI, item-by-item and overall

	Item 1	Item 2	Item 3	Item 4	Item 5	Overall
<b>Level 1 caseness</b>						
Sensitivity (CI)	0.76 (0.62–0.86)	0.71 (0.57–0.82)	0.6 (0.46–0.73)	0.2 (0.11–0.34)	0.40 (0.27–0.55)	0.80 (0.66–0.89)
Specificity (CI)	0.65 (0.54–0.75)	0.70 (0.59–0.79)	0.77 (0.66–0.85)	0.94 (0.86–0.97)	0.83 (0.73–0.90)	0.53 (0.42–0.64)

## Discussion

### Utility of the GUPI

Participants overwhelmingly found the questionnaire easy to understand and complete. A majority reported it as useful and potentially helpful in communicating concerns. For the minority who did not, the brevity and clarity of the instrument mean that it presents little in the way of response burden. It is possible that the framing of the presentation of the GUPI as a research measure in this instance diminished its face validity, and that patients may be more likely to see it as a useful tool were it presented within the context of normal clinical care.

### Levels of reported need on the GUPI

Levels of reported perceived need on the GUPI appear to be much higher than those generally demonstrated in epidemiological surveys (59% on the GUPI, versus 13.8% in the Australian National Survey for Mental Health and Wellbeing;<sup>20</sup> 19.4% in the US National Co-Morbidity Survey;<sup>21</sup> 11.7% in an Ontario study;<sup>21</sup> 22.4% in the Christchurch psychiatric epidemiology study;<sup>22</sup> 7.3% in a Finnish national survey,<sup>23</sup> with cross-national differences being in part at least explained by differences in instrumentation).<sup>13</sup> That higher levels of perceived need were reported in this study is unsurprising, as assessment of perceived need is likely to yield higher proportions of need when individuals are help seeking, as they are to some degree when they attend general practice. Only one study to date has examined mental health need in general practice attendees, but it is not comparable with this study as it defined 'need' according to objective symptomatology scores.<sup>24</sup>

### Time trends in GUPI responses

Reliability analyses generally suggested that participants were less likely to report mental health needs at time 2 than time 1. This might be regression toward the mean. Alternatively, the GP consultation may have served through provision of information or a professional opinion to either allow the need to be met or to reassure the patient so that need was no longer perceived. Completion of the GUPI might in some cases have prompted patients to raise their mental health concerns with the GP.

Perceived need for medication was more frequently endorsed for those whose perceived needs were stable than those whose needs were not stable.

This suggests that those consistently reporting need on the GUPI over time may be a different subsample than those who do not, in terms of duration, severity of pathology and/or distress. One subsample reporting need at time 1 may have a continuing, stable need, and perceive their difficulties to be more 'biological' or 'severe'; the other may have a perceived need that is less severe and, therefore, more likely to respond to reassurance or brief treatment, or to naturally remit over time.

### Validity of the GUPI

Criterion-related concurrent validity of the GUPI was generally supported. Perceived need was associated with poorer general health and a greater level of disability due to both physical and emotional difficulties, as assessed by the items taken from the SF-8. Participants who reported need on the GUPI generally demonstrated level 1 caseness on the SPHERE. This supports the appropriateness of assessing perceived need within primary care, not only through the value of providing an opportunity for GPs to raise mental health concerns in the consultation, but also because of the strong link between perceived need and these instruments as proxies for caseness.

Agreement between different items over time was particularly high between the first three items of the GUPI, tapping information regarding emotional problems, medication for emotional problems, and counselling; and between the final two items, tapping practical issues and social skills. Intuitively, the first three items of the GUPI tap a more 'psychological' component of mental healthcare (i.e. recognition of psychological difficulties and pursuit of different treatment options); the final two items focus on more socially oriented features of need. This higher level of agreement between the first three items supports this intuition. McNemar's statistic, factor analysis, logistic regression, and sensitivity and specificity analysis further suggested that the GUPI may perform adequately in a psychometric sense, even if items 4 and 5 are deleted; psychometric properties of the GUPI-SF were generally similar to the GUPI. It appears, therefore, that a reformulated GUPI, containing only the first three items, may have advantages of brevity of completion time and simplicity of administration, without sacrificing psychometric qualities. However, it is important to bear in mind that needs sampled by items 4 and 5 will be clinically significant for some people, and that to delete these items may reduce the instrument's content validity. The briefer form may be considered particularly suitable in packages of instrumentation where symptom or functional questions are also being included, but even in its

'full' form, the GUPI is a short instrument for patients to complete.

While sensitivity is high, specificity is only moderate. Most individuals who meet the threshold for psychiatric caseness report a perceived mental health need, but a substantial number of the individuals who do not meet psychiatric caseness do report a need. However, we would suggest that these features of the GUPI do not render it redundant. It is arguably most important to ensure higher levels of sensitivity – to be inclusive, and to reduce 'false negatives' – rather than specificity in the instance of assessment of mental health needs. This may particularly be the case in the general practice context, given that true positives may at times be particularly difficult to detect. Recent findings suggest that higher levels of insight into the existence of a mental health problem are associated with a more accurate reporting of need.<sup>25</sup> Given that those with lower insight are presumably less likely to disclose symptoms as well as to report need, detection of difficulties in this case is left entirely to the practitioner. While mental health professionals have been found to identify needs even in the absence of their presentation by the patient, this may be a more challenging a task for the GP, given the often time-limited and pressured nature of the patient–professional relationship.<sup>25</sup> It is hence important that any measure of perceived mental health need is high in sensitivity, and the GUPI fulfils this criterion.

The GUPI's moderate specificity might be seen as problematic if the aim of assessing perceived need is its use as a proxy for psychiatric caseness. The identification of perceived need, however, goes beyond this. Perceived needs assessment may allow facilitation of the meeting of patient needs, arguably at least part of the professional–patient relationship, even if it is not the professional (in this case, the GP) who directly meets the need. Further, perceived mental health need identification may assist in the early identification of subthreshold difficulties, which if accompanied by a timely intervention may prevent the emergence of more serious morbidity.

### Limitations of the study

This study has some acknowledged methodological limitations. Firstly, it was not possible to determine whether study refusers differed from participants. Relatedly, completion rate was only moderate, with 62% of those approached agreeing to participate. It is possible that refusal was a result of the very fact of experiencing a perceived need for mental health-care, and/or objective symptomatology. However, those who experienced mental health difficulties

may have been more likely to participate than those who did not, although this appears unlikely as the study was not introduced as research specific to mental health issues. In either case, the study's findings may be limited in generalisability. It is possible that completion rates of the GUPI would be higher if this were framed as an aspect of routine clinical care rather than as a research project; future research focusing on the use of the GUPI as part of normal clinical practice may serve to further clarify the generalisability of these findings.

Additionally, the GUPI's administration differed over time: in person at time 1, and by telephone at time 2. While this procedure probably secured a greater sample size at follow-up, it may have led to clients being more reluctant to disclose perceived need verbally, in contrast to the less personal questionnaire format of time 1. Brief criterion validation measures were selected to reduce response burden; the appropriateness of these measures as proxies for full psychiatric interviews is not settled.<sup>19</sup> As test–retest reliability analysis focused on the GUPI, we are unable to determine whether reduction in perceived need reported on the GUPI over time is associated with a reduction in 'actual' need on either the SPHERE or the SF. Given that this study is a primary care study, it also does not allow examination of perceived mental health need in those people who do not present to general practice, approximately 20% in a calendar year.<sup>26</sup>

We have not established whether administration of the GUPI results in consumers raising issues with their GP and thereby having needs met, or having perceived needs extinguished via reassurance. Finally, sample size constrained us from examining the degree to which sensitivity and specificity of the GUPI differs across consistent and inconsistent responders; it is possible that the measure's sensitivity and specificity would be greater in a sample of consistent responders.

If needs assessment results in no improvement in the patient's care or outcome, its utility would seem questionable. The methodology of this study did not allow examination of this issue with respect to the GUPI, but existing evidence suggests that providing health professionals with information regarding a patient's perceived need may improve patient outcome, or at least benefit the clinical relationship. Two uncontrolled trials have found providing health professionals with information about patients' perceived needs improved patient outcome.<sup>27,28</sup> Assessment of perceived need has also been associated with an improvement in patient-reported quality of patient–doctor communication, and changes in patient management.<sup>12</sup> In one recent randomised controlled trial, feedback of standardised needs assessment did not improve the outcome

of older people attending psychiatric day hospitals,<sup>29</sup> a further cluster randomised controlled trial in adults with severe mental illness similarly found no clinical improvement but did detect an increase in patient levels of satisfaction.<sup>27</sup> In both of these studies, the comparison group included patients who received regular needs assessment conducted by multidisciplinary health professionals, together with the patient and their family; this may have limited the ability to detect between-group differences.<sup>30</sup>

### Suggestions for future research

We suggest that further research on the GUPI is desirable to build on the findings of this study. A study in a general population setting without GP consultation intervention may more adequately estimate reliability. More complex study designs in primary care could establish the utility of the instrument in clinical planning and decision making. Such designs could also explore the key question of the possible role of the GUPI in influencing the therapeutic content and outcome of consultations, and examine more fine-grained issues such as where and how it can be best used within consultation. Current research utilising the GUPI may be able to provide further information on its performance, particularly when used in parallel with other symptom scales than those used in this study.

### Conclusions

The GUPI is a generally well-received measure. Concurrent criterion-related validity was strongly supported. Perceived needs rates reduced over a brief interval of time. This might have been due to the role of an intervening GP consultation in reducing perceived need by allowing an opportunity for reassurance; GUPI administration may have contributed to this. From the point of view of psychometrics, the use of a GUPI shorter form with only three 'psychological/psychiatric' items received support.

In either five-item or three-item forms, the GUPI goes a substantial way towards meeting relevant evaluative criteria as set out in Evans et al's Mental Health Needs Assessment Critical Appraisal Checklist.<sup>16</sup> On the basis of these findings, the use of the GUPI is suggested as a potentially useful measure within primary care research settings. Such further use, particularly in combination with symptom measures, would allow further exploration of its psychometric properties. Meanwhile, practitioners

may consider targeted clinical use of the GUPI, and further research may support more extensive adoption within clinical settings. The full GUPI is brief enough to be acceptable in combination with short symptom measures, and the use of the GUPI-SF can be considered where extreme brevity is desired.

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### REFERENCES

- Hickie IB, Davenport TA, Naismith SL *et al.* SPHERE: A national depression project. *Medical Journal of Australia* 2001;175:S4-S5.
- Bridges-Webb C, Britt H, Miles DA *et al.* Morbidity and treatment in general practice in Australia 1990-1991. *Medical Journal of Australia* 1992;157:S1-S56.
- Britt H and Miller GC. The BEACH study of general practice. *Medical Journal of Australia* 2000;173:63-4.
- Goldberg D and Williams P. *A User's Guide to the General Health Questionnaire*. Windsor: NFER-Nelson, 1988.
- Hickie IB, Davenport TA and Ricci CS. Screening for depression in general practice and related medical settings. *Medical Journal of Australia* 2002;177:S111-S116.
- Marshall M, Hogg LI, Gath DH *et al.* The Cardinal Needs Schedule: a modified version of the MRC Needs for Care Assessment Schedule. *Psychological Medicine* 1995;25:605-17.
- Bebbington PE, Brewin CR, Marsden L *et al.* Measuring the need for psychiatric treatment in the general population: The community version of the MRC Needs for Care Assessment. *Psychological Medicine* 1996;26:229-36.
- Brewin CR, Wing JK, Mangan SP *et al.* Principles and practice of measuring need in the long-term mentally ill: the MRC Needs for Care Assessment. *Psychological Medicine* 1987;17:971-81.
- Phelan M, Slade M, Thornicroft G *et al.* 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* 1995;167:589-95.
- Carter MF, Crosby C, Geertshuis S *et al.* Developing reliability in client-centred mental health needs assessment. *Journal of Mental Health* 1996;5:233-43.

- 11 van Os J, Altamura AC, Bobes J *et al.* 2-COM: an instrument to facilitate patient–professional communication in routine clinical practice. *Acta Psychiatrica Scandinavica* 2002;106:446–52.
- 12 van Os J, Altamura AC, Bobes J *et al.* Evaluation of the Two-Way Communication Checklist as a clinical intervention. *British Journal of Psychiatry* 2004; 184:79–83.
- 13 Meadows G, Fossey E, Harvey C *et al.* The assessment of perceived need. In: Andrews G, Henderson S (eds). *Unmet Need in Psychiatry: problems, resources, responses*. Cambridge: Cambridge University Press, 2000, pp. 390–8.
- 14 Meadows G, Burgess P, Bobevski I *et al.* Perceived need for mental health care: influences of diagnosis, demography and disability. *Psychological Medicine* 2002;32:299–309.
- 15 Meadows G, Harvey C, Fossey E *et al.* Assessing perceived need for mental health care in a community survey: Development of the Perceived Need for Care Questionnaire (PNCQ). *Social Psychiatry and Psychiatric Epidemiology* 2000;35:427–35.
- 16 Evans S, Greenhalgh J and Connelly J. Selecting a mental health needs assessment scale: Guidance on the critical appraisal of standardized measures. *Journal of Evaluation in Clinical Practice* 2000;6:379–93.
- 17 Hickie IB, Davenport TA, Hadzi-Pavlovic D *et al.* Development of a simple screening tool for common mental disorders in general practice. *Medical Journal of Australia* 2001;175:s10–s17.
- 18 Ware JE, Kosinski M, Dewey JE *et al.* *A Manual for Users of the SF-8 Health Survey*. Lincoln, RI: Quality-Metric Incorporated, 2001.
- 19 Clarke DM and McKenzie DP. An examination of the efficiency of the 12-item SPHERE questionnaire as a screening instrument for common mental disorders in primary care. *Australian and New Zealand Journal of Psychiatry* 2003;37:236–9.
- 20 Meadows G, Burgess P, Fossey E *et al.* Perceived need for mental health care, findings from the Australian National Survey of Mental Health and Well-being. *Psychological Medicine* 2000;30:645–56.
- 21 Katz SJ, Kessler RC, Frank RG *et al.* The use of outpatient mental health services in the United States and Ontario: the impact of mental morbidity and perceived need for care. *American Journal of Public Health* 1997;87:1136–43.
- 22 Hornblow A, Bushell JA, Wells JE *et al.* Christchurch psychiatric epidemiological study: use of mental health services. *New Zealand Medical Journal* 1990; 103:415–17.
- 23 Lehtinen V, Joukamaa M, Jyrkinen E *et al.* Need for mental health services of the adult population in Finland: results from the Mini Finland Health Survey. *Acta Psychiatrica Scandinavica* 1990;81:426–31.
- 24 Boardman J, Henshaw C and Willmott S. Needs for mental health treatment among general practice attenders. *British Journal of Psychiatry* 2004;185: 318–27.
- 25 Carter MF. The relationship of a self-reported assessment of need in mental illness to insight. *Journal of Mental Health* 2003;12:81–9.
- 26 Meadows G, Liaw T, Burgess P *et al.* Australian general practice and the meeting of needs for mental health care. *Social Psychiatry and Psychiatric Epidemiology* 2001;36:595–603.
- 27 Marshall M, Lockwood A, Green G *et al.* Systematic assessments of need and care planning in severe mental illness: Cluster randomised controlled trial. *British Journal of Psychiatry* 2004;185:163–8.
- 28 O’Leary D and Webb M. The needs for care assessment: a longitudinal approach. *Psychiatric Bulletin* 1996;20:134–6.
- 29 Ashaye OA, Livingston G and Orrell MW. Does standardized needs assessment improve the outcome of psychiatric day hospital care for older people? A randomized controlled trial. *Aging and Mental Health* 2003;7:195–9.
- 30 Department of Health (UK). *Effective Care Co-ordination in Mental Health Services: modernising the care programme approach – a policy booklet*. London: Department of Health, 1999.

#### CONFLICTS OF INTEREST

None.

#### ADDRESS FOR CORRESPONDENCE

Professor Graham Meadows, Director, Southern Mental Health Adult Research, Training and Evaluation Centre, Department of Psychological Medicine, Monash University, PO Box 956, Dandenong Vic 3175, Australia. Phone: +61 (0)3 9554 1941; email: [graham.meadows@med.monash.edu.au](mailto:graham.meadows@med.monash.edu.au)

*Accepted ???????*



## Appendix 1: The General-practice Users' Perceived-need Inventory (GUPI)

These questions ask whether you would like your General Practitioner to discuss with you any of the following kinds of help, for common emotional problems such as feeling depressed or anxious. Your GP might offer to help you in this way, or you might prefer your GP to suggest an alternative source of help.

Please first carefully read the list of three choices, one at the top of each of the columns, then fill in one circle like this ● in each row, for the option which best applies to you.

Type of help	I would like my GP to discuss this kind of help with me	I don't need to discuss this kind of help.	I am already getting this kind of help, (either from my GP or somewhere else)
Information about emotional problems or getting treatment for these problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Medication or tablets to help you with emotional problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Counselling; including any kind of help to talk through your problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Help to sort out practical issues such as housing or money problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Help to improve your ability to work, to care for yourself, to use your time or to meet people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Have any of the following reasons stopped you in the last few weeks, from getting any of these kinds of help, or from getting as much help as you may have needed. Fill in any circles that apply to you

Not applicable, I haven't needed any of these kinds of help .....	<input type="radio"/>
I preferred to manage myself .....	<input type="radio"/>
I didn't think anything would help .....	<input type="radio"/>
I didn't know where to get help .....	<input type="radio"/>
I was afraid to ask of help or what others would think of me .....	<input type="radio"/>
I couldn't afford the money .....	<input type="radio"/>
I asked but didn't get help .....	<input type="radio"/>

Thank you for your help

