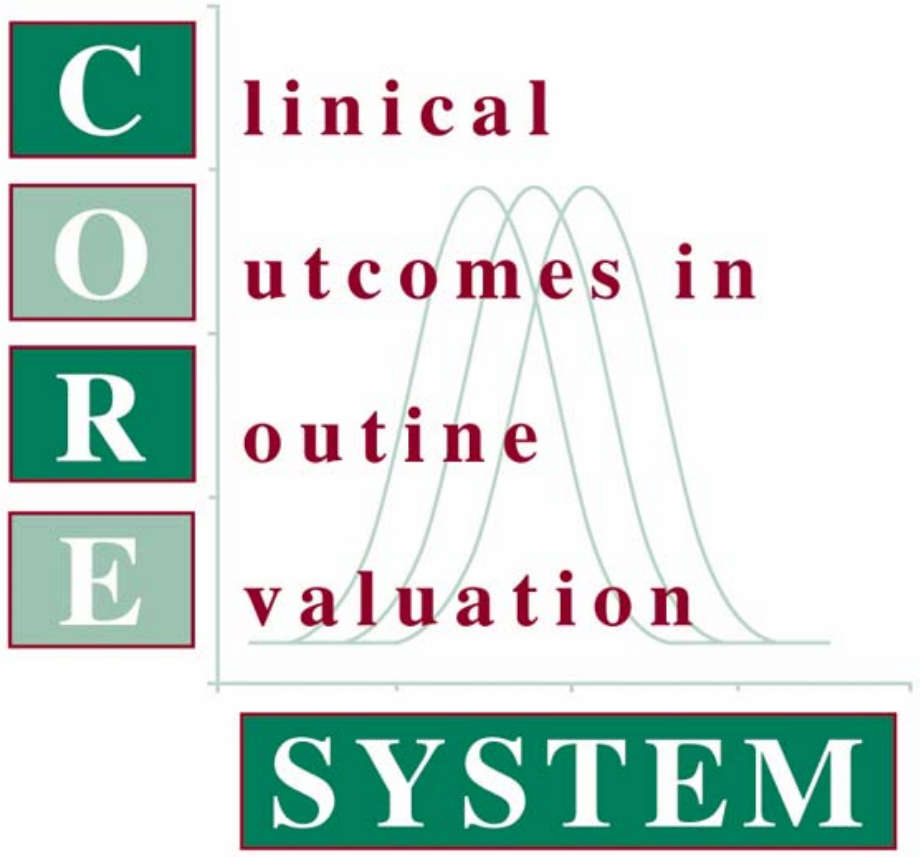


CORE-10 USER MANUAL

Version 1.0

Released 1st June 2007

Contents

Tables

Figures

Appendices

PREAMBLE

Acknowledgements & enquires

The development of the CORE-10 and manual was funded by the Artemis Trust and Priorities & Needs R&D funding via Leeds Mental Health Teaching NHS Trust. Enquires regarding CORE-10 itself should be sent to CORE-IMS at admin@coreims.co.uk

Citing the manual

This manual should be referenced as follows:

> Connell, J. & Barkham, M. (2007). *CORE-10 User Manual, Version 1.1.* CORE System Trust & CORE Information Management Systems Ltd.

IT support for IAPT pathfinder sites

The CORE System Trust (CST) and CORE User Network have asked for the following information to be available to potential Improving Access to Psychological Therapy pathfinder sites.

Reproduction of CORE measures in Trust software

CST recognises that pathfinder sites may prefer to develop/commission local software to capture, store and report on data for all the measures in the Minimum Data Set (MDS) or to incorporate such functionality into an existing software application. A service wishing to incorporate the CORE questionnaires into locally developed/commissioned software (or to incorporate them into an existing software application) should seek prior permission from the Trustees of CST because this would otherwise constitute a breach of copyright. The CST Trustees can be contacted at cst-iapt@psyctc.org. CORE questionnaires may be reproduced freely on paper.

CORE-Net software

CST and the CORE User Network welcome the Improving Access to Psychological Therapies Pathfinder programme and are supportive of the central role given to the measurement and evaluation. The pathfinder programme sets a demanding schedule which involves capture and reporting of data from a wide range of measures, including CORE, starting in September 2007 for a period of 6-7 months. At the request of services who are already using CORE and who are considering bidding as a pathfinder site, CORE Information Management Systems Ltd (CORE IMS) have agreed to develop the existing CORE-Net software to allow data capture for the key measures included in the Minimum Data Set. For further details of available support, see Section V.

SECTION I

Introduction

The CORE-10 is a brief outcome measure comprising 10 items drawn from the CORE-OM which is a 34-item assessment and outcome measure. The CORE-OM has been widely adopted in the evaluation of counselling and the psychological therapies in the UK.

Where resources and time allow, the CORE-OM remains the preferred version for the assessment and measurement of outcome. This is because it offers a wider range of items for clients to identify to practitioners at assessment and provides more precise estimates of outcomes and change following an intervention. In addition, there is to date a far larger amount of accumulated data on the CORE-OM from which to derive benchmarks and comparisons.

However, there is a need for a shorter measure in such settings as busy practices where information is needed quickly and which places minimum demands on clients and practitioners. In addition, further measures tapping other outcomes may be needed from services such that some trade-offs have to be made. For the pathfinder sites taking part in the Improving Access to Psychological Therapies initiative, the CORE-10 has been selected as part of a minimum data set that will enable services to meet the requirements of the Balanced Score Card with the least burden to clients and services.

The CORE family of measures

The CORE-10 is one instrument within the CORE family of measures which, together with the CORE System, are briefly summarised in Section V. The parent measure is the CORE-OM, the properties of which have been reported widely in the literature.[1-10] In addition it has been used widely in benchmarking applications within NHS settings.[11-14] The CORE-OM is part of a broader CORE System which has also been reported in the literature and provides a context within which to evaluation outcomes.[15,16]

Acknowledging that one outcome measure is not fit for all purposes, shorter versions derived from the CORE-OM have also been developed. These include CORE Short Forms A&B for session-by-session use in research settings[3, 7] and the CORE-5 for session-by-session use in practice settings.[17] Population-specific versions of CORE also exist for the general population (GP-CORE)[18] and learning disabilities (LD-CORE).[19] A range of translations are also available (see Section V). Training and IT support for CORE is available and has been documented together with a resulting national research database.[20, 21]

Overview

The CORE-10 has 10 items on one side of A4, making it quick and easy to administer. It can easily be scored by hand. The CORE-10 has been designed to tap into a pan-theoretical 'core' of users' distress, including commonly experienced symptoms of anxiety and depression and associated aspects of life and social functioning. In addition, there is a key item on risk to self.

The CORE-10 taps global distress and is, therefore, suitable for use as an initial quick screening tool and also as an outcome measure. Like most self report measures, it cannot be used to gain a diagnosis of a specific disorder. A *clinical score* can be derived directly by summing the items and used as a global index of distress. The risk item should be regarded as a clinical flag and some services may wish to use it to trigger more discussion of risk at assessment. A non-response to the risk item should also be explored further.

It is important to remember that no service can be fully evaluated through the use of one outcome measure alone. Hence, the CORE-10 should be viewed as one component of an evaluation system to be used either with the CORE System tools (see Section V) or with whatever local or theory-specific methods and clinical supervision/audit practices are in place.

Development

The CORE-10 was derived from the 34 item CORE-OM using a number of specific requirements to determine item selection. First, we sought to devise a tool that met the following characteristics: item coverage, format, range of intensity, and content. Secondly, we sought to find a balance between the role of statistical procedures, face and clinical validity.

Item coverage: We aimed to ensure that the measure provided a balance in terms of being short and easily scored but still giving sufficient scope to tap as far as possible the 10 item clusters in the CORE-OM: (1) subjective well-being, (2) anxiety, (3) depression, (4) physical, (5) trauma, (6) general functioning, (7) close relationships (functioning); (8) social relationships (functioning), (9), risk to self, and (10) risk to others.

Format: Although our aim of restricting the item number to 10 was driven by brevity, the specificity of 10 items yielded additional advantages in terms of simplicity of scoring. Simple summing of the individual item totals would directly yield a 'clinical' score for the CORE measure as has been used in recent reports and would therefore not require practitioners to make any further calculations.[9]

Range of intensity: We sought to draw on both high and low intensity items. Excluding the 6 risk items, the CORE-OM is balanced between high and low intensity items (i.e., 14 each). Hence, we sought a structure that reflected 6 high and 4 low intensity items.
Content: Although our aim of 10 items tapping 10 item clusters would appear to fit a one-item per cluster assignment, we were cognisant of the need to sample both high and low items in relation to *depression* and *anxiety* due to their high prevalence in the population. Hence, this combination alone would require a total of 4 items. In terms of functioning, we elected to select one item from each of the three clusters – *general, social, and close* relationships yielding a total of 3 items. In addition, we selected single items from *physical* and from *trauma* – a total of 2 items. To keep to 10 items, we selected a single *risk* item as a key component in screening with 'risk to self' taking priority over 'risk to others' which has a relatively low incidence rate in people presenting in primary care. To accommodate this structure, we elected to omit items from the Subjective Well-being domain due to their having a high correlation with the problem domain, higher than the correlation between any other two domains[3]. In addition, we aimed to exclude symptom and functioning items which had been found to be most frequently omitted by clients in previous reports on the CORE-OM.[3, 5]

In order to achieve the above requirements, we employed a method comprising four steps:

Step 1: Omission of items First, we omitted 'Subjective Well Being' items [4, 14, 17, 31] and 'Risk to Others' items [6 and 22]. Second we omitted frequently missed items from the symptom and functioning dimensions [19, 20, 21, 30, and 32].[3, 5]

Step 2: Item coverage and mapping The omission of items in step 1 resulted in some items being 'forced choices' in order to retain items from specific clusters and the balance of 6/4 high and low intensity items. This resulted in the selection of items **2** (*low anxiety*), **7** (*high general functioning*), **27** (*low depression*), and **3** (low *close relationship*) with the subsequent omission of items 12, 1, 26, 25, 29, 9, 24. There remained 6 paired items in which one item from each pair needed to be selected.

Step 3: Regression analyses We then employed regression analyses to identify items which best predicted item cluster scores on the CORE-OM. This resulted in the selection of items **23** (*high depression*), **10** (*high social functioning*), **18** (*low physica*l), and **16** (*high risk to self).*

Step 4: Clinical judgement Where decisions on the basis of regression analyses were marginal, we invoked clinical judgement to inform item selection. For *trauma* item **28** was more focused specifically on trauma than item 13. For *high anxiety* there was a clear preference for item **15** rather than item 11.

The data used for the development of the CORE-10 measure consisted of 6610 clients drawn from 33 primary care services. Using SPSS 12.01 the data was split into 3 random groups with each data set drawing from the 33 services. One data set was used for item selection, as detailed above. The second dataset was used as a means of replicating results obtained from the first sample. The third sample, together with other datasets, was used as an independent sample to determine a range of psychometric properties of the extracted items.

Table 1: CORE-10 development – Selection of items

Item	Domain: Cluster	Item	Inten-sity	Step Omitted/ Included
4	Subj Wellbeing	I have felt O.K. about myself	Lo	1 (omit)
14	Subj Wellbeing	I have felt like crying	Hi	1 (omit)
17	Subj Wellbeing	I have felt overwhelmed by my problems	Hi	1 (omit)
31	Subj Wellbeing	I have felt optimistic about my future	Lo	1 (omit)
2	**P: Anxiety**	**I have felt tense, anxious or nervous**	**Lo**	**2 (incl)**
20	P: Anxiety	My problems have been impossible to put to one side	Lo	1 (omit)
11	P: Anxiety	Tension and anxiety have prevented me doing important things	Hi	3 (omit)
15	**P: Anxiety**	**I have felt panic or terror**	**Hi**	**3 (incl)**
5	P: Depression	I have felt totally lacking in energy and enthusiasm	Hi	3 (omit)
23	**P: Depression**	**I have felt despairing or hopeless**	**Hi**	**3 (incl)**
27	**P: Depression**	**I have felt unhappy**	**Lo**	**2 (incl)**
30	P: Depression	I have thought I am to blame for my problems and difficulties	Lo	1 (omit)
8	P: Physical	I have been troubled by aches, pains or other physical problems	Lo	3 (omit)
18	**P: Physical**	**I have difficulty getting to sleep or staying asleep**	**Lo**	**3 (incl)**
13	P: Trauma	I have been disturbed by unwanted thoughts and feelings	Hi	3 (omit)
28	**P: Trauma**	**Unwanted images or memories have been distressing me**	**Hi**	**3 (incl)**
1	F: Close Rel	I have felt terribly alone and isolated	Hi	2 (omit)
3	**F: Close Rel**	**I have felt I have someone to turn to for support when needed**	**Lo**	**2 (incl)**
19	F: Close Rel	I have felt warmth and affection for someone	Lo	1 (omit)
26	F: Close Rel	I have thought I have no friends	Hi	2 (omit)
7	**F: General F**	**I have felt able to cope when things go wrong**	**Hi**	**2 (incl)**
12	F: General F	I have been happy with the things I have done	Lo	2 (omit)
21	F: General F	I have been able to do most things I needed to	Lo	1 (omit)
32	F: General F	I have achieved the things I wanted to	Hi	1 (omit)
33	F: Social Rel	I have felt humiliated or shamed by other people	Hi	3 (omit)
10	**F: Social Rel**	**Talking to people has felt too much for me**	**Hi**	**3 (incl)**
25	F: Social Rel	I have felt criticised by other people	Lo	2 (omit)
29	F: Social Rel	I have been irritable when with other people	Lo	2 (omit)
22	R: Harm to O	I have threatened or intimidated another person	Hi	1 (omit)
6	R: Harm to O	I have been physically violent to others	Hi	1 (omit)
9	R: Harm to S	I have thought of hurting myself	Lo	2 (omit)
16	**R: Harm to S**	**I made plans to end my life**	**Hi**	**3 (incl)**
24	R: Harm to S	I have thought it would be better if I were dead	Lo	2 (omit)
34	R: Harm to S	I have hurt myself physically or taken dangerous risks with my Health	Hi	3 (omit)

Domains: Subj Wellbeing = Subjective Wellbeing; P = Problems; F = Functioning; R = Risk
Clusters: Close Rel = Close Relationships; General F = General Functioning; Social Rel = Social Relationships
Harm to O = Harm to Others; Harms to S = Harm to Self

Structure

Item selection for the CORE-10 was determined by a combination of clinical utility, coverage of item clusters, and statistical procedures (i.e., regression analyses). The 10 items comprise the following: Depression (2 items), Anxiety (2 items), Functioning (3 items, 1 each for 'general' 'social', and 'close'); Trauma (1 item); Physical (1 item); and Risk (1 item). The measure includes high and low intensity items to increase sensitivity and is loaded slightly in favour of higher intensity items (6 items) in order to reduce any ceiling effect. Two of the items are 'positively' framed. The items are presented in Table 2. They are presented here grouped according to problem areas (i.e., item clusters).

Table 2: CORE-10 items

Item	Problem Area	Item	Positive/ Negative	Intensity
1	**Anxiety**	I have felt tense, anxious or nervous	-	Low
5	**Anxiety**	I have felt panic or terror	-	High
9	**Depression**	I have felt unhappy	-	Low
8	**Depression**	I have felt despairing or hopeless	-	High
7	**Physical**	I have had difficulty getting to sleep or staying asleep	-	Low
10	**Trauma**	Unwanted images or memories have been distressing me	-	High
2	**Close relationships**	I have felt I have someone to turn to for support when needed	+	Low
4	**Social relationships**	Talking to people has felt too much for me	-	High
3	**General Functioning**	I have felt able to cope when things go wrong	+	High
6	**Risk**	I made plans to end my life	-	High

Format

The actual sequence of items in the CORE-10 follows the order they appear in the CORE-OM and is shown in the item number in Table 2. The final version of the CORE-10 is presented in Appendix I.

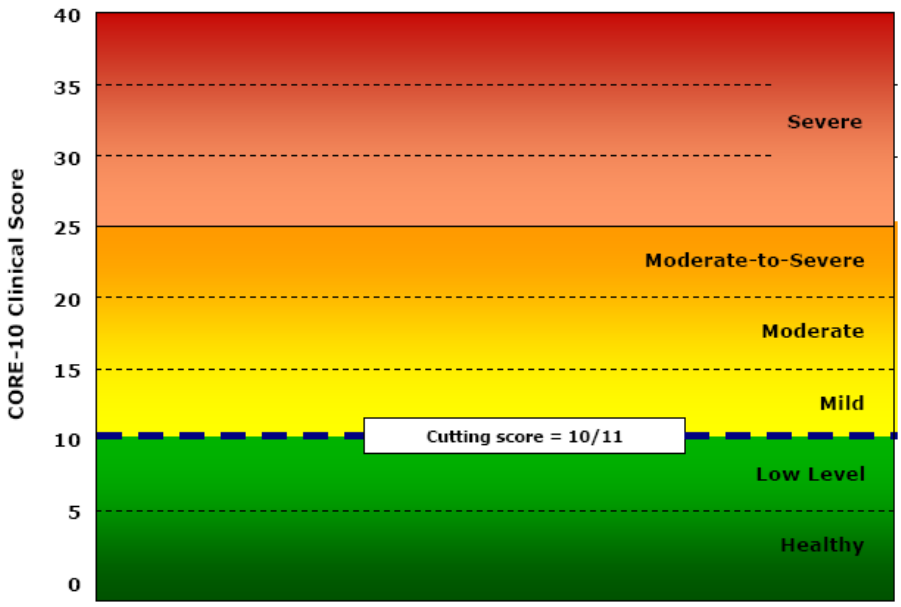
Scoring procedures and meaning

Key points in the scoring of the CORE-10 are as follows:

1. Each item within the CORE-10 is scored on a 5-point scale ranging from 0 ('not at all') to 4 ('most or all the time').
2. The clinical score is calculated by adding the response values of all 10 items.
3. Where there are missing data the clinical score is derived by calculating the total mean score (dividing the total score by the number of completed items) and multiplying by 10.
4. We do not recommend re-scaling the clinical score if more than one item is missing.
5. The minimum score that can be achieved is 0 and the maximum is 40.
6. The measure is problem scored, that is, the higher the score the more problems the individual is reporting and/or the more distressed they are.

A score of 10 or below denotes a score within the non-clinical range and of 11 or above within the clinical range. Within the non-clinical range we have identified two bands called 'healthy' and 'low' level distress. People may score on a number of items at any particular time but still remain 'healthy'. Similarly, people may score in the 'low' range which might be a result of raised pressures or particular circumstances but which is still within a non-clinical range. Within the clinical range we have identified the score of 11 as the lower boundary of the 'mild' level, 15 for the 'moderate' level, and 20 for the 'moderate-to-severe' level. A score of 25 or over marks the 'severe' level.

Figure 1: Practice guide for interpreting CORE-10 clinical scores



Normative data

Normative data is available for three samples, two clinical and one non-clinical population (Table 3). For samples 1 and 3 the normative data is for the CORE-10 items as embedded in the CORE-OM (i.e., the CORE-OM has been administered to the sample and the scores for the items making up the CORE-10 subsequently extracted).

Non-clinical sample: General population (sample 1)

The sample comprised 553 adults who participated in the follow-up to the psychiatric morbidity survey and returned valid CORE-OM forms was used.[22] This data was weighted to be representative of a general population taking into account design factors, non-response and sampling procedures from the original psychiatric morbidity sample to the subsequent follow-up sample.[23] This resulted in an effective general population sample of 535 cases consisting of 268 males (50.2%) and 267 females (49.8%) with a mean age of 43.4 years (SD = 15.3).

Clinical sample: Primary care routine practice (sample 2)

The sample comprised one third, randomly selected, of a dataset of 5831 people presenting in 33 primary care services who had completed a CORE-OM. The other two thirds of the dataset were used in the development and psychometric analysis of the measure. This clinical sample consisted of 1835 clients comprising 1319 females (72%) and 516 males (28%). The average age was 38 (SD = 12.6) ranging from 16 to 84 years. Ethnicity data was available for 1606 (87.5%) people. Of these, 92% were White/European and the remainder were Asian (4%), African/Caribbean (2%), and Mixed/Other (2.3%). The majority of clients presented with anxiety (71%) and/or depression (65%). Half of the sample reported experiencing interpersonal problems (50.9%).

Clinical sample: GP practice (sample 3)

This data was drawn from a naturally occurring sample from a GP practice in the north of England who completed the CORE-10 consistent with the Quality Outcomes Framework agenda. A total of 323 measures were completed. In the majority of cases (n = 271; 84%) the client completed the measure directly onto computer. The ten items comprising the CORE-10 were presented individually to the client on the computer monitor. A response was required before the next item was offered. The remaining clients (n = 52; 16%) completed a pen and paper version of the CORE-10. Data was collected between April and October 2006. A reliable measure (no more than 1 missing item) was completed by 321 patients; 209 (65%) females and 112 (35%) males. Age data was unavailable.

Table 3: Means, standard deviations, and confidence intervals for clinical and non-clinical sample populations

	Sample 1 General Population (n=535)			Sample 2 Primary Care Counselling (n =1835)			Sample 3 GP Practice (n=321)		
	Mean	**SD**	**CI**	**Mean**	**SD**	**CI**	**Mean**	**SD**	**CI**
Males	4.8	4.6	4.3-5.4	18.5	8.1	17.8-19.2	19.8	7.6	18.3-21.2
Females	4.7	4.9	4.1-5.2	20.1	7.5	19.7-20.5	20.4	8.0	19.3-21.5
Total	4.7	4.8	4.3-5.2	19.7	7.7	19.3-20.0	20.2	7.9	19.3-21.0

Gender differences

There was no significant difference between males and females in the General Practitioner (stand alone/non-embedded, clinical) sample (19.8 vs. 20.4; t = .68, p = .50) or the General Population (non-clinical) sample (4.8 vs. 4.7; t = .46, p = .64). There was, however, a statistically significant difference between males and females for the Primary Care Counselling (embedded, clinical) sample (18.5 vs. 20.1; t = -4.1, p <.001). More data is required to establish whether gender should be taken into account when relating individual scores to clinical distribution data.

Section II

Psychometric qualities: Is the measure valid and reliable?

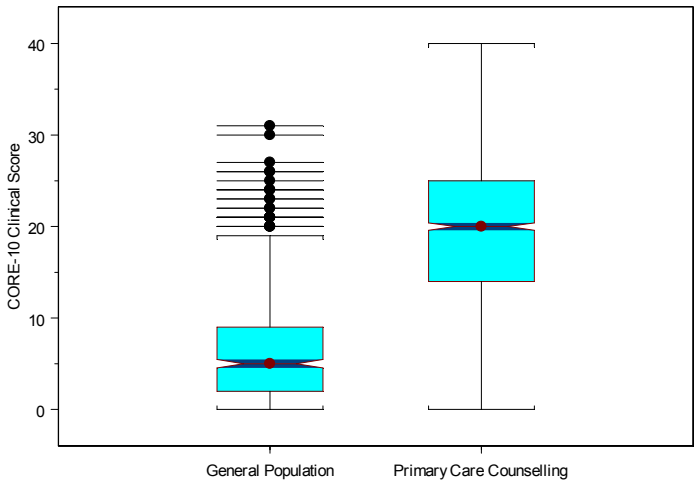
A measure should be reliable, valid, and responsive to the clinical change that occurs over time.

- Validity is the extent to which the measure measures what it intends to measure; that is, is it asking the right questions?
- Reliability is how uniformly the test can be repeated when administered on more than one occasion or by more than one rater.
- Responsiveness or sensitivity is the ability of the measure to detect true change in clients' status over time; that is, is it sensitive to the subtle changes patients make?

Discrimination between clinical and non-clinical populations

One aspect of validity is the requirement of the measure to show a statistically and clinically significant difference between the clinical population for which it has been designed and a non-clinical sample. A comparison of the Primary Care Counselling (clinical) and the General Population (non-clinical) samples revealed a large and clinically significant difference between the two populations (19.7 vs. 4.7; t = 37.3; p<.001). This is illustrated in the box plot of the data (Figure 2). The boxes cover the middle 50% of the scores in each group. The (red) dot in the box indicates the median and the dark blue 'notched' area around the line is the confidence interval (CI) around the median. Neither the boxes nor the confidence intervals overlap, indicating the statistically significant difference between the two populations. It also shows that there are very few cases in the clinical sample scoring zero and very few outliers in the non-clinical sample scoring very high, a further indication of the difference in scores between the two populations.

Figure 2: Box-plot showing difference between clinical and non-clinical populations



Discrimination between clients with and without a diagnosis of depression

Whether a measure can discriminate between those diagnosed and not diagnosed with a problem refers to the sensitivity and specificity of the measure. Sensitivity and specificity relate to the proportion of people correctly 'diagnosed' by a measure when compared with a well established 'gold standard' diagnostic tool. The sensitivity of the measure is the proportion of people with a positive diagnosis on both tests and specificity the proportion of people with a negative diagnosis on both tests. A perfect test is one that achieves 100% sensitivity and 100% specificity. However this state is virtually unobtainable and there is always some trade off between the rates. The lower the trade off between sensitivity and specificity the better the measure performs as a diagnostic test.

Table 4 shows a range of cut off scores on the CORE-10 against a diagnosis of DSM-IV depression using the SCID.[24] A cut-off score for depression of 13 on the CORE-10 yields sensitivity and specificity values of .92 (CI = .83-1.0) and 0.72 (CI = .60-.83) respectively.

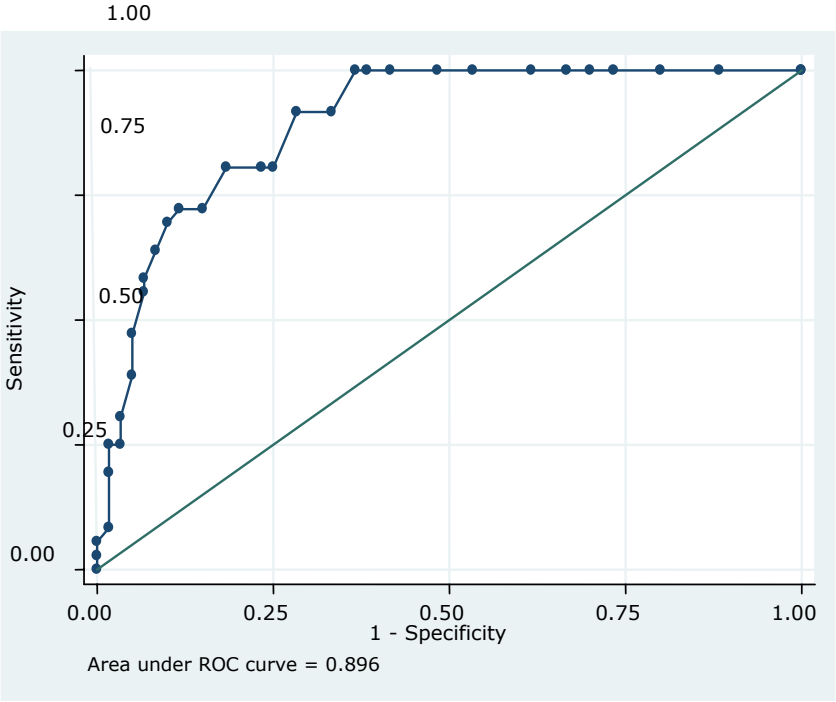
Table 4: Sensitivity and specificity of the CORE-10 against a SCID diagnosis of depression

Cut point	Sensitivity (true positives)	Specificity (true negatives)
≥ 13	0.92	0.72
≥ 14	0.81	0.75
≥ 15	0.81	0.77
≥ 16	0.81	0.82
≥ 17	0.72	0.85
≥ 18	0.72	0.88
≥ 19	0.69	0.90
≥ 20	0.64	0.92
≥ 21	0.58	0.93

As outlined above a good diagnostic test is one that has small false positive (high sensitivity) and small false negative (high specificity) rates across a reasonable range of cut off values. This can be tested using a ROC (Receiver Operating Characteristic) curve which is a graphical representation of the trade off between the false negative and false positive rates for every possible cut off (see Figure 3).

A rapid climb towards the upper left hand corner of the graph signifies that the false negative rate is high and the false positive rate is low. A diagonal path from the lower left hand corner to the upper right hand corner means that every improvement in false positive rate is matched by a corresponding decline in the false negative rate. To quantify how quickly the graph climbs towards the left hand corner the area under the curve is measured. The closer the area is to 1.0 the better the test. The area under the curve for the cut off values of the CORE-10 compared with a DSM-IV SCID diagnosis was 0.896 (SE = 0.031, 95%CI = 0.835 to 0.957).

Figure 3: ROC curve of the CORE-10 against the SCID diagnosis of moderate depression



Correlation with other measures

It is expected that a measure of psychological distress would correlate with other well-established mental health measures examining similar constructs. We identified reports in which the CORE-OM had been correlated with other outcome measures to which we had access to the original data.[3, 7, 23, 25] We recalculated the correlations using the 10 CORE items drawn from the CORE-OM. The correlation between the CORE-10 items and other measures is shown in Table 5. These results indicate a good correlation between the CORE-10 and other measures of anxiety, depression and overall mental health.

Table 5: Correlation of the CORE-10 with other measures

Measure	CORE-10	Reference for dataset used
Symptom CheckList-90-R	.81	[3]
Brief Symptom Inventory	.75	[3]
Beck Depression Inventory	.77	[3]
Beck Depression Inventory-II	.75	[7]
Beck Depression Inventory-II	.76	[3]
Beck Anxiety Inventory	.65	[3]
Patient Health Questionnaire-9	.56	[25]
Clinical Interview Schedule-R	.74	[23]

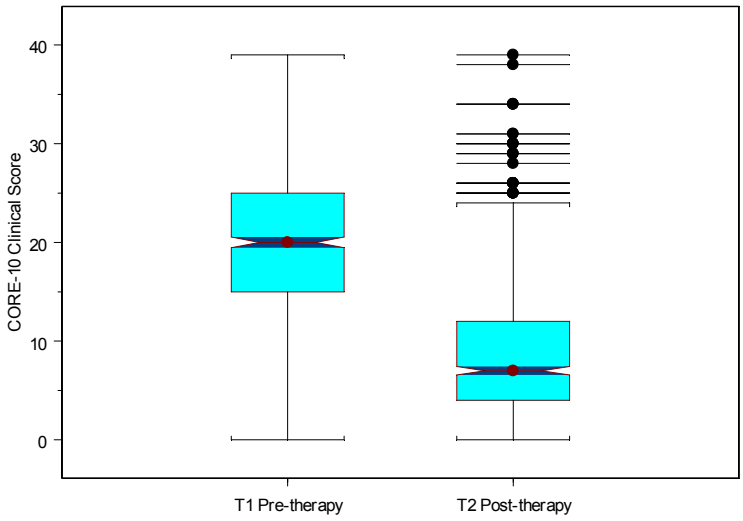
Internal reliability: Do all the items measure the same trait?

One minimal requirement of any measure is that it shows high internal reliability. Internal reliability tells you whether the items are all measuring the same trait by examining the consistency of responses. Thus a series of random unrelated questions would have a low internal consistency and conversely a series of related items (e.g., known symptoms of depression) should have a high internal consistency. Internal consistency is measured on a scale of 0-1. A very high score (e.g., .9) may indicate redundant items, a low score (e.g., .2) indicates inconsistent or random responses. A measure does not need to be uni-dimensional to achieve a high internal consistency as multiple dimensions can be inter-related. Internal reliability is measured using Cronbach's coefficient alpha which is the percentage of the variance in a score that is covariance between items. An alpha of 0.82 (CI .79 to .85) provides evidence of very good internal consistency. For women the alpha was .82 (CI .78 to .86) and for men .81 (CI .76 to .86).

Sensitivity to change

The most important requisite of an outcome measure is that it is responsive to change over time. To test this we used the pre- and post-therapy data within the Primary Care Counselling (clinical) sample. The sample consisted of 780 clients of whom 27% were male and 73% female with an average age of 40. The clients had an average of 6 therapy sessions. The pre-therapy score for those clients with both a pre- and post-therapy measure was 19.5 (SD = 7.6) compared with a post-therapy score of 8.6 (SD = 6.7) yielding a change score of 10.9 (SD = 8.0). The difference was statistically significant (t = 38.1, p<.001). The difference between the pre- and post-therapy scores is illustrated in Figure 4.

Figure 4: Difference between CORE-10 pre- and post-therapy scores



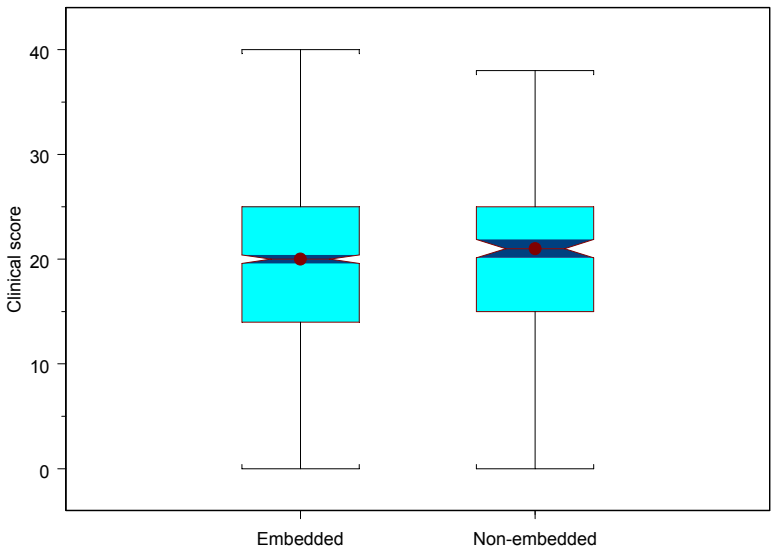
Acceptability

One aspect of acceptability can be judged by the rates of completion and non-completion of items. One of the criteria for inclusion of items in CORE-10 was a low rate of missing data for each of the chosen 10 items from the original CORE-OM. From the Primary Care Counselling (clinical) sample there was a mean of .08 (SD = .35) missing items. All ten items were completed by 94.4% of the sample. This analysis was repeated on the General Population (non-clinical) sample. When clients who had obviously not turned over the page were omitted (n = 4), for the CORE-10 items there was a mean of .06 (SD = .46) missing items with 520 (96.7%) completing all 10 items. The analysis could not be repeated on the General Practitioner sample as this was administered using computer software where it was mandatory to complete one item before the next item became available.

Comparison of embedded vs. stand alone version

The majority of the psychometric testing of the CORE-10 has been performed on the CORE-10 items as embedded within the CORE-OM. This is a logical step in measure development. Although presenting items outside the context of the other items may yield slight differences in how clients respond, it would be expected that these differences will be relatively small. Indeed, a comparison of the Primary Care (embedded) and General Practitioner (non-embedded) samples found the CORE-10 measure yielded a significantly higher score than from the embedded items (19.7 vs. 20.2 t=41.3, p<.001). However the difference was small and clinically insignificant as illustrated in Figure 5.

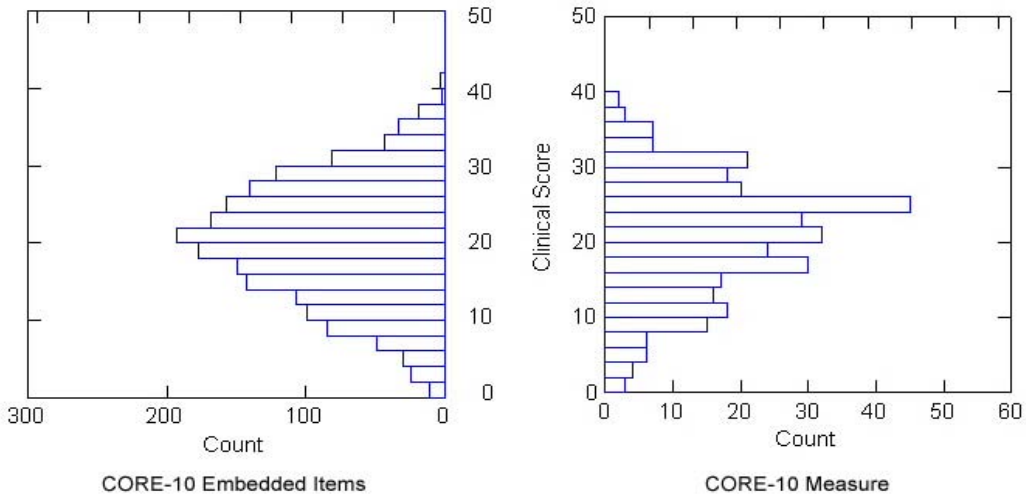
Figure 5: Notched box plot of embedded and non-embedded CORE-10 items



The boxes cover the middle 50% of the scores in each group. The (red) dot in the box indicates the median and the dark blue 'notched' area around the line is the confidence interval (CI) of the median. The similarity between the two samples is illustrated by the comparable range of scores for the two samples. The narrow confidence interval for the Primary Care Counselling sample is an indication of the precision of the median score as a result of the large number of clients in this dataset. This is the reason for the non-overlap of the confidence intervals and hence the statistically significant difference between the two samples.

We also plotted the distribution of scores for the CORE-10 measure against that of the CORE-10 embedded items which are shown in Figure 6. The shapes of the plots are similar. The clinical scores ranged from 0 to 38. Of the total sample of 321 people, 85.7% scored 11 or above (i.e., scored above the cut-off as indicating psychological distress) while the percentage of people presenting with depression was 81.7% as determined by use of a cutting score of 13. But this value would be lower if a higher cutting score was adopted.

Figure 6: Back-to-back histograms of embedded and non-embedded CORE-10 items



Section III

Reliable and clinically significant change

Researchers traditionally compare group means for treatments using statistical methods to suggest whether change is a sampling artefact or chance finding. Practitioners are more concerned with changes in particular individuals and often dichotomise outcome as 'successful' or 'not successful'. Jacobson and colleagues proposed methods bridging these languages by presenting changes in the group under investigation at the level of the individual.[26] The methods rest on two questions being asked of each client's data:

- Has the client's score changed sufficiently to be confident that the change is not attributable to measurement error? This question relates to 'reliable change'.

- How does the end state score of the client compare with the scores observed in socially and clinically meaningful comparison groups? And more precisely, is the end-state score better represented by a non-clinical or general population rather than a clinical population? This question relates to 'clinically significant change'.

To achieve reliable and clinically significant change a client's score must fulfil both these criteria.

Reliable change

Reliable change refers to the extent to which change falls beyond that likely based on the measurement variability of the measure. This is calculated using the following formulae:

$$(SE_{diff} = SD_1\sqrt{2}\sqrt{1-r}) \text{ x } 1.28$$

where SD_1 is the standard deviation of the baseline (pre-therapy) observations and, r is the reliability (coefficient alpha) of the measure. Multiplying by 1.28 yields a value which is unlikely to occur more than 10% of the time due to the unreliability of the measure alone. The value of 1.28 is recommended for use with short outcome measures as opposed to the traditional value of 1.96.[27, 28]

The resulting values for the CORE-10 (SD_1= 7.9 r=.82) gives us a reliability figure of 5.9 which we would round up to 6.0 for ease of measurement. *The client must therefore improve by 6.0 or more from pre- to post-therapy to be able to say that they have made reliable improvement*.

Cutting score between clinical and non-clinical populations

The cutting score to discriminate between a clinical and non-clinical population was calculated using the Primary Care Counselling (clinical) and General Population (non-clinical) samples and the formulae proposed by Jacobson and Truax:[26]

$$\frac{mean_{clin}\,sd_{norm} + mean_{norm}\,sd_{clin}}{sd_{norm} + sd_{clin}}$$

Replacing this with the values for the CORE-10 (see Table 3) yielded a cutting score for the sample as a whole of 11.0. The difference between men (10.6) and women (11.1) was less than 1 full point.

It is therefore recommended that a cut off of 10/11 is used where 10 is in the non-clinical range and 11 in the clinical range.

In summary, to achieve reliable improvement, a client must improve by 6.0 or more points from pre- to post-therapy. To achieve clinically significant change they must change from a pre-therapy score of 11 or above to a post-therapy score of 10 or below. To achieve reliable and clinically significant change both criteria must be fulfilled. Note that those clients whose pre-therapy score is below the cutting score (average 13% of total clients), while it is possible to achieve reliable improvement it is not possible to achieve clinical improvement because their score is already below the cutting score. For this reason it is often necessary to calculate reliable and clinical improvement rates for (a) only for those clients above the cut off value and (b) for all clients, particularly if a service has a high rate of clients with lower client scores at intake. Table 6 shows comparative improvement rates for the Primary Care Counselling sample using four mutually exclusive groups: (1) reliable and clinically significant improvement, (2) reliable improvement only, (3) no reliable change, and (4) reliable deterioration.

Table 6: Rates of reliable and clinically significant change for Primary Care Counselling

	All clients (n=323)		**Clients above cut off only (n=263)**	
	N	%	N	%
Reliable and clinically significant improvement	439	54.8	439	63.4
Reliable improvement only	170	21.2	146	21.1
No reliable change	173	21.6	95	13.7
Reliable deterioration	19	2.4	12	1.7

Section IV

Comparison of CORE-10 with CORE-OM

Correlation with the CORE-OM

CORE-OM and CORE-10 clinical scores were calculated for the clinical (Primary Care Counselling) and the non-clinical (General Population) samples. For the clinical sample the two scores correlated at r = 0.94 (CI 0.93 to 0.95). For the non-clinical sample the two scores correlated at r = 0.92 (CI 0.91 to 0.93). This high correlation is an indication of the close relationship between the clinical scores of the CORE-10 and the CORE-OM.

Correlation with other measures

The differences between correlations of the CORE-10 and CORE-OM with other common mental health measures are shown in Table 7. Despite the considerable reduction in items from the CORE-OM to the CORE-10, the correlations with mental health measures measuring similar constructs remains high.

Table 7: Comparison of the CORE-10 and CORE-OM correlation with other measures

Measure	CORE-10	CORE-OM	Difference
Symptom CheckList-90-R	.81	.88	.07
Brief Symptom Inventory	.75	.81	.06
Beck Depression Inventory	.77	.85	.08
Beck Depression Inventory-II	.75	.75	.00
Beck Depression Inventory-II	.76	.81	.05
Beck Anxiety Inventory	.65	.65	.00
Patient Health Questionnaire-9	.56	.63	.07
Clinical Interview Schedule-R	.74	.77	.03

Internal reliability

Despite the considerable reduction in the number of items, which will almost invariably result in a lowering of the coefficient alpha, the internal consistency for the CORE-10 is good at 0.82 (CI .79-.85). By comparison, the coefficient alpha for the CORE-OM is .94 (CI .93-.95) for both clinical and non-clinical populations.[3] Such a high value might suggest redundancy of items.

Reliable and clinical change

Using the Primary Care Counselling sample a comparison of the rates of reliable and clinical change for the CORE OM and CORE-10 was carried out (Table 8). For the CORE-OM a cut off value of 10 and an RCI of 5 were used while the values for the CORE-10 a cutting score of 11 and an RCI of 6 were used.[22] The difference between the two measures was small with a slightly higher proportion of clients achieving reliable and clinical change on the CORE-OM who did not on the CORE-10 and a corresponding higher rate of clients achieving reliable change, but not clinical change, on the CORE-10.

Table 8: Comparison of rates of reliable and clinical change for CORE-10 and CORE-OM

	CORE-10		**CORE-OM**	
	N	%	N	%
Reliable and clinically significant improvement	439	54.8	452	56.1
Reliable improvement only	170	21.2	154	19.1
No reliable change	173	21.6	186	23.1
Reliable deterioration	19	2.4	14	1.7

Section V

The CORE family of outcome measures

The CORE-10 is one of a family of CORE outcome measures which have been developed to be used under different circumstances and for different populations. These measures are outlined below.

CORE Measures	Thumbnail summary
CORE-OM: *'Parent' outcome measure*	The CORE-OM is a 34-item generic measure of psychological distress which is pan-theoretical (i.e., not associated with a school of therapy), pan-diagnosis (i.e., not focused on a single presenting problem), and draws upon the views of what practitioners considered to be the most important aspects of mental health to measure. The CORE-OM comprises 4 domains Well-being (4 items); Symptoms (12 items - depression x 4, anxiety x 4, trauma x 2 physical x 2); Functioning (12 items general x 4, social x 4, & close x 4); and Risk (6 items - to self x 4 or to others x 2). It takes between 5-10 minutes to complete.
Short Forms A&B: *Session-by-session repeated administration (research)*	Two parallel 18 item psychometrically balanced measures for use at alternate therapy sessions and which together make up the CORE-OM. The use of two short forms at alternate sessions rather than the CORE-OM measure at every session reduces memory effects. Due to administrative complexities, repeated administration of the two short forms is usually used only in research studies.
CORE-10: *Review or quick initial assessment*	A short 10 item version of the CORE-OM to be used as a screening tool and outcome measure when the CORE-OM is considered too long for routine use. Items cover anxiety (2 items), depression (2 items), trauma (1 item), physical problems (1 item) functioning (3 items – day to day, close relationships, social relationships) and risk to self (1 item). The measure has 6 high intensity/severity (e.g., and 4 low intensity/severity items.
CORE-5: *Session-by-session monitoring*	The CORE-5 comprises 5 items drawn from the CORE-OM and was designed to provide a brief tool for practitioners to monitor ongoing progress session by session. Items cover anxiety, depression, and functioning.

The CORE family of population-specific outcome measures

CORE Measures	Thumbnail summary
GP-CORE: *General Population* *For use with general or student populations*	A short 14 item measure derived from the CORE-OM suitable for use with general populations, including students. In contrast to the CORE-OM, the GP-CORE does not comprise items denoting high-intensity presenting problems or risk and over half the items are positively keyed. These aspects increase its acceptability in a non-clinical population.
YP-CORE: *Young Person's*	A 10-item measure derived from the CORE-OM and designed for use in the 11-16 age range. Structure is similar to that of the CORE-OM but with items rephrased to be more easily understood by the target age group.
LD-CORE: *Learning Disability*	LD-CORE is being developed by therapists and adults with LD in Scotland and England. The measure includes simplified items from the CORE-OM selected by therapists and adults with LD, and also includes new items designed to cover the major issues they face that are not in the CORE-OM.
CORE Translations	Approved translations now exist for Gujarati, Norwegian, Italian, Slovak, Swedish, Icelandic, Albanian and Greek. Kannada, Tamil and Welsh versions are nearing completion. Referential and psychometric data for the Slovak, Italian, Norwegian and Greek translations should be available in 2008. People seeking other translations or wishing to help produce them should contact core-trans@psyctc.org.

The CORE System

The CORE System was developed by a multidisciplinary group of practitioners and researchers and the content of the system was informed by extensive collaboration with practitioners, managers, and service commissioners.[15] The system comprises three tools, sharing the onus of evaluation data provision equally between clients completing a CORE outcome measure pre- and post-therapy and practitioners completing the CORE Assessment Form at pre-therapy and End of Therapy Form at post-therapy.

CORE System	Thumbnail summary
A CORE measure	See section above.
Therapy Assessment Form	The CORE Therapy Assessment Form captures a 'core' set of contextual information that aids the quality of both client assessment and overall service development. To enhance client assessment, the form collects important contextual information including client support, previous/concurrent attendance for psychological therapy, medication, as well as a categorisation system to record presenting difficulties, their impact on day-to-day functioning, and any associated risk. To aid the development of service quality, the form collects data on critical assessment audit items that profile the accessibility and appropriateness of service provision. These include client demographics, waiting times, and the suitability of referral.
End of Therapy Form	The CORE End of Therapy Form complements the other components and captures a 'core' set of treatment descriptors that aid the interpretation of CORE-OM scores to help contextualize therapy outcomes and inform service development. The form collects profile information that includes therapy length, type of intervention, modality, and frequency. To enhance the development of service quality, the form collects data on critical discharge audit items that profile the effectiveness and efficiency of service provision. These include problem and risk review, therapy benefits, session attendance rates, and therapy ending (i.e., planned or unplanned).

Currently available software

The CORE-Net software currently available from CORE IMS:

- Allows data capture, storage, analysis and reporting facilities of data for CORE measures
- Allows data capture of most of the routine data specified in the MDS (nature of intervention/treatment offered; number of sessions; type of therapist; therapist identifier; gender; age; ethnicity)
- Is being used by a rapidly growing number of staff (currently estimated at about 100) spread across a number of services, including services operating in the stepped care environment. About 600 new patients are currently being added per month in CORE-Net
- Allows data to be entered either by therapists or administrative staff spread across multiple locations (an essential requirement if data entry is carried out in surgeries)
- Allows any PC with internet access to be used without the installation of any local software since CORE-Net requires only a standard internet browser
- CORE-Net server software can either be mounted on a local server or, to minimise potential delays arising from local IT installation and support tasks can be used on a currently available secure hosted server
- Provides a high level of security in order to protect data confidentiality

Development

In order to provide a more complete data capture and reporting system for IAPT pathfinder sites in CORE-Net:

- The data capture of sexuality and disability is under development
- Data capture for the PHQ-9 and IAPT Inclusion & Employment Questionnaire is in development
- Development of data capture for the other primary measures included in the IAPT Outcome Framework and Data Collection Minimum Data Set (GAD-7; PEQ1; PEQ2; Work & Social Adjustment Scale) is subject to agreement with pathfinder sites, agreement of copyright holders of the measures and availability of development funding
- Development of data capture for disorder specific measures (e.g., SPIN; OCI; IES; HAI; Mobility Inventory; HADS; BDI; Fear Questionnaire; Penn State Worry) and other measures (e.g., CSQ8; SF6-D; EQ5-D) is subject to specific requests from

pathfinder sites, agreement of copyright holders of the measures and availability of funding for software development.

- Reporting the aggregate data at monthly intervals
- CORE–Net provides a facility to download all data to an Excel spreadsheet for analysis and reporting purposes. This facility will be extended to allow downloading of data captured from the additional measures (PHQ-9, etc) to assist pathfinder sites in meeting the aggregate reporting requirements specified in Appendix 1, IAPT Reporting Template 1, Service Activity Data and Appendix 3, IAPT Reporting Template 3, Data Collection Framework & Key Findings.

Availability of the software supporting additional measures is in all cases subject to the agreement of the copyright owner for the specific measure. CORE-Net can provide inter-operability with a local EPR system but it is **not** intended to provide EPR functionality within CORE-Net. There is a license fee payable for use of the CORE-Net software (but there is no charge for use of CORE measures). CORE-IMS can be contacted for more information at admin@coreims.co.uk

References

1. Barkham, M., Evans, C., Margison, F., McGrath, G., Mellor-Clark, J., Milne, D. & Connell, J. (1998). The rationale for developing and implementing core batteries in service settings and psychotherapy outcome research. *Journal of Mental Health*, *7*, 35-47.

2. Evans, C., Mellor-Clark, J., Margison, F., Barkham, M., McGrath, G., Connell, J. & Audin, K. Clinical Outcomes in Routine Evaluation: The CORE-OM. (2000). *Journal of Mental Health*, *9*, 247-255.

3. Evans, C., Connell, J., Barkham, M., Margison, F., Mellor-Clark, J., McGrath, G. & Audin, K. (2002). Towards a standardised brief outcome measure: Psychometric properties and utility of the CORE-OM. *British Journal of Psychiatry*, 180, 51-60.

4. Barkham, M., Culverwell, A., Spindler, K., Twigg, E., & Connell, J. (2005). The CORE-OM in an older adult population: Psychometric status, acceptability, and feasibility. *Aging and Mental Health, 9,* 235-245.

5. Barkham, M., Gilbert, N., Connell, J., Marshall, C. & Twigg, E. (2005). Suitability and utility of the CORE-OM and CORE-A for assessing severity of presenting problems in psychological therapy services based in primary and secondary care settings. *British Journal of Psychiatry, 186,* 239-246.

6. Barkham, M., Mellor-Clark. J., Connell, J., & Cahill J. (2006). A CORE approach to practice-based evidence: A brief history of the origins and applications of the CORE-OM and CORE System. *Counselling & Psychotherapy Research, 6,* 3-15.

7. Cahill, J., Barkham, M., Stiles, W.B., Twigg, E., Rees, A., Hardy, G.E., & Evans C. (2006). Convergent validity of the CORE measures with measures of depression for clients in brief cognitive therapy for depression. *Journal of Counseling Psychology*, *53,* 253-259.

8. Lyne, J., Barrett, P., Evans, C., & Barkham, M. (2006). Dimensions of variation on the CORE-OM amongst patients attending for psychological therapy. *British Journal of Clinical Psychology, 45,* 185-203.

9. Leach, C., Lucock, M., Barkham, M., Stiles, W.B., Noble, R., & Iveson, S. (2006). Transforming between Beck Depression Inventory and CORE-OM scores in routine clinical practice. *British Journal of Clinical Psychology, 45,* 153-166.

10. Barkham, M., Mullin, T., Leach, C., Stiles, W.B., & Lucock, M. (in press). Stability of the CORE-OM and BDI-I: Psychometric properties and implications for routine practice. *Psychology & Psychotherapy: Theory, Research & Practice.*

11. Barkham, M., Margison, F., Leach, C., Lucock, M., Mellor-Clark, J., Evans, C., Benson, L., Connell, J., Audin, K. & McGrath, G. (2001). Service profiling and outcomes benchmarking using the CORE-OM: Towards practice-based evidence in the psychological therapies. *Journal of Consulting and Clinical Psychology*, *69*, 184-196.

12. Evans, C., Connell, J., Barkham, M., Marshall, C. & Mellor-Clark, J. (2003). Practice-based evidence: Benchmarking NHS primary care counselling services at national and local levels. *Clinical Psychology & Psychotherapy, 10,* 374-388.

13. Gilbert, N., Barkham, M., Richards, A., & Cameron, I. (2005). The effectiveness of a primary care mental health service delivering brief psychological interventions: A benchmarking study using the CORE System. *Primary Care Mental Health, 3*, 241–251.

14. Mullin, T., Barkham, M., Mothersole, G., Bewick, B.M., & Kinder, A. (2006). Recovery and improvement benchmarks in routine primary care mental health settings. *Counselling & Psychotherapy Research, 6*, 68-80.

15. Mellor-Clark, J., Barkham, M., Connell, J. & Evans, C. (1999). Practice-based evidence and the need for a standardised evaluation system: Informing the design of the CORE System. *European Journal of Psychotherapy, Counselling and Health*, *3*, 357-374

16. Mellor-Clark, J., Connell, J., Barkham, M. & Cummins, P. (2001). Counselling outcomes in primary health care: a CORE system data profile. *European Journal of Psychotherapy, Counselling and Health*, 4, 65-86.

17. Bewick, B.M., Barkham, M., Connell, J., & Twigg, E. (in prep). The CORE-5: Ongoing monitoring of psychological therapy outcomes.

18. Sinclair A, Barkham M, Evans C, Connell J, & Audin K. (2005). Rationale and development of a general population well-being measure: Psychometric status of the GP-CORE in a student sample. *British Journal of Guidance & Counselling, 33,* 153-174.

19. Marshall, K., & Willoughby-Booth, S. (in press). Modifying the Clinical Outcomes in Routine Evaluation measure for use with people who have a learning disability. *British Journal of Learning Disabilities.*

20. Evans, R., Mellor-Clark, J., Barkham, M., & Mothersole, G. (2006). Routine outcome measurement and service quality management in NHS primary care psychological therapy services: Reflections on a decade of CORE development. *European Journal of Psychotherapy and Counselling*, *8*, 141-161.

21. Mellor-Clark, J., Curtis Jenkins, A., Evans, R., Mothersole, G., & McIness, B. (2006). Resourcing a CORE Network to develop a National Research Database to help enhance psychological therapy and counselling service provision. *Counselling & Psychotherapy Research, 6,* 16-22.

22. Singleton, N., & Lewis, G. (2003) *Better or Worse: A Longitudinal Study of the Mental Health of Adults Living in Private Households*, 2000. London: Stationary Office

23. Connell, J., Barkham, M., Stiles, W.B., Twigg, E., Singleton, N., Evans, O., Miles, J.N.V. (2007). Distribution of CORE-OM scores in a general population, clinical cut-off points, and comparison with the CIS-R. *British Journal of Psychiatry,* 190, 69-74.

24. Spitzer, R.L., Williams, J.B., Gibbon, M., & First, M.B. (1992). The Structured Clinical Interview for DSM-III-R (SCID). I: History, rationale, and description. *Archives of General Psychiatry, 49*, 624-629

25. Gilbody, S., Richards, D.A., & Barkham, M. (in press). Diagnosing depression in primary care using self-completed instruments: a UK validation of the PHQ-9 and CORE-OM. *British Journal of General Practice.*

26. Jacobson, N.S. & Truax, P. (1991). Clinical significance: A statistical approach to defining meaningful change in psychotherapy research. *Journal of Consulting and Clinical Psychology,* 59, 12-19

27. Wise, E. A. (2003). Psychotherapy outcome and satisfaction methods applied to intensive outpatient programming in a private practice setting. *Psychotherapy: Theory, Research, Practice, Training, 40*, 203-214.

28. Wise, E. A. (2004). Methods for analyzing psychotherapy outcomes: A review of clinical significance, reliable change, and recommendations for future directions. *Journal of Personality Assessment, 82*, 50-59.

Appendix I: CORE-10

CLINICAL OUTCOMES in ROUTINE EVALUATION

CORE-10 v.1

Site ID

Client ID

letters only / numbers only

Sub codes

Therapist ID / numbers only (1) / numbers only (2)

Date form given D D / M M / Y Y Y Y

Stage Completed
S Screeening
R Referral
A Assessment
F First Therapy Session
P Pre-therapy (unspecified)
D During Therapy (review)
L Last therapy session
X Follow up 1
Y Follow up 2

Episode Stage

Gender
Male
Female

Age

IMPORTANT - PLEASE READ THIS FIRST

This form has 10 statements about how you have been OVER THE LAST WEEK.
Please read each statement and think how often you felt that way last week.
Then tick the box which is closest to this.
Please use a dark pen (not pencil) and tick clearly within the boxes.

Over the last week...

	Not at all	Only occasionally	Sometimes	Often	Most or all of the time
1 I have felt tense, anxious or nervous	0	1	2	3	4
2 I have felt I have someone to turn to for support when needed	4	3	2	1	0
3 I have felt able to cope when things go wrong	4	3	2	1	0
4 Talking to people has felt too much for me	0	1	2	3	4
5 I have felt panic or terror	0	1	2	3	4
6 I made plans to end my life	0	1	2	3	4
7 I have had difficulty getting to sleep or staying asleep	0	1	2	3	4
8 I have felt despairing or hopeless	0	1	2	3	4
9 I have felt unhappy	0	1	2	3	4
10 Unwanted images or memories have been distressing me	0	1	2	3	4

Total (Clinical Score*)

* **Procedure:** Add together the item scores, then divide by the number of questions completed to get the mean score, then multiply by 10 to get the Clinical Score.
Quick method for the CORE-10 (if all items completed): Add together the item scores to get the Clinical Score.

Thank you for your time in completing this questionnaire

Appendix II: CORE-OM

CLINICAL OUTCOMES in ROUTINE EVALUATION

OUTCOME MEASURE

Site ID ☐☐☐☐☐ **Age** ☐☐ **Male** ☐ **Female** ☐

letters only ☐☐ numbers only ☐☐☐☐☐☐☐

Client ID

Therapist ID ☐☐☐ numbers only (1) ☐☐☐ numbers only (2) ☐☐☐

Sub codes

D D M M Y Y Y Y

☐☐ / ☐☐ / ☐☐☐☐

Date form given

Stage Completed **Stage** ☐

S Screening
R Referral
A Assessment
F First Therapy Session
P Pre-therapy (unspecified)
D During Therapy
L Last therapy session
X Follow up 1
Y Follow up 2

Episode ☐

IMPORTANT – PLEASE READ THIS FIRST

This form has 34 statements about how you have been OVER THE LAST WEEK.
Please read each statement and think how often you felt that way last week.
Then tick the box which is closest to this.
Please use a dark pen (not pencil) and tick clearly within the boxes.

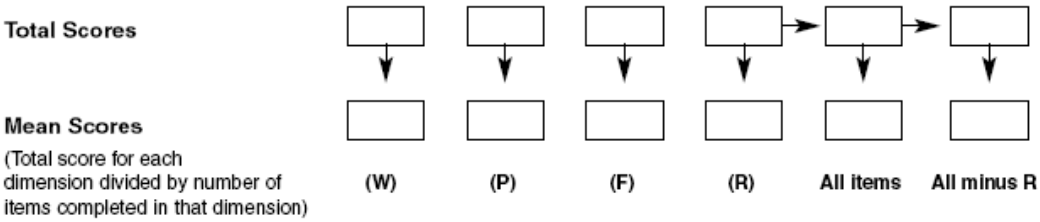
	Over the last week	Not at all	Only Occasionally	Sometimes	Often	Most or all the time	OFFICE USE ONLY
1	I have felt terribly alone and isolated	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ F
2	I have felt tense, anxious or nervous	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ P
3	I have felt I have someone to turn to for support when needed	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0	☐ F
4	I have felt O.K. about myself	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0	☐ W
5	I have felt totally lacking in energy and enthusiasm	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ P
6	I have been physically violent to others	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ R
7	I have felt able to cope when things go wrong	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0	☐ F
8	I have been troubled by aches, pains or other physical problems	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ P
9	I have thought of hurting myself	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ R
10	Talking to people has felt too much for me	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ F
11	Tension and anxiety have prevented me doing important things	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ P
12	I have been happy with the things I have done	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0	☐ F
13	I have been disturbed by unwanted thoughts and feelings	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ P
14	I have felt like crying	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ W

Please turn over

CORE-OM (cont'd)

Over the last week		Not at all	Only Occasionally	Sometimes	Often	Most or all the time	OFFICE USE ONLY
15	I have felt panic or terror	0	1	2	3	4	P
16	I made plans to end my life	0	1	2	3	4	R
17	I have felt overwhelmed by my problems	0	1	2	3	4	W
18	I have had difficulty getting to sleep or staying asleep	0	1	2	3	4	P
19	I have felt warmth or affection for someone	4	3	2	1	0	F
20	My problems have been impossible to put to one side	0	1	2	3	4	P
21	I have been able to do most things I needed to	4	3	2	1	0	F
22	I have threatened or intimidated another person	0	1	2	3	4	R
23	I have felt despairing or hopeless	0	1	2	3	4	P
24	I have thought it would be better if I were dead	0	1	2	3	4	R
25	I have felt criticised by other people	0	1	2	3	4	F
26	I have thought I have no friends	0	1	2	3	4	F
27	I have felt unhappy	0	1	2	3	4	P
28	Unwanted images or memories have been distressing me	0	1	2	3	4	P
29	I have been irritable when with other people	0	1	2	3	4	F
30	I have thought I am to blame for my problems and difficulties	0	1	2	3	4	P
31	I have felt optimistic about my future	4	3	2	1	0	W
32	I have achieved the things I wanted to	4	3	2	1	0	F
33	I have felt humiliated or shamed by other people	0	1	2	3	4	F
34	I have hurt myself physically or taken dangerous risks with my health	0	1	2	3	4	R

THANK YOU FOR YOUR TIME IN COMPLETING THIS QUESTIONNAIRE



Appendix III: CORE Practitioner-completed measures

Therapy Assessment Form

CLINICAL OUTCOMES in ROUTINE EVALUATION

THERAPY ASSESSMENT FORM v.2

Site ID ☐☐☐☐ **Age** ☐☐

Client ID letters ☐☐ numbers ☐☐☐☐☐☐☐ **Male** ☐ **Female** ☐

Sub Codes **TH ID number** ☐☐☐ SC2 numbers ☐☐☐ SC3 numbers ☐☐☐ **Employment** ☐☐

Referrer(s) ☐☐ ☐☐ ☐☐ **Ethnic Origin** ☐☐

Referral date D D ☐☐ / M M ☐☐ / Y Y Y Y ☐☐☐☐

First assessment date attended D D ☐☐ / M M ☐☐ / Y Y Y Y ☐☐☐☐

Last assessment date D D ☐☐ / M M ☐☐ / Y Y Y Y ☐☐☐☐

Total number of assessments ☐ **Episode**

Previously seen for therapy in this service? Yes ☐ No ☐ ☐ **Episode**

Months since last episode ☐☐☐

Is this a follow-up/review appointment? Yes ☐ No ☐

Relationships/support *Please tick as many boxes as appropriate*

Living alone (not including dependents)	☐	Full time carer (of disabled/elderly etc)	☐
Living with partner	☐	Living in shared accommodation (e.g. lodgings)	☐
Caring for children under 5 years	☐	Living in temporary accommodation (e.g. hostel)	☐
Caring for children over 5 years	☐	Living in institution/hospital	☐
Living wiht parents/guardian	☐	Other ☐	
Living with other relatives/friends	☐		

Current/previous use of services for psychological problems?
Please tick as many boxes as appropriate

		Concurrent	< 12 mths	< 12 mths
Primary	GP or other member of primary care team (eg practice nurse, counsellor) ...	☐	☐	☐
Secondary	In primary care setting ...	☐	☐	☐
	In community setting ...	☐	☐	☐
	In hospital setting on sessional basis ...	☐	☐	☐
	Day care services (e.g. day hospital) ...	☐	☐	☐
	Hospital admission <=10 days ...	☐	☐	☐
	Hospital admission >=11 days ...	☐	☐	☐
Specialist	Psychotherapy/psychological treatments from specialist team (sessional) ...	☐	☐	☐
	Attendance at day therapeutic programme ...	☐	☐	☐
	Inpatient treatment ...	☐	☐	☐
Other	Counsellor in eg voluntary, religious, work, educational setting ...	☐	☐	☐

Therapy Assessment Form (cont'd)

Is the client currently prescribed medication to help with their psychological problem(s)? Yes ☐ No ☐

If yes, please indicate type of medication:

Anti-psychotics (neuroleptics/major tranquillizers) ☐ Anti-depressants ☐ Anxiolytics/Hypnotics (minor tranquillizers) ☐ Other ☐

Brief description of reason for referral

Identified Problems/Concerns

	severity	<6 months	6–12 months	>12 months	Recurring/ continuous
☐ Depression		☐	☐	☐	☐
☐ Anxiety/Stress		☐	☐	☐	☐
☐ Psychosis		☐	☐	☐	☐
☐ Personality Problems		☐	☐	☐	☐
☐ Cognitive/Learning		☐	☐	☐	☐
☐ Eating Disorder		☐	☐	☐	☐
☐ Physical Problems		☐	☐	☐	☐
☐ Addictions		☐	☐	☐	☐

	severity	<6 months	6–12 months	>12 months	Recurring contin.
☐ Trauma/abuse		☐	☐	☐	☐
☐ Bereavement/loss		☐	☐	☐	☐
☐ Self esteem		☐	☐	☐	☐
☐ Interpersonal/relationship		☐	☐	☐	☐
☐ Living/Welfare		☐	☐	☐	☐
☐ Work/Academic		☐	☐	☐	☐
☐ Other (*specify below*)		☐	☐	☐	☐

Risk

	None	Mild	Mod	Sev
Suicide	☐	☐	☐	☐
Self Harm	☐	☐	☐	☐
Harm to others	☐	☐	☐	☐
Legal/Forensic	☐	☐	☐	☐

ICD-10 CODES

	F/Z	Main Code	Sub-code		F/Z	Main Code	Sub-code
1	☐	☐☐	. ☐	3	☐	☐☐	. ☐
2	☐	☐☐	. ☐	4	☐	☐☐	. ☐

What has the client done to cope with/aviod their problems? *Please tick, and then specify actions*

Positive actions ☐ Negative actions ☐

Assessment outcome ***(tick one box only)***

Assessment/one session only ☐

Accepted for therapy ☐

Accepted for trial period of therapy ☐

***If the client is not entering therapy give brief reason**

End of Therapy Form

CLINICAL OUTCOMES in ROUTINE EVALUATION

END OF THERAPY FORM v.2

Site ID ☐☐☐☐

Client ID letters ☐☐ numbers ☐☐☐☐☐☐☐

Sub Codes Therapist ID ☐☐☐ SC4 numbers ☐☐☐ SC5 numbers ☐☐☐

Date therapy commenced D D ☐☐ / M M ☐☐ / Y Y Y Y ☐☐☐☐

Date therapy completed D D ☐☐ / M M ☐☐ / Y Y Y Y ☐☐☐☐

Number of sessions planned ☐☐☐

Number of sessions attended ☐☐☐

Number of sessions unattended ☐☐☐

What type of therapy was undertaken with the client? *Please tick as many boxes as appropriate*

Psychodynamic	☐	Person-centred	☐
Psychoanalytic	☐	Integrative	☐
Cognitive	☐	Systemic	☐
Behavioural	☐	Supportive	☐
Cognitive/Behavioural	☐	Art	☐
Structured/Brief	☐	Other *(specify below)*	☐

What modality of therapy was undertaken with the client? *Please tick as many boxes as appropriate*

Individual	☐	Family	☐
Group	☐	Marital/Couple	☐

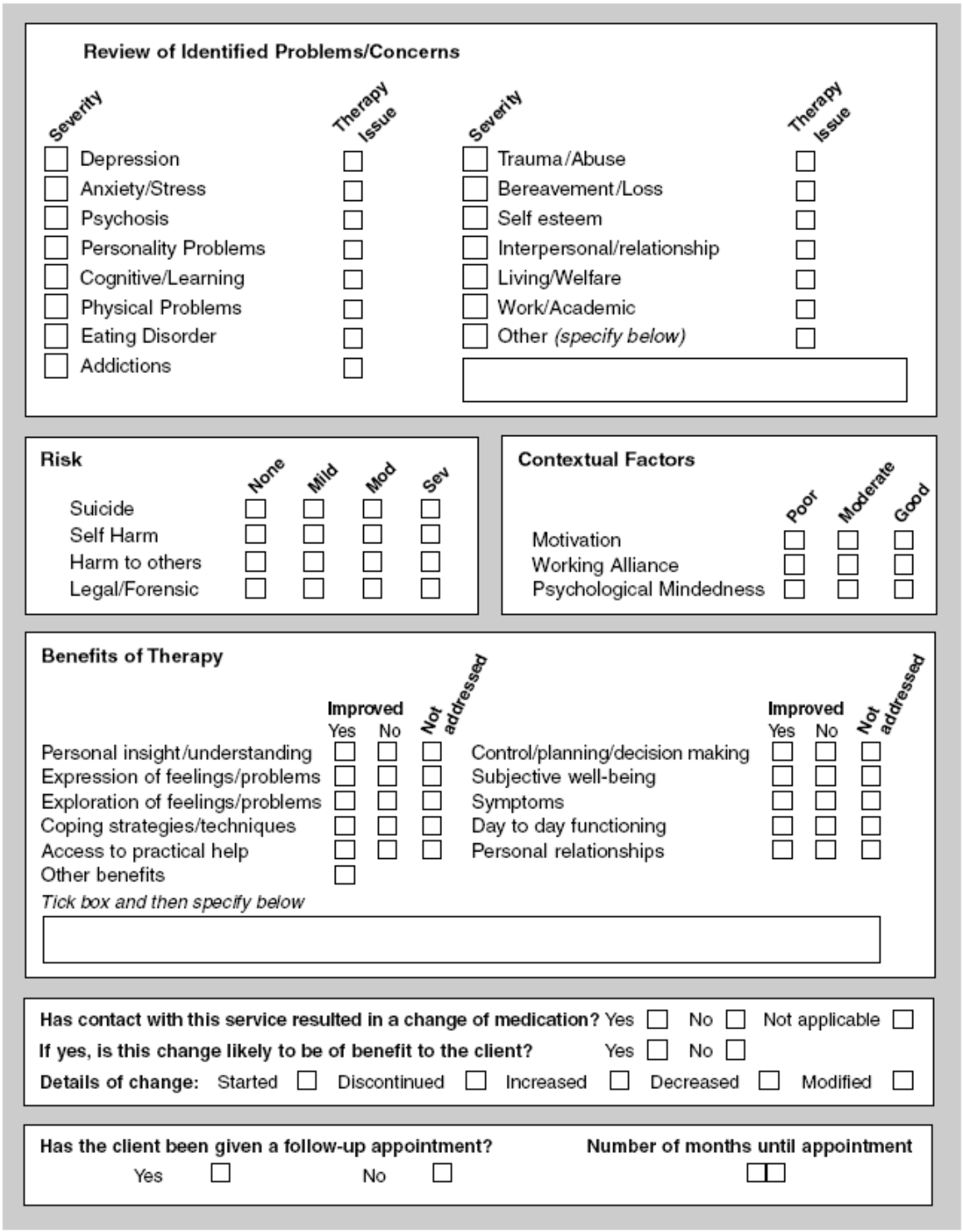
What was the frequency of therapy with the client?

More than once weekly	☐	Less than once weekly	☐
Weekly	☐	Not at a fixed frequency	☐

Which of the following best describes the ending of therapy?

Unplanned	☐	**Planned**	☐
Due to crisis	☐	Planned from outset	☐
Due to loss of contact	☐	Agreed during therapy	☐
Client did not wish to continue	☐	Agreed at end of therapy	☐
Other unplanned ending *(specify below)*	☐	Other planned ending *(specify below)*	☐

End of Therapy Form (cont'd)



Review of Identified Problems/Concerns

	Severity	Therapy Issue
Depression	☐	☐
Anxiety/Stress	☐	☐
Psychosis	☐	☐
Personality Problems	☐	☐
Cognitive/Learning	☐	☐
Physical Problems	☐	☐
Eating Disorder	☐	☐
Addictions	☐	☐

	Severity	Therapy Issue
Trauma/Abuse	☐	☐
Bereavement/Loss	☐	☐
Self esteem	☐	☐
Interpersonal/relationship	☐	☐
Living/Welfare	☐	☐
Work/Academic	☐	☐
Other *(specify below)*	☐	☐

Risk

	None	Mild	Mod	Sev
Suicide	☐	☐	☐	☐
Self Harm	☐	☐	☐	☐
Harm to others	☐	☐	☐	☐
Legal/Forensic	☐	☐	☐	☐

Contextual Factors

	Poor	Moderate	Good
Motivation	☐	☐	☐
Working Alliance	☐	☐	☐
Psychological Mindedness	☐	☐	☐

Benefits of Therapy

	Improved Yes	Improved No	Not addressed
Personal insight/understanding	☐	☐	☐
Expression of feelings/problems	☐	☐	☐
Exploration of feelings/problems	☐	☐	☐
Coping strategies/techniques	☐	☐	☐
Access to practical help	☐	☐	☐
Other benefits	☐		

	Improved Yes	Improved No	Not addressed
Control/planning/decision making	☐	☐	☐
Subjective well-being	☐	☐	☐
Symptoms	☐	☐	☐
Day to day functioning	☐	☐	☐
Personal relationships	☐	☐	☐

Tick box and then specify below

Has contact with this service resulted in a change of medication? Yes ☐ No ☐ Not applicable ☐

If yes, is this change likely to be of benefit to the client? Yes ☐ No ☐

Details of change: Started ☐ Discontinued ☐ Increased ☐ Decreased ☐ Modified ☐

Has the client been given a follow-up appointment? Yes ☐ No ☐

Number of months until appointment ☐☐

The CORE Measures & CORE System

Publications

Up to June 2007

This is a chronological listing of publications which focuses on the following:

A: CORE System and its constituent measures (i.e., CORE-OM, CORE-SF, GP-CORE)

B: Use of the CORE System or its components in trials and routine settings

C: Outcome measurement, implementation, & infrastructure (e.g., other outcome measures, core battery, practice research networks, outcomes policy)

D: Broader issues of practice-based evidence and evidence-based practice

1998 [2] **Barkham M, Evans C, Margison F, McGrath G, Mellor-Clark J, Milne D, Connell J** (1998). The rationale for developing and implementing core batteries in service settings and psychotherapy outcome research. *Journal of Mental Health, 7*, 35-47. [A,C]

Evans C, Margison F, Barkham M (1998). The contribution of reliable and clinically significant change methods to evidence-based mental health. *Evidence Based Mental Health, 1*, 70-72. [C,D]

1999 [1] **Mellor-Clark J, Barkham M, Connell J, Evans C** (1999). Practice-based evidence and need for a standardised evaluation system: Informing the design of the CORE System. *European Journal of Psychotherapy, Counselling and Health, 2,* 357-374. [A,D]

2000 [7] **Barkham M, Mellor-Clark J** (2000). Rigour and relevance: The role of practice-based evidence in the psychological therapies. In N. Rowland, & S. Goss (eds.), *Evidence-based counselling and psychological therapies*. London: Routledge. [D]

Evans C, Mellor-Clark J, Margison F, Barkham M, McGrath G, Connell J, Audin K (2000) Clinical Outcomes in Routine Evaluation: The CORE-OM. *Journal of Mental Health, 9,* 247-255. [A]

Hall Z, Mullee M (2000). Undertaking psychotherapy research. *Group Analysis. 33,* 319-332. [B]

Margison F, Barkham M, Evans C, McGrath G, Mellor-Clark J, Audin K, Connell J (2000). Measurement and psychotherapy: Evidence based practice and practice-based evidence. *British Journal of Psychiatry, 177*, 123-130. [D]

Mellor-Clark J (2000). Evidence-based counselling in primary care. In P. Tovey (ed.), *Contemporary primary care & change: Issues and themes*. Buckingham: Open University Press. [D]

Mellor-Clark J, Barkham M (2000). Quality evaluation: methods, measures & meaning. In C. Feltham & I. Horton (eds.), *The handbook of counselling and psychotherapy*. London: Sage Publications. [A,D]

Whewell P, Bonanno D (2000) The Care Programme Approach and risk assessment of borderline personality disorder. Clinical validation of the CORE risk sub-scale. *Psychiatric Bulletin, 24*, 381-384. [B]

2001 [7] **Audin K, Mellor-Clark J, Barkham, M, Margison F, McGrath, G, Lewis S, Cann L, Duffy J, Parry G** (2001). Practice research networks for effective psychological therapies. *Journal of Mental Health, 10,* 241-251. [C]

Audin K, Margison F, Mellor-Clark J, Barkham M (2001). Value of HoNOS in assessing patient change in NHS psychotherapy and psychological treatment services. *British Journal of Psychiatry, 178*, 561-566. [C]

Barkham M, Margison F, Leach C, Lucock M, Mellor-Clark J, Evans C, Benson L, Connell J, Audin K, McGrath G (2001). Service profiling and outcomes benchmarking using the CORE-OM: Towards practice-based evidence in the psychological therapies. *Journal of Consulting and Clinical Psychology, 69*, 184-196. [A,B]

McCloskey H (2001). Evaluation of the CORE outcome measure in a therapeutic forensic setting. *British Journal of Forensic Practice, 3*, 22-28. [B]

Mellor-Clark J, Connell J, Barkham M, Cummins P (2001). Counselling outcomes in primary health care: a CORE System data profile. *European Journal of Psychotherapy, Counselling and Health, 4*, 65-86. [B]

Mellor-Clark J (2001). How can quality be enhanced in counselling services? In P. Bower, J. Foster, and J. Mellor-Clark (eds.), *Quality in Counselling in Primary Care: A guide to effective commissioning and clinical governance*. Manchester. NPCRDC. [B,D]

Ming Wai Wan (2001). Ethnic culture, distress and clinical measurement: A CORE outcome comparison between the British Chinese and white Europeans. *Journal of Mental Health. 10,* 301-315. [A]

2002 [6] **Ball J, Pike G, Cuff C, Mellor-Clark J, Connell J** (2002). Working well? Results from the RCN Working well survey into the wellbeing and working lives of nurses. Royal College of Nursing. [B]

Ekers D, Lovell K (2002). Self-help for anxiety and depression in primary care: an audit of a pilot clinic. *Clinical Effectiveness in Nursing, 6,* 129-133. [B]

Evans C, Connell J, Barkham M, Margison F, Mellor-Clark J, McGrath G, Audin K (2002). Towards a standardised brief outcome measure: Psychometric properties and utility of the CORE-OM. *British Journal of Psychiatry, 180*, 51-60. [A]

Howey L, Ormrod J (2002). Personality disorder, primary care counselling and therapeutic effectiveness. *Journal of Mental Health, 11*, 131-139. [B]

McInnes B (2002). Vicious circle. *Nursing Standard, 16 (27):14-5*; March 20-26. [B]

Mellor-Clark J (2002). A CORE profile of counselling in primary care. *Psychiatry, 1:4*, 39-43. [B]

2003 [9] **Barkham M, Mellor-Clark J** (2003). Bridging evidence-based practice and practice-based evidence: developing a rigorous and relevant knowledge for the psychological therapies, *Clinical Psychology & Psychotherapy, 10*, 319–327. [D]

Evans C, Connell J, Barkham M, Marshall C, Mellor-Clark J (2003). Practice-Based Evidence: benchmarking NHS primary care counselling services at national and local levels. *Clinical Psychology & Psychotherapy, 10,* 374–388. [B,D]

Gardiner C, McLeod J, Hill I, Wigglesworth A (2003). A feasibility study of the systematic evaluation of client outcomes in a voluntary sector counselling agency. *Counselling & Psychotherapy Research*, 3, 285-90. [B]

Kelly TA (2003). Clinical outcome measurement: A call to action. *Journal of Psychology & Christianity, 22,* 254-258. [C]

Lovell K, Richards DA, Bower P (2003). Improving access to primary mental health care: Uncontrolled evaluation of a pilot self-help clinic. *British Journal of General Practice. 53,* 133-135. [B]

Lucock M, Leach C, Iveson S, Lynch K, Horsefield C, Hall P (2003). A systematic approach to practice-based evidence in a psychological therapies service. *Clinical Psychology and Psychotherapy, 10,* 389-399. [B,D]

Mellor-Clark J (2003). National innovations in the evaluation of psychological therapy service provision. *The Journal of Primary Care Mental Health, 7*, 82–85. [C]

Stiles WB, Leach C, Barkham M, Lucock, M, Iveson S, Shapiro DA, Iveson M, Hardy GE (2003). Early sudden gains in psychotherapy under routine clinic conditions: practice-based evidence. *Journal of Consulting and Clinical Psychology, 71*, 14-21. [B]

Winter D, Archer R, Spearman P, Costello M, Quaite A, Metcalfe C (2003) Explorations of the effectiveness of a voluntary sector psychodynamic counselling service. *Counselling & Psychotherapy Research. 3,* 261-9. [B]

2004 [5] **Cooke R, Barkham M, Audin K, Bradley M, Davy J** (2004). Student debt and its relation to student mental health. *Journal of Further and Higher Education*, *28*, 53-66. [B]

Cooper H, Lester H, Freemantle N, Wilson S (2004). A cluster randomised controlled trial of the effect of primary care mental health workers on satisfaction, mental health symptoms and use of services: background and methodology. *Primary Care Psychiatry*, *9*, 1-7. [B]

Dent-Brown K, Wang M (2004). Developing a rating scale for projected stories. *Psychology and Psychotherapy: Theory, Research and Practice*, *77*, 325-333. [B]

Leach C, Lucock M, Iveson S, Noble R (2004) Evaluating psychological therapies services: a review of outcome measures and their utility. *Mental Health & Learning Disabilities Research & Practice, 1*, 53-66. [C]

Mellor-Clark J (2004). A review of the evolution of research evidence and activity for NHS primary care counselling. *Psychodynamic Practice*, *10*, 373-393. [D]

2005 [17] **Ashworth M, Robinson SI, Godfrey E, Parmentier H, Shepherd M, Christey J, Wright K, Matthews V** (2005). The experiences of therapists using a new client-centred psychometric instrument, PSYCHLOPS (Psychological Outcome Profiles). *Counselling & Psychotherapy Research,* 5, 37-42. [B]

Barkham M, Culverwell A, Spindler K, Twigg E, Connell J (2005). The CORE-OM in an older adult population: Psychometric status, acceptability, and feasibility. *Ageing and Mental Health, 9,* 235-245. [A]

Barkham M, Gilbert N, Connell J, Marshall C, Twigg E (2005). The suitability and utility of the CORE-OM and CORE-A for assessing severity of presenting problems in primary and secondary care based psychological therapy services. *British Journal of Psychiatry, 186,* 239-246. [A]

Barkham M, Rees A., Leach C, Shapiro DA, Hardy GE, Lucock M (2005). Rewiring efficacy studies of depression: An empirical test in transforming BDI-I to CORE-OM scores. *Mental Health and Learning Disabilities Research and Practice*. *2,* 11-18. [B]

Baylis K, Farquharson L (2005) Developing a service: why bother with audit? *Clinical Psychology Forum*, *154*, 16-20. [B]

Charman D, Barkham M (2005). Psychological treatments: Evidence based practice & practice based evidence. *InPsych.* [D]

Gilbert N, Barkham M, Richards A, Cameron I (2005). The effectiveness of a primary care mental health service delivering brief psychological interventions: A benchmarking study using the CORE System. *Primary Care Mental Health*, *3,* 241-251. [B]

Grayer J, Buszewicz M, Orpwood L, Cape J, Leibowitz J. (2005). A graduate primary care mental health worker pilot study: facilitating access to voluntary and community sector services. A description of the 'Community Link Service'. *Primary Care Mental Health*, *3*, 181-191. [B]

Greasley P, Small N (2005). Evaluating a primary care counselling service: outcomes and issues. *Primary Health Care Research and Development,* 6, 125–136. [B]

Hardy GE, Cahill J, Stiles WB, Massey C, Macaskill N, Barkham M (2005). Sudden gains in cognitive therapy for depression: A replication and extension. *Journal of Consulting and Clinical Psychology, 73,* 59-67. [B]

Leach C, Lucock M, Barkham M, Noble R, Clarke L, Iveson S (2005). Assessing risk and emotional disturbance using the CORE-OM & HoNOS outcome measures. *Psychiatric Bulletin, 29,* 419-422. [A]

Lees J, Evans C, Manning, N (2005). A cross-sectional snapshot of therapeutic community client members. Therapeutic Communities: International Journal for Therapeutic and Supportive Organizations, 26, 295-314. [B]

Lutz W, Leach C, Barkham M, Lucock M, Stiles WB, Evans C, Noble R, Iveson S (2005). Predicting rate and shape of change for individual clients receiving psychological therapy: Using growth curve modeling and nearest neighbor technologies. *Journal of Consulting and Clinical Psychology, 73,* 904-913. [B]

Mead N, MacDonald W, Bower P, Lovell K, Richards D, Roberts C, Bucknall A (2005). The clinical effectiveness of guided self-help versus waiting-list control in the management of anxiety and depression: A randomized controlled trial. *Psychological Medicine, 35,* 1633-1643. [B]

Morris E, Isaacson H (2005). An evaluation of a systemic therapy service in adult mental health. *Clinical Psychology Forum. 151,* 16-21. [B]

Shepherd M, Ashworth M, Evans C, Robinson SI, Rendall M, Ward S (2005). What factors are associated with improvement after brief psychological interventions in primary care? Issues arising from using routine outcome measurement to inform clinical practice. *Counselling and Psychotherapy Research, 5*, 273-80. [B]

Sinclair A, Barkham M, Evans C, Connell J, Audin K (2005). Rationale and development of a general population well-being measure: Psychometric status of the GP-CORE in a student sample. *British Journal of Guidance & Counselling, 33,* 153-174. [A]

2006 [30] **Aveline M** (2006). Commentary on "Using Clinical Outcomes in Routine Evaluation". *European Journal of Psychotherapy and Counselling, 8,* 227-234.

Barkham M (2006). Good enough science: The CORE-OM as a bridge between research and practice in the psychological therapies. *Psychotherapy Bulletin.* [D]

Barkham M, Connell J, Stiles WB, Miles JNV, Margison J, Evans C, Mellor-Clark J (2006). Dose-effect relations and responsive regulation of treatment duration: The good enough level. *Journal of Consulting and Clinical Psychology*. [B]

Barkham M, Mellor-Clark J, Connell J, Cahill J (2006). A CORE approach to practice-based evidence: A brief history of the origins and applications of the CORE-OM and CORE System. *Counselling & Psychotherapy Research, 6,* 3-15. [A,D]

Bewick BM, McBride J, Barkham M (2006). When clients and practitioners have differing views of risk: Benchmarks for improving assessment and practice. *Counselling & Psychotherapy Research, 6,* 50-59. [B]

Bewick BM, Trusler K, Mullin T, Grant S, Mothersole G (2006). Routine outcome measurement completion rates for the CORE-OM in primary care psychological therapies and counselling. *Counselling & Psychotherapy Research, 6,* 33-40. [B]

Botella L (2006). Routine evaluation in a psychotherapy service: The use of CORE System data. *European Journal of Psychotherapy and Counselling, 8,* 235-241. [B]

Branney P, Barkham M (2006). Core outcomes in psychosexual therapy: A feasibility study of CORE-OM. *Sexual & Relationship Therapy, 21*, 15-26. [A]

Cahill J, Barkham M, Stiles WB, Twigg E, Rees A, Hardy GE, Evans C (2006). Convergent validity of the CORE measures with measures of depression for clients in brief cognitive therapy for depression. *Journal of Counseling Psychology, 53,* 253-259. [A]

Cahill J, Potter S, Mullin T (2006). First contact session outcomes in primary care psychological therapy and counselling services. *Counselling & Psychotherapy Research, 6,* 41-49. [B]

Cavanagh K, Shapiro DA, Van Den Berg S, Swain S, Barkham M, Proudfoot J (2006). The effectiveness of computerised cognitive behavioural therapy in routine care. *British Journal of Clinical Psychology.*[B]

Connell J, Grant S, Mullin S (2006). Client initiated termination of therapy at NHS primary care counselling services. *Counselling & Psychotherapy Research, 6,* 60-67. [B]

Cooke R, Bewick BM, Barkham M, Bradley M, Audin K (2006). Measuring, monitoring and managing the psychological well-being of first year university students. *British Journal of Guidance & Counselling*. [B]

Davies L, Leach C, Lucock M, Stiles WB, Iveson S, Barkham M (2006). Therapists' recall of sudden gains in routine clinical practice. *Psychology and Psychotherapy: Theory, Research and Practice, 79,* 107-114. [B]

Evans R, Mellor-Clark J, Barkham M, Mothersole G (2006). Developing the resources and management support for routine evaluation in counselling and psychological therapy service provision: Reflections on a decade of CORE development. *European Journal of Psychotherapy and Counselling, 8*, 141-161. [C]

Grant S (2006). Making sense of CORE System data: Attrition, effectiveness, concordance and information capture. *European Journal of Psychotherapy and Counselling, 8,* 193-208. [B]

Leach C, Lucock M, Barkham M, Stiles, WB, Noble R, Iveson, S. (2006). Transforming between Beck Depression Inventory and CORE-OM scores in routine clinical practice. *British Journal of Clinical Psychology, 45,* 153-166. [A]

Lyne J, Barrett P, Evans C, Barkham M (2006). Dimensions of variation on the CORE-OM amongst patients attending for psychological therapy. *British Journal of Clinical Psychology, 45,* 185-203. [A]

McIness B (2006). Management at the crossroads: The service management challenge of implementing routine evaluation and performance management in psychological therapy and counselling services. *European Journal of Psychotherapy and Counselling, 8,* 163-176. [B,C]

McNaughton K-A, Boyd J, McBride J (2006). Using CORE data in counselling supervision: An initial exploration. *European Journal of Psychotherapy and Counselling, 8,* 209-225. [B]

Mellor-Clark J (2006). Developing CORE performance indicators for benchmarking in NHS primary care psychological therapy and counselling services: An editorial introduction. *Counselling & Psychotherapy Research, 6,* 1-2. [B]

Mellor-Clark J, Barkham M (2006). The CORE System: Developing and delivering practice-based evidence through quality evaluation. In C. Feltham & I. Horton (eds.), *Handbook of counselling and psychotherapy*. 2nd Edition. London: Sage Publications. [D]

Mellor-Clark J, Barkham M (2006). Editorial: Using Clinical Outcomes in Routine Evaluation. *European Journal of Psychotherapy and Counselling, 8*, 137-140. [B]

Mellor-Clark J, Curtis Jenkins A, Evans R, Mothersole G, McIness B (2006). Resourcing a CORE Network to develop a National Research Database to help enhance psychological therapy and counselling service provision. *Counselling & Psychotherapy Research, 6,* 16-22. [B,C]

Mellor-Clark J, Barkham M, Mothersole G, McInnes B, Evans R (2006). Reflections on benchmarking NHS primary care psychological therapies and counselling. *Counselling & Psychotherapy Research, 6,* 81-87*.* [D]

Mothersole, G. (2006). The use of CORE System data to inform and develop practitioner performance assessment and appraisal: An experiential account. *European Journal of Psychotherapy and Counselling, 8,* 177-191. [B,C]

Mullin T, Barkham M (2006). When clients don't provide discharge data in primary care services: Using CORE System information to address attrition in CORE-OM outcome data. *Primary Care Mental Health.* [B]

Mullin T, Barkham M, Mothersole G, Bewick BM, Kinder A (2006). Recovery and improvement benchmarks in routine primary care mental health settings. *Counselling & Psychotherapy Research, 6,* 68-80*.* [B]

Stiles WB, Barkham M, Twigg E, Mellor-Clark J, Cooper M (2006). Effectiveness of cognitive-behavioural, person-centred, and psychodynamic therapies as practiced in National Health Service settings. *Psychological Medicine, 36,* 555-566. [B]

Trusler K, Doherty C, Mullin T, Grant S, McBride J (2006). Waiting times for primary care psychological therapy and counselling services. *Counselling & Psychotherapy Research, 6,* 23-32. [B]

2007 [3] **Barkham M, Margison F** (2007). Practice-based evidence as a complement to evidence-based practice: From dichotomy to chiasmus. In C. Freeman & M. Power (Eds.), *Handbook of evidence-based psychotherapies: A guide for research and practice.* Chichester: Wiley. pp. 443-476. [D]

Connell J, Barkham M, Stiles WB, Twigg E, Singleton N, Evans O, Miles JNV (2007). Distribution of CORE-OM scores in a general population, clinical cut-off points, and comparison with the CIS-R. *British Journal of Psychiatry, 190,* 69-74. [A]

Connell J, Barkham M, Mellor-Clark J (2007). Mental health CORE-OM norms of students attending university counselling services benchmarked against an age-matched primary care sample. *British Journal of Guidance & Counselling, 35,* 41-56. [B]

In press [5]

Barkham M, Margison F (in press). Practice-based evidence as a complement to evidence-based practice: From dichotomy to chiasmus. In C. Freeman & M. Power (Eds). *Handbook of evidence-based psychotherapies.* Wiley. [D]

Barkham M, Mullin T, Leach C, Stiles WB, Lucock M (in press). Stability of the CORE-OM and BDI-I: Psychometric properties and implications for routine practice. *Psychology & Psychotherapy: Theory, Research & Practice.* [A]

Connell J, Barkham M (in press). Effectiveness of student counselling services: An analysis using the CORE-System. *British Journal of Guidance and Counselling*.[B]

Gilbody S, Richards D, Barkham M (in press). Diagnosing depression in primary care using self-completed instruments: a UK validation of the PHQ-9 and CORE-OM. *British Journal of General Practice.* [A]

Marshall K, Willoughby-Booth S (in press). Modifying the Clinical Outcomes in Routine Evaluation measure for use with people who have a learning disability. *British Journal of Learning Disabilities.* [A]