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**Improving Access to Psychological Therapy: Initial
Evaluation of the Two Demonstration Sites**

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Abstract
The Government's Improving Access to Psychological Therapy (IAPT) programme aims to implement NICE Guidance for people with depression and anxiety disorders. In the first phase of the programme, two demonstration sites were established in Doncaster and Newham with funding to provide increased availability of cognitive-behaviour therapy-based (CBT) services to those in the community who need them. The services opened in late summer 2006. This paper documents the achievements of the sites up to September 2007 (roughly their first year of operation) and makes recommendations for the future roll out of IAPT services.

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EXECUTIVE SUMMARY

The Government's Improving Access to Psychological Therapy (IAPT) programme aims to implement NICE Guidance for people with depression and anxiety disorders. In the first phase of the programme, two demonstration sites were established in Doncaster and Newham with funding to provide increased availability of cognitive-behaviour therapy-based (CBT) services to those in the community who need them. The services opened in late summer 2006. This report documents the achievements of the sites up to September 2007 (roughly their first year of operation) and makes recommendations for the future roll out of IAPT services.

Funding

Each site received £1.3-1.5 million in extra resource.

Clinical Populations

The clinical populations served by the two sites are different. Doncaster focuses predominantly on individuals for whom depression is considered by their GPs to be their main problem, although many are also considered to have generalized anxiety disorder. Post-traumatic stress disorder and obsessive-compulsive disorder are excluded. Newham focuses on depression and all anxiety disorders. Individuals seen in Doncaster are predominantly white, whereas Newham has an ethnically mixed population with a substantial number who do not speak English.

Services

The clinical services in both sites are based on NICE Guidelines, but have somewhat different emphases. Doncaster is described as a high throughput, stepped care service with a marked emphasis on low intensity work (especially guided self-help), although high intensity work is also available. Newham places a greater emphasis on high intensity CBT but over time has increased its capacity to deliver low intensity interventions for the conditions where they are indicated.

Outcomes are mainly assessed by patient self-report. Brief, standardized questionnaires measuring depression (the PHQ) and anxiety (the GAD) are given at every session. A longer symptom questionnaire (CORE-OM) plus measures of employment and other variables are intended to be given at pre-treatment, formal review sessions, and at post-treatment. The services do not routinely collect follow-up data but the evaluation team conducted a further assessment at a minimum of four months after patients left the services.

Multiple sources of referral are available. Many patients are referred by their GPs but referrals from Job Centre Plus, other professionals and self-referral are also encouraged.

Achievements

Despite being new starts, both demonstration sites have achieved a great deal in their first thirteen months, much to the credit of their highly enthusiastic and dedicated staff.

1. **Numbers treated.** An impressive number of people have been assessed and treated by the sites. During the thirteen months covered by this report nearly 5,500 people have been referred, of whom 3,500 have concluded their involvement with the services. Around 1,900 of the concluded cases received at least 2 sessions of treatment. The numbers seen in Doncaster are particularly impressive.

2. **Completeness of outcome monitoring**. Session by session use of the PHQ and GAD has ensured that the sites have almost complete data on pre to post-treatment changes in depression and anxiety (99% of treated cases in Doncaster and 88% in Newham, despite the significant number of people who do not speak English). Data completeness is less impressive (56% or less) for measures that were only intended to be collected at pre- treatment and post-treatment.

3. **Psychological Benefits**. Both demonstration sites achieved good recovery rates (52%) for people who had depression and/or an anxiety disorder for more than 6 months. These results confirm that CBT in the field can deliver short-term results broadly in line with those observed in the clinical trials that are the basis for the NICE Guidelines. Furthermore, the follow-up study suggests that these gains are largely maintained 4-12 months later. A minority of people had been unwell for less than 6 months when they entered the services. Although these individuals showed at least as large gains, it is difficult to know whether this represents a significant added benefit from the service as natural recovery and recovery following modest treatment as usual in primary care can also be high in such individuals.

4. **Employment Effects**. At the end of treatment 5% more of the treated population was in employment (range 4% to 10%). This is supportive of the assumptions made in Department of Health's 2007 Comprehensive Spending Review proposal.

5. **Self-referral.** Approximately one in five people seen in Newham referred themselves to the service. Providing a self-referral route appears to have enabled the service to access disabled individuals in the community who are not well served by existing referral routes. Compared to GP referrals, self-referrers are at least as unwell, tend to have had their problems for longer, and more closely match the ethnic mix of the community.

Recommendations

Much can be learned from the pioneering work of the demonstration sites. For the future rollout of IAPT services we recommend:

1. **More extensive use of session-by-session outcome measurement.** Completeness of data for determining the benefits of the services was much higher for variables (depression & anxiety) that were assessed every session

than for variables that were meant to be assessed at pre-treatment and post-treatment only. In addition, there is evidence that individuals who complete these pre and post-treatment only measures tend to show more clinical improvement, which suggests that such measures may over-estimate benefit. It is therefore recommended that future IAPT services aim to also include brief measures of employment and disability in their session-by-session assessments.

2. **Accept Self-referrals**. The findings from Newham indicate that allowing self-referral enables services to access individuals with chronic and disabling conditions who are not well served by existing GP only referral systems.

3. **Include a brief diagnostic assessment**. Nice guidance varies between the different disorders covered by the IAPT initiative. In order to establish which guidance is relevant, a diagnosis needs to be established on entry to the services.

4. **Provide clear criteria and sufficient capacity for patients to be stepped between low intensity and high intensity interventions, if required.** Nice Guidelines indicate that when low intensity interventions are recommended within a stepped care approach, patients who fail to adequately respond to such interventions need to be offered a subsequent step-up to high intensity intervention. Step down from high to low interventions is also sometimes appropriate. For stepping to work effectively, services need to have clear stepping criteria; the two types of intervention need to be described to patients as equally valid, but different; and there needs to be sufficient therapist capacity at each level.

5. **Planned Follow-up.** Depression is a recurring problem. Part of the appeal of psychological treatments is that they have the potential to achieve enduring effects. Such effects need to be demonstrated, rather than assumed. We therefore recommend that IAPT services include a routine follow-up 3-6 months after treatment completion and offer a few sessions of booster treatment at that stage if there are signs of deterioration. Routine inclusion of relapse prevention procedures in the treatment programmes should also be considered.

INTRODUCTION

In late 2005 the government established the Improving Access to Psychological Therapy (IAPT) programme to develop proposals for implementing the NICE Guidelines for people with depression and anxiety disorders. As part of this process, two demonstration sites were established in Doncaster and Newham, to provide cognitive behavioural therapy-based (CBT) services to those in the community who need them and in doing so to throw light on fruitful patterns of national roll-out.

The services opened in late summer 2006. In this report we document the achievements of the two sites up to end September 2007. This covers roughly the first year of operation, during which both sites were starting from scratch. A fuller evaluation based at the University of Sheffield and supported by the National Institute for Health Research Service Delivery and Organisation (SDO) will be following patients over a much longer period and using more sophisticated research methods than were possible in the short time available for our own enquiry.

In what follows, we treat the two sites in turn and then draw some general conclusions. For each site we begin with organisation – a general description of the service offered, the system of referral, and the pattern of staffing. We then trace the progress of patients – numbers treated and for how long. Next we examine the psychological outcome of the treatment – comparing scores on assessment tools before and after treatment; and then we do the same for employment outcomes. We also report on a follow-up of outcomes four or more months after the end of treatment. Finally we present the funding of each site, and examine its activity in relation to the overall pattern of need in the local area.

1. DONCASTER

ORGANISATION

The Doncaster service describes itself as a high-volume, predominantly low-intensity service, based on a stepped care model. Proposals for such a service were being developed from 2005 onwards. At this time also, moves towards a stepped care model were being taken with the employment of six graduate mental health workers in Doncaster.

The IAPT demonstration site itself went live mid-August 2006. The six graduate mental health workers were integrated into IAPT as case managers, and referrals to some other primary care mental health services, such as the Doncaster Primary Care Trust counselling service, became coordinated via the IAPT.

The central activity of the service is individual case management, largely telephone based, which offers patients guided self help and support based on CBT principles. It is possible for patients to be referred onward within the service to specialist CBT therapy, or counselling. The service design draws strongly on the collaborative care framework.

Referrals

GPs are asked to refer to the service
   a) "All patients with at least moderate depression (PHQ9 of 10 or more) except those with a history of repeated treatment failure, psychotic features, personality disorder, primary drug/alcohol problems, or significant risk."
   b) "All patients with GAD [generalised anxiety disorder] (usually scoring more than 10 on GAD7), panic disorder (with or without agoraphobia), simple phobias, social phobia, and health anxiety, except those with significant suicide risk" or who "have failed to respond to at least 3 interventions"[1].
More serious cases are to be referred to specialised secondary mental health services as are all cases of post-traumatic stress disorder and obsessive-compulsive disorder.

Referral sources:
- GP: 96%
- Other health professional: 3%
- Self-referral and Jobcentre Plus referral: <1%

Interestingly there were almost no referrals recorded as received via Jobcentre Plus[2], although the Doncaster area has a Pathways to Work programme, and each Jobcentre Plus has an IAPT case manager liaising with it. It is possible that patients who hear about IAPT via Jobcentre Plus are formally referred via other routes.

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[1] Quoted from Doncaster's 'GP Referral Pack to IAPT'.
[2] 16 referrals came from Jobcentre Plus. There were 11 self-referrals.

Personal characteristics of those referred:
- 65% are women
- 99.1% are 'White British' (99.5% 'White')
- 16% are aged 18-24, 52% are aged 25-44 and 28% are aged 45-64. Numbers over 65 are very low (3%) as service focus is on working age adults.

Diagnosis. No formal diagnosis of patient problems is undertaken by the IAPT service. Instead, patient diagnoses are taken directly from GP referral forms. The guidelines given to GPs suggest using the PHQ-9 and GAD-7 to support diagnosis; GPs do not ordinarily use formal assessment methods based in standardised psychiatric diagnostic criteria (e.g. ICD10 or DSM-IV).

In GPs' assessments of the patients they referred, almost all had depression as their primary problem:
- 95% Depression
- 5% Anxiety disorders, comprised of:
  - 3.9% Generalized Anxiety Disorder
  - 0.4% Agoraphobia 'with panic'
  - 0.1% Agoraphobia 'no panic'
  - 0.3% Social phobia
  - 0.2% PTSD
  - 0.2% Specific phobia
  - 0.1% OCD
  - <0.1% Health anxiety
- <1% Other (includes bereavement, eating disorder, drug/alcohol problem)

In GPs' assessments, most of the patients referred had multiple problems: 90% had more than one problem recorded. Among those with multiple problems recorded, the most common secondary problem was an anxiety disorder:
- 97% Anxiety disorders, comprised of:
  - 96.6% General anxiety disorder
  - 0.4% Agoraphobia
  - 0.2% Social phobia
  - 0.1% PTSD
  - 0.1% OCD
  - <0.1% Specific phobia
  - <0.1% Health anxiety
- 2% Depression
- 1% Other (includes bereavement, eating disorder, drug/alcohol problem)

While GPs assessed only 5% of the patients they referred to the service as primarily suffering from anxiety disorders, the relative rate of detection of anxiety disorders among GPs in Doncaster is 21% (to depression's 79%) (Chan et al, 2008). It therefore appears that the Doncaster service is primarily a service for depression, generalized anxiety disorder, and mixed anxiety and depression. Other anxiety disorders that are covered by the IAPT initiative and are common in the community such as panic disorder, agoraphobia, and social phobia do not appear to have been prominent in the service, while OCD and PTSD are referred directly to secondary mental health services.

Severity. At the first meeting with IAPT services the severity of individuals' symptoms are indexed using the PHQ-9 and GAD-7 measures. The distribution of severity ratings were as follows:

- PHQ-9:
    - 6% score 0-4
    - 12% score 5-9
    - 20% score 10-14
    - 28% score 15-19
    - 34% score 20+
- GAD-7:
    - 6% score 0-4
    - 15% score 5-9
    - 27% score 10-14
    - 52% score 15+

For the purposes of this report, patients are considered to be a clinical 'case' if they score above certain values on PHQ-9, and/or the GAD-7. For the PHQ-9, a score of 10 or over indicates clinical caseness; for the GAD-7, recent research indicates a score of 8 or over indicates clinical caseness (Kroenke et al, 2002; 2007). On this basis, 90% of the referred individuals are clinical cases.

Duration. GPs are not asked to wait for any period before referring a person to the service. Duration distributions are [3]:

- 33% had this episode for less than 6 months
- 33% had this episode for between 6 months and 2 years
- 34% had this episode for 2 years or more.

The median duration of the presenting problem is 0.9 years and the mean 2.9 years[4].

Medication. An estimated 55% of the people referred to the service are taking psychotropic medication at intake[5]. Among those taking medications, the types taken were:

- 71% SSRI
- 5% tricyclic
- 3% beta-blocker
- 3% hypnotic
- 1 % antipsychotic
- <1% MAOI
- <1% antimanic
- 18% unknown or other

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[3] This is of the 53% of referrals who have duration recorded. See the section on psychological outcomes for further discussion of the importance of the duration issue.

[4] The duration recording is intended to capture the duration to date of the current episode of illness. However, data inspection suggests that in some cases the recording may have been of the total lifetime history of illness, with the furthest outlier being a duration of 55 years.

[5] This is of the 63% who have medication data recorded.

Staff

Within IAPT: The largest group of staff working in the service are 20 case managers – people with a variety of backgrounds[6] who receive graduate or post-graduate training in primary mental health care provided by York University (one week intensive clinical skills training, then two terms of one day a week classroom-based training and one day a week practical training supervised by York University)[7].

The case managers operate within a structured supervision framework. Supervision takes place weekly and lasts for around 1 hour. It is provided by CBT therapists employed by IAPT. The decision of which patients to take to supervision is automated – it includes all with high PHQ-9 / GAD-7 scores, and also every patient after every 4th session. Case managers also have open access to CBT therapists on a daily basis to discuss patient treatments and risks as needed.

If case managers find a case needs more intensive CBT therapy, after adequate treatment duration at lower treatment steps, they can transfer the patient to one of the CBT therapists employed in the IAPT project. The CBT therapists each spend one day a week on supervision of case managers and one day acting as the service 'duty manager', with the remaining three days for clinical work. IAPT is funded for 4 CBT therapists but has operated with fewer over the period covered by this report (see below for details).

The numbers of staff have inevitably varied over time. In September 2007 IAPT employed the following numbers (FTE):

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[6] 6 of the case managers were previously employed in Doncaster as graduate mental health workers. Common backgrounds of the other case managers include counselling diplomas, psychology degrees, professionals from other social services such as social work and occupational therapy, and 'experts by experience'.

[7] The level of training depends on the prior qualifications of the person – those who are non-graduates (prior to this) receive modules at third-year undergraduate level; others receive the same modules at postgraduate level. All attend all training modules, and all are assessed on their clinical competency; some also undertake academic assignments.

Staff type	Total FTE:	(Which includes vacant:)
Directors (clinical and project) - Pay bands 8c-d	1.5	(1)
Team manager - Pay band 7	1	(0)
Lead counsellor - Pay band 6	0.5	(0)
CBT therapists - Pay bands 6-7	4.0	(1.7)[8]
Case managers - Pay bands 4-5	20.5[9]	(2.3)
Administrative staff - Pay bands 3-4	4	(1)
Total	31.5	(6)

Associated with IAPT: In addition to the case managers and CBT therapists employed directly by the IAPT, there are five counsellors who are managed by the IAPT team manager but funded by Doncaster Primary Care Trust[10].

Prior to the implementation of IAPT GPs would have referred patients to these counsellors directly. Now the referral pathway is via IAPT. These counsellors are focussed on Doncaster west; there is another counselling service working for Doncaster PCT in central and east Doncaster (AB Counselling) who retain their original referral pathway via GPs in the practices where they are based, as well as accepting referrals from IAPT.

Case managers are able to refer patients to counsellors in the same manner as they would refer them to a CBT therapist. The counsellors offer both brief focussed counselling and longer-term counselling (usually 6-12 sessions but this can be extended further), and are classified by IAPT as offering both low and high intensity services at levels 2 and 3 of the Doncaster stepped care model.

However, the counsellors remain outside of the IAPT service itself in as much as they are not funded by IAPT, do not use the same IT system to manage patient flows and treatment, and are not subject to the same data collection requirements. Patients' activities with the counsellors are not included in the IAPT patient records that are the basis of this evaluation. The treatment outcomes analysed here are for the IAPT case managers and CBT therapists only.

Mental Health Trust (external to IAPT): To complete the picture of psychological / counselling services in Doncaster we can add the following employees of the Rotherham, Doncaster and South Humber Mental Health NHS Foundation Trust (RDaSH):

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[8] The vacant CBT posts were filled in December 2007 and January 2008.

[9] Six of these are funded by Doncaster PCT, with the funding that was previously used to employ graduate mental health workers to work in GP practices.

[10] To be more precise, the Doncaster PCT funds 4.93 FTE counsellor positions; 0.5 of this goes to funding a lead counsellor. This lead counsellor is also 0.5 funded by IAPT directly as detailed in the staffing table above.

Staff type	Total FTE:	(Which includes vacant:)
Cognitive behavioural psychotherapists	5.4	(0)
Clinical psychologists	2.4	(1.6)
Counsellors	2.7	(0)
Total	10.5	(1.6)

The RDaSH operates on the assumption that each year it will accept around 133 patients for specialist (face-to-face) CBT, with a waiting time of 14-20 months. This capacity is largely used for more seriously ill patients and not for patients who have been stepped up through IAPT; RDaSH assumes a further 40-80 patients will be seen each year for specialist CBT within the IAPT team.

The low volumes of CBT within RDaSH are due to higher intensity of treatment. Planned average hours per patient treated are 17 for RDaSH cognitive behavioural psychotherapists (with a throughput per therapist of 27 per annum). For comparison, RDaSH assumes IAPT case managers will average 4 hours per patient treated.

The RDaSH counselling service operates on the assumption that each year it will accept around 114 patients, with each patient being treated for an average of 12 hours. The RDaSH clinical psychologists operate on a planned 36 patients accepted per annum, with 20 hours per patient.

Treatment

The normal mode of treatment is for a patient referred to the service to be contacted immediately and first seen by a case manager about 21 days later[11], face-to-face, for 45 minutes to an hour, at a venue of their choice which is often on the GP's premises. This first session, when the patient first completes the standard questionnaires, leads to an assessment of the patient's problem (but no formal diagnosis) followed by the beginning of treatment.

The patient's beliefs, attitudes and behaviour are analysed, and a treatment plan including goals for the future are agreed. Typically a patient receives a copy of 'A Recovery Programme for Depression' by Karina Lovell and David Richards, while 42% are also given Chris Williams' 'Overcoming Anxiety'. The case manager and patient will schedule a next meeting and agree on section(s) of the book for the patient to work through prior to that. At the next meeting they will reflect on that work, and agree on further work as needed, and so on.

Subsequent sessions are held on the telephone. Patients who do not phone in at the appointed time are proactively followed up as agreed at onset of treatment. Patients are also offered the alternative of face-to-face meetings. (Around 23% of subsequent meetings are face-to-face, which last on average 40 minutes.)

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[11] Median value. Interquartile range is from 13 to 33 days.

The average telephone session lasts 22 minutes. The case manager works with a computer, using an IT system designed to help manage and track patient treatment. The session begins with the case manager administering the PHQ-9 and GAD-7 over the phone. The patient answers the questions and the case manager records the answers on her computer. The majority of the session involves therapeutic engagement: discussion of the patient's current situation, reflection on progress, and agreeing a next piece of work as appropriate.

If the patient makes sufficient progress, treatment is discontinued by agreement. If the symptoms fail to improve, additional treatment options at the same intensity level are discussed and may be undertaken by the patient if appropriate; or she can be referred to counselling services; or she can be referred to regular face-to-face CBT from a CBT therapist in the team.

It is also possible for a person to be referred directly to either a CBT therapist within the IAPT or a counsellor when the referral is first received (i.e. without seeing a case manager). The decision is made by the service Duty Manager, a role that is shared between staff including CBT therapists and the lead counsellor. This appears to be relatively uncommon: with a monthly flow of referrals of around 320 people over the period covered by this report, around 19 people per month[12] are referred directly to the Doncaster PCT counselling service; referrals direct to CBT are very unusual.

Direct referrals to Doncaster's other counselling service, AB Counselling, or to secondary mental health services, are also possible but rare – around one person per month for the former and 1 person every two months for the latter[13].

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[12] This is the average over the last three months covered by this report, July-September 2007.
[13] These are averages taken from July-September 2007.

THE PROGRESS OF PATIENTS

The Doncaster IAPT has managed an impressively high number of patients. In the 13 months up to end September 2007, 4,451 patients have been referred to the programme.

Figure 1: Graph of monthly referrals
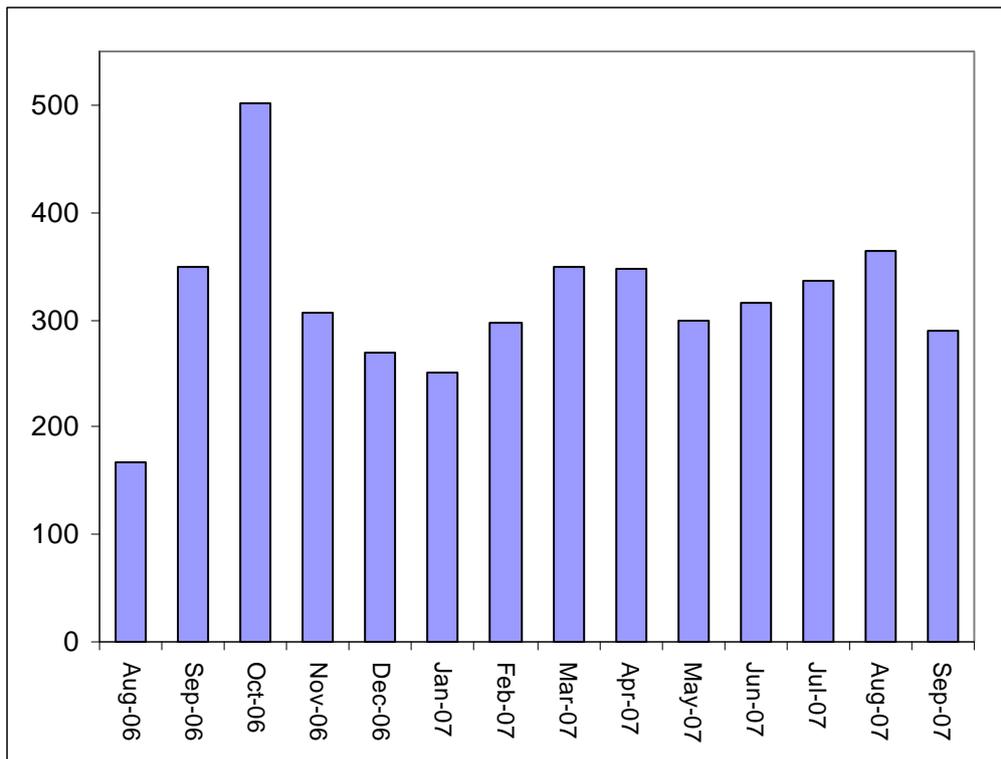
Of all patients referred, 378 were deemed unsuitable[14]. Reasons are not recorded in the database. For some the decision is made early in contact with the service – when first referred but before a first session (77 of the 378). Others had an initial session (171/378) or multiple sessions (130/378) before the decision was made.

At the end of September 2007, 967 are still in the system, either in treatment or waiting for it.

Of those considered suitable for the service who are no longer in the system, 877 had no sessions. Of these, 42% were coded as 'discontinued unexpectedly'; these are people who did not contact the service after referral and could not be reached by the service. Reasons for this are not recorded in the database but could include patient characteristics or patients' views of the service. 27% refused IAPT treatment. The remaining 31% are mutually agreed between the service and the patient.

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[14] Their severity scores (on PHQ9 and GAD7) compared with the total of referrals show the 'unsuitable' group have more severe symptoms, with higher proportions scoring 20+ on the PHQ-9 and 15+ on the GAD-7).

This leaves 2,225 who attended one or more sessions, but are no longer in the system – we can call them 'concluded' patients. Of these 89% were found at assessment to be clinical cases (i.e. met the criteria of a score of 8 or more on the GAD-7 and/or a score of 10 or more on the PHQ-9 at the initial meeting with the IAPT service).

571 of the 2,225 came only once. Again, they can be split into types of service conclusion. For 44%, the decision was jointly reached between the service and the patient themselves that no further treatment from IAPT was required. 22% of patients decided, independently of the service, to refuse further treatment. Finally, 34% were coded as 'discontinued unexpectedly'; these are people who did not contact the service again after the first session and could not be reached by the service.

There are significant differences in problem severity between those who attend two or more sessions and those who for various reasons attend only one session[15]. Those who finish after one session by mutual agreement with the service, or by refusing further treatment, have relatively milder problem severity. Those people with whom the service loses contact after one session have relatively more severe problem severity, similar to those who stay for two or more sessions. Table 1 gives details. [16]

Table 1: initial scores for those who have only one session versus those who attend two or more sessions

Type of completion	Initial PHQ-9 value			Initial GAD-7 value		
	Mean	N	SD	Mean	N	SD
Concluded after 2+ sessions	15.8	1654	6.2	13.9	1654	5.2
Concluded after 1 session – by mutual agreement	13.9*, **	246	7.5	12.4*, **	246	6.3
Concluded after 1 session – patient refuses further treatment	14.2**	121	7.3	12.1*, **	121	6.3
Concluded after 1 session – patient drops out without contact	16.6	196	5.5	14.2	196	4.9
Total	15.5	2217	6.4	13.6	2217	5.4

* significantly different from concluders with 2+ sessions at the 5% level.
** significantly different from concluders who drop out without contact after 1 session at the 5% level.

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[15] Onaway ANOVA for PHQ-9: F=9.744, p<0.0005. One-way ANOVA for GAD-7: F=9.612, p<0.0005.
[16] Significance tests detailed in the table come from ANOVA post-hoc tests (Games-Howell, as sample sizes vary substantially across cells and variances are non-homogeneous).

Figure 2: Patient progress: Doncaster

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┌─────────────────────────┐              ┌─────────────────────────┐
│ 4,451 referred to the   │─────────────▶│ 378 unsuitable          │
│ service                 │              │                         │
└─────────────────────────┘              └─────────────────────────┘
            │
            ▼
┌─────────────────────────┐              ┌─────────────────────────┐
│ 4,073 were suitable for │─────────────▶│ 967 still in system     │
│ the service             │              │ 4 status unknown        │
└─────────────────────────┘              └─────────────────────────┘
            │
            ▼
┌─────────────────────────┐              ┌─────────────────────────┐
│ 3,102 'concluded' system│─────────────▶│ 877 had no sessions     │
│                         │              │ 571 had 1 session       │
└─────────────────────────┘              └─────────────────────────┘
            │
            ▼
┌────────────────────────────┐           ┌─────────────────────────┐
│ 1,654 attended at least 2  │ ─ ─ ─ ─ ▶ │ 1,648 have pre- and     │
│ sessions                   │           │ post-treatment PHQ9     │
└────────────────────────────┘           │ and/or GAD7 records     │
            │                             └─────────────────────────┘
            ▼
┌─────────────────────────────────┐      ┌─────────────────────────┐
│ 1,270 had the prior duration of │      │ 833 known to have       │
│ their primary condition coded.  │─ ─ ─▶│ been ill over 6 months  │
│ Of these, 837 (66%) had been    │      │ and have pre- and post- │
│ ill over 6 months.              │      │ treatment PHQ-9 and/or  │
└─────────────────────────────────┘      │ GAD-7 records           │
                                         └─────────────────────────┘
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This leaves 1,654 who had at least 2 sessions. Our analysis focuses on this group; since psychological well-being is monitored at each session, these patients have multiple PHQ-9 and/or GAD-7 scores, allowing analysis of treatment outcomes.

This group of 1,654 is just over half of all those who were referred to the system, found suitable, and are no longer in the system. Virtually all of these patients have provided PHQ-9 and GAD-7 scores at pre-treatment and post-treatment. Less complete data are available on the prior duration of their problem (77% completeness).

On average these patients had 4.9 sessions, comprising a total of around 2.6 hours of contact (including the initial session). The median time between sessions is 12 days. The median length of treatment from first session to last is 8 weeks (the mean length is 11 weeks).

Among the 1,654, the most common type of treatment ending was completion of treatment by mutual agreement with the service (72%). 21% dropped out without contacting the service; 7% actively refused further treatment.

Only 44 of the 1,654 (i.e. 2.7%) received any sessions of step 3 CBT from a specialist therapist[17]. Among those who did, the mean number of CBT sessions was 5.7 (median 5.0).

The most common activity was guided self-help, using workbooks, which was done by 1,442 people (of the 1654). 99 people did some computerised CBT. 355 people had at least one session at which none of the above took place – other common activities included providing information, medication support, and signposting to other services. Group activities are not used at step 2. The CBT therapists do use some group work.

Of the 1603 that had any of the step 2 interventions, 34 also had step 3 CBT, while 1569 did not. This gives a step-up rate of 2.1%.

A more precise measure of step-up takes those who were cases at their last step 2 session and asks what proportion went on to step 3 CBT. On this basis, the step-up rate is 3.8% (25 people of 650), which is surprisingly low.

NICE recommendations for the stepped care management of depression indicate that patients who fail to respond at step 2 care should be offered a move to step 3 where "CBT is the psychological treatment of choice" but therapists could also "consider interpersonal psychotherapy (IPT) if the patient expresses a preference for it or you think the patient may benefit from it". (Interpersonal therapy was not available in Doncaster IAPT).

Of the 625 who did not 'step up' on the more precise measure, 54% completed treatment in agreement with the service, 35% dropped out of treatment, and 11% refused further treatment.

Of the 25 who did 'step up' on the more precise measure, 67% completed treatment in agreement with the service, 21% dropped out of treatment, and 13% refused further treatment.

One aspect of the IAPT service that is not captured in the administrative database on which this report is based is referrals onward from IAPT to counselling and to other mental health services. People can be referred for counselling if they meet one or more of the following criteria:
1. "They are experiencing mild, moderate or severe anxiety or depression.
2. They have been assessed by a case manager as potentially unsuitable for low-intensity CBT involving the depression recovery or anxiety self-help programmes, or computerised CBT.
3. They have opted for counselling following a sufficient period of low intensity-CBT with no symptomatic response.
4. They have identified through case management unresolved issues that are impacting on their current coping methods and personal development.
5. Their referral after assessment following initial contact and discussion with the duty manager is deemed unsuitable due to the following:

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[17] The rate is higher if one includes in the calculation patients still in treatment. Including all patients who have completed treatment or are still in treatment, and who have had at least one session, 4.1% have received one or more sessions of step 3 CBT (126 people of 3041).

a. identification of issues that are historic or have a developmental nature that are impacting on current life difficulties
b. relationship difficulties
c. problems with adjustment (eg to parenthood, retirement, diagnosis of illness)
d. low focus and low motivation towards implementing changes
e. a prolonged or complex grief reaction or other high level of emotional distress
f. a high requirement for risk management
g. a complex history, with significant risk and/or high impairment of functioning
h. a number of previous interventions with unhelpful outcomes."[18]

The IAPT service has done some analysis of referral patterns, which we draw on here. Using data from July to September 2007, the average referral rate from case managers to the Doncaster PCT counselling service is around 37 people per month[19]. This is generally considered a form of 'stepping up' by the Doncaster IAPT as most of the counselling service activity is classified as high intensity treatment, while the case management service is low intensity. In addition, as mentioned earlier around 19 patients per month are referred directly to the service without being seen by a case manager first.

Patients can also be referred to AB Counselling who provide services for Doncaster PCT in east and central Doncaster; the rate here is about 10 per month (around 90% occurring after having seen a case manager). A small number of patients are referred to the secondary mental health services provided by RDaSH (around 5 per month, 85% after having seen a case manager).

As the IAPT database does not code onward referrals, it is not possible to cross-reference these numbers with the data that shows the type of treatment ending a person had or by the number of sessions a person had with a case manager. The Doncaster PCT counselling service does keep paper-only outcome measures (such as the PHQ-9, GAD-7 and CORE-OM measures) and an ACCESS database tracking, for example, numbers referred to the counselling service, and the IAPT is currently auditing this information.

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[18] Quoted from White (2008).
[19] The rate was lower in the first few months of the IAPT, so that the total over the period of this report is around 420.

PSYCHOLOGICAL OUTCOMES

The data on the psychological states of patients are based on verbal answers by patients entered onto the computer by the case manager at the start of each session.

If we focus on whether a person has recovered or not, we can describe as ill someone who has a score of 8 or more on the GAD-7 and/or a score of 10 or more on the PHQ-9. Such a person is a 'case'. On this definition 1494 of the 1,648 for whom we have pre- and post-treatment scores were ill at the beginning of their first session. Of these 56% had recovered by the time they left the system.

Alternatively we can look at the change in the average score on each questionnaire, shown in Table 2. We can calculate effect sizes from these by dividing the mean difference of each pair of pre- and post-treatment scores by the pooled standard deviation of this mean difference. The effect sizes are 1.16 on the PHQ-9, 1.12 on the GAD-7, and 0.93 on the CORE-OM.

Table 2: pre- and post-treatment scores for all

		Pre	**Post**
PHQ-9	Mean (SD)	15.8 (6.2)	7.5 (6.9)
	N	1653	1653
GAD-7	Mean (SD)	13.9 (5.1)	6.8 (6.2)
	N	1651	1651
CORE-OM	Mean (SD)	1.88 (0.59)	1.18 (0.82)
	N	92	92

The change in scores from pre- to post-treatment is significant for all measures.[20]

Outcomes by duration

Table 3 shows recovery rates split by the prior duration of illness. Table 4 shows pre- and post-treatment scores split by prior duration.

The differences in recovery rates between the duration categories in Table 3 are significant[21], with lower recovery rates being observed for more chronic cases.

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[20] For PHQ-9 F= 2217.500, p <0.0005; for GAD-7 F= 2062.002, p<0.0005; for CORE-OM F=78.852, p<0.0005.
[21] Chi-square=13.103, p=0.022. Analysis included only those with prior duration of illness recorded.

Table 3: recovery rates, by duration

Prior problem duration	% recovery	N. of cases
Under 3 months	60	202
3-6 months	63	187
6 months – 1 year	54	211
1-2 years	54	181
2-4 years	53	151
4+ years	47	218
Missing duration data	59	344
Total	56	1494

Note: this table includes only patients who are clinical cases, i.e. met the criteria of scoring 8 or more on the GAD-7 and/or 10 or more on the PHQ-9 at the initial meeting with the IAPT service.

Table 4: pre- and post-treatment scores, by duration

Problem duration		PHQ-9 Pre	PHQ-9 Post	GAD-7 Pre	GAD-7 Post	CORE-OM Pre	CORE-OM Post
Under 3 months 14%	Mean (SD)	15.6 (6.3)	7.1 (6.8)	13.7 (5.00)	6.2 (6.0)	1.74 (0.36)	1.03 (0.98)
	N	226	226	226	226	8	8
3-6 months 12%	Mean (SD)	16.2 (6.2)	6.8 (6.8)	13.6 (5.2)	6.0 (5.6)	1.96 (0.50)	1.08 (0.61)
	N	205	205	205	205	14	14
6 months – 1 year 15%	Mean (SD)	15.7 (6.3)	7.3 (6.7)	13.6 (5.1)	6.6 (5.8)	1.78 (0.66)	1.43 (0.79)
	N	240	240	240	240	15	15
1-2 years 12%	Mean (SD)	15.6 (6.3)	7.3 (6.6)	14.1 (5.1)	7.0 (6.2)	2.09 (0.31)	1.32 (0.89)
	N	195	195	195	195	12	12
2-4 years 10%	Mean (SD)	15.9 (5.9)	7.5 (6.6)	14.1 (5.1)	7.3 (6.3)	1.94 (0.54)	1.28 (0.81)
	N	162	162	162	162	11	11
4 years + 14%	Mean (SD)	16.4 (5.9)	8.9 (7.7)	14.5 (5.0)	8.1 (6.9)	1.80 (0.79)	1.11 (0.95)
	N	236	236	236	236	18	18

Missing duration data 23%	Mean (SD)	15.3 (6.2)	7.5 (7.1)	13.5 (5.3)	6.5 (6.1)	1.87 (0.66)	1.01 (0.80)
	N	384	384	384	384	14	14
Total	Mean (SD)	15.8 (6.2)	7.5 (6.9)	13.8 (5.1)	6.8 (6.2)	1.88 (0.59)	1.18 (0.82)
	N	1648	1648	1648	1648	92	92

The changes in scores over time (from pre- to post-treatment) are significant for all measures in Table 4.[22] The interaction effects between time and duration are not significant for any of the measures.[23]

The IAPT Programme Board recommended that the Doncaster and Newham demonstration sites should not treat patients whose problem duration was less than six months[24]. This was recommended to assist the evaluation of outcomes. While NICE guidelines do not generally link treatment to prior duration of condition[25], it is the case that natural recovery is common in recent onset cases of anxiety and depression in primary care and so must be taken into account when evaluating to what extent any improvements would have happened anyway, and to what extent they can be attributed to the treatment. In the absence of a randomised control group (waitlist or treatment as usual) results need to be 'benchmarked' against standard data on recovery rates and benchmarking is difficult for recent onset cases[26].

Doncaster chose not to follow the recommendation for a range of reasons: it was believed that early intervention was appropriate as a preventative measure; and the service wished to be responsive to patient demand as part of the patient choice agenda. As of end September 2007, 34% of patients had their condition for less than 6 months at the start of treatment (i.e. 433 out of the 1270 with duration coded, treatment concluded and attended 2 or more sessions). We will consider these individuals separately, after considering first the remaining 66% whose problem duration was greater than six months at the start of treatment.

Long-term cases

The literature suggests that natural recovery is modest in patients where the problem duration is more than 6 months. Such individuals have tended to report low recovery rates when placed on wait-lists or placebo medication. If we look at wait-list control

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[22] GLM Repeated Measures. PHQ-9 F=1707.032, p<0.0005; GAD-7 F=1508.851, p<0.0005; CORE-OM F=54.673, p<0.0005. Analysis included only those with prior duration of illness recorded.

[23] There is a main effect for duration categories on the GAD-7 measure only; F=3.328; p=0.005.

[24] Unless problem duration was at least 3 months and the person faced substantial risk to accommodation, employment or associated physical health due to their mental health condition.

[25] There are some exceptions, such as in guidelines for PTSD, or the suggestion of 2 weeks 'watchful waiting' by GPs for recent onset depression.

[26] While a randomised controlled trial can pick up relatively small intervention effects, one needs substantial differences in recovery rates between a benchmark and the observed result to conclude there has been clinical benefit. If the difference is small or within the range of the benchmark results, one cannot be confident that the intervention has worked, even though it is possible that a randomised controlled trial could have found a modest intervention effect.

comparisons, Posternak and Miller's (2001) meta-analysis of wait-list control groups reports an average recovery rate from depression of approximately 20%, and a percentage change on the Beck Depression Inventory of approximately 16%. If one looks at wait list controls in randomised controlled trials of CBT for anxiety disorders that have focussed exclusively on patients with a duration of more than 6 months, recovery rates rarely exceed 5% in the wait-list.

The Doncaster recovery rates and symptom change data for the 66% of patients who had problem duration of greater than 6 months comfortably exceed the existing benchmarks. In Doncaster, 52% of patients who met caseness criteria on the PHQ-9 and/or the GAD-7 at pre-treatment no longer met caseness criteria at post-treatment and the effect sizes are 1.22 on the PHQ-9 and 1.13 on the GAD-7. It therefore seems reasonable to conclude that the treatment offered in the IAPT demonstration site is frequently effective in these cases.

Among these patients those who recovered had received significantly more sessions (5.8) than those who did not (4.6), and significantly more case manager/therapist time (3.0 hours) than those who did not (2.6 hours)[27]. There was no significant difference in recovery rates between the 59% of patients who were taking medication (as well as receiving the IAPT psychological interventions) and those who were not taking medication (both have recovery rates of 52%)[28].

Recent onset cases

We turn now to the 34% of patients who had before treatment had their problem for less than 6 months. Several studies have looked at recovery rates in recent onset cases of depression and anxiety in primary care that were 'treated as usual' in primary care (TAU). For the present purposes the four studies that are most obviously relevant are Catalan et al (1984), Spijker et al (2002), Tennant et al (1981) and Kendrick et al (2006).

The Catalan et al (1984) paper focuses on recent onset cases of depression and/or anxiety in primary care, with caseness defined by general health questionnaire (GHQ) thresholds. None of the TAU patients had received psychological interventions from trained individuals, yet 60% of cases had recovered within 1 month and 70% had recovered within 6 months.

The Spijker et al (2002) study is an investigation of the duration of new episodes of major depression in the community. 50% of cases recovered within 3 months, and 63% within 6 months. These results are broadly similar to those reported in Tennant et al's (1981) earlier community study which found that recent onset (less than 6 months) cases of anxiety and/or depression had a 68% recovery rate after 4 weeks.

The Kendrick et al (2006) study is a controlled trial of recent onset cases of depression and/or anxiety (prior duration being between 1 and 6 months). Caseness was defined using GHQ thresholds. Patients were allocated randomly into 3 groups:

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[27] Figures include initial session.
[28] These calculations exclude those whose medication status is unknown (14% of the group).

either treatment as usual by GPs, or community mental health nurses providing generic care, or community mental health nurses providing NICE-guidance-advocated problem-solving treatment. In the treatment as usual condition GPs were not allowed to refer patients for psychological therapy during the first 8 weeks of the study. The overall results showed that all three groups showed marked improvements but did not differ from each other. For the treatment as usual GP care group, the pre-treatment to 8 weeks uncontrolled effect sizes are 2.04 for the GHQ and 1.18 for the hospital anxiety and depression scale (HADS) (average of the effect sizes for depression and anxiety scales).

The Doncaster IAPT cases with an initial duration of less than 6 months show recovery rates and effect sizes similar to those observed in the GP care alone conditions in Catalan et al (1984) and Kendrick et al (2006), as well as to the community recovery rates for recent onset depression in the Spijker et al (2002) and Tennant et al (1981) studies. Some 62% of the Doncaster patients who were classified as cases on the PHQ-9 and/or GAD-7 at pre-treatment were classified as non-cases at post-treatment, and the pre-treatment to post-treatment effect size on the PHQ-9 was 1.33 (the effect size on the GAD-7 was 1.30).

Benchmarking is, of course, a very rough way of establishing clinical effectiveness. However, with that caveat, it seems we cannot exclude the possibility that the IAPT treatment that was provided for the cases with the duration of less than 6 months was no more effective than what would have happened if the treatment was not being provided. Of course, it is important to realise that this is a statement about what conclusions can, and cannot, be rejected. The overlapping results of the IAPT demonstration site with the benchmarking studies do not demonstrate that the IAPT treatment was ineffective. A randomised controlled trial showing equivalence would be needed for such a conclusion.

EMPLOYMENT AND BENEFIT OUTCOMES

In analysing impacts on employment we focus on people who have concluded their treatment and had 2 or more sessions. We have 445 such patients for whom pre- and post- data on employment exist.

One would not expect major changes in employment status during a short course of treatment. However a significant number of patients who were originally off work and on Statutory Sick Pay (SSP) returned to work. This is shown in table 5. The net increase of people at work (and not on SSP) corresponded to 4% of the treated population. This matches the assumption in the Comprehensive Spending Review cost-benefit analysis by Layard et al (2007) that treatment raises the employment rate of those treated by 4 percentage points over the following 2 years. There was a small net increase in people on benefit; such increases in benefit are likely when people have recently become ill, given the time that it takes to get onto benefit.

Similar results apply if focus is on long-term cases; indeed the net increase in numbers in employment is higher (5%) due to shifts both from SSP receipt and from the 'other' category. See Table 6 for details.

Results for the recent-onset people are given in Table 7.

Incomplete employment questionnaires mean it is not possible to look at changes in sick days among the employed.

Table 5: Changes in employment for all

		Pre-treatment				
		Benefit recipient (IB, IS, JSA)	Receiving Statutory Sick Pay	Employed (no SSP)	Other	Total
Post-treatment	Benefit recipient (IB, IS, JSA)	115	6	8	15	144
	Receiving Statutory Sick Pay	3	27	13	0	43
	Employed (no SSP)	9	27	149	7	192
	Other	14	3	5	44	66
	Total	141	63	175	66	445

Table 6: Changes in employment for patients with over 6 months prior problem duration

		Pre-treatment				
		Benefit recipient (IB, IS, JSA)	Receiving Statutory Sick Pay	Employed (no SSP)	Other	Total
Post-treatment	Benefit recipient (IB, IS, JSA)	80	1	3	9	93
	Receiving Statutory Sick Pay	2	14	4	0	20
	Employed (no SSP)	7	14	81	0	102
	Other	4	0	1	22	27
	Total	93	29	89	31	242

Table 7: Changes in employment for patients with less than 6 months prior problem duration

		Pre-treatment				
		Benefit recipient (IB, IS, JSA)	Receiving Statutory Sick Pay	Employed (no SSP)	Other	Total
Post-treatment	Benefit recipient (IB, IS, JSA)	17	3	2	4	26
	Receiving Statutory Sick Pay	1	9	6	0	16
	Employed (no SSP)	1	10	38	4	53
	Other	8	2	2	12	24
	Total	27	24	48	20	119

FOLLOW-UP SURVEY

To fully evaluate the outcomes of the service it is important to determine if the psychological and employment gains achieved at the end of treatment are largely maintained over time. As the Doncaster (and Newham) IAPT services stop collecting any information on patients once they have their last treatment session, a one-off follow-up survey was carried out.

Patients who had completed treatment by 1 September 2007, with at least two treatment sessions, were eligible for the follow-up survey. The intention was to include all who had completed treatment at least three months previously.

Delays in implementing the survey meant in practice it included all who had completed treatment at least four months previously. The average amount of time between last treatment session and the follow-up survey, for the eligible group, was 42 weeks.[29]

The eligible group totalled 1444 people. Doncaster took a random sample of 893 people from this group[30]. Of the 893 surveyed, 452 people responded (51%). Respondents had significantly lower final PHQ-9 score than the sample group[31].

The follow-up survey consisted of three questionnaires – the PHQ-9, the GAD-7, and an employment status questionnaire (the same as used during treatment). People were mailed the questionnaires, for self-completion; those who did not return them were then phoned and offered the chance to complete them over the phone.

Tables 8 and 9 show the psychological outcomes and Tables 10 and 11 the employment outcomes for, respectively, all respondents and those whose problem duration at start of treatment was six months or over[32].

The changes in average PHQ-9 and GAD-7 scores over time are significant. At follow-up patients continue to have significantly lower PHQ and GAD scores than at pre-treatment[33]. In addition, there is a modest, but significant increase in PHQ & GAD scores from post-treatment to follow-up[34]. The results for those with over six months prior problem duration mirror those of the whole group[35].

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[29] The shortest amount of time was 16 weeks; the longest 72 weeks.

[30] The sub-sample is representative of the full eligible group in terms of initial and final PHQ-9 and GAD-7 scores, and in terms of the prior duration of the current condition (no significant differences). The sub-sample has a longer time from last treatment session to the follow-up survey than the full eligible group (the mean difference was 24 days, $t=7.711$, $p<0.0005$).

[31] The mean difference in PHQ-9 scores was -0.657, $t=-2.033$, $p=0.043$.

[32] See the section on psychological outcomes for discussion of the relationship between problem duration and outcomes.

[33] For PHQ-9, the change from pre-treatment to follow-up: $F=342.194$, $p<0.0005$. For GAD-7, the change from pre-treatment to follow-up: $F=310.809$, $p<0.0005$.

[34] For PHQ-9, the change from post-treatment to follow-up: $F=12.566$, $p<0.0005$. For GAD-7, the change from post-treatment to follow-up: $F=6.219$, $p=0.013$.

[35] From pre-treatment to follow-up: PHQ-9 - $F=107.833$, $p<0.0005$; GAD-7 - $F=102.898$, $p<0.0005$. From post-treatment to follow-up: PHQ-9 - $F=10.769$, $p=0.001$; GAD-7 - $F=5.628$, $p=0.019$.

Table 8: Psychological outcomes for all follow-up survey respondents

		Pre	**Post**	**Follow-up**
Recovery rate	%		56%	50%
	N		452	446
PHQ-9	Mean (SD)	15.7 (6.3)	7.4 (6.9)	8.7 (7.7)
	N	435	435	435
GAD-7	Mean (SD)	13.5 (5.4)	6.8 (6.4)	7.6 (6.8)
	N	437	437	437

Table 9: Psychological outcomes for follow-up survey respondents with 6 months or more prior problem duration

		Pre	**Post**	**Follow-up**
Recovery rate	%		47%	40%
	N		202	199
PHQ-9	Mean (SD)	15.4 (6.3)	8.2 (7.0)	10.0 (8.0)
	N	217	217	217
GAD-7	Mean (SD)	13.9 (5.3)	7.9 (6.5)	9.0 (7.0)
	N	220	220	220

Table 10: Changes in employment for all follow-up survey respondents

		Pre-treatment				
		Benefit recipient (IB, IS, JSA)	Receiving Statutory Sick Pay	Employed (no SSP)	Other	Total
Follow-up	Benefit recipient (IB, IS, JSA)	72	13	7	16	108
	Receiving Statutory Sick Pay	4	2	11	0	17
	Employed (no SSP)	17	31	132	10	190
	Other	5	2	5	16	28
	Total	98	48	155	42	343

Among the full group of respondents to the follow-up survey, the net increase in those employed is 10.2%, partly due to a drop in the numbers receiving Statutory Sick Pay of 9.0%. There is a small net increase in benefit receipt of 2.9%.

Table 11: Changes in employment for follow-up survey respondents with 6 months or more prior problem duration

		Pre-treatment				
		Benefit recipient (IB, IS, JSA)	Receiving Statutory Sick Pay	Employed (no SSP)	Other	Total
Follow-up	Benefit recipient (IB, IS, JSA)	42	4	5	7	58
	Receiving Statutory Sick Pay	3	2	8	0	13
	Employed (no SSP)	8	7	64	3	82
	Other	1	1	4	8	14
	Total	54	14	81	18	167

Among those whose problems had existed for at least 6 months prior to treatment from IAPT, the net increase in employment at follow-up is 0.6%, mirrored by a drop in the numbers receiving Statutory Sick Pay of 0.6%. There is a net increase in benefit receipt of 2.4%.

FUNDING

The Doncaster IAPT spent £1,584K from inception to 30 September 2007[36]:

	Actuals: Inception to Sept 07 (~14 months)		Budgeted: 07/08 financial year (12 months)	
	Spend (£000)	Average FTE*	Budget (£000)	FTE
Pay				
Directors	117	1.1	110	1.5
Team manager	51	1	36	1
Lead counsellor	17	0.5	21	0.5
CBT therapists	143	2.3	202	4.0
Case managers**	527	19.3	449	20.5
Administrators	71	4	86	4
Pay total	*926*		*904*	
Non-Pay				
Training	270		155	
Facilities	178		155	
IT	117		91	
Advertising	10		15	
Other	83		111	
Non-pay total	*658*		*526*	
Total cost of therapy	**1,584**		**1,430**	

* Note: estimated - precise staffing levels have varied over the period.
** These figures include funding for 6 case manager jobs filled by those employed in 2005 as graduate mental health workers

One should note that a proportion of the training costs of £270K should not properly be included in the running cost of the IAPT service.

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[36] The demonstration site went live mid-August 2006. The 'Actuals' column shows money spent over the 14 months from August 06 to September 07.

PUTTING THE SERVICE IN CONTEXT

Finally, it is helpful to put this service in context. The population of Doncaster is 290,000, including 233,000 adults.[37] From analysis of GP records covering 40,000 adults, we find that in January – June 2007 5.5% of adults visited the GP with "a new record of depressive symptoms or other mental health problems" as diagnosed by the GP (Chan et al., 2008). This suggests an annual rate of new diagnoses of 11% - or 25,630 adults in the whole of Doncaster.[38]

Of these, "new depressive symptoms" accounted for 60% of diagnoses.

These figures of GP diagnoses are clearly much larger than the number of 4,451 patients referred to IAPT over a 14- month[39] period. However if we were to focus on cases where the patient had symptoms for over six months, we would find a higher proportion going to IAPT (though a specific calculation is not possible).

In fact the scale at which IAPT has operated has been extremely impressive, given the short time it has had to operate. The effectiveness of treatment has also been impressive.

The main questions still to be understood are: why so few patients with a primary diagnosis of anxiety disorders other than GAD were referred to the service, and why so few patients were thought to need Step 3 care.

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[37] Latest available ONS mid-year estimate, for 2005.

[38] This compares with 8.3% in national data collected in 1991 for people aged 16-64 for people presenting with any new or ongoing mental health problem (National Mental Health Statistics). It also compares with 17% of the national adult population diagnosed as mentally ill in the Psychiatric Morbidity Survey of a representative sample of households in 2004.

[39] 14 months is the approximate period covered by this report – from August 2006 to end September 2007.

2. NEWHAM

ORGANISATION

Prior to the IAPT demonstration site, Newham already had a relatively developed structure for delivering psychological therapy services, organised in three tiers:
- Tier 1: GP-practice-based, brief-therapy service, run by the Newham Primary Care Trust (PCT).
- Tier 2: Borough-wide individual, group and family therapy (including psychodynamic, systemic and CBT therapy), run by the PCT.
- Tier 3: Borough-wide secondary-care specialists, run by the East London and the City Mental Health Trust.

The Newham demonstration site consists of a cognitive behavioural therapy (CBT) service created from scratch in mid-2006 plus a linked employment service[40]. It started in a somewhat difficult environment involving some scepticism by existing services, which made it difficult initially to obtain referrals.

The CBT service now delivers three steps of intervention:
- Step 2a: computerised CBT, guided self-help, group psychoeducation
- Step 2b: brief CBT (individual and group)
- Step 3: full CBT (individual and group).

Generally, step 2a is delivered by assistant therapists, Steps 2b and 3 by CBT therapists. The service considers step 2a 'low intensity' and 2b and 3 as 'high intensity'.

The service developed in two phases. In phase one, it was available to 14 GP surgeries (covering approximately one-third of the Newham working age population or around 50,000 adults), as well as to local residents referred by employers, community groups, or Jobcentre Plus. The focus was on delivering steps 2b and 3 using qualified therapists.

Between January and March 2007, the service entered its phase two. The referral base was broadened to include self-referrals from local residents, and to gradually incorporate all Newham GP surgeries. The focus also broadened, to include more delivery of step 2a services, requiring the recruitment of more assistant therapists.

The associated employment service is provided by Mental Health Matters and operates side-by-side with the CBT service. Employment coaches help patients to gain employment or resolve employment problems. It should be noted that the Pathways to Work programme has not yet been rolled out in Newham.

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[40] IAPT finance also pays for enhancement of the pre-existing Primary Care Trust psychological services, funding 1 additional therapist, 2 assistant therapists and associated management, to deliver NICE-supported non-CBT therapies (particularly systemic therapy). See the funding section for costs, and Annex D for patient data from the enhancement.

Referrals

A broad range of common mental health conditions (depression and all the anxiety disorders) are covered; only those with very severe conditions – like psychosis – are not eligible for the IAPT. People with a severe drug or alcohol problem, which precludes them from participating fully in the therapy process, are also excluded.

Referral sources:
- GP: 75%
- Other health professional: 4%
- Self-referral: 21%[41]

Personal characteristics of those referred:
- 60% are women
- 49% are from BME communities (of these, 25% are Asian, 17% are Black).
- 13% are aged 18-24, 58% are aged 25-44 and 25% are aged 45-64. Numbers under 18 and over 65 are very low (2% each).
- 13% do not speak English[42].

Diagnosis. Diagnosis in Newham is through diagnostic assessment[43] undertaken by the service, based on the ICD10 framework. The primary diagnoses were as follows:
- 46% depression
- 43% anxiety disorders:
  - 3% agoraphobia
  - 5% social phobia
  - 1% other specific phobia
  - 6% panic disorder
  - 6% generalized anxiety disorder
  - 4% obsessive compulsive disorder
  - 5% post traumatic stress disorder
  - 3% health anxiety
  - 10% other
- 12% other disorders (including anger, personality disorder, eating disorders, bipolar affective disorder, schizophrenia, and mental and behavioural disorders due to psychoactive substance use)

Two-fifths experienced two or more disorders:
- 60% one disorder
- 25% two disorders
- 15% three or more disorders.

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[41] The relative proportion of self-referrals rose over this time with the successful roll-out of phase two and continues to increase. In the last three months covered in this report (July-September 2007), self-referrals were 42% of all referrals.

[42] The service is able to accommodate many non-English speakers. There is in-house capacity to provide services directly in, or have an in-house interpreter available for, Punjabi, Hindi, Bengali and Urdu. The services of external interpreters are used where needed and to cover other languages.

[43] Not all patients referred have assessments recorded (N=411, 39% of referrals). Those without assessments include those who are still in the service whose assessment has not yet taken place, those found unsuitable for the service at initial contact, and those who left the service prior to assessment.

Grouping all disorders together (primary and secondary), the most common disorder was anxiety (45%) followed by depression (42%).

From the diagnostic information, it would appear that the Newham service covered the full range of conditions relevant to the IAPT initiative.

Severity. The presenting level of morbidity at assessment (using the PHQ-9 and GAD-7 scores recorded at first session) were:
- PHQ-9:
    - 7% score 0-4
    - 17% score 5-9
    - 23% score 10-14
    - 26% score 15-19
    - 28% score 20+
- GAD-7:
    - 9% score 0-4
    - 18% score 5-9
    - 29% score 10-15
    - 44% score 15+

Patients are considered to be a clinical 'case' if they score above a certain level on the PHQ-9, or the GAD-7, or on both. For the PHQ-9, a score of 10 or over indicates clinical caseness; for the GAD-7, recent research indicates a score of 8 or over indicates clinical caseness (Kroenke et al, 2002; 2007). On this basis, 86% of the referred individuals are clinical cases.

Duration. 78% of those referred have had the current episode of illness of 6 months or over.[44]

The median duration of current episode is 3.3 years and the mean is 7.0 years[45]. The mean duration is somewhat skewed by a group with very long durations; just under half had durations over 4 years:
- 22% had this episode for less than 6 months
- 17% had this episode for between 6 months and 2 years
- 61% had this episode for over two years.

Entry to the service is restricted by previous duration of the patient's condition: either the condition must have been in place for six months or more; or for three months together with substantial negative impact on accommodation, employment or associated physical health.

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[44] This is of the 59% of referrals who have duration recorded. The PHQ9 scores of those with durations under 6 months is slightly more spread out than the total of referrals, with more in the 'mild' and the 'moderate-severe' groups. On the GAD7 they showed proportionately more with clinically significant scores (8 and above), especially in the 'moderate' group.

[45] This duration recording is intended to capture the length thus far of the current episode of illness. However, data inspection suggests that in some cases the recording may reflect total lifetime history of illness, with the furthest outlier being a duration of 50 years. There is also a separate record kept of duration since first ever onset of the illness (mean is 5.8 years).

Since service entry is restricted by prior duration of condition, not all those referred with a prior duration of less than six months will be accepted – the proportion of those with prior duration under six months among those accepted for treatment is 21%, versus 28% for those the service did not accept.

Self-referral. Newham encouraged self-referral as an experiment to see if this route into the service facilitates access for groups who are not well served by GP referral alone. When self-referral cases are compared with those from the GP they did not differ in initial severity of the condition (PHQ-9 / GAD-7)[46]. They did have a longer prior duration of condition (7.5 years mean versus 6.9; medians are 4.0 years versus 3.0), but the difference was not significant.

There were some differences in the ethnicity of self-referral cases compared to those referred by a GP. Table 12 shows the ethnic distribution across the two referral sources and compares it with the ethnic distribution of GP-detected mental health conditions in Newham (Chan et al, 2008). While the overall pattern of ethnic distribution does not differ significantly between the two referral sources, if one compares simply the odds of a GP-referral patient being Black / Black British to the odds of this for a self-referral patient, the difference is significant at the 5% level.[47]

Table 12: Patient ethnicity by referral source

Ethnic group	GP referral		Self-referral		GP detection
	N	%	N	%	%
White	357	52	96	47	41
Asian / Asian British	178	26	48	24	28
Black / Black British	110	16	45	22	25
Chinese or other	18	3	5	3	2
Mixed	25	4	9	4	3
Total	688	100	203	100	100

There are also some differences in the primary diagnoses of those referred by the GP versus those self-referring. Table 13 shows these differences. Social phobia and obsessive-compulsive disorder were relatively more common among self-referrers that among GP referrals.[48]

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[46] Self-referral cases compared to GP-referral cases also do not differ in final, post-treatment PHQ-9 or GAD-7 scores.

[47] Chi-square on full ethnic distribution shown in Table 12: Chi-square=4.676; p=0.322. Chi-square on proportion of Black / Black British patients: Chi-square=4.165, p=0.041.

[48] The different patterns of diagnoses comparing the two referral sources are significant as a whole; Likelihood ratio=38.281, p=0.032. The differences in levels of social phobia and obsessive compulsive disorder are individually significant when comparing the odds of a GP-referral patient having one of these diagnoses to the odds of this for a self-referral patient; for social phobia t=-4.472, p<0.0005; for OCD t=-2.069, p=0.039.

Table 13: Patient diagnoses (ICD-10) by referral source

Diagnosis	GP referral		Self-referral	
	N	%	N	%
Disorder due to psychoactive substance use	5	1	x	x
Depression and recurrent depression	227	47	50	42
Other mood disorder	9	2	x	x
Agoraphobia	13	3	3	3
Social phobia	14	3	15	13
Specific phobia	4	1	3	3
Other anxiety disorder	32	7	6	5
Panic disorder	28	6	8	7
Generalised anxiety disorder	31	6	4	3
Obsessive Compulsive disorder	16	3	9	8
Other reaction to severe stress	15	3	x	x
Post traumatic stress disorder	24	5	5	4
Somatoform disorder	14	3	4	3
Eating disorder	8	2	x	x
Specific personality disorder	11	2	x	x
Symptoms of cognition, perception emotion and behaviour disorder	14	3	4	3
Other*	19	4	5	4
Total	484	100	120	100

x data suppressed – numbers below threshold of N=3
* this includes a range of conditions which did not individually meet the N=3 threshold for either referral group

Medication. We know that 20% of the people referred to the service are receiving psychotropic medication when they begin treatment. However it is possible this is an underestimate. Until recently the computer system did not allow clinicians to give a positive code for no medication. This means one cannot distinguish, from the database records, those known not to take medication from those for whom the information was not recorded[49]. This has since been rectified.

Of those known to be taking psychotropic medication, the types of medication are:
- 73% SSRI
- 9% tricyclic
- 5% sedative
- 2% mood stabilisers
- 1% antipsychotic
- 9% other

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[49] 11% are recorded as not taking medication; 69% do not have medication information recorded. The Newham team state that they enquired about medication (and coded it if it was present) in almost all instances, which implies those without a medication record equals those not taking medication.

Staff

Within IAPT: In September 2007 IAPT employed the following numbers (FTE), though as we show later, these numbers are higher than the average over the life of the project:

Staff type	Total FTE:	(Which includes vacant:)
Therapy service		
Clinical lead - Consultant rate	1	(0)
Deputy lead - Pay band 8c	0.4	(0.4)
'Senior' CBT therapists - Pay band 8b	2.8	(0)
'Experienced' CBT therapists - Pay band 8a	2.8	(0)
CBT therapists - Pay band 6	3.1	(0)
Honorary CBT therapists[50]	1.2	(0.4)
Assistant CBT therapists - Pay band 5	6	(0)
Project managers - Pay band 7	1	(0)
Administrative staff - Pay bands 3-5	6.4	(2.7)
Therapy service total	*24.7*	*(3.5)*
Employment service		
Employment coach manager	1	(0)
Employment coaches	2	(0)
Employment service total	*3*	*(0)*

The staff numbers have expanded as part of the ongoing service expansion in phase two. Four of the assistant CBT therapists began in May 2007, and three of the CBT therapists began in September 2007, as well as additional administrative staff.

The Newham IAPT has a structured programme of professional training and support, including clinical supervision, training in CBT towards BABCP accreditation, and continuing professional development.

PCT and Mental Health Trust (external to IAPT): As mentioned earlier, Newham has already a relatively developed structure for delivering psychological therapy services:

- Within GP surgeries brief therapy is provided by 5.7 FTE clinical staff including 3.7 psychotherapy, 1.9 counselling, and 0.1 clinical psychology staff (all funded by Newham PCT). Therapy is largely multi-model drawing on psychodynamic, systemic and CBT approaches.

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[50] Honorary CBT therapists are still in training. They typically work 0.2 FTE in exchange for expenses and supervision time.

- A centralised Psychological Services team provides further services at primary care level, with 9.5 FTE clinical staff[51] who are all psychologists (all funded by Newham PCT). Again, much therapy is multi-model, with staff specialisations including CBT, systemic, and psychodynamic approaches.
- A team offering specialist secondary-care services with 14.5 FTE clinical staff: 6.5 multimodal/integrative; 3.0 psychodynamic, 1.5 medical psychotherapy, 1.5 CBT, 1.1 systemic, 0.6 art, and 0.3 community psychology.

Treatment

All people referred initially attend an assessment with a qualified therapist or an assistant therapist working with the supervision of a qualified therapist. The assessment is based on the ICD10 framework and uses PHQ-9 and GAD-7 to gauge case severity. In Newham all questionnaires are completed by the patient on paper in their own time.

The suggested treatment allocation depends on the condition and its severity. The intention was that if low-intensity (step 2a) treatments (including guided self-help) could be useful, the patient is started on these. Escalation up the stepped grades of treatment occurs if the patient has not improved after 4 hours of step 2a or 8 hours of step 2b. If at 20 hours with the service (including all levels of treatment) a patient still has not improved they will usually be referred on to secondary care (e.g. the community mental health team). Some patients could be allocated directly to step 3 care within IAPT, for example if low-intensity treatments are known to be ineffective (such as for patients suffering post-traumatic stress disorder), or if there is substantial risk to self or others.

In practice, staffing limitations meant many step 2 treatments, particularly 2a treatments, only began to be delivered during phase two of the service delivery, from mid-March 2007. This initially limited the implementation of the treatment allocation system outlined above.

There is capacity to deliver specialised services in the form of disorder-specific CBT. There is a lead therapist for each disorder (conditions such as panic/phobia, OCD, PTSD).

The normal mode of treatment is for a patient referred to the service to be contacted within a few days and first seen for assessment about 14 days later[52]. Assessment usually lasts around an hour. It takes place at the Newham Psychological Treatment Centre (63%) or at the GP surgery (19%), with 17% on the telephone.

For some, 'flexible engagement' occurs before formal assessment. This involves discussion between the patient and service staff about their illness and the nature of the service. Around 29% of referrals have at least one 'flexible engagement' contact and 13% have two or more. The average duration of a flexible engagement contact is 9 minutes, and it almost always occurs on the telephone (86%).

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[51] This total includes the 1.0 FTE therapist funded via the IAPT budget.
[52] Median value.

Flexible engagement aims to encourage referrals to take up the service. It is particularly used by self-referrals (55% of self-referrals as against 22% of GP referrals have used it).

Following assessment, the patient is allocated to a treatment. Therapy makes use of two workbooks, 'Overcoming Anxiety: A Five Areas Approach', and 'Overcoming Depression: A Five Areas Approach', both by Chris Williams. Computerised CBT is also available but interestingly is rarely taken up by patients.

Because of the initial staffing limitations discussed above, the balance between low- and high-intensity services has varied over time. For those who had already completed treatment and had at least one treatment session (excluding flexible engagement and assessment) by end September 2007, around two-thirds (69%) experienced only step 3 treatment (full CBT therapy). 14% had only step 2 treatments (step 2a or 2b), and 11% had both.[53] Among those who were still in treatment and had at least one treatment session (excluding flexible engagement and assessment) by end September 2007, the majority (54%) had only received step 2 interventions. 16% had only had step 3 treatment, and 12% both.[54]

Both the CBT and employment services are based at the newly established Newham Psychological Treatment Centre[55]. Service users can choose whether they would like therapy and employment services to take place at the Centre, at their GP surgery, elsewhere, or over the phone. Excluding flexible engagement and assessment, the majority of contacts are done face-to-face (84%; 16% are on the phone); of the face-to-face contacts, 68% take place at the Centre, 21% take place at the GP surgery, and 11% at other locations. The average length of a face-to-face session is 47 minutes, and of a telephone session is 18 minutes.

[53] The balance had missing or 'other' codes on treatment type.
[54] The balance had missing or 'other' codes on treatment type.
[55] The Centre expanded to a second physical site in November 2007.

THE PROGRESS OF PATIENTS

Because a well-established primary care psychological service already existed in Newham, the CBT service had at first some difficulties attracting sufficient numbers of referrals. This has improved over time (see Figure 3.)

Figure 3: Graph of monthly referrals
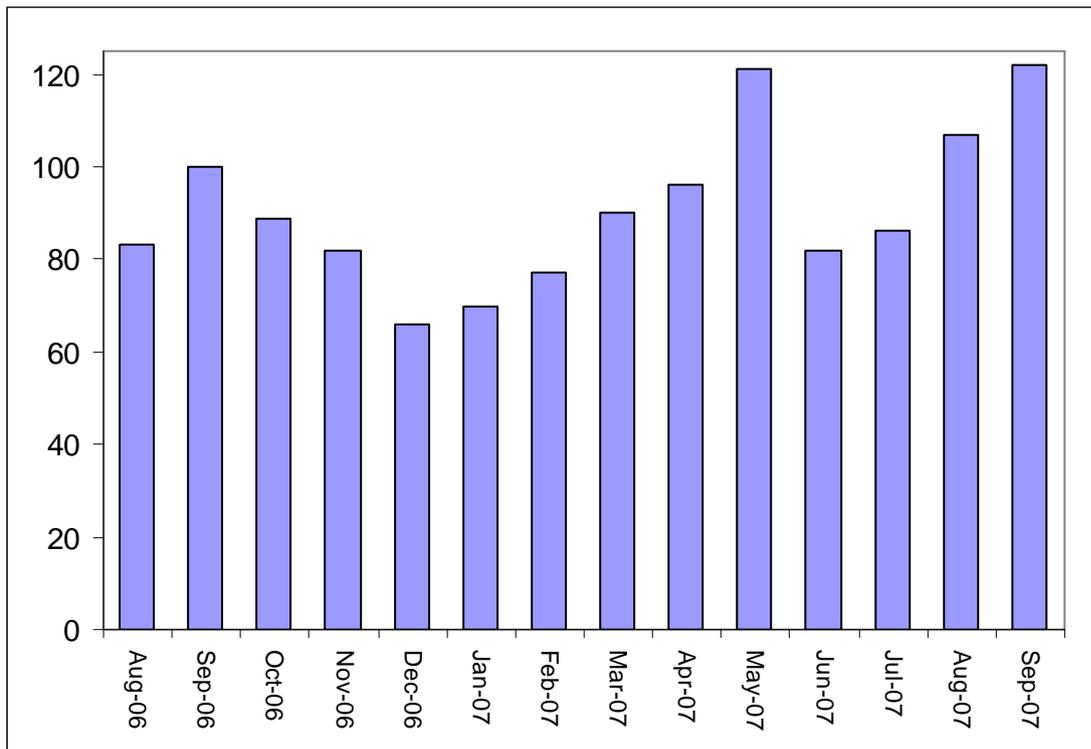
By end September 2007 the system had recorded 1043 referrals. Of these, 231 were found unsuitable[56]. Of the unsuitables, 30 were not eligible for the service, and 41 were found to not need the service; other specific reasons for unsuitability are not recorded in the database. This decision is usually reached when first referred (70 of the 231) or at assessment (137 of the 231).

58 of the suitable referrals went directly to the employment service. This normally happens after some contact with the IAPT service - for the service choices to be explained – but none of these people participated in any clinical therapy activities.[57]

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[56] The PHQ9 scores of the unsuitables include more patients at the severe end of the spectrum than the total of referrals. Conversely, the GAD7 shows more patients at the none/mild end of the spectrum.

[57] As the employment service data is not integrated with the therapy service database, there is limited further information on these people. From initial profile information collected, it is clear that this group were usually referred via non-GP health professionals (31%) or self-referral (39%). They are predominantly male (60%) and most often benefit recipients (28 of the 58; note employment status was not recorded for 18 of the 58). The severity of their symptoms is lower than the bulk of referrals, with 44% not meeting caseness criteria of scoring 10 or more on the PHQ-9 and/or 8 or more on the GAD-7.

Of those suitable for the service, 87 had no sessions. Most of these people are recorded as failing to engage or dropping out without further contact (90%). Specific reasons for this are not recorded in the database but could include patient characteristics or patients' views of the service. A further 8% refused the service; the remainder were referred elsewhere.

At the end of September 2007, 385 are still in the system, either in treatment or waiting for it.

Focusing on the 282 who have concluded treatment in the system, (i.e. attended one or more sessions and are no longer in the system), 90% were found to be cases (i.e. scored 8 or over on the GAD-7 and/or 10 or over on the PHQ-9 at the first session with the service)[58].

33 of the 282 had only one session. Of these, 73% were patients who did not contact the service again after the first session and could not be reached by the service. The remainder are patients who were referred to other services after the first session, and patients who refused further treatment.

It would be interesting to look at whether initial scores differ between those who attend only one session, and those who attend two or more. However, this analysis is limited by the small number of patients with only one session[59]. The only significant difference is that those who conclude after one session by refusing further treatment have lower GAD-7 scores than those who conclude after one session by dropping out without further contact with the service[60].

Table 14: initial scores: only one session versus two or more sessions

Type of completion	Initial PHQ-9 value			Initial GAD-7 value		
	Mean	N	SD	Mean	N	SD
Concluded after 2+ sessions	15.1	239	6.2	13.5	238	5.2
Concluded after 1 session – by mutual agreement	x	x	x	x	x	x
Concluded after 1 session – patient refuses further treatment	13.8	4	6.0	8.3*	4	2.6
Concluded after 1 session – patient drops out without contact	16.2	14	5.2	15.2	14	4.3
Total	15.1	258	6.1	13.5	257	5.2

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[58] This is of all with recorded scores. 24 people who attended one or more sessions and are no longer in the system do not have an initial score recorded.

[59] There are 33 patients with only one session; of these 19 have an initial PHQ-9 or GAD-7 score recorded. Splitting these into types of conclusion results in one groups below the threshold of publishable data (Office of National Statistics guidelines advise suppressing results for cells with less than three individuals in them).

[60] Analysis using ANCOVA post-hoc test (Tukey HSD), excluding the category with insufficient sample size (those who concluded after 1 session by mutual agreement with the service).

x data suppressed – numbers below threshold of N=3
* significantly different from 'concluded after 1 session – patient drops out without contact'.

Figure 4: Patient progress: Newham

```
┌──────────────────────┐         ┌──────────────────────┐
│ 1,043 referred to    │────────▶│ 231 unsuitable       │
│ system               │         │                      │
└──────────┬───────────┘         └──────────────────────┘
           │
           ▼
┌──────────────────────┐         ┌──────────────────────┐
│ 812 suitable for the │────────▶│ 0 status unknown     │
│ service              │         │ 385 still in system  │
│                      │         │ 58 to employment     │
│                      │         │ service              │
└──────────┬───────────┘         └──────────────────────┘
           │
           ▼
┌──────────────────────┐         ┌──────────────────────┐
│ 369 'concluded'      │────────▶│ 87 had no sessions   │
│ therapy              │         │ 33 had 1 session     │
└──────────┬───────────┘         └──────────────────────┘
           │
           ▼
┌──────────────────────┐         ┌ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─┐
│ 249 attended at      │─ ─ ─ ─ ▶  220 have pre- and
│ least 2 sessions     │           post-treatment PHQ9
│                      │           and/or GAD7 records
└──────────┬───────────┘         └ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─┘
           │
           ▼
┌──────────────────────┐         ┌ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─┐
│ 222 had the prior    │           171 known to have
│ duration of their    │─ ─ ─ ─ ▶  been ill over 6 months
│ primary condition    │           and have pre- and post-
│ coded. Of these, 185 │           treatment PHQ-9 and/or
│ (83%) had been ill   │           GAD-7 records
│ over 6 months.       │         └ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─┘
└──────────────────────┘
```

This leaves 249 who attended at least 2 sessions. As psychological well-being is monitored at each session, these patients have multiple PHQ-9 and/or GAD-7 scores, allowing analysis of treatment outcomes. Further analysis will focus on this group and particularly on those who have been unwell for 6 months or more.

This group of 249 is 58% of those who were referred, found suitable, and are no longer in the system. Prior duration of condition is known for 89% and 83% of these had been ill for over 6 months. Almost all had complete pre- and post-treatment test data.

Among the 249, the average number of sessions was 8.2, comprising a total of around 7.2 hours of contact (including initial assessment session). The median time between sessions is 14 days. The median length of treatment from first session to last is 16 weeks (the mean is 18 weeks).

The most common type of treatment ending among the 249 was concluding treatment in mutual agreement with the service (62%). 32% ended treatment by

dropping out (without contacting the service); 5% actively refuse further treatment, and 2% are referred on to other services.

The most common activity was receiving step 3 full CBT from a specialist therapist, which was done by 183 of the 249 (74%). Among these patients, the mean number of CBT sessions was 7.3 (median was 7.0).

Other activities include a range of so-called 'step 2' interventions, such as guided self-help, group psychosocial education, and CCBT. 42 of the 249 (17%) had done at least one session of such activities. The most common was guided self-help, done by 22 individuals; brief CBT (step 2b) was done by 6, and computerised CBT by 7.

Among the 249, 36 received support from the employment service.

Of course in a stepped care system patients can begin with lower step interventions and move to higher step interventions if needed. Of the 42 who had any step 2 interventions (2a or 2b), 13 also had step 3 CBT, while 29 did not 'step up'. This gives a rough step-up rate of 31%.[61]

A more precise measure of step-up takes those who were cases at their last step 2a or 2b session, and asks what proportion went on to step 3 CBT. On this basis, the step-up rate is 32% (7 of 22).

Of the 7 who did 'step up' on this latter measure, 4 completed treatment by mutual agreement with the service and 3 dropped out or terminated treatment early.

Of the 15 who did not 'step up' on this latter measure, almost all (12) are recorded as having dropped out of treatment; of these, a third had step 2b (brief CBT) or step 3 (full CBT) sessions scheduled which they failed to attend. The other 3 either had an ending mutually agreed with the service, or were referred on to other services.

This analysis of step-up rates is based on relatively small numbers, since many step 2 interventions (particularly 2a) were not delivered in earlier stages of the Newham IAPT demonstration site.

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[61] Note that this step-up rate includes people who received both step 2 and step 3, but in reverse order; there were 4 people who began with step 3 and later in their treatment also received some step 2.

PSYCHOLOGICAL OUTCOMES

The data on the psychological states of patients are based on paper questionnaires completed by patients at the start of each session.

The benchmark for whether someone is clinically ill is normally set at scoring 10 or more on the PHQ-9, and/or 8 or over on the GAD-7 (Kroenke et al, 2002; 2007). Looking at such 'cases' only, 197 of the 220 for whom we have pre- and post-treatment scores were ill at the beginning of their first session. Of these, 55% had recovered by the time they left the service.

The change in the average score on each questionnaire is shown in Table 15. Another metric for judging psychological outcomes is effect sizes – the change in the average score on each questionnaire, divided by the pooled standard deviation. The effect sizes are 0.89 on the PHQ-9, 1.06 on the GAD-7, and 1.01 on the CORE-OM.

Table 15: pre- and post-treatment scores for all

		Pre	Post
PHQ-9	Mean (SD)	15.3 (6.2)	8.2 (7.2)
	N	221	221
GAD-7	Mean (SD)	13.7 (5.1)	6.8 (5.8)
	N	221	221
CORE-OM	Mean (SD)	1.83 (0.61)	1.07 (0.67)
	N	140	140

The change in scores from pre- to post-treatment is significant for all measures.[62]

Outcomes by duration

Table 16 shows recovery rates, and table 17 pre- and post-treatment scores, both grouped by the prior duration of illness.

The differences in recovery rates between the duration categories in Table 16 are not significant[63].

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[62] For PHQ=9 $F=172.985$, $p<0.0005$; for GAD-7 $F=250.152$, $p<0.0005$; for COREOM: $F=142.381$, $p<0.0005$.
[63] Chi-square=5.682, $p=0.224$. Analysis included only those with prior duration of illness recorded.

Table 16: Recovery rates, by duration

Prior problem duration	% recovery	N. of cases
Under 6 months	72	32
6 months – 1 year	67	12
1-2 years	53	19
2-4 years	60	35
4+ years	49	89
Missing duration data	20	10
Total	55	197

Note: this table includes only patients who are clinical cases, i.e. met the criteria of scoring 10 or over on at least one of the PHQ-9 or the GAD-7 at the initial meeting with the IAPT service.

Table 17: pre- and post-treatment scores, by duration

Problem duration		PHQ-9		GAD-7		CORE-OM	
		Pre	Post	Pre	Post	Pre	Post
Under 6 months 15%	Mean (SD)	14.8 (5.6)	6.4 (6.2)	13.3 (4.9)	5.2 (4.7)	1.61 (0.67)	0.95 (0.49)
	N	35	35	35	35	23	23
6 months – 1 year 6%	Mean (SD)	16.2 (6.2)	5.3 (6.2)	14.6 (4.2)	4.2 (4.8)	1.84 (0.28)	0.86 (0.51)
	N	13	13	13	13	9	9
1-2 years 10%	Mean (SD)	15.1 (7.3)	9.1 (9.4)	12.5 (5.9)	7.3 (7.7)	1.52 (0.69)	0.69 (0.83)
	N	23	23	23	23	14	14
2-4 years 17%	Mean (SD)	14.6 (6.6)	7.4 (6.8)	13.8 (5.7)	6.0 (5.7)	1.86 (0.70)	1.04 (0.69)
	N	39	39	39	39	25	25
4 years + 43%	Mean (SD)	15.9 (5.8)	8.9 (7.1)	14.1 (4.7)	7.4 (5.7)	2.01 (0.50)	1.24 (0.68)
	N	96	96	96	96	65	65
Missing duration data 11%	Mean (SD)	14.3 (8.3)	12.0 (7.8)	12.4 (6.7)	10.3 (5.8)	0.95 (0.18)	0.92 (0.29)
	N	14	14	14	14	4	4
Total	Mean (SD)	15.3 (6.2)	8.2 (7.2)	13.6 (5.1)	6.8 (5.8)	1.83 (0.61)	1.07 (0.67)
	N	220	220	220	220	140	140

The changes in scores over time (from pre- to post-treatment) are significant for all measures in Table 17.[64] The interaction effects between time and duration are not significant for any of the measures.

The IAPT Programme Board recommended that the Doncaster and Newham demonstration sites should not treat patients whose problem duration was less than six months[65]. The reasons for this are discussed in some detail in the 'outcomes by duration' section for Doncaster. The key point is that since natural recovery is common in recent onset cases of anxiety and depression in primary care, and in the absence of a randomised control group, results must be 'benchmarked' against standard data on recovery rates for this group separately.

37 (17%) of the patients who have concluded treatment and attended 2 or more sessions had been unwell for less than 6 months at the start of treatment[66]. We will consider these individuals separately, after considering first the remaining 83% whose problem duration was greater than six months at the start of treatment.

Long-term cases

The literature suggests that natural recovery is low in patients where the prior problem duration is more than 6 months. Posternak and Miller (2001), in a meta-analysis of wait-list control groups, found average recovery from depression was around 20%, and percentage change on the Beck Depression Inventory of approximately 16%. For anxiety disorders natural recovery appears even lower: wait-list controls in randomised controlled trials for CBT for anxiety disorders rarely show recovery rates, for those who have been ill for more than six months, exceeding 5%.

The Newham recovery rates and changes in symptom scores for the 83% of patients with prior duration of over six months comfortably exceed these benchmarks. 52% of the 165 patients who met initial caseness criteria recovered by the end of treatment. The effect sizes are 1.01 on the PHQ-9 and 1.24 on the GAD-7. It therefore seems reasonable to conclude that the treatment offered in the IAPT demonstration site is frequently effective in these cases.

We know that at least 15% of the 165 were on medication and their recovery rate was 48%. The recovery rate of those known to be not taking medication was 33%. However, these rates are relatively unreliable due to the small numbers involved, n=25 and n=24 respectively.[67]

The average number of contacts that took place for those who recovered was around 10 and for those who did not recover significantly lower (8)[68]. Similarly, the

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[64] GLM Repeated Measures. PHQ-9 F=132.47, p<0.0005; GAD-7 F=194.516, p<0.0005; CORE-OM F=101.513, p<0.0005. Analysis included only those with prior duration of illness recorded.
[65] Unless problem duration was at least 3 months and the person faced substantial risk to accommodation, employment or associated physical health due to their mental health condition.
[66] This is of those with duration data recorded; a further 27 (11% of the whole group who have concluded treatment and attended 2 or more sessions) did not have any duration data recorded.
[67] Note also the limitations in medication recording discussed on page 22.
[68] t=2.014, p=0.046.

average total contact time was higher for those who recovered (9 hours) than for those who did not (7.5 hours).

Recovery rates differed somewhat according to primary condition. They were higher for anxiety disorders (59%) than for depression (51%).[69]

Recent onset cases

37 (17%) of the patients who have concluded treatment and attended 2 or more sessions had been unwell for less than 6 months at the start of treatment[70]. The recovery rate for those with prior duration under six months is 72%. This is similar to the upper end of those observed in the GP care alone conditions in Catalan et al (1984) and Kendrick et al (2006), as well as to the community recovery rates for recent onset depression in the Spijker et al (2002) and Tennant et al (1981) studies[71]. One cannot be confident that the intervention has been more effective for this group than what would have happened if the treatment was not being provided.

As was noted in regard to Doncaster's recent onset cases, benchmarking is a very rough way of establishing clinical effectiveness and it cannot give a firm conclusion – a randomised controlled trial showing equivalence would be needed for that.

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[69] For the small group of 'other disorder' the recovery rate was 50% (n=14).

[70] This is of those with duration data recorded; a further 27 (11% of the whole group who have concluded treatment and attended 2 or more sessions) did not have any duration data recorded.

[71] These studies are all outlined in further detail in the Doncaster section on recent onset cases. Note also that the Newham result is based on a relatively small sample size and so the results are not fully reliable.

EMPLOYMENT AND BENEFIT OUTCOMES

Among people who concluded treatment and attended 2 or more sessions, the net increase of people at work corresponded to 10% of the treated population. This increase comes mainly from reducing numbers receiving Statutory Sick Pay (a decrease of 6%), and a decrease in numbers in the 'other' category (not employed, and not receiving benefits or SSP) of 4%. This is shown in table 18.[72]

Most of the patients are long-term cases, and so results for those with prior condition duration of over six months are very similar, with a net increase in employment of 7%, largely due to reducing numbers receiving Statutory Sick Pay. See table 19 for details.

There are only 23 patients with recent onset (prior condition duration of under six months), so estimates are likely unreliable. They are detailed in table 20; the net increase in people at work is 22% of the group, due to a reduction in the number of benefit recipients of 9%, and a reduction of numbers receiving SSP of 13%.

Incomplete employment questionnaires mean it is not possible to look at changes in sick days among the employed.

Table 18: Changes in employment for all

		Pre-treatment				
		Benefit recipient (IB, IS, JSA)	Receiving Statutory Sick Pay	Employed (no SSP)	Other	Total
Post-treatment	Benefit recipient (IB, IS, JSA)	38	0	1	5	44
	Receiving Statutory Sick Pay	0	2	0	0	2
	Employed (no SSP)	2	6	54	8	70
	Other	3	2	2	12	19
	Total	43	10	57	25	135

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[72] It was possible to compare employment outcomes in this group between those who had received support from the employment service and those who had not. Those who did receive support show a larger increase in net employment – 10.7% - compared to those who did not – 9.3%. Further analysis of the employment service was not undertaken, because their administrative records are not integrated with the main IAPT database (it is currently in the process of being integrated).

Table 19: Changes in employment for patients with over 6 months prior problem duration

		Pre-treatment				
		Benefit recipient (IB, IS, JSA)	Receiving Statutory Sick Pay	Employed (no SSP)	Other	Total
Post-treatment	Benefit recipient (IB, IS, JSA)	31	0	1	5	37
	Receiving Statutory Sick Pay	0	1	0	0	1
	Employed (no SSP)	1	4	44	6	55
	Other	2	1	2	10	15
	Total	34	6	47	21	108

Table 20: Changes in employment for patients with less than 6 months prior problem duration

		Pre-treatment				
		Benefit recipient (IB, IS, JSA)	Receiving Statutory Sick Pay	Employed (no SSP)	Other	Total
Post-treatment	Benefit recipient (IB, IS, JSA)	6	0	0	0	6
	Receiving Statutory Sick Pay	0	1	0	0	1
	Employed (no SSP)	1	2	8	2	13
	Other	1	1	0	1	3
	Total	8	4	8	3	23

FOLLOW-UP SURVEY

To fully evaluate the outcomes of the service it is important to determine if the psychological and employment gains achieved at the end of treatment are largely maintained over time. As the Newham IAPT service stops collecting any information on patients once they have their last treatment session, a one-off follow-up survey was carried out.

Patients who had completed treatment by 1 September 2007, with at least two treatment sessions, were eligible for the follow-up survey. This was a total of 165 people.

The intention was to include all who had completed treatment at least three months previously. Delays in implementing the survey meant in practice it included all who had completed treatment at least four months previously. The average amount of time between last treatment session and the follow-up survey, for the full group, was 42 weeks.[73]

The follow-up survey consisted of three questionnaires – the PHQ-9, the GAD-7, and an employment status questionnaire (the same as were used during treatment). People were mailed the questionnaires for self-completion; those who did not return them were then phoned and offered the chance to complete them over the phone.

Of the 165 surveyed, 60 people responded (36%). The respondents are representative of the full sample in terms of initial and final PHQ-9 and GAD-7, as well as prior duration of current condition[74].

Tables 21 and 22 show the psychological outcomes and Tables 23 and 24 the employment outcomes for, respectively, all respondents and those whose problem duration at start of treatment was six months or over[75].

Table 21: Psychological outcomes for all follow-up survey respondents

		Pre	Post	Follow-up
Recovery rate	%		57%	42%
	N		51	52
PHQ-9	Mean (SD)	15.1 (6.6)	7.4 (6.4)	8.5 (6.8)
	N	59	59	59
GAD-7	Mean (SD)	13.8 (5.3)	6.5 (5.2)	7.8 (5.9)
	N	59	59	59

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[73] The shortest amount of time was 17 weeks; the longest 74 weeks.

[74] Respondents have, on average, completed their treatment more recently than the full sample; the mean difference is 30 days, t=-2.647, p=0.010.

[75] See the section on psychological outcomes for discussion of the relationship between problem duration and outcomes.

Table 22: Psychological outcomes for follow-up survey respondents – respondents with 6 months or more prior problem duration

		Pre	Post	Follow-up
Recovery rate	%		64%	43%
	N		39	40
PHQ-9	Mean (SD)	15.0 (6.4)	6.5 (5.7)	8.8 (7.0)
	N	44	44	44
GAD-7	Mean (SD)	13.8 (4.9)	5.8 (4.8)	8.1 (6.2)
	N	44	44	44

The changes in average PHQ-9 and GAD-7 scores are significant. At follow-up patients continue to have significantly lower PHQ and GAD scores than at pre-treatment.[76] For the overall group, the modest increases in PHQ & GAD scores from post-treatment to follow-up are not significant[77]; they are significant for the group who have had their condition for over six months[78].

Table 23: Changes in employment for all follow-up survey respondents

		Pre-treatment				
		Benefit recipient (IB, IS, JSA)	Receiving Statutory Sick Pay	Employed (no SSP)	Other	Total
Follow-up	Benefit recipient (IB, IS, JSA)	14	0	1	5	20
	Receiving Statutory Sick Pay	0	0	3	0	3
	Employed (no SSP)	5	1	15	1	22
	Other	2	0	2	8	12
	Total	21	1	21	14	57

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[76] For the overall group: on the PHQ-9, the change from pre-treatment to follow-up, F=32.10, p<0.0005; on the GAD-7, the change from pre-treatment to follow-up, F=40.765, p<0.0005. For the over six months prior duration group: on the PHQ-9, the change from pre-treatment to follow-up, F=21.696, p<0.0005; on the GAD-7, the change from pre-treatment to follow-up, F=26.967, p<0.0005.
[77] For PHQ-9, the change from post-treatment to follow-up: F=1.088, p=0.301. For GAD-7, the change from post-treatment to follow-up: F=2.048, p=0.158.
[78] For PHQ-9, the change from post-treatment to follow-up: F=4.124, p=0.048. For GAD-7, the change from post-treatment to follow-up: F=5.025, p=0.030.

Among the full group of respondents to the follow-up survey, the net increase in numbers employed is 1.8%. The net drop in benefit receipt is 1.8%. There is a net increase in numbers receiving Statutory Sick Pay of 3.5%.

Table 24: Changes in employment for follow-up survey respondents with 6 months or more prior problem duration

		Pre-treatment				
		Benefit recipient (IB, IS, JSA)	Receiving Statutory Sick Pay	Employed (no SSP)	Other	Total
Follow-up	Benefit recipient (IB, IS, JSA)	13	0	0	3	16
	Receiving Statutory Sick Pay	0	0	3	0	3
	Employed (no SSP)	5	1	11	1	18
	Other	0	0	1	6	7
	Total	18	1	15	10	44

Among the group of follow-up survey respondents who had previously had their condition for six months or more, the net increase in numbers employed is 6.8%, and the drop in benefit receipt is 4.5%. There is a net increase in numbers receiving Statutory Sick Pay of 4.5%.

FUNDING

The demonstration sites went live in mid-August 2006. Between then and 30 September 2007 expenditure on IAPT (excluding the additional provision in the existing primary care psychological service[79]) has been as follows[80]:

	Actuals: Inception to Sept 07 (~14 months)		Budgeted: 07/08 financial year (12 months)	
	Spend (£000)	Average FTE*	Budget (£000)	FTE
Pay				
Clinical lead and deputy	117	1.1	145	1.4
Senior/exp. CBT therapists	350	5.0	315	6
CBT therapists	38	1.4	112	3
Assistant CBT therapists	84	3.2	181	6
Project managers and administrators	144	3.8	230	8
Pay total	*734*		*982*	
Non-Pay				
Training	51		50	
Facilities	122		77	
IT	118		3	
Advertising	7		0	
Other	82		86	
Non-pay total	*380*		*216*	
Total cost of therapy	**1114**		**1198**	
Employment service	149		107	
Overall cost	**1263**		**1305**	

* Note: estimated - precise staffing levels have varied over the period.

The overall spend on providing therapy was about £1,114,000. In addition £134K was spent on the employment service. Note that a proportion of spending to date will include start up costs and should not properly be included in the running cost of the IAPT service (this includes development of IT software and establishment of new premises).

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[79] The per annum budget for this is £163,000. The actuals from inception to September 2007 are lower (£156,715) as the additional provision took longer to begin than the main IAPT service. It funds 1 therapist (systemic therapy) and 2 assistant therapists, and associated administration and management costs. Annex D gives patient data from the enhanced provision.

[80] The demonstration site went live mid-August 2006. The 'Actuals' column shows money spent over the 14 months from August 2006 to September 2007.

PUTTING THE SERVICE IN CONTEXT

It is helpful to put this service in context. The population of Newham is 250,000, including 190,000 adults.[81] From analysis of GP records (covering 60,000 adults), we find that in January – June 2007 2.0% of adults visited the GP with "a new record of depressive symptoms or other mental health problems" as diagnosed by the GP (Chan et al., 2008). This suggests an annual rate of new diagnoses of 4.0% - or 7,600 people in the whole of Newham.[82]

Of these, "new depressive symptoms" accounted for 50% of diagnoses.

These figures for GP diagnoses, though much lower than in Doncaster, are larger than the combined number of patients referred to IAPT (1,043 over a 14-month period[83]) and existing psychological services (3,986[84]). However if we were to focus on cases where the patient had symptoms for over six months, we would find a higher proportion going to IAPT (though a specific calculation is not possible).

IAPT itself was originally covering rather under one-third of the borough. But from March onwards it advertised throughout the borough for self-referrals and canvassed some other GP practices. The current rate of referral to IAPT at an annualised rate is around 1,300. But clearly the combination of Primary Care Psychology Services and IAPT still provides for only a proportion of patient need.

IAPT achieves good results but unit costs have been high, because throughput has been lower than planned, due partly to the problems of start-up.

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[81] Latest available ONS mid-year estimate, for 2005.
[82] This compares with 8.3% in national data collected in 1991 for people aged 16-64 for people presenting with any new or ongoing mental health problem (National Mental Health Statistics). It also compares with 17% of the national adult population diagnosed as mentally ill in the Psychiatric Morbidity Survey of a representative sample of households in 2004.
[83] 14 months is the approximate period covered by this report – from August 2006 to end September 2007.
[84] This is to Tier 1 and Tier 2 services.

3. CONCLUDING OBSERVATIONS

BACKGROUND

Both demonstration sites have made substantial achievements over their first thirteen months against a background of considerable difficulties. These difficulties included an uncertain and delayed beginning of funding and no assurance of long-term funding on the basis of which to recruit staff. That they have achieved what they have is a testament to the outstanding dedication and hard work of those involved.

Both demonstration sites were new start-ups. The Doncaster site had existed in conception for about 12 months before it started. It hit the ground running and achieved a truly impressive level of throughput from the start.

The Newham site had a standing start and initially it had serious organisational difficulties in obtaining sufficient referrals. Its throughput eventually increased but is still not as high as it should be, given its staffing. It has also undergone service redesign, putting more focus on step 2a services in phase two of the service delivery. It is anticipated that the increased emphasis on low intensity interventions will increase throughput in the future, as it has done in Doncaster.

The clinical populations served by the sites are very different, as can be seen from Annex B. The Doncaster site focuses predominantly on individuals in whom depression is considered by GPs the main problem, whereas Newham focuses on depression and the full range of anxiety disorders. Individuals seen in Doncaster are predominantly white, whereas Newham has an ethnically mixed population with a significant number of individuals who do not speak English. Finally, a larger proportion of individuals seen in Newham have had their problem for more than 2 years.

ACHIEVEMENTS

1. **Numbers treated.** An impressive number of people have been assessed and treated by the demonstration sites. During the thirteen months covered by this report (August 2006-September 2007) nearly 5,500 people have been referred to the two sites, of whom around 4,800 were considered suitable for the services. Approximately 3,500 of these individuals have now concluded their involvement with the services, with the remainder still in the system at September 2007. Of the concluded cases, around 1,900 have received at least 2 sessions of treatment with most having pre and post treatment scores on standardized outcome measures. The numbers seen in Doncaster are particularly impressive.

2. **Psychological benefits.** In terms of therapeutic results both demonstration sites have achieved good recovery rates for people who have been sick for six months and more. Table 25 summarizes the recovery rates and mean changes in symptom scores. These results confirm that **CBT in the field can deliver short-term therapeutic results well in line with those for clinical trials**. Furthermore, the follow-up study suggests that these gains are largely maintained at between four

months and a year after treatment. Although similarly high recovery rates were obtained for people who had been unwell for less than 6 months, it is difficult to know whether this represents a significant benefit of treatment as natural recovery can also be high in such cases.

Table 25: Recovery rates and changes in symptom scores to post-treatment and follow-up for all with over 6 months prior problem duration

		To post-treatment	**To follow-up**
% recovery (cases)	Doncaster	52%	40%
	Newham	52%	43%
Change in average PHQ score (all)	Doncaster	-8.1	-5.4
	Newham	-7.3	-6.2
Change in average GAD-7 score (all)	Doncaster	-6.8	-4.8
	Newham	-7.0	-5.7

3. **Employment effects.** The effects on employment are also encouraging. The observed increase in employment of 5%[85] of the treated population is **supportive of the assumptions made in the cost-benefit analysis** included in the Department of Health's Comprehensive Spending Review proposal.

4. **Self-referral.** Approximately one in five of the people seen in Newham referred themselves to the service. When compared with GP referrals, **self-referral patients are at least as ill, tend to have had their problems for longer, and more closely matched the ethnic mix of the local population. In addition, some problems (social phobia and obsessive compulsive disorder) that were rare among GP referrals were more prominent among self-referrals.** These findings show the potential of IAPT to reach sections of the population not adequately covered under present NHS arrangements.

5. **Outcome measurement**. **Data collection on psychological well-being measures that were given every session has been outstanding (see Annex A).** This is in contrast to many existing psychological treatment services and suggests that a comprehensive system for monitoring outcomes in psychological well-being could be rolled out more broadly if it uses session by session recording and a computerized system (as in Doncaster). Data collection for clinical outcomes measures that were only administered at some sessions has been less good in both sites. There are some other serious omissions. Neither site has been good at recording medication – a particularly key issue in Doncaster as the collaborative care model puts strong emphasis on medication compliance (Gilbody et al, 2006). Final employment status is also only recorded in a quarter to a third of treated individuals. These omissions need to be addressed.

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[85] Average - combining Doncaster (4%) and Newham (10%).

ISSUES TO BE ADDRESSED

1. NICE Guidelines. The two demonstration sites are works in progress. Despite their impressive achievements, neither can yet be described as comprehensive services that implement the NICE guidelines for the psychological treatment of depression and all the anxiety disorders. Newham covers the full range of problems but its early emphasis on high intensity treatment meant that it initially failed to reach the desired scale. Doncaster has focused more exclusively on those problems for which a stepped care model is particularly indicated and has placed a very strong emphasis on low intensity work (such as guided self-help). This has produced a high throughput but step up to high intensity CBT rarely occurred even in individuals who continued to meet caseness criteria at the end of low intensity work. Reasons for this need to be explored.

NICE guidance varies between different disorders covered by the IAPT initiative. In order to decide which guidance is relevant for a particular person, a diagnosis needs to be established. In Newham CBT therapists conducted a diagnostic assessment. While this is likely to have established reliable diagnoses, it required a considerable amount of therapist time and hence adversely affected throughput. Doncaster did not use diagnostic interviews and relied on low intensity workers to conduct briefer person centred interviews. While this procedure helped throughput it seems likely that a more detailed assessment identifying a provisional diagnosis would have been needed if Doncaster had treated the full range of conditions that IAPT aims to cover. Further consideration needs to be given to how IAPT services can establish the diagnostic information necessary for implementing NICE guidance while at the same time ensuring the initial assessment process is reasonably streamlined.

2. **Measurement**. The substantially higher data completeness rates for variables that were assessed every session suggests that the IAPT minimum data set should be reviewed to see if it would be possible to include very brief employment and disability assessments in the sessional measures. Greater consistency in recording medication is required. Systematic recording of onward referrals is also important.

3. **Follow-up.** Depression is a recurring condition. Psychological treatments are particularly interesting as they bring with them the potential to achieve enduring change. However, neither site routinely follows up patients to determine whether gains have been maintained. We would recommend that the sites consider including a routine follow-up 3-6 months after treatment completion with the addition of a few booster sessions at that stage if there are signs of deterioration. The follow-up specially conducted for this report encouragingly showed that at 4-12 month follow-up most of the psychological gains achieved during treatment were maintained (see Table 25). However, there was a modest amount of drop back that could perhaps have been reduced with a planned clinical follow-up and routinely including established relapse prevention procedures in the treatment programmes.

4. **Recent Onset Cases.** It is reasonable to conclude that the treatment offered by the IAPT sites was frequently effective with people whose problems had persisted for six months or more. When shorter problem durations are considered, natural recovery rates in the absence of IAPT intervention could be high so we can be less sure that IAPT services provided added benefit. Research involving random

allocation to immediate treatment or treatment after a short delay is needed to clarify this point.

In conclusion, both sites have demonstrated well the ability of psychological therapy services to help sections of the community hitherto neglected by the NHS. They have shown results in the field that are broadly in line with clinical trials and thus confirm the assumptions made in the IAPT business case.

ANNEX A:
DATA COMPLETENESS AND RELATED ISSUES

The data completeness rates for measures analysed in this report are given below.

Most audits of clinical outcomes in NHS mental health services suffer from the problem that a substantial number of patients fail to complete measures at post treatment. Incomplete post-treatment data makes it difficult to draw clear-cut conclusions about the improvements that patients might expect to obtain if they are treated in a particular service. In an attempt to get round this problem, the two demonstration sites aimed to give simple measures of depression (PHQ) and anxiety (GAD) at every session. In this way, it was hoped that it would be possible to obtain a post treatment symptom score on almost everyone. This is because if a patient drops out or the therapist forgets to give the measure at the formal post-treatment assessment, the score from the preceding session can be used as the post-treatment score. As the tables below demonstrate, the system was successful. Both Demonstration sites achieved almost complete pre and post-treatment data for the PHQ and GAD. Lower post-treatment data completeness rates were observed for the measures (such as CORE-OM and the Employment Questionnaire) that were only meant to be given at pre-treatment, review and post-treatment. Follow-up data and information on medication usage also have substantial missing data.

The fact that both sites obtained almost complete pre-post treatment data on the PHQ and GAD means that it is possible to compare the clinical outcomes of people who did and did not provide complete data on the CORE-OM and employment questionnaire. This allows one to determine whether the missing observations on these measures are a cause for concern. If the people who did and did not provide a post-treatment score on these measures show the same amount of improvement on the PHQ and GAD one could argue that the missing data is unlikely to have substantially distorted the picture. Unfortunately, this was not the case. Individuals who failed to provide post-treatment data on the CORE-OM or the Employment Questionnaire tended to have shown less improvement on the PHQ and GAD (see below). This may be because they tended to have had less sessions of treatment before leaving the service.

DATA COMPLETENESS

Doncaster initial and post-treatment data

The data in this report come from the IAPT site's own administrative database. The database software pre-existed the IAPT site – it has previously been used for other services in the UK and in the USA.

There were a total of 2225 who were coded by the service as having 'concluded' treatment by the time of this report. For these, data completeness is as follows:

	Patients with at least one session		Patients with 2 or more sessions	
	No.	%	No.	%
Number	2225	-	1654	-
Initial PHQ recorded	2217	100	1654	100
Initial GAD recorded	2217	100	1654	100
Initial CORE recorded	1639	74	1281	77
Final PHQ recorded	-	-	1648	100
Final GAD recorded	-	-	1648	100
Final CORE recorded	-	-	92	6
Initial employment status recorded	1859	84	1442	87
Final employment status recorded	-	-	445	27
Initial medication status recorded	1859	84	1422	86
Final medication status recorded	-	-	0	0
Duration of condition recorded	1648	74	1270	77

Changes in medication status were not coded in the IAPT administrative data[86]. There is a partner code to initial medication status, which codes how long the patient has been taking the medication to date. This is completed for around 45% of patients who have initial medication status recorded.

Doncaster has achieved outstanding data completeness for the measures (PHQ and GAD) that are given each session. Over 99% of patients who had 2 or more sessions had both a pre and post treatment score. Data completeness for the measures (CORE and Employment) that are only scheduled for pre- and post-treatment is considerably poorer (6% and 27% respectively).

Doncaster follow-up data

Patients who had completed treatment by 1 September 2007, with at least two treatment sessions, were eligible for the follow-up survey. This was a total of 1444 people. Doncaster took a random sub-sample of 893 people from this group[87].

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[86] It is possible that case managers used their free text notes to record changes in medication status. This has not been analysed.

[87] The sub-sample is representative of the full eligible group in terms of initial and final PHQ-9 and GAD-7 scores, and in terms of the prior duration of the current condition (no significant differences).

The follow-up survey consisted of three questionnaires – the PHQ-9, the GAD-7, and an employment status questionnaire (the same as were used during treatment). People were mailed the questionnaires, for self-completion; those who did not return them were then phoned and offered the chance to complete them over the phone.

Of the 893 surveyed, 452 people responded (51%). Respondents had significantly lower final PHQ-9 and GAD-7 scores than non-respondents[88]. Data completeness for respondents is as follows:

	Patients who responded to follow-up	
	No.	%
Number	452	
Initial PHQ recorded	452	100
Initial GAD recorded	452	100
Initial CORE recorded	377	83
Final PHQ recorded	452	100
Final GAD recorded	452	100
Final CORE recorded	36	8
Initial employment status recorded	393	87
Final employment status recorded	108	24
Initial medication status recorded	394	87
Final medication status recorded	0	0
Duration of condition recorded	365	81
Follow-up PHQ recorded	435	96
Follow-up GAD recorded	437	97
Follow-up employment status recorded	395	87

Newham initial and post-treatment data

The data in this report come from the IAPT site's own administrative database. The database software was developed specifically for the service and delays in its implementation meant the service operated from paper systems for much of the period covered by this report. The subsequent switch from paper to IT-based systems raised some difficulties for data extraction; it is expected that data quality will continue to improve now the IT database is bedded in.

Until recently the Newham IT system did not allow clinicians to give a positive code for 'no medication taken'. This meant one cannot distinguish, from the database records, those known not to take medication from those for whom the information was not recorded[89]. The IT system has since been rectified.

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[88] One-way ANOVA: for PHQ-9, the mean difference was 1.33, F=0.7824, p=0.005; for GAD-7 the mean difference was 0.88, F=4.371, p=0.037.
[89] The Newham team state that they enquired about medication (and coded it if it was present) in almost all instances, which implies those without a medication record equals those not taking medication.

The IT system does allow recording of the date that medication stopped being taken (if any). Almost no patient has a medication end date recorded. It is unclear if this is because none ended medication while in treatment, or because clinicians failed to complete this data field.

There were a total of 282 who were coded by the service as having 'concluded' treatment by the time of this report. For these, data completeness is as follows:

	Patients with at least one session		Patients with 2 or more sessions	
	No.	%	No.	%
Number	282	-	249	-
Initial PHQ recorded	258	92	239	96
Initial GAD recorded	257	91	238	96
Initial CORE recorded	226	80	217	87
Final PHQ recorded	-	-	220	88
Final GAD recorded	-	-	220	88
Final CORE recorded			140	56
Initial employment status recorded	222	79	215	86
Final employment status recorded	-	-	135	54
Initial medication status recorded	90	32	86	35
Final medication status recorded	-	-	0	0
Duration of condition recorded	237	84	222	89

Like Doncaster, Newham has achieved impressive data completeness for the measures (PHQ and GAD) that are given each session. Over 88% of patients who had 2 or more sessions had pre- and post-treatment scores. This is outstanding for a service in which 13% of users do not speak English. Data completeness for the measures (CORE and Employment) that are only scheduled for pre- and post-treatment is less good (56% and 54% respectively).

Newham follow-up data

Patients who had completed treatment by 1 September 2007, with at least two treatment sessions, were eligible for the follow-up survey. This was a total of 165 people.

The follow-up survey consisted of three postal questionnaires – the PHQ-9, the GAD-7, and an employment status questionnaire. Those who did not return them were then phoned and offered the chance to complete them over the phone.

Of the 165 surveyed, 60 people responded (36%). There were no significant differences between respondents and non-respondents in terms of initial or final PHQ-9 or GAD-7, or prior duration of current condition. Data completeness for respondents is as follows:

	Patients who responded to follow-up	
	No.	%
Number	60	
Initial PHQ recorded	60	100
Initial GAD recorded	60	100
Initial CORE recorded	58	97
Final PHQ recorded	59	98
Final GAD recorded	59	63
Final CORE recorded	38	95
Initial employment status recorded	57	62
Final employment status recorded	37	27
Initial medication status recorded	16	27
Final medication status recorded	0	0
Duration of condition recorded	54	90
Follow-up PHQ recorded	60	100
Follow-up GAD recorded	60	100
Follow-up employment status recorded	60	100

SIGNIFICANCE OF MISSING DATA

Pre and post-treatment scores on the PHQ and GAD for individuals who did and did not provide pre and post treatment scores on the CORE-OM or the Employment Questionnaire are given below. Inspection of the means reveals that individuals who provided pre and post treatment scores on the CORE-OM or the Employment Questionnaire tended to have improved more than those who did not. This difference was significant (as indicated by a significant interaction effect in a mixed model ANOVA) for the Employment Questionnaire in both sites, for the CORE-OM in both sites when the GAD is used as the measure of clinical improvement and for Newham only when the PHQ is used as the measure of clinical improvement.

A final table gives the pre-post effect sizes for the PHQ and GAD in individuals who did and did not have pre and post treatment scores on the CORE-OM and the Employment Questionnaire. The effect sizes for individuals who completed these measures at pre and post are on average 1.72 times greater than for those who did not (range 1.09 to 2.47). In general, the difference was larger in Newham than in Doncaster. The better depression and anxiety outcomes in individuals who completed pre and post-treatment CORE's or Employment Questionnaires may be partly explained by the fact that they tend to have had more treatment sessions before leaving the services. The number of sessions they receive will be determined by patient choice or by mutual agreement between patient and therapist.

Doncaster (CORE-OM)

1. PHQ-9

a. Descriptive statistics

		Mean	SD	N
First PHQ-9 value	Doesn't have pre-post CORE	15.78	6.154	1556
	Has pre-post CORE	15.37	6.249	92
	Total	*15.76*	*6.158*	*1648*
Last PHQ-9 value	Doesn't have pre-post CORE	7.60	6.967	1556
	Has pre-post CORE	6.01	6.389	92
	Total	*7.51*	*6.943*	*1648*

b. Tests of effects

Time = pre-PHQ, post-PHQ
CORE = whether had both pre- and post- scores for CORE, y/n

		F	d.f.	Sig.
Within-subjects	Time	528.054	1	<0.0005
	Time * CORE	2.388	1	0.122
Between-subjects	CORE	2.877	1	0.09

2. GAD-7

a. Descriptive statistics

		Mean	SD	N
First GAD-7 value	Doesn't have pre-post CORE	13.79	5.155	1556
	Has pre-post CORE	14.79	4.911	92
	Total	*13.84*	*5.146*	*1648*
Last GAD-7 value	Doesn't have pre-post CORE	6.83	6.159	1556
	Has pre-post CORE	6.03	6.310	92
	Total	*6.79*	*6.168*	*1648*

b. Tests of effects

Time = pre-GAD-7, post-GAD-7
CORE = whether had both pre- and post- scores for CORE, y/n

		F	d.f.	Sig.
Within-subjects	Time	540.283	1	<0.0005
	Time * CORE	7.145	1	0.008
Between-subjects	CORE	0.041	1	0.840

3. Difference in number of sessions

Those who have both pre- and post-CORE have more sessions than those who do not (mean difference: 3.4 sessions (7.0 sessions versus 3.6 sessions) p=<0.0005).

Doncaster (employment questionnaire)

1. PHQ-9

a. Descriptive statistics

		Mean	SD	N
First PHQ-9 value	Doesn't have pre-post empl	15.59	6.233	1203
	Has pre-post empl	16.21	5.933	445
	Total	*15.76*	*6.158*	*1648*
Last PHQ-9 value	Doesn't have pre-post empl	8.11	7.158	1203
	Has pre-post empl	5.90	6.045	445
	Total	*7.51*	*6.943*	*1648*

Time = pre-PHQ, post-PHQ
empl = whether had both pre- and post- scores for employment, y/n

		F	d.f.	Sig.
Within-subjects	Time	2094.540	1	<0.0005
	Time * empl	1299.714	1	<0.0005
Between-subjects	empl	6.791	1	0.009

2. GAD-7

a. Descriptive statistics

		Mean	SD	N
First GAD-7 value	Doesn't have pre-post empl	13.70	5.270	1203
	Has pre-post empl	14.22	4.778	445
	Total	*13.84*	*5.146*	*1648*
Last GAD-7 value	Doesn't have pre-post empl	7.27	6.353	1203
	Has pre-post empl	5.50	5.439	445
	Total	*6.79*	*6.168*	*1648*

b. Tests of effects

Time = pre-GAD-7, post-GAD-7
empl = whether had both pre- and post- scores for employment, y/n

		F	d.f.	Sig.
Within-subjects	Time	1921.675	1	<0.0005
	Time * empl	43.595	1	<0.0005
Between-subjects	empl	5.716	1	0.017

3. Difference in number of sessions

Those who have both pre- and post-employment have more sessions than those who do not (mean difference: 2.9 sessions (7.0 sessions versus 4.1 sessions) p=<0.0005).

Newham (CORE-OM)

1. PHQ-9

a. Descriptive statistics

		Mean	SD	N
First PHQ-9 value	Doesn't have pre-post CORE	15.86	6.438	81
	Has pre-post CORE	14.96	6.113	139
	Total	*15.30*	*6.235*	*220*
Last PHQ-9 value	Doesn't have pre-post CORE	12.41	7.548	81
	Has pre-post CORE	5.73	5.722	139
	Total	*8.19*	*7.202*	*220*

b. Tests of effects

Time = pre-PHQ, post-PHQ
CORE = whether had both pre- and post- scores for CORE, y/n

		F	d.f.	Sig.
Within-subjects	Time	145.604	1	<0.0005
	Time * CORE	30.193	1	<0.0005
Between-subjects	CORE	28.187	1	<0.0005

2. GAD-7

a. Descriptive statistics

		Mean	SD	N
First GAD-7 value	Doesn't have pre-post CORE	13.62	5.370	81
	Has pre-post CORE	13.65	4.979	139
	Total	*13.64*	*5.115*	*220*
Last GAD-7 value	Doesn't have pre-post CORE	9.99	6.302	81
	Has pre-post CORE	4.91	4.603	139
	Total	*6.78*	*5.822*	*220*

Time = pre-GAD-7, post-GAD-7
CORE = whether had both pre- and post- scores for CORE, y/n

		F	d.f.	Sig.
Within-subjects	Time	218.665	1	<0.0005
	Time * CORE	37.393	1	<0.0005
Between-subjects	CORE	17.916	1	<0.0005

3. Difference in number of sessions

Those who have both pre- and post-CORE have more sessions than those who do not (mean difference: 6.0 sessions (11.1 sessions versus 5.1 sessions), p=<0.0005).

Newham (employment questionnaire)

1. PHQ-9

a. Descriptive statistics

		Mean	SD	N
First PHQ-9 value	Doesn't have pre-post empl	15.91	6.335	85
	Has pre-post empl	14.91	6.164	135
	Total	*15.30*	*6.235*	*220*
Last PHQ-9 value	Doesn't have pre-post empl	11.68	7.697	85
	Has pre-post empl	5.99	5.916	135
	Total	*8.19*	*7.202*	*220*

b. Tests of effects

Time = pre-PHQ, post-PHQ
empl = whether had both pre- and post- scores for employment, y/n

		F	d.f.	Sig.
Within-subjects	Time	152.362	1	<0.0005
	Time * empl	19.485	1	<0.0005
Between-subjects	empl	21.804	1	<0.0005

2. GAD-7

a. Descriptive statistics

		Mean	SD	N
First GAD-7 value	Doesn't have pre-post empl	13.69	5.271	85
	Has pre-post empl	13.61	5.033	135
	Total	*13.64*	*5.115*	*220*
Last GAD-7 value	Doesn't have pre-post empl	9.35	6.367	85
	Has pre-post empl	5.16	4.808	135
	Total	*6.78*	*5.822*	*220*

b. Tests of effects

Time = pre-GAD-7, post-GAD-7
empl = whether had both pre- and post- scores for employment, y/n

		F	d.f.	Sig.
Within-subjects	Time	224.846	1	<0.0005
	Time * empl	23.215	1	<0.0005
Between-subjects	empl	12.893	1	<0.0005

3. Difference in number of sessions

Those who have both pre- and post-employment have more sessions than those who do not (mean difference: 5.8 sessions (11.2 sessions versus 5.4 sessions), p=<0.0005).

ANNEX B: PROFILES OF REFERRED PATIENTS

	Doncaster	Newham
Gender:	(%)	(%)
Female	65	60
Male	35	40
Ethnicity*:		
White	99.5	51
Asian	0.2	25
Black	0.1	17
Mixed	<0.1	4
Chinese or other ethnic group	<0.1	3
Other / do not know	0.1	-
Age:		
18-24	16	13
25-44	52	58
45-64	28	25
Do not speak English:	0	13
Primary diagnosis:		
Depression**	95	46
Anxiety disorders**	5	43
- General anxiety disorder	3.9	6
- Agoraphobia 'no panic'	0.1	-
- Agoraphobia 'with panic'	0.4	-
- Agoraphobia	-	3
- Panic disorder	-	6
- Social phobia	0.3	5
- Specific phobia	<0.1	1
- PTSD	0.1	5
- OCD	0.1	4
- Health anxiety	<0.1	3
- Other anxiety disorder	0	10
Other conditions	1	12
Prior length of current episode:		
Less than 6 months	33	22
6 months to 2 years	33	17
2 years or more	34	61

* These figures are calculated excluding the 'missing' category. Doncaster had none missing, Newham had 9% of the total referred group missing ethnicity data.
** For comparison, the relative rates of GP detection of these two classes of disorders are as follows:
Newham: 69% depression to 31% anxiety disorders
Doncaster: 79% depression to 21% anxiety disorders
(Chan et al, 2008)

ANNEX C: GP PRACTICE DATA

Data from GP practices in Doncaster and Newham were extracted and analysed by the Primary Care Informatics team at St George's, University of London – see Chan et al. (2008) for details. Key findings for each site are summarised below.

	Doncaster	Newham
Proportion of practice adults with new depressive symptoms in first 6 months of 2007	3.21	0.96
Proportion of practice adults with new depressive or other mental health problem in first 6 months of 2007	5.47	1.97
Proportion of practice adults with prescriptions of antidepressants, anxiolytics or hypnotics in the first 6 months of 2007	8.87	5.16
Proportion of practice adults with mental health problems receiving sick notes in the first six months of 2007	1.89	0.82

The team also analysed total prescriptions of antidepressant drugs for the Doncaster and Newham PCTs compared to the national rate in 2006-07: the national level of prescriptions per thousand adult population is 762.4; Newham, with 445.8 prescriptions per thousand adults, has a lower prescribing rate; Doncaster, with 985.5 prescriptions per thousand adults has a higher prescribing rate.

ANNEX D: OUTCOMES BY ETHNICITY

Newham is an ethically mixed borough. By utilizing self-referral, the IAPT service was able to attract an increased proportion of patients from BME groups (see page 34). In this Annex we ask whether the outcomes of individuals in the IAPT service were related to ethnicity. Details of the relevant analyses are given below. The broad answer is that ethnicity did not appear to influence outcome. Patients from BME groups who were treated in the service achieved at least as good outcomes as non-BME patients. This suggests that the Newham service (which included staff from BME groups: see page 32) was successful in equitably meeting the needs of its ethnically diverse population.

Cohort

There are 247 people who can be analysed (i.e. have had 2 or more sessions of therapy, had completed by September 2007 and have ethnicity recorded).[90]

The ethnic distribution is as follows:
- White = 134 (54%)
- Asian / Asian British = 67 (27%)
- Black / Black British) = 33 (13%)
- Other = 13 (5%)[91]

All significance tests are conducted twice – once with all four ethnic groups, once with only the 3 largest ethnic groups (to check the small numbers in the final group are not skewing results).

Recovery rates

Proportion of people who were cases initially and who were no longer cases by end of treatment[92]:

Ethnic group	% recovery	N. of cases
White	50.5	119
Asian / Asian British	66.7	57
Black / Black British	54.2	30
Other	50.0	13

Recovery rates do not vary significantly by ethnic group[93].

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[90] Ethnicity recording is excellent – there are only 2 people who have to be excluded from the analysis because of unknown ethnicity.

[91] This group combines two categories - Chinese and other, and Mixed – because of the small numbers in these groups (Chinese and other = 7, Mixed = 6).

[92] To qualify as a case, person must score 8 or over on the GAD7 or 10 or over on the PHQ9 (or both). Recovery means dropping below both on GAD7 and 10 on PHQ9. Only cases who completed GAD7 and PHQ9 at pre and post are included.

[93] Chi-square=3.842, p=0.279. For the three main groups only, chi-square=3.712, p=0.156..

Changes in scores

Ethnicity		PHQ-9		GAD-7	
		Pre	Post	Pre	Post
White	Mean	15.85	8.24	13.87	7.01
	(SD)	(6.06)	(6.85)	(5.20)	(5.81)
	N	119	119	119	119
Asian	Mean	14.65	7.37	13.91	5.77
	(SD)	(6.35)	(7.32)	(5.10)	(5.56)
	N	57	57	57	57
Black	Mean	13.83	8.23	12.17	6.73
	(SD)	(7.17)	(7.34)	(5.19)	(5.70)
	N	30	30	30	30
Other	Mean	16.77	10.77	14.00	8.92
	(SD)	(4.64)	(9.58)	(4.22)	(7.27)
	N	13	13	13	13
Total	Mean	15.32	8.16	13.65	6.76
	(SD)	(6.24)	(7.21)	(5.12)	(5.83)
	N	219	219	219	219

Initial PHQ9 and GAD7 scores do not vary significantly by ethnic group[94].

Changes in scores (post-treatment) do not vary significantly by ethnic group[95].

Range of disorders

Ethnicity	Condition		
	Depression	Anxiety	Other
White	52%	40%	9%
Asian	38%	53%	10%
Black	50%	29%	21%
Other	46%	46%	8%

There is no significant difference, by ethnic group, in the distribution of disorders[96].

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[94] Oneway ANOVA. For all four groups, p=0.241 and p=0.428 for PHQ9 and GAD7 respectively. For the three main groups, p=0.210 and p= 0.273 for PHQ9 and GAD7 respectively.
[95] Repeated measures GLM. Interaction between group ant time (pre-post): For all four groups, p=0.616 and p=0.198 for PHQ9 and GAD7 respectively. For the three main groups, p=0.472 and p=0.165 respectively.
[96] Likelihood Ratio. For all four groups, p=0.252. For the three main groups, p=0.106.

Duration of current episode

Prior duration of current episode:
- White = 8.37 (mean years), 4.54 (median years)
- Asian = 5.36 (mean years), 2.83 (median years)
- Black = 6.79 (mean years), 2.50 (median years)
- Other = 3.36 (mean years), 1.50 (median years)

The differences are not significant for either all four ethnic categories or for the three largest categories[97].

Breaking down into duration categories:

	Ethnicity			
Duration	White	Asian	Black	Other
< 6 months	15%	8%	27%	23%
6 months – 1 year	4%	9%	3%	8%
1-2 years	11%	8%	3%	23%
2-4 years	12%	30%	12%	8%
4+ years	48%	37%	37%	39%
Missing data	10%	9%	18%	0%

The differences in duration categories between ethnic groups are significant[98].

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[97] One-way ANOVA. For all four groups, p=0.053. For the three main groups, p=0.086.
[98] Likelihood Ratio. For all four groups, p=0.024. For the three main groups only, p=0.010. Analysis included only those with prior duration of illness recorded.

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