



## Dundee Advanced Interventions Service

Annual Report

1 April 2011 to 31 March 2012

Host NHS Board: NHS Tayside

This version of the report has been redacted to adhere to ISD recommendations on data reporting ([http://www.isdscotland.org/About-ISD/Confidentiality/Disclosure-Protocol-Version-2-3\\_webversion.pdf](http://www.isdscotland.org/About-ISD/Confidentiality/Disclosure-Protocol-Version-2-3_webversion.pdf)) which aims to ensure that individuals cannot be identified where data from small areas are reported. Consequently, some data have been combined, and where appropriate, some data have been omitted.



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**Foreword**

This year, the service underwent an independent 5-year review, and this provides a detailed summary of activity and outcomes for the service over the previous five years. This is not yet published yet, but we expect this to be available on request.

As before, readers are invited to refer to our 2008 Report for more detailed information on the interventions.<sup>1</sup> Up-to-date information on the service can also be obtained from our website. Finally, as previously, in order to ensure that readers have access to our current treatment recommendations, we continue to include our treatment recommendations for Obsessive-Compulsive Disorder (OCD) and major depression in Appendix 1 (page 48).

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<sup>1</sup> [http://www.advancedinterventions.org.uk/pdf/AIS\\_Annual\\_Report\\_2008.pdf](http://www.advancedinterventions.org.uk/pdf/AIS_Annual_Report_2008.pdf)

## Executive Summary

### Introduction

The Dundee Advanced Interventions (Neurosurgery for Mental Disorder) Service was first designated as a National Specialist Service in April 2006, and became fully staffed in the first quarter of 2007. It is commissioned to provide assessment and neurosurgical treatment of chronic, severe treatment-refractory depression and obsessive-compulsive disorder.

## 1 Activity

### 1.1. Summary of activity for year ending May 2012

	Actual	Planned
<b>Assessments</b>	26	24
<b>Vagus Nerve Stimulation</b>	0	7
<b>Anterior Cingulotomy</b>	3	5
<b>Follow-up</b>	12	12

### 1.2. Referrals

Forty-five referrals were received during the reporting period (18 men and 27 women); with a mean age of 42.0 years. There were 42 referrals (93.3%) from Scotland, and 3 referrals (6.7%) from England.

### 1.3. Assessments

Twenty-six assessments were conducted during the 2011/12 financial year. Twelve men and 14 women were seen, with a mean age of 41.8 years (range 19.3 – 70.3 years). Three assessments were conducted outwith the SLA.

Approximately 50% of patients had a diagnosis of unipolar major depression, and approximately 30% of patients had a primary diagnosis of obsessive-compulsive disorder; this is a similar diagnostic breakdown to previous years. The presence of other diagnoses reflects the complexity and comorbidity of chronic mental illness.

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#### **1.4. Procedures**

Three Anterior Cingulotomy procedures were performed during 2011/12. One patient came from England. The service also performed implantation of Deep Brain Stimulation as part of an international research study.

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### **2 Mortality Data & Adverse Effects**

There were no deaths and no post-operative infections during the reporting year. Adverse effects are largely unchanged from previous years, and are consistent with the published literature on the procedures undertaken.

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### **3 Waiting Times**

The average ( $\pm$ SD) waiting time (from referral to assessment) for Scottish patients was  $8.5 \pm 5.0$  weeks. This is down slightly from the previous year. Ninety-two percent of patients were seen within 18 weeks, with documented reasons for delays for the two patients that waited longer. One was from England, and delays are commonly due to funding approval issues.

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### **4 Quality of Care**

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#### **4.1. Formal Complaints**

There was one formal complaint which was resolved within the NHS Tayside complaints procedure.

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#### **4.2. Improving the Patient Experience – Patient Satisfaction**

Patient satisfaction for outpatient assessment and inpatient admission continues to be high, with the overwhelming majority reporting positive experiences of the service.

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### **5 Best Value Healthcare – Clinical Audit and Outcomes**

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#### **5.1. Outcome Data**

Of the 6 patients who had undergone Anterior Cingulotomy for depression and were followed up in 2011/12, one met criteria for remission; the patient having maintained this improvement for many years. Two patients who had not met criteria for response still had reductions in their symptom burden.

One patient who underwent Cingulotomy for OCD two years ago continued to experience full clinical remission at follow-up; a status that had been maintained for well over a year.

Of the 3 patients who were reviewed following VNS, one (33%) met criteria for remission. This is consistent with published outcomes in very treatment-refractory patients.

## **6 Teaching and Research Activities**

Members of the team continue to deliver presentations at a regional, national, and international level and publish in peer-reviewed journals in fields such as: neurosurgery; ablative neurosurgery; vagus nerve stimulation; neuroimaging; and neuropsychology.

The service is research active, with a range of active research projects, some of which are part of international, multi-centre clinical trials of neuromodulation for depression. The service is also participating in a novel clinical study of deep brain stimulation for OCD which is funded by the Medical Research Council. Recruitment for this study will open in the third quarter of 2012.

## **7 Service Developments and Future Plans**

The service is participating in an international, multicentre, clinical trial of Deep Brain Stimulation (DBS) for refractory depression. This will enable us to not only advance treatments in this refractory population but also to develop patient choice in this clinical area. Uniquely, in Dundee, we will have the opportunity to evaluate the outcomes for DBS alongside those for other neurosurgical therapies.

Following the deliberations and recommendations of the Expert Advisory Group that conducted the 5 year review on behalf of NSD, it has been proposed that the activities of the AIS be formally extended within the SLA to allow inpatient treatment for OCD to be provided in Dundee for patients in NHS Scotland.

## **8 Summary and Conclusions**

Neurosurgical activity in 2011/12 continues to be variable but it is recognised that clinical activity varies from one year to the next and is dependent upon the nature of the patients referred. We believe that there remain considerable numbers of patients with unmet needs and we are keen to ensure that they have the opportunity to be referred to the service.

## Section A: The Advanced Interventions Service

### A1. Overview of the Service

The Dundee Advanced Interventions Service provides comprehensive, multidisciplinary clinical assessments for patients referred with chronic, treatment-refractory depression (TRD) and Obsessive Compulsive Disorder (OCD).

The Dundee service represents one of only a few clinical teams internationally who provide neurosurgical interventions for psychiatric disorders. The provision of psychiatric neurosurgery by a multidisciplinary/ multi-professional team with members drawn from psychiatry, neurosurgery, mental health nursing, clinical psychology, neuropsychology, and dynamic psychotherapy is, to our knowledge, unique. However, it is only by drawing on such multidisciplinary expertise within an integrated clinical team that patients with such disabling, long-term, healthcare needs can be provided with comprehensive, bespoke, treatment plans that best meet those needs.

#### A1.a) What is Neurosurgery for Mental Disorder?

The standard definition of Neurosurgery for Mental Disorder (NMD) is that provided by The Royal College of Psychiatrists:

*“...a surgical procedure for the destruction of brain tissue for the purposes of alleviating specific mental disorders carried out by a stereotactic or other method capable of making an accurate placement of the lesion”* (Royal College of Psychiatrists, 2000)

This definition is most relevant to ablative (lesion-based) neurosurgery procedures (for example - Anterior Cingulotomy). However, the term ‘NMD’ is often used to refer to non-lesion based neurosurgical procedures such as Vagus Nerve Stimulation (VNS) and Deep Brain Stimulation (DBS). However, the term ‘NMD’ does not include other, non-neurosurgical, brain stimulation techniques such as Transcranial Magnetic Stimulation (TMS/ rTMS)<sup>2</sup> or Direct Current Stimulation (DCS)<sup>3</sup>.

#### A1.b) Designation as a National Service

The Dundee Advanced Interventions (Neurosurgery for Mental Disorder) Service was first designated as a National Specialist Service in April 2006, and became fully staffed in the first quarter of 2007.

We have now been operating as a full service for five years (2007-2012).

<sup>2</sup> [https://en.wikipedia.org/wiki/Transcranial\\_magnetic\\_stimulation](https://en.wikipedia.org/wiki/Transcranial_magnetic_stimulation)

<sup>3</sup> [https://en.wikipedia.org/wiki/Transcranial\\_direct-current\\_stimulation](https://en.wikipedia.org/wiki/Transcranial_direct-current_stimulation)

## A2. Description of Patient Pathway

### A2.a) Target Group for Service

The service exists to provide specialist assessment and treatment options for patients with severe, chronic, treatment-refractory depression and OCD. Although chronic depression is usually defined as unremitting symptoms for at least two years (American Psychiatric Association, 1994), the patients we see are defined not only by prolonged periods of illness, but also by having not responded to a range of pharmacological (e.g. antidepressants), physical (e.g. ECT), and psychological (e.g. Cognitive-Behavioural Therapy) treatments.

It should be noted that tertiary-level services<sup>4</sup> for patients with mood disorders (e.g. depression), and anxiety disorders (e.g. OCD) do not exist in Scotland. Dundee AIS, whilst operating to some extent as a quaternary service, will often assess patients with complex mood and anxiety disorders for whom there is uncertainty about diagnosis or management. In some instances, we are also asked to see healthcare staff with complex mental health problems (typically mood disorders).

Whilst this means that some patients referred to the AIS might be at low likelihood of progressing to neurosurgical intervention, it does mean that: 1) Patients for whom future treatment options are uncertain are able to benefit from a specialist, multi-disciplinary assessment; and 2) we may become involved with patients who will later enter a neurosurgical treatment pathway, but at an earlier stage. This improves communication between clinical services, provides improved continuity and clinical care for patients, and facilitates decision-making at a later date.

### A2.b) Referral

Referrals to the AIS come from consultant psychiatrists who will usually retain clinical responsibility for the delivery of patient care during the assessment process. We do not usually accept referrals from psychiatrists working in the private sector, but would instead make recommendations for transfer of care to the NHS.

Referrals are accepted on the understanding that the referring consultant retains overall clinical responsibility for the ongoing care of the patient, including the implementation of any treatment recommendations made by the service.

Referrals are accepted from throughout the UK and Ireland. We recommend that referrals from outside of the UK are only made following detailed prior discussion. In some cases, we are able to advise on accessing comparative services within the referring country.

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<sup>4</sup> Tertiary services are those that see patients who do not respond to secondary care (*i.e.* community mental health teams and inpatient treatment) services.

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## A2.c) Assessment

We anticipate that patients will normally be able to travel to Dundee for assessment. However, it is acknowledged that there are clinical circumstances where it is better for us to travel to conduct the assessment:

- 1) Where the patient is currently a hospital inpatient and travel to Dundee may be impractical. Patients who are detained under the respective mental health act will usually be assessed locally.
- 2) Where the patient cannot attend for reasons such as: infirmity, risks related to mental state, legal status, or inability to leave home (due to symptom severity, for example).
- 3) Where it is considered of additional importance to assess the patient at home. For example, in the case of severe obsessive-compulsive disorder where symptoms may be confined to the home and it is important to observe and understand the nature of the rituals.

Assessments will usually take place over the course of a full day. Prior to the patient's attendance, we will have reviewed all available case notes so that we have as much information as possible on previous treatments, response, and adverse effects.

In the morning, the patient will undergo an extensive diagnostic psychiatric assessment, using diagnostic interviews<sup>5</sup> and standard rating scales to rate the severity of illness and associated disability.

In the afternoon, an experienced psychological therapist will focus on the previous psychological therapies that the patient has received and explores the patient's experiences of these. After review of all relevant information, we meet with the patient (and carers) to provide feedback on our clinical opinions and to summarise and explain the treatment recommendations we are likely to make. This is an opportunity for the patient and accompanying carer or relative to ask questions and to seek further clarification.

For referrals of patients with severe, disabling OCD, it is often better to conduct the evaluation at home or elsewhere in their local environment. This may, therefore, require a series of visits by several members of the AIS team.

Following assessment, the patient and referrer is provided with a detailed clinical report on diagnosis, and advice on future management that will commonly include the combination of evidence-based pharmacological (drug) and psychological therapies. For some patients the treatment recommendations may also include neurosurgical interventions.

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<sup>5</sup> For example, the MINI International Neuropsychiatric Interview.

**A2.d) Neurosurgical pathway**

The pathway from referral, via assessment, to neurosurgery is shown in simplified form below in *Section E: Referral and Treatment Pathway*. Since patient histories and their journeys through healthcare are almost always complex, and illnesses present with a range of diagnostic issues, the service will aim to review the patient in Dundee on several occasions before settled agreement is reached to proceed with neurosurgery. Further care planning may involve additional visits with the patient and/ or the local psychiatric services. Since patients and their families may require considerable time to consider treatment options, the time from initial assessment to neurosurgery may be extensive.

**A2.e) Follow-up**

All patients who have undergone neurosurgical intervention are reviewed by the service at 12 months, 24 months, and 5 years. In addition, the team retain contact with the patient's own clinical service, and rating scales completed prospectively help to provide complementary information on the patient's progress.

## Section B: Quality Domains

### B1. Efficient

#### B1.a) Report of Actual versus Planned Activity

Table 1 below shows the summary of activity for the service during 2011/12.

**Table 1. Overview of Activity Data for Year Ending March 2012**

	Actual	Planned
Assessments	26	24
Vagus Nerve Stimulation	0	7
Anterior Cingulotomy	3	5
Follow-up	12	12

#### B1.a.1. Follow-up Assessments

Follow-ups (ACING): 8

Follow-ups (VNS): 3

Follow-ups (DBS): 1

#### B1.a.2. Referrals

Forty-six referrals were received during the reporting period (19 men and 27 women); with a mean age of 42.0 years. This represents a slightly younger demographic than the previous year (mean age in 2010/11 was 48.5 years), and a slightly higher proportion of men (F:M ratio of 1.42 in 2011/12 versus 1.63 in 2010/11).

As in previous years, a number of referrals, after careful consideration, were not considered to fall within the remit of the service and this was discussed with the referrer, often with advice on further management. A number of referrals are due to be assessed outwith this reporting period.

#### B1.a.2.1. Referring NHS Organisation

Table 2 below shows the referring NHS Organisation. In total, there were 42 referrals (93.3%) from Scotland, and 3 referrals (6.7%) from England. It is unclear whether the reduction in numbers of

referrals from England is related to financial pressures and changes in commissioning in England and Wales.

**Table 2. New Referrals received during 2011-12: NHS Organisation referring**

NHS Organisation	Country	No. of Referrals
NHS Borders	Scotland, UK	1
NHS Eilean Siar (Western Isles), NHS Shetland, and NHS Orkney	Scotland, UK	3
NHS Fife	Scotland, UK	8
NHS Forth Valley	Scotland, UK	1
NHS Grampian	Scotland, UK	5
NHS Greater Glasgow and Clyde	Scotland, UK	9
NHS Lanarkshire	Scotland, UK	2
NHS Lothian	Scotland, UK	6
NHS Tayside	Scotland, UK	7
Hertfordshire Partnership NHS Trust	England, UK	1
North Cumbria Mental Health and Learning Disabilities NHS Trust	England, UK	1
South West Yorkshire Partnership NHS Foundation Trust	England, UK	1
	<b>Total</b>	<b>45</b>

### B1.a.3. Assessments

Twenty-six assessments were conducted during the 2011/12 financial year. Twelve men and 14 women were seen, with a mean age of 41.8 years (range 19.3 – 70.3 years). Whilst most patients were seen at Ninewells Hospital, a number were seen at their local hospital(s).

#### B1.a.3.1. Referring NHS Organisation

The NHS organisation (Board or Primary Care Trust) responsible for each assessment is shown below in Table 3. Please note that NHS organisation names can change (and frequently do) and the name shown is the one at the time of referral/ assessment.

**Table 3. New Assessments: Referring NHS Organisation**

NHS Organisation	Country	No. of assessments
NHS Borders	Scotland, UK	1
NHS Eilean Siar (Western Isles), NHS Shetland, and NHS Orkney	Scotland, UK	1
NHS Fife	Scotland, UK	4
NHS Forth Valley	Scotland, UK	1
NHS Grampian	Scotland, UK	3
NHS Greater Glasgow and Clyde	Scotland, UK	4
NHS Lanarkshire	Scotland, UK	1
NHS Lothian	Scotland, UK	3
NHS Tayside	Scotland, UK	3
Hertfordshire Partnership NHS Trust	England, UK	2
North Cumbria Mental Health and Learning Disabilities NHS Trust	England, UK	1
South West Yorkshire Partnership NHS Foundation Trust	England, UK	1
<-- Non-UK Health Authority -->		1
<b>Total Number of Assessments:</b>		<b>26</b>
<b>No. of assessments not covered by SLA:</b>		<b>3</b>

One individual was seen from a non-UK Health Authority (referred in the previous year). Due to current NHS commissioning arrangements, this assessment was performed under the SLA. One patient was seen twice by the service during this reporting period.

#### **B1.a.3.2. Diagnosis of Patients Assessed**

The distribution of primary diagnostic categories following assessment is shown below in Table 4. Secondary (or additional) diagnoses are not listed. The main categories of diagnosis are similar to previous years with 53.8% of patients having a primary diagnosis of depression. The percentage of patients with obsessive-compulsive disorder was 30.8%. 15.4% of patients had another primary diagnosis, with a secondary diagnosis of depression or OCD.

It should be recognised that in almost all cases, patients had a number of comorbid diagnoses and it is often hard to determine the 'primary' diagnosis. In chronic and treatment-refractory mental illness comorbid conditions and complex presentations are the norm.

**Table 4. Primary Diagnosis for New Assessments**

Diagnosis	No. of patients	%
F31.3 Bipolar affective disorder, current episode mild or moderate depression	2	7.7%
F31.6 Bipolar affective disorder, current episode mixed	1	3.8%
F32.1 Moderate depressive episode	3	11.5%
F32.2 Severe depressive episode, without psychotic symptoms	1	3.8%
F33.1 Recurrent depressive disorder, current episode moderate	2	7.7%
F33.2 Recurrent depressive disorder, current episode severe without psychotic symptoms	2	7.7%
F33.4 Recurrent depressive disorder, currently in remission	2	7.7%
F33.9 Recurrent depressive disorder, unspecified	1	3.8%
F42.2 Obsessive compulsive disorder, mixed obsessional thoughts and acts	7	26.9%
F42.8 Other obsessive-compulsive disorders	1	3.8%
F45.2 Hypochondriacal disorder	1	3.8%
F60.31 Emotionally unstable personality disorder - borderline type	1	3.8%
F95.2 Combined vocal and multiple motor tic disorder [de la Tourette's syndrome]	1	3.8%
G93.3 Postviral fatigue syndrome (Benign myalgic encephalomyelitis/ Chronic fatigue syndrome, postviral)	1	3.8%
<b>Total</b>	<b>26</b>	<b>100.0%</b>

#### B1.a.4. Procedures

A summary of neurosurgical procedures performed is given below in Table 5.

**Table 5. Procedures performed in 2011-2012**

<b>Anterior Cingulotomy (ACING)</b>	
As first operation:	3
As second operation:	0
As third procedure:	0
<b>Total:</b>	<b>3</b>
<b>Vagus Nerve Stimulation (VNS)</b>	
As first operation:	0
As second operation:	0
<b>Total:</b>	<b>0</b>
<b>Total number of Procedures:</b>	<b>3</b>

#### B1.a.4.1. NHS Organisation Referring for/ funding Surgery

The referring NHS Organisation for neurosurgical patients is shown below in Table 6.

**Table 6. NHS Organisation responsible for Neurosurgical patients**

NHS Organisation	Country	Procedure
Derbyshire Mental Health Services NHS Trust	England, UK	ACING*
NHS Borders	Scotland, UK	ACING
NHS Greater Glasgow and Clyde	Scotland, UK	ACING

#### B1.a.4.2. Procedures not covered by SLA

During this financial year, one procedure was performed outwith the SLA. These are indicated in Table 6 by an asterisk.

The service performed one implantation of a Deep Brain Stimulator for depression. This was provided as part of a multi-centre research programme.

### B1.a.5. Inpatient admissions

Inpatient admission is routine for most neurosurgical patients, although we will try to accommodate patient preferences. For example, if someone is able to travel to attend pre-operative assessments, pre-operative admission can be minimised.

#### B1.a.5.1. Inpatient Exposure and Response Prevention (ERP)

No inpatient ERP programmes were delivered during this financial year. Further discussions about inpatient treatment programmes for OCD are below in section B2.a.2.

#### B1.a.5.2. Durations of Inpatient stay

Details of inpatient admissions are shown below in Table 7.

**Table 7. Duration of inpatient stay (all categories)**

Type of Admission	N	SLA†	Non-SLA
Total inpatient stay - all NMD patients, Carseview (days)	3	43	35
Mean inpatient stay - all NMD patients, Carseview (days)	3	21.5	35
Total inpatient stay - all NMD patients, Ward 23 (days)	3	5	2
Mean inpatient stay - all NMD patients, Ward 23 (days)	3	2.5	2
Total inpatient stay - Inpatient ERP, Carseview (days)	-	-	-
Mean Inpatient stay - Inpatient ERP, Carseview (days)	-	-	-
Total inpatient stay - Other, Carseview (days)	-	-	-
Total inpatient stay - Reviews (days)	-	-	-

† SLA indicates that the admission was provided as part of the Service-Level Agreement.

\* Inpatient ERP is not currently included in the SLA and must be funded by the referring NHS organisation.

### B1.a.6. Comments on variation between actual and planned activity

The planned activity represents notional figures and we expect year-to-year variation in these. Ultimately, neurosurgical activity is determined by the clinical needs of the population being seen. We continue to see more patients than planned, and our rates of follow-up are consistent with planned/ predicted activity.

## B1.b) Resource Use

Details of inpatient admissions are given above in Section B1.a.5. Non-SLA procedures undertaken in 2011-12 permit revenue from this activity to be offset against funding for the service.

## B1.c) Finance and Workforce

### B1.c.1. Financial Report

This is included below in *Section D: Financial Statement*.

### B1.c.2. Workforce

The staff members are listed below in Table 8.

**Table 8. Team members as of May 2012, listed alphabetically.**

Name	Title/ Role
Dr David Christmas	Consultant Psychiatrist
Professor M. Sam Eljamel	Consultant Neurosurgeon
Bob MacVicar	Clinical Nurse Specialist
Anne Mather	Senior Mental Health Nurse and Systemic Family Therapist
Patricia McIntosh	Administrator
Professor Keith Matthews	Professor of Psychiatry and Honorary Consultant Psychiatrist
Professor Douglas Steele	Professor of Neuroimaging and Honorary Consultant Psychiatrist
Margaret Stewart	Medical Secretary
John Swan	Clinical Lecturer and Cognitive Behavioural Psychotherapist
Karen Walker	Senior Mental Health Nurse and Cognitive Behavioural Psychotherapist
Fiona Wilson	Senior Mental Health Nurse and Cognitive Behavioural Psychotherapist
Kath Yates	Top Grade Psychotherapist (Psychodynamic Psychotherapy)

## B1.d) Key Performance Indicators and HEAT targets

The HEAT targets most relevant to the service are those related to access (waiting times) – further details are given below in Section B4.a) . The service has had no unplanned readmissions.

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## **B2. Effective**

The service assesses clinical effectiveness in a range of domains, and these are reported below.

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### **B2.a) Clinical Audit Programme**

The AIS works hard to ensure a continuous review process governing all aspects of patient outcomes. This enables us to work closely with patients, their families, and their care teams to maximise recovery and outcomes following neurosurgery.

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#### **B2.a.1. Multi-disciplinary team meetings**

The service has weekly multidisciplinary team meetings which embrace a range of activities:

- 1) Review of current patient pathways, team discussion about treatment issues, and allocation of referrals. Follow-up reviews are scheduled and inpatient admissions are planned.
- 2) Case discussions where issues have arisen in the treatment or management of particular patients.
- 3) Research meetings where team members will present either their own research, or review recent scientific papers of relevance to the service. In addition, the research activities of the service are discussed and updated.

The multidisciplinary meetings are chaired; have an agenda; and minutes are taken. The minutes reflect the current status of all patients involved with the service and mirror the patient pathway. The minutes provide a contemporaneous record of the clinical activity of the service, and ensure robust clinical governance.

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#### **B2.a.2. Liaison with other clinical networks**

Revisions of national commissioning arrangements in the last financial year mean that the AIS is no longer able to see patients referred from the NCG-commissioned OCD services for England and Wales without additional dialogue with the referring Primary Care Trust. This has the potential to introduce delays in patients being seen, and with the current uncertainties about commissioning in England and Wales and financial pressures in the NHS south of the border one might predict that fewer numbers of patients will be referred.

In the last financial year, the AIS has made recommendations for two patients to be able to receiving inpatient treatment for OCD in London; one of whom has completed a treatment programme. The AIS has liaised closely with services during this episode of treatment.

Additionally, two members of staff have visited inpatient units in England: Springfield University Hospital<sup>6</sup>; and the Bethlem Royal Hospital. This has enabled us to get experience of inpatient programmes in England, and has also meant that links are strengthened between services in Scotland and England.

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#### **B2.a.2.1. Anxiety Disorders Residential Unit (ADRU)**

The Anxiety Disorders Residential Unit specialises in the treatment of Obsessive Compulsive Disorder (OCD) and Body Dysmorphic Disorder (BDD). This service is based at the Bethlem Royal Hospital in London.<sup>7</sup>

The multidisciplinary team is run under the direction of Dr David Veale, Consultant Psychiatrist in CBT, and Head and Principal Therapist Simon Darnley. The service is promoted as being especially suitable for those who have not made sufficient progress locally or where there is insufficient service development to deliver adequate therapy. During the visit we spent time both with Dr Veale and Simon Darnley. Of particular interest was the development of their psychological work to include guided imagery and re-scripting to deal with past trauma which they often experience as a block to successful treatment. They are shortly due to publish a case series on the topic.

The trip to the Anxiety Disorders Residential Unit provided an opportunity not just to observe how their unit works but also to develop links with this service and for them to hear how the national service for neurosurgery actually operates. We are hopeful that they may take up our offer to visit us here in Dundee.

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#### **B2.a.2.2. Springfield University Hospital**

Springfield University Hospital offers a service to South West London and a national in-patient service, both specialising in the treatment of severe complex and treatment-refractory Obsessive-Compulsive Disorder and Body Dysmorphic Disorder (BDD). The in-patient service differs from the Anxiety Disorders Residential Unit (at the Bethlem Hospital) is that it provides a service for people who require 24-hour nursing support and who may have additional risk issues such as self-harm.

This visit gave an opportunity to meet with staff from delivering psychological therapies in the local south west London service and discuss the challenges in delivering treatments in a community setting. Of particular interest was the time spent on the in-patient unit and meeting staff who are part of the National Service, under the consultant leadership of Dr Lynne Drummond; not least as a Scottish patient was currently resident there. This patient had been referred to the unit after

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<sup>6</sup> [http://www.swlstg-tr.nhs.uk/services/ocd\\_bdd\\_national.asp](http://www.swlstg-tr.nhs.uk/services/ocd_bdd_national.asp)

<sup>7</sup> <http://www.national.slam.nhs.uk/services/adult-services/adru/>

assessment by the Advanced Interventions Service and via the cross-border arrangement, and it was of interest to follow his care pathway and to be an active participant in some of his treatments.

### **B2.a.2.3. Child and Adolescent Obsessive Compulsive Disorder Service**

The Child and Adolescent Obsessive Compulsive Disorder Service is a national specialist service, available to people from across the UK and based at the Maudsley Hospital in London. The team is led by Dr Isobel Heyman, Consultant Child and Adolescent Psychiatrist and Honorary Senior Lecturer.

The service offers assessment and treatment for children and adolescents with obsessive compulsive disorder (OCD) and related conditions, including body dysmorphic disorder, tic disorders, Tourette's syndrome, anxiety and habit disorders, including trichotillomania. They also assess and treat OCD related anxiety disorders in young people with developmental disorders (for example high functioning autism spectrum disorders or neurological conditions).

Treatment is delivered through a range of evidence-based care packages tailored to meet the needs of the young person and their parents or carers. This was of interest to us as the availability of a wide range of interventions is likely to influence outcomes from treatment.

Of particular interest was the adapted treatment programme for OCD in autistic spectrum disorders. The AIS has seen a number of patients in recent years with comorbid Aspergers Syndrome and OCD. Treatment can be particularly challenging and the experience of other specialist centres was of usefulness to the Dundee service.

## **B2.b) Clinical Outcomes**

In this report we aim to provide a summary of outcomes for patients reviewed in 2011/12. More detailed, cumulative reporting will occur on a periodic basis when the accumulation of more data makes this process more meaningful. In standard annual reports, outcomes will be reported on a per-patient basis to clinical staff involved in their care and treatment.

### **B2.b.1. Neurosurgery for Mental Disorder – Outcomes during 2011/12**

Ten patients were reviewed during this reporting period. Their outcomes are shown below in Table 9. Outcomes have been grouped by type of intervention, and reductions/ increases in scores are colour-coded accordingly. It should be noted that the reason for a second procedure is non-sustained or partial response to the first intervention. Not all patients reviewed underwent neurosurgery as part of the National Service, but outcomes will be reported nonetheless due to the importance of reporting of long-term outcomes from neurosurgical treatment for psychiatric illness.

**Table 9. Outcomes from NMD Procedures (Follow-up performed in 2011/12)**

ID	Procedure	Indication for surgery	Procedure No.	Weeks post-op	% Change in HRSD-17	% Change in MADRS	% Change in Y-BOCS	Response?	Remission?
276	VNS	F33.1 Recurrent depressive disorder, current episode moderate	1	140.7	31.5	3	-	No	No
263	VNS	F33.1 Recurrent depressive disorder, current episode moderate	1	156	-15.3	3.1	-	No	No
79	VNS	F33.2 Recurrent depressive disorder, current episode severe without psychotic symptoms	1	108.1	-76.1	-82.8	-	Yes	Yes
171	ACING	F42.2 Obsessive compulsive disorder, mixed obsessional thoughts and acts	1	109.5	-	-	-81.1	Yes	Yes
133	ACING	F32.1 Moderate depressive episode	1	284.5	-76.7	-78	-	Yes	Yes
202	ACING	F33.1 Recurrent depressive disorder, current episode moderate	2	54.5	2.3	-2.7	-	No	No
249	ACING	F32.2 Severe depressive episode, without psychotic symptoms	2	51.5	17	7.3	-	No	No
67	ACING	F33.2 Recurrent depressive disorder, current episode severe without psychotic symptoms	2	53.5	-16.8	-14	-	No	No
126	ACING	F32.2 Severe depressive episode, without psychotic symptoms	2	53.5	1.7	-5.6	-	No	No
10	ACING	F33.2 Recurrent depressive disorder, current episode severe without psychotic symptoms	3	53.7	-16.6	-8.6	-	No	No

**HRSD-17** = 17-item Hamilton Rating Scale for Depression; **MADRS** = Montgomery-Åsberg Depression Rating Scale; **YBOCS** = Yale-Brown Obsessive Compulsive Scale.

**Depression Criteria:** **Response** is defined as a  $\geq 50\%$  improvement in baseline score on the HRSD-17 **OR**  $\geq 50\%$  improvement in baseline score on the MADRS. **Remission** is defined as HRSD  $\leq 7$ , or MADRS  $\leq 10$ .

**OCD Criteria:** **Response** is defined as  $\geq 35\%$  improvement in baseline Y-BOCS. **Remission** is a Y-BOCS score  $\leq 10$ .

## **B2.c) Service Improvement**

### **B2.c.1. Clinical Meetings**

The team meets formally to discuss referrals, to review assessments, and to review care pathways on a weekly basis. The team also have research meetings where current research activity is discussed, along with reviewing treatment outcomes. In addition, members of the team present relevant research at these meetings.

## **B2.d) Research**

The following is an overview of research activities undertaken by the service and team members.

### **B2.d.1. List of publications (in press/ published)**

1. PERRIN, J. S., MERZ, S., BENNETT, D. M., CURRIE, J., **STEELE, J. D.**, REID, I. C. & SCHWARZBAUER, C. (2012) Electroconvulsive therapy reduces frontal cortical connectivity in severe depressive disorder [In Press]. *Proceedings of the National Academy of Sciences*.
2. SPRENGELMEYER, R., **STEELE, J. D.**, MWANGI, B., KUMAR, P., **CHRISTMAS, D.**, MILDERS, M. & **MATTHEWS, K.** (2011) The insular cortex and the neuroanatomy of major depression. *Journal of Affective Disorders*, 133, 120-127.
3. **CHRISTMAS, D.** (2011) Recommended management of treatment-refractory depression. *Prescriber*, 22, 28-37.
4. MWANGI, B., EBMEIER, K. P., **MATTHEWS, K.** & **DOUGLAS STEELE, J.** (2012) Multi-centre diagnostic classification of individual structural neuroimaging scans from patients with major depressive disorder. *Brain*, 135, 1508-1521.
5. MWANGI, B., **MATTHEWS, K.** & **STEELE, J. D.** (2012) Prediction of illness severity in patients with major depression using structural MR brain scans. *Journal of Magnetic Resonance Imaging*, 35, 64-71.

### **B2.d.2. Books/ Book Chapters**

The service has recently completed an online CPD (continuing professional development) module on Neurosurgery for Mental Disorder for the Royal College of Psychiatrists.<sup>8</sup>

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<sup>8</sup> <http://www.psychiatrycpd.co.uk/learningmodules/neurosurgeryandneuromodulati.aspx>

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### B2.d.3. Guideline Contributions

Members of the service have contributed to the following national documents, guidelines, and consultations:

1. World Society for Stereotactic and Functional Neurosurgery, Psychiatric Neurosurgery Committee Consensus Guideline on Clinical and Ethical Standards.
2. National Horizon Scanning Centre, National Institute for Health Research, University of Birmingham.

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### B2.d.4. Current Research Projects

Below is a summary of current research projects that the service or members of the team are currently leading or making a major contribution to. The Principal Investigator (PI) is listed for each project:

**1) Neuropsychological Function as a Result of Chronic Exposure to Methadone and Other Opiates: Neural Responses to Rewards - A Study Using Functional Magnetic Resonance Imaging (fMRI) (PI: Dr Alex Baldacchino)**

- a) Recent research would suggest that substance dependence is related to an abnormal functioning of reward valuation systems in the brain - opiate-dependent individuals tend to overvalue drugs compared to natural rewards. Substance dependence has also been associated with impulsive behaviour *i.e.* opiate-dependent subjects discount delayed rewards at a larger rate than healthy subjects. This study will test whether chronic opiate exposure is associated with measurable executive dysfunction and if chronic, long-acting opiates are associated with greater behavioural and neuropsychological toxicity. Using fMRI the study will investigate the neural substrates of valuation and discounting of delayed rewards in healthy controls and cohort subjects.

**2) Study Title: Diffusion Tensor and Functional Imaging of Chronic Treatment Refractory Depression and Neurosurgical Treatments. (PI: Prof. Douglas Steele)**

- a) This study will use Diffusion Tensor Imaging (DTI) and functional magnetic resonance imaging (fMRI) to relate neuropsychological performance and clinical status (symptoms) with measures of white matter integrity and grey matter function in 'emotional-processing-relevant' brain networks. This will lead to a greater understanding of the consequences and side-effects of neurosurgery. Using DTI in addition to fMRI will help to map lesion

topography and subsequent effects on communicating white matter tracts with great precision, helping to develop our understanding of the functional architecture of depression. This will help guide the development of novel and more effective treatment strategies.

**3) A Clinical Evaluation for the Management of Patients with Major Depressive Disorder, single or recurrent episode, with Deep Brain Stimulation: The BROADEN Study (PI: Prof. Keith Matthews)**

- a) To evaluate the safety and efficacy of Deep Brain Stimulation for patients with MDD, who have failed to respond to at least 4 treatments in the current episode. The primary outcome assessment will occur at 6 months and all patients will be followed-up for 1 year. See Section C1. below for more information.
- b) The study will compare group 1 who will be implanted with the device and activated for stimulation and group 2 (the control group) who will be implanted with the device but will not receive active stimulation for the first six months of the study. This study will also aim to describe the effects of DBS on measures of regional brain metabolic activity using electroencephalography (EEG) and PET (positron emission tomography) scanning.
- c) So far, one patient has been implanted and one other patient has been recruited. The study is ongoing.

**4) Pilot investigation of clinical effectiveness and mediators of learning in the CBASP (PI: John Swan; CSO reference number: CZG/2/461)**

The following is an extract from the completed research summary provided to the Chief Scientist Office:

*“This was a case series carried out by clinicians and researchers at NHS Tayside, NHS Lothian and the University of Dundee. People suffering from Chronic Depression were carefully and fully assessed using a broad range of measures of depression, social functioning, interpersonal problems, quality of life and general physical and psychological health. They were then offered 6 months of psychotherapy resulting in at least 20 hours of therapy. The treatment was a new psychological therapy for chronic depression called Cognitive behavioural Analysis System of Psychotherapy (CBASP). At the end of therapy measures were repeated.*

*Six months of CBASP is associated with significant reductions in symptoms of depression for 30% of participants; a further 30% made clinically significant changes in these measures with 40% unfortunately experiencing no change in their depression. In summary, 60% of participants were substantially improved on measures of depression, general health, social functioning, quality of life*

*and the quality of interpersonal relationships. Premature withdrawal from therapy was not common; most people who started therapy finished their treatment."*

#### **6. Deep brain stimulation for severe obsessive compulsive disorder: efficacy and mechanisms of ventral striatum and subthalamic nucleus targets. (PI Professor Eileen Joyce, UCL, London).**

The overarching study aim is to establish the potential of deep brain stimulation (DBS) for people with obsessive compulsive disorder (OCD) who have failed to respond to the best currently available medical treatment and who are significantly disabled by their symptoms. Previous studies indicate that DBS of the ventral striatum/ventral capsule (VS/VC) and the subthalamic nucleus (STN) are effective for OCD. About two-thirds showed clear improvement but remained moderately symptomatic. The main objective of this study is to investigate whether this efficacy can be improved by determining:

- i. Whether DBS at both sites is more efficacious than DBS at either site alone for the alleviation of all symptom dimensions of OCD;
- ii. The different mechanisms of action of DBS at the two brain sites which explain why DBS at both sites is better than each site alone;
- iii. Whether adjunctive cognitive behavioural therapy improves DBS-mediated clinical outcomes.

#### **B2.e) Teaching activities**

Many members of the team are involved in undergraduate and postgraduate teaching, both at a local level and on a national stage.

##### **B2.e.1. Conference Presentations**

- 1) *"Myth, Method, and Measurement: What do we really know about antidepressants?"* | Friday, May 27, 2011 | David Christmas | Scottish Mental Health Nurse Prescribers' Forum Conference | Dundee
- 2) *"Advanced Interventions - How good are the clinical outcomes?"* | Tuesday, June 28, 2011 | David Christmas | 40th International Congress of the Royal College of Psychiatrists | Brighton
- 3) Workshop on Treatment-Refractory Depression | Thursday, October 13, 2011 | David Christmas | General and Community Faculty Meeting – Royal College of Psychiatrists | Newcastle
- 4) Workshop on the pharmacological treatment of obsessive-compulsive disorder; guidelines for first line treatment and approaches to resistant and refractory cases | Wednesday, June 29<sup>th</sup>,

2011 | Keith Matthews with Dr Lynne Drummond and Professor Naomi Fineberg (NCG Commissioned OCD Services, England) | 40th International Congress of the Royal College of Psychiatrists | Brighton

- 5) *“Through a glass, darkly: Peering into the murky world of pharmaceutical shadow-science”* | Thursday, December 08, 2011 | David Christmas | Scottish Mental Health Research Network Annual Scientific Meeting 2011: Working with Industry | Edinburgh

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### **B2.e.2. Other Presentations**

- 1) *“CBASP – Update on Advanced Interventions Service for Depression”* | 16 December 2011 | NE Scotland Consultant Psychiatrists | Carseview Centre, Dundee
- 2) *“Antipsychotics – Evidence and Experimercials: Deciphering the real story about antipsychotic drugs”* | Wednesday, February 15, 2012 | David Christmas | Consultant CPD Meeting (NHS Grampian) | Royal Cornhill Hospital, Aberdeen
- 3) Masterclasses on the Management of Severe OCD | Keith Matthews with Dr Lynne Drummond and Professor Naomi Fineberg (NCG Commissioned OCD Services, England) at Hertfordshire Partnership NHS Foundation Trust [27.06.11] and South West London and St Georges NHS Trust [29.06.2011]
- 4) *“DBS for Refractory Depression”* | 8<sup>th</sup> December 2011 | Keith Matthews | Scottish Mental Health Research Network Annual Scientific Meeting | Royal College of Physicians of Edinburgh.
- 5) *“Neurosurgery and Neuromodulation for Treatment-Refractory Depression: A Clinical Update”* | Monday, March 12, 2012 | David Christmas | Borders General Hospital, NHS Borders

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### **B2.e.3. Other teaching activities**

Members of the team continue to contribute to the University of Dundee undergraduate medical course, and also teach on the postgraduate MRCPsych course in Tayside.

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### **B2.f) Supporting local services**

We continue to work with local services to improve the pathways of patients on a neurosurgical pathway. We continue to strive to facilitate cross-boundary coordination of patient care, and we aim to ensure that an understandably anxiety-provoking journey for patients is managed as smoothly as possible.

More time is being spent planning post-operative care prior to neurosurgery, and we are pleased to see that outcomes are enhanced by close working with local services.

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### **B3. Safe**

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#### **B3.a) Risk Register**

Risk management is managed within the framework of the host service, NHS Tayside.

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#### **B3.b) Clinical Governance**

Dundee AIS is subject to the clinical governance framework operated by the host NHS Board. For example: appraisal; job planning; continuing professional development; knowledge and skills framework (KSF); *etc.*

The NHS Tayside Safety, Governance and Risk framework is being aligned with the new Quality Strategy announced by the Cabinet Secretary for Health and Wellbeing in February this year. The three key drivers are: Person Centeredness; Effectiveness; and Safe.

The quality and governance approach of Dundee AIS measures up to the key drivers for NHS Scotland strategies as well as local frameworks.

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#### **B3.c) Healthcare Associated Infection and Scottish Patient Safety Programme**

Details of HAIs are given below in Section B3.d.2.

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#### **B3.d) Adverse Events**

Significant adverse events are discussed first, followed by a more detailed discussion of adverse effects relating to the treatments provided.

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##### **B3.d.1. Survival Data**

Survival following neurosurgical intervention continues to be 100%.

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##### **B3.d.2. Number of Hospital Acquired Infections**

**Number:** None

**Description:** N/A

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##### **B3.d.3. Number of Critical Incidents**

There were no critical incidents in the last 12 months of activity.

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#### **B3.d.4. No. of Deaths**

No deaths have occurred as a result of neurosurgical intervention since such interventions were first offered in 1992. In 2011 a patient who underwent neurosurgery in the early 1990s died from an unrelated cause.

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#### **B3.d.5. Adverse effects**

We continue to systematically collect information on adverse effects from both Anterior Cingulotomy and VNS. In addition, we conduct extensive neuropsychological assessments (clinical battery and computerised testing) to identify post-surgical impairments in cognitive function.

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##### **B3.d.5.1. Anterior Cingulotomy**

Attributing adverse effects to neurosurgery is challenging, since some potential adverse effects (such as lack of energy and/ or motivation) are common symptoms of the underlying disorder and/ or some treatments (e.g. antidepressants). We continue to attempt to attribute patient complaints to neurosurgical intervention, adverse effects from medication, or symptoms of the underlying disorder, maintaining a low threshold for attributing adverse effects to neurosurgery.

The most common adverse effects in the first 2-3 weeks after surgery are: Headache (40.9%) Tiredness (40.9%); Nausea (27.3%); Concentration problems (27.3%); Dizziness (18.2%); and Incontinence (13.6%). These are expected to have resolved in the first 2-4 weeks after surgery. The adverse effect profile of Anterior Cingulotomy continues to be relatively benign, with few effects persisting beyond the immediate post-operative period. At 12 months the most common problems reported are: Memory problems (36.85%); Concentration problems (26.3%); Weight gain (26.3%); and Headache, Nausea, Tiredness (each 15.8%). The confidence that we have in attributing these effects to the procedure is relatively low, since depressive symptoms will explain many of them. Similarly, weight gain is relatively small and is frequently due to medication effects.

Neuropsychological assessment, conducted prospectively for many years, has failed to evidence consistent changes in performance, with most patients demonstrating improvements which are probably mediated by the reductions in symptom burden. The fact that self-reports of memory problems and concentration difficulties are not evidenced by objective testing would suggest that these complaints are explainable by on-going depressive symptoms.

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### B3.d.5.2. Vagus Nerve Stimulation

VNS continues to be well-tolerated at follow-up with the majority of patients being largely unaware of active stimulation after the first year. At 12-month follow-up the most common adverse effects in Dundee patients have been: Voice alteration (50.0%); Throat Discomfort (25.0%); Coughing (12.5%); and Facial Numbness (6.3%). These are consistent with the literature on VNS. All adverse effects are stimulation-related and are generally tolerated. There have been no instances where adverse effects have necessitated discontinuation of active stimulation. Magnet use<sup>9</sup> is infrequent.

Follow-up of the individual who experienced apparent vocal cord paralysis following implantation of VNS identified other causes for the voice problems which were unrelated to the VNS.

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### B3.e) Formal Complaints

The service has received one complaint in the last 12 months of operation. This has been dealt with via the NHS Tayside complaints system.

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## B4. Timely (Access)

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### B4.a) Waiting Times

NHS Scotland has had a target “for 90 per cent of patients to wait no longer than 18 weeks from referral to treatment”, from December 2011.<sup>10</sup> Compliance with this target is reported in Section B4.a.3. below.

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#### B4.a.1. Waiting times from referral to assessment

Waiting times for 2011/12 are shown below in Table 10. All times are expressed (in weeks) from date of referral received to the first appointed date for assessment. Waiting times for English patients are clearly longer than for Scottish patients, but this is invariably due to the requirement for funding to be available before someone can be seen.

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<sup>9</sup> Patients are given a magnet which can be used to temporarily stop active stimulation in response to problematic adverse effects.

<sup>10</sup> <http://www.scotland.gov.uk/About/scotPerforms/partnerstories/NHSScotlandperformance/18weeksRTT>

**Table 10. Waiting times for the service in 2011/12**

	N	Average waiting time (weeks) from referral to assessment (SD/ range)	Max waiting time (weeks)
 Scotland	23	8.5 ± 5.0	23.7
 England/ Wales	3	17.3	28.4

Please note that the number of patients included in this table may be less than the total number of assessments reported in Section B1.a.3.

#### **B4.a.2. Waiting times from assessment to surgery**

There is often a significant period of time between when patients are assessed and when they subsequently proceed to neurosurgical intervention. In all cases, it is appropriate and/ or necessary for the patient to have sufficient time to make informed choices about such treatments. In many cases, additional treatment trials need to be completed before it can be considered reasonable to proceed to neurosurgery, and all patients proceeding to ablative neurosurgery (regardless of country of residence) have to be reviewed by the Mental Welfare Commission for Scotland (MWC) who must approve and certify the procedure before the treatment can proceed. Assessment by the MWC typically takes 6-8 weeks, depending on where the patient needs to be seen. We continue to liaise with the MWC in order to minimise time to review.

#### **B4.a.3. Compliance with NHS Scotland Waiting Time Targets**

In the last 12 months, two (8%) patients had a time from referral to assessment that exceeded 18 weeks. Reasons for these delays are listed below in Table 11. One of these was from England, and delays arose whilst funding was confirmed.

**Table 11. Reasons for delays in assessments.**

Reason for delay in assessment	N
Delays occurred because of lack of confirmation of funding for assessment	1
Referring psychiatrist completing additional assessments and history of previous treatment	1
<b>Total</b>	<b>2</b>

The service works hard to minimise delays in patients being seen, but often such delays are due to referring PCTs in England taking time to provide either confirmation of funding, or having to wait for additional information which enables the AIS to process the referral and/ or advise referrers. Whilst we work hard to minimise such delays, we are unable to affect aspects of the pathway prior to the patient being seen by us.

#### **B4.b) Review of Clinical Pathway**

The clinical pathway is continually reviewed in order to ensure maximum benefit for patients and minimum burden. It is acknowledged that the need to accurately assess baseline functioning does mean that patients often find the pre-operative work-up tiring. However, the completion rate is 100% and no patients have declined to undergo detailed pre-operative and post-operative assessment.

The self-report measures that all patients complete in order to provide important complementary data on symptom burden, quality of life, and functioning is currently as streamlined as is possible and any additional assessments must demonstrate utility.

Members of the team continue to provide teleconferencing when delivering ongoing follow-up for some patients in more remote areas of Scotland. Further, in a number of cases in the last year, members of the team have attended clinical meetings in the patient's locality in order to minimise travel for patients, and their clinical team.

Having access to patient notes continues to be an issue for the service. Administrative staff spend a considerable amount of time trying to ensure that patient records are available for review prior to the patient being seen. In some cases, notes are sent late and in a small number of instances, assessments have had to be rescheduled because the referring NHS body has not sent clinical notes. Interestingly, there is a greater willingness to send original notes when the alternative would be to photocopy nine volumes of case notes.

It is common for clinical psychology notes to be kept separate from the records of other parts of the mental health service in Scotland. Since part of the assessment process involves a review of previous psychological treatment, we continue to work hard to ensure that all records are available so that decisions about treatment can be made. The existence of another set of records independent to the patient's main set of records is a problem for us, and arguably for clinical services in general.<sup>11</sup>

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<sup>11</sup> For further information on NHS Scotland Health Records Management, see <http://www.scotland.gov.uk/Publications/2008/07/01082955/0>

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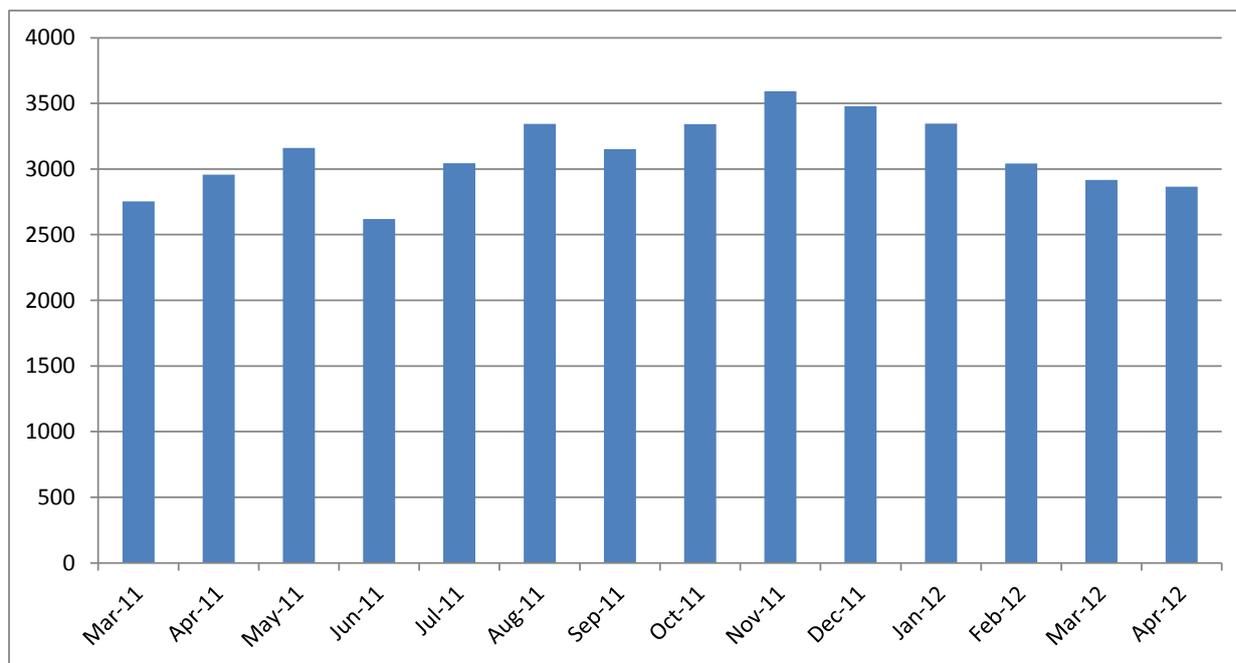
**B5. Person-Centred**

All assessments result in a specific set of treatment recommendations which take into account the individual's previous experiences, treatment history, and wishes regarding treatment. In the run-up to neurosurgical intervention, individualised care plans are developed which involve identifying the patient's strengths, resilience, and future goals.

**B5.a) Patient / Carer / Public Involvement**

As previously reported, the AIS has facilitated the setting up of an internet-based, 'social networking' forum for current and former patients. This closed group is managed/ moderated by two current/ former patients and an employee from one of the local Mental Health Associations. The intention of the group is to provide independent expert advice and information for any patients entering a prospective neurosurgical treatment pathway and to provide support and information for anyone who has already entered such a pathway. The AIS staff role is restricted to directing appropriate patients to the website and we have no access to the content. However, we do discuss, in general terms, how the forum is functioning and how we might contribute to its improvement on a regular basis with the moderators.

The AIS was one of the first national services to have its own website which acts as a portal for professionals and patients. Up-to-date information is provided, along with rating scales and tools for the use of patients, and current guidelines used within the service. The website has had over 100,000 page impressions since its inception and in the last year has had between 2,500 and 3,500 visits per month. Visits to the website in the last year are shown below in Figure 1.



**Figure 1. Visits to Advanced Interventions website (March '11 - April '12)**

**B5.b) Better Together Programme**

Although the service has not participated directly in the *Better Together* programme, the service ensures that patient feedback is continually obtained and acted upon in order to improve the quality of care provided. The specialised nature of the service provided has meant that bespoke tools have been developed in order to get patient feedback on the activities of the AIS. We believe that the feedback obtained is not only important to improving patient care, but is more extensive than currently exists in most parts of mental health services.

**B5.c) Patient Feedback**

We continue to collect patient satisfaction data on a routine basis. Patients are asked to complete and return a questionnaire after outpatient assessments and inpatient admissions. The high level of returns is, we believe, a positive reflection of patient experience.

Cumulative responses are categorised as follows and averaged:

Score	Represents	
1	Strongly Disagree	Much worse
2	Disagree	Worse
3	Neutral	Neutral
4	Agree	Better
5	Strongly Agree	Much better

### B5.c.1. Patient Feedback for New Assessments

The demographics of the sample are shown in Table 12. The mean scores, for each question are given below in Table 13.

**Table 12. Demographics of patient satisfaction questionnaire sample (N=58)**

Characteristic	N	%
<b>Gender</b>		
Male	23	39.7%
Female	35	60.3%
<b>Age Group</b>		
18-29	5	10.0%
30-39	12	24.0%
40-49	14	28.0%
50-59	15	30.0%
60 and above	4	8.0%
<b>Country of Residence</b>		
England/ Wales/ NI	1	1.7%
Eire	6	10.3%
Scotland	50	1.7%
Other	1	86.2%

At least one questionnaire was returned from each NHS Board in Scotland.

**Table 13. Results of outpatient satisfaction questionnaire (N=58)**

Question	Mean Score	Type of Scale
Explained to me what would happen during the day	4.3	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
Easy to complete questionnaires	3.5	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
Helpful for partner/relatives/friend to come	4.3	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree

Question	Mean Score	Type of Scale
Pleased that partner/relatives/friend were also seen	4.4	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
Helpful to be seen by two people	4.2	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
Good to meet at end to discuss recommendations	4.6	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
Information given at feedback was helpful	4.4	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
Staff were interested in me and not just my illness	4.3	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
Felt staff listened to what I had to say	4.5	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
Felt staff were honest and open with me	4.5	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
Felt I could talk freely with those meeting with me	4.4	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
Had confidence in doctors and nurses who assessed me	4.5	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
Staff seemed knowledgeable about my condition	4.6	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
Felt staff involved me in decision-making about my care	4.2	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
Staff seemed to respect my decisions about my treatment	4.4	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
Overall, I am satisfied with care I received	4.4	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
I found it helpful to be seen by the service	4.6	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
I learned something new about my problems and available treatments	4.3	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
After attending I feel more optimistic about treatment	3.8	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
Compared to attendance at other outpatient assessments, my attendance at AIS was:	4.2	Much Worse, Worse, Neutral, Better, Much Better

The overall responses continue to be favourable, with average responses remaining positive. We are gratified that: the majority of people find the assessment to be a positive process; the appraisals of the team's ability to engage are highly-rated; the experience of multi-disciplinary assessment is positive; the involvement with relatives/ carers is endorsed; and patients feel more hopeful after attending.

Responses on "After attending I feel more optimistic about treatment" are interesting since they contrast with very positive responses on other components on the feedback process. We continue to believe that this reflects complex interactions between individuals' experiences of being seen by a service that they may perceive as a 'last resort' and having additional information about diagnosis and prognosis that they might not have received previously.

Comments from free-text parts of the questionnaire are listed below in Section G: Appendix 2. The source (number of the questionnaire received in sequence) of the quote is given in parenthesis after each quote. Only responses in this current reporting year are included.

### B5.c.2. Patient Feedback for Inpatient Admissions

Responses to the inpatient questionnaire are given below in Table 14. Scoring is similar to that given above, with higher scores representing greater satisfaction.

**Table 14. Results of inpatient satisfaction questionnaire (N=18).**

Question	Mean	Scale Items
Ward staff were welcoming	4.0	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
Ward staff knew purpose of admission	4.0	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
I had a named nurse	3.9	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
My named nurse knew about purpose of admission	3.8	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
I was orientated to the ward	3.8	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
Staff could respond to my physical needs	3.9	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
Staff could respond to my emotional needs	3.7	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
Able to discuss problems with staff during daily one-to-one contact	3.8	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
Ward staff & nurses from AIS were in close communication with ward	3.9	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
My accommodation (room, shower, bed) was of acceptable standard	4.0	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
Ward nursing staff were consistently approachable, courteous, trustworthy, friendly & responsive to my needs	4.0	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
Written info was made available to me	4.0	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
I was clear about arrangements for discharge	4.0	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
I knew who to contact if problems following discharge	4.0	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
Ward staff & nurses from AIS were in close communication	4.0	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
Staff were interested in me and not just my illness	3.9	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree

Question	Mean	Scale Items
I felt staff listened to what I had to say	3.9	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
I felt staff were honest and open with me	3.9	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
I felt I could talk freely with those looking after me	3.9	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
I had confidence in doctors & nurses in ward	4.0	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
Staff seemed knowledgeable about my condition	4.0	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
I felt staff involved me in decision-making about my care	3.9	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
Staff seemed to respect my decisions about my treatment	4.0	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
Compared to inpatient admission in other units, my stay in Dundee was:	4.3	Much Worse, Worse, Neutral, Better, Much Better

It should be noted that the total number of questionnaires is lower than for the outpatient setting, and some respondents didn't answer all questions. This means that small numbers of less positive responses can bring the mean down.

However, we are pleased to report that patients continue to rate their stay in the inpatient psychiatric unit as being 'Better' or 'Much better' than other units. This feedback has been reported back to ward staff.

## B6. Equitable

### B6.a) Age limits

The service has no upper or lower age limit, although it is realistically expected that the time needed to demonstrate resistance to a range of treatments, and to progress to a referral to the service, will mean that most patients are in their 20s by the earliest time of referral. Illness characteristics play a role, since the time from onset of symptoms in OCD (for example) and the time of diagnosis is approximately eight years.

### B6.b) Demographics

A brief description of the demographics of referrals since 2006 is given below in Table 15 (N=213). Again, it should be noted that the female: male ratio in depression is unequal, and differences in these rates may reflect differences in prevalence rates.



### B6.d) Geographical Access

The geographical distribution of referrals (not assessments) is given below in Table 17.

**Table 17. Geographical distribution of referrals 2006-2010.**

Country	N	Percentage
Eire	3	1.4%
England, UK	25	11.7%
Northern Ireland	5	2.4%
Scotland, UK	180	84.5%
	<b>213</b>	<b>100.00%</b>

The NHS Board for all assessments in recent years is shown below in Table 18. It continues to be apparent that the majority of referrals come from the central belt, with an eastern predominance. Undoubtedly, this reflects the proximity to Dundee, and this is something that is seen with a number of National Services: the majority of referrals come from either the host NHS Board, or neighbouring Boards.<sup>12</sup>

**Table 18. NHS Board for assessments and rates per 100,000 population (2006-2012).**

NHS Board	No. of Assessments	Population (2010) <sup>13</sup>	Assessments per 100,000
NHS Borders	3	112,870	2.66
NHS Dumfries and Galloway	4	148,190	2.70
NHS Eilean Siar (Western Isles), NHS Shetland, and NHS Orkney	3	-	-
NHS Fife	26	364,945	7.12
NHS Forth Valley	6	293,386	2.05
NHS Grampian	20	550,620	3.63
NHS Greater Glasgow and Clyde	22	1,203,870	1.83
NHS Highland	6	310,830	1.93
NHS Lanarkshire	4	562,477	0.71
NHS Lothian	14	836,711	1.67
NHS Tayside	38	402,641	9.44

It is notable that the larger NHS Boards (NHS Lothian and NHS Greater Glasgow & Clyde) are generally under-represented in activity. It remains unclear why this is, although Table 19 indicates that referrals from these two NHS Boards have increased in the last 12 months. The imbalances in

<sup>12</sup> Data available on request.

<sup>13</sup> <http://www.gro-scotland.gov.uk/files2/stats/time-series/hbe8110-single-year-of-ageCORRECTED.xls>

referrals from particular NHS Boards is less evident in the last financial year; the service is pleased to see this and efforts continue to be made to ensure that referrals come from all NHS Boards.

**Table 19. Referrals per 100,000 for Scottish NHS Boards (Year Ending 2012)**

<b>NHS Organisation</b>	<b>No. of Referrals</b>	<b>Referrals per 100,000</b>
NHS Borders	1	0.89
NHS Eilean Siar (Western Isles), NHS Shetland, and NHS Orkney	3	-
NHS Fife	8	2.19
NHS Forth Valley	1	0.34
NHS Grampian	5	0.91
NHS Greater Glasgow and Clyde	9	0.75
NHS Lanarkshire	2	0.36
NHS Lothian	6	0.72
NHS Tayside	7	1.74
	<b>42</b>	

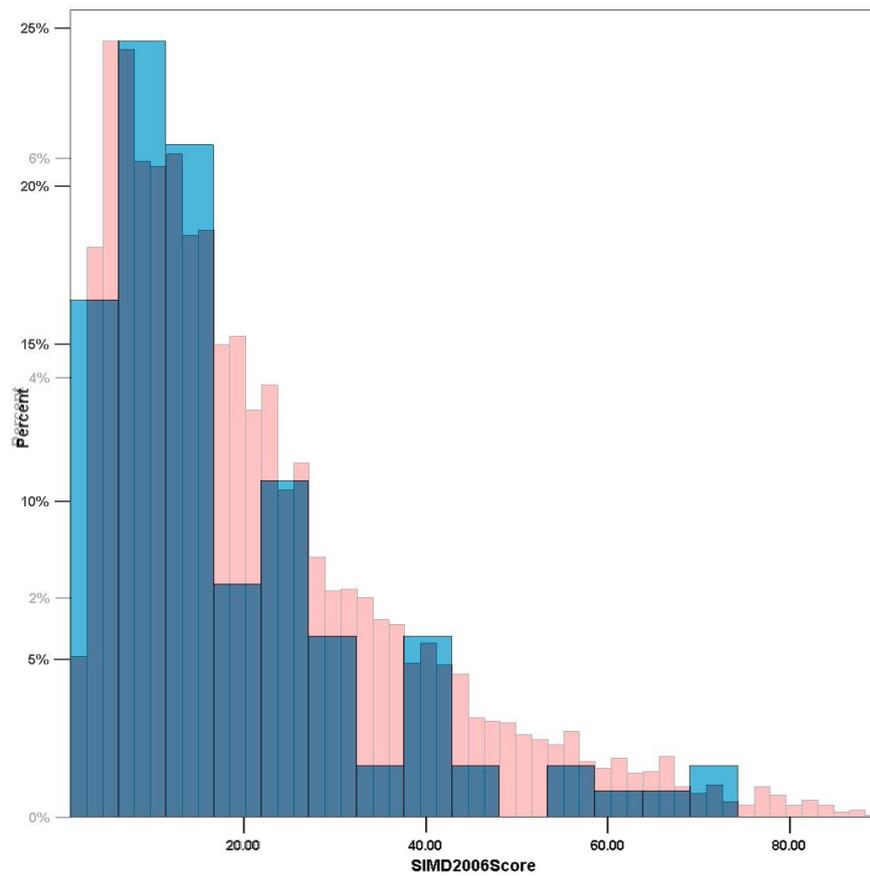
The source of assessments in the last three years is represented geographically in Figure 2.



**Figure 2. Source of assessments 2010-2012. Image copyright Google Earth.**

#### **B6.e) Socioeconomic status of referrals**

This was covered in the annual report in 2010 and the analysis has not been repeated this year. For reference, the figure is given below.



**Figure 3. Distribution of SIMD scores for AIS referrals 2006-2010 (blue) and Scotland (red).**

Essentially, the distribution of referrals broadly matches that of Scotland, and there are no concerns regarding equity of access at this time.

## Section C: Looking Ahead – Service Developments and Expected Changes

### C1. Deep Brain Stimulation

The BROADEN study (<http://www.broadenstudy.com>) is a detailed study of the efficacy of electrical deep brain stimulation of a specific brain area (Brodmann Area 25) as a treatment for disabling and treatment refractory depression. We are now able to offer this experimental treatment to a small number of carefully selected patients as an alternative to the established therapies (VNS and Anterior Cingulotomy) in Dundee. This would be on the basis of participation in an ethically approved research study. Because the study has been designed to evaluate this novel therapy to a very high standard of scientific rigour, we believe this represents an excellent opportunity to not only advance patient care but also to develop patient choice in this clinical area. Uniquely, in Dundee, we will have the opportunity to evaluate the outcomes for this DBS alongside those for other neurosurgical therapies.

One individual has undergone implantation of DBS and a further patient has been recruited to the study. At this stage, it is too early to report outcomes, but no significant adverse effects are apparent so far.

### C2. Vagus Nerve Stimulation

Following the 5-year review, NSAG recommended that VNS should not be part of the designated service, in contrast to the expert opinion of the review group. Whilst the financial cost of VNS to NHS Boards in recent years is low (due to low activity), VNS can no longer be provided to Scottish patients as part of the designated national service. However, it remains a treatment option for patients where the NHS Board will fund the procedure. All current patients who have undergone implantation of VNS will continue to be followed-up as per the existing arrangements, and we will continue to report detailed outcomes for VNS.

### C3. Inpatient treatment for OCD

Following the 5-year service review, NSAG recommended that expert inpatient treatment should be incorporated into the designated service.

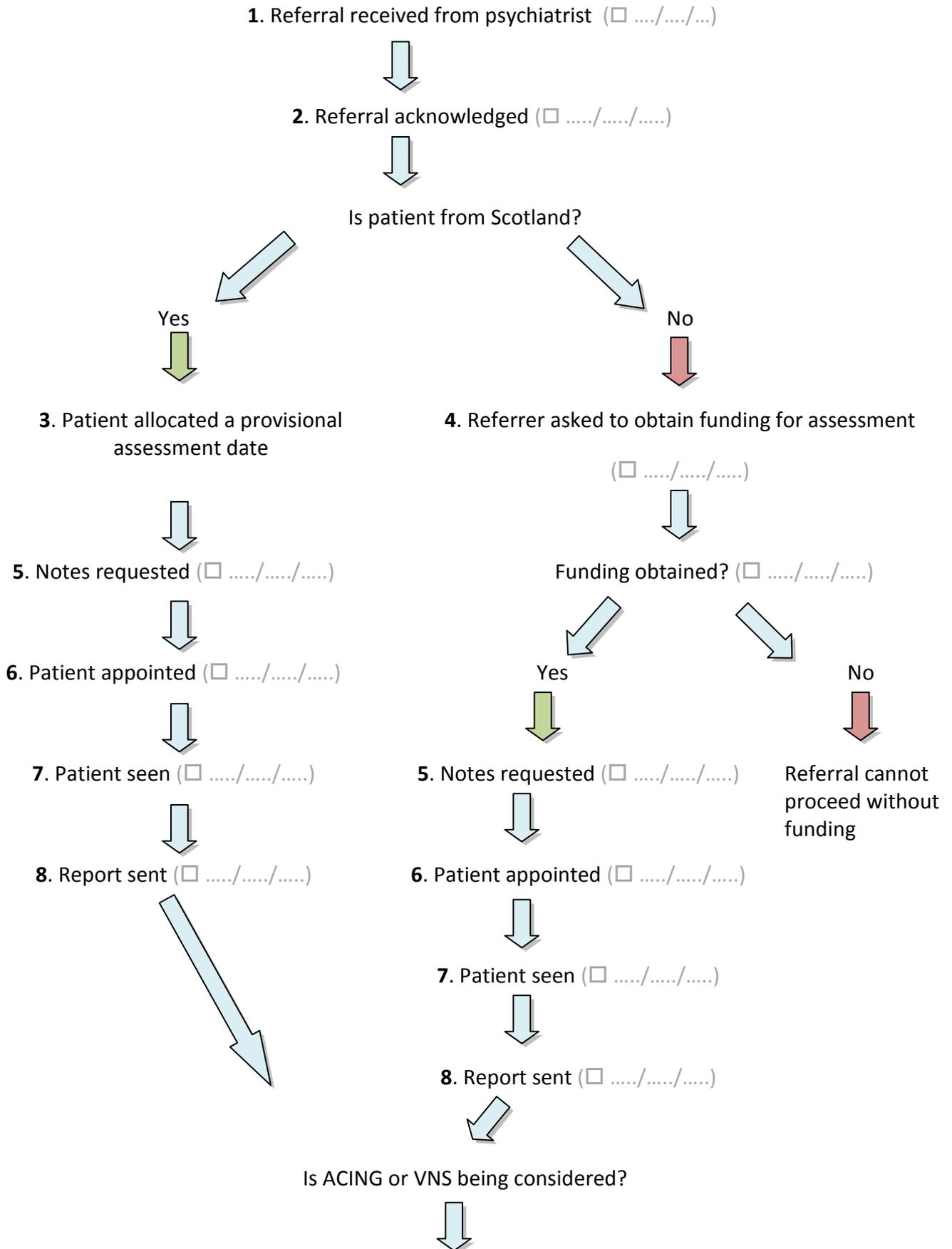
We are optimistic that changes to the SLA will be agreed this year so that patients requiring inpatient treatment (Exposure and Response Prevention, ERP) are able to receive this from the AIS in

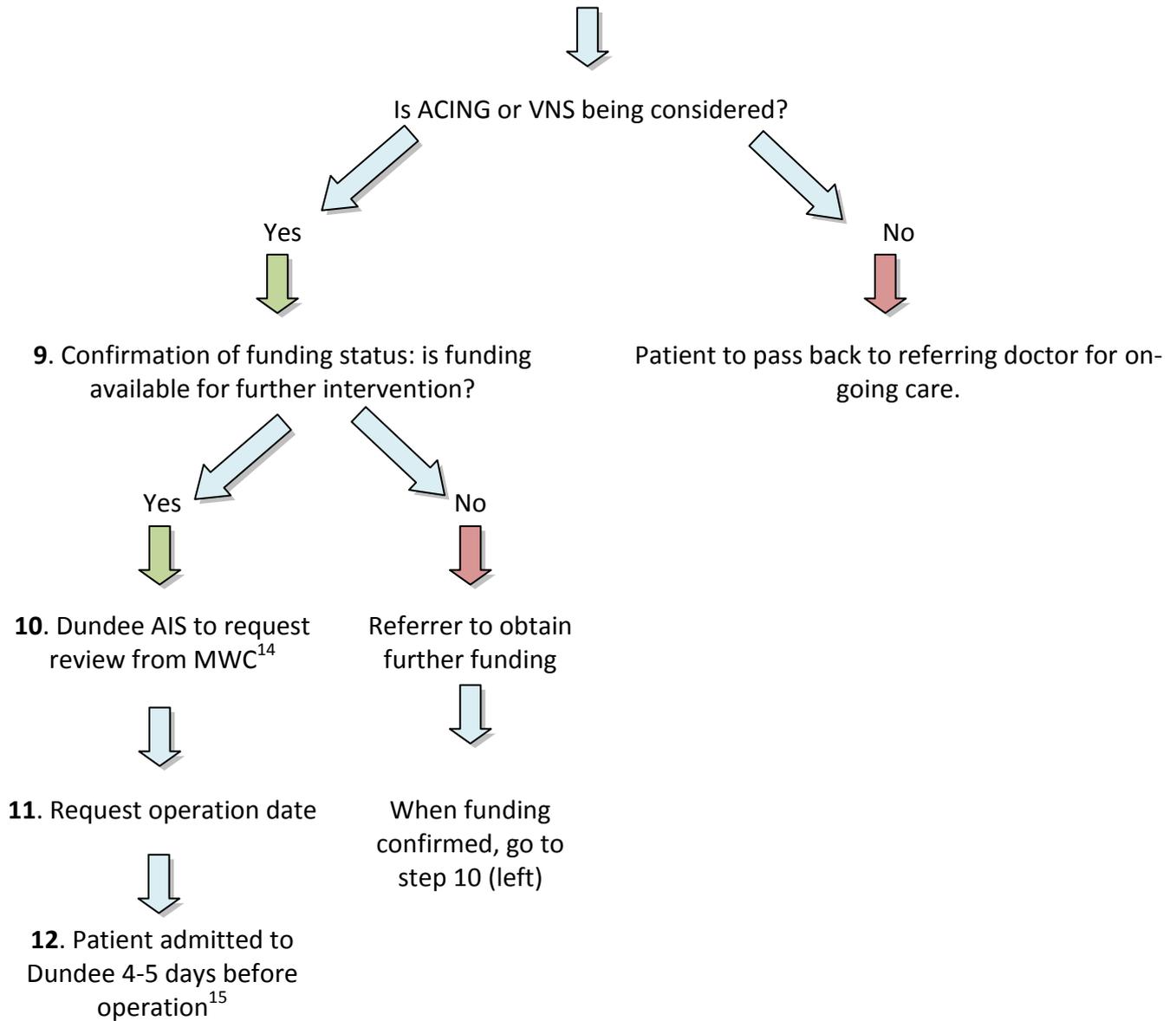
Dundee. It is predicted that this can be delivered within existing service resourcing, and will mean that patients will not have to travel to England. In addition, it will allow the service to provide support and supervision to Scottish NHS Boards, reduce costs of treatment to NHS Scotland, and build capacity for ERP in Scotland.

**Section D: Financial Statement**

This will be submitted separately by NHS Tayside finance department.

## Section E: Referral and Treatment Pathway





<sup>14</sup> Mental Welfare Commission for Scotland

<sup>15</sup> This may not be necessary for local patients who can attend for assessments in the pre-operative week

## Section F: Appendix 1 – Treatment recommendations prior to ablative neurosurgery

These recommendations are up-to-date at the point of writing (May 2011), but they may change depending on the emergence of compelling new clinical evidence. Please check our website for the most up-to-date recommendations.

### 1 Depression

#### 1.1. Physical Treatment Methods

As a guiding principle, all of the physical treatments that have been shown to be effective in ‘*treatment-resistant-depression*’ (preferably in randomised, controlled trials) must have been tried in adequate dosage for an adequate period. In general terms, this will reflect the prescription of antidepressant drugs within, or above, the dose range recommended by the British National Formulary (BNF) for a period of at least six weeks.

It is important to note that a proportion of individuals with chronic, refractory depression will have unrecognised or ‘undeclared’ Bipolar Disorder. Therefore, the following also considers the application of “*bipolar depression*” treatment strategies as part of the framework for treatment ‘adequacy’ prior to ablative NMD.

At present, the use of plasma drug concentration monitoring (where possible) is not included as a mandatory requirement, but is sometimes desirable. Most patients referred for assessment will have been exposed to many different treatment trials. The following represent those deemed ‘*essential*’ before proceeding to ablative surgery.

The ***minimum*** inclusion criteria for neurosurgery are:

- 1) At least two ‘adequate’ courses of treatment with a tricyclic antidepressant drug. One of these trials must be with either clomipramine, imipramine or amitriptyline.
- 2) At least two ‘adequate’ courses of treatment with a selective serotonin re-uptake inhibitor (SSRI).
- 3) At least one ‘adequate’ course of treatment with a ‘classical’ monoamine oxidase inhibitor (i.e. not Moclobemide).
- 4) At least one of the above (TCA, SSRI or MAOI) plus lithium carbonate augmentation for a period of 4-6 weeks with a 12-hour post-medication plasma lithium level of 0.5-0.8 mmol/L.
- 5) At least one ‘adequate’ course of treatment with a tricyclic antidepressant drug as defined above plus thyroid hormone augmentation for a period of 6 weeks. This involves the

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administration of liothyronine sodium/ T3 hormone (*not T4*) [at a dose up to 20 micrograms three-times-a-day.]. Failure to respond within 6 weeks ought to lead to termination of T3 administration. Where the patient is known to suffer from hypothyroidism and is taking replacement T4 (biochemically euthyroid), this strategy of T<sub>3</sub> augmentation is still advised.

- 6) At least two '*adequate*' courses of treatment with an antidepressant drug as defined above, plus the prescription of two atypical antipsychotic drugs for a period of six weeks at a dose within the BNF recommended range. There is probably greatest evidence to support the selection of olanzapine and risperidone, although others (quetiapine, amisulpride, aripiprazole) may be worth considering. Where psychotic symptoms are prominent in the clinical presentation, trials of both typical (e.g. Flupentixol) and atypical antipsychotic drugs should be considered.
- 7) At least two '*adequate*' trials of electroconvulsive therapy (ECT), spaced 6 months apart. Adequacy in this context is defined as a minimum of 12 bilateral applications of ECT with recorded evidence of seizure duration exceeding 15 s per treatment. Failure to respond is defined as either no clinical response, minimal clinical response or a brief response with relapse within a period of four weeks, despite adequate antidepressant maintenance treatment. Where available, and considered more acceptable/appropriate for the patient, a trial of high dose unilateral ECT (5 times seizure threshold) can substitute for bilateral ECT.
- 8) At least one '*adequate*' course of treatment with an antidepressant drug as defined above plus the essential fatty acid ethyl-eicosapentaenoate (EPA) at a dose of 1g per day.
- 9) At least one '*adequate*' course of treatment with an SSRI as defined above plus the addition of bupropion (Sustained Release) at a dose of 150-300mg/day.
- 10) At least one trial of an anticonvulsant drug shown to have efficacy in bipolar depression. This includes Lamotrigine at a dose of <400mg day, Divalproex sodium (Depakote®) at a dose of up to 2.5g per day and Carbamazepine at a dose of 800-1200mg per day.
- 11) At least one trial of an antipsychotic drug shown to have efficacy in bipolar depression. This includes olanzapine (5-20mg/day) and quetiapine (300-600mg /day). NB there is also some preliminary evidence for increased response rates in the treatment of Bipolar I depression where olanzapine (6-12mg/day) is *combined* with fluoxetine (25-50mg/day).
- 12) At least one of the following:
  - a) Combination therapy with clomipramine, lithium carbonate and L-tryptophan. The clomipramine to be administered at the maximally tolerated dose (150-250 mg/ day), with a 12 hr post-medication plasma lithium level of 0.5-0.8 mmol/l. This ought to be administered for a minimum period of 6 weeks.

- b) Combination therapy with phenelzine, lithium carbonate and L-tryptophan. The phenelzine to be administered at the maximally tolerated dose (45-90 mg / day), with a 12 hr post-medication plasma lithium level of 0.5-0.8 mmol/l. This ought to be administered for a minimum period of 6 weeks.

### **1.2. Alternative Recommended Pharmacological Treatment Strategies**

*Desirable but not essential prior to ablative NMD.* Either: an absence of unequivocal evidence of efficacy in TRD, or, only suitable for selected patients on the basis of increased risk to physical health:

- 1) **Prescription of an antidepressant drug beyond BNF recommended maximum daily dose.**
  - a) For example, gradual escalation to highest tolerated dose of venlafaxine (>500 mg / day). Beyond 375 mg / day, weekly ECG recordings are advisable, with regular BP monitoring required beyond 200 mg / day.
  - b) Alternatively, gradual escalation to highest tolerated dose of imipramine (>300 mg / day). Similar close physiological monitoring is required. Measurement of plasma levels may be indicated, with a target concentration of 200-250 ng/ml. This ought to be continued for 6 weeks.
  - c) Combination of venlafaxine (375mg/day or maximally tolerated dose) with mirtazapine (30-45mg/day) with appropriate physiological monitoring (BP measurements and ECG recordings)
- 2) **Psychostimulant Drug Treatment.**
  - a) Prescription of a maximally tolerated dose of a tricyclic drug (preferably imipramine), to which methylphenidate (Ritalin®) is added, initially as a single 10 mg test dose, gradually increasing to 30 mg *t.d.s.* This ought to be continued for 6 weeks.

### **1.3. Psychological Treatment Methods**

- 1) At least one sustained trial of structured, manualised, cognitive-behavioural therapy of 20 sessions duration (with either a cognitive or a behavioural emphasis), with long-term follow-up. Treatments ought to be delivered by a therapist with British Association for Behavioural and Cognitive Therapies (BABCP) accreditation. Where there is significant doubt over the adequacy of previous trials of psychological treatment, it may be appropriate to offer the patient at least a brief trial of a suitable psychological therapy. In some cases, this might suggest that a more intensive course of therapy ought to be instigated in either Dundee or elsewhere.

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## 2 Obsessive-Compulsive Disorder (OCD)

### 2.1. Physical Treatment Methods

As a guiding principle, all of the physical treatments that have been shown to be effective in OCD (preferably in randomised, controlled trials) must have been tried in adequate dosage for an adequate period of time. In general terms, this will reflect the prescription of antidepressant drugs within, or sometimes above, the dose range recommended by the BNF for a period of 12-16 weeks.

Treatment gains can accrue slowly and premature termination of treatment trials should be avoided. Most patients referred for assessment will have been exposed to many different treatment trials. The following represent those deemed 'essential' before proceeding to surgery.

The minimum inclusion criteria are:

- 1) At least one course of treatment with the tricyclic antidepressant drug clomipramine for 12-16 weeks in a dose in excess of 150 mg/day. Except in exceptional circumstances, the dose should be titrated upwards towards a target of 250 mg/day (or above) depending on tolerability. Compliance may be determined by plasma level estimation where deemed necessary.
  - 2) At least two courses of treatment with different selective serotonin re-uptake inhibitors (SSRI's) (fluoxetine, fluvoxamine, paroxetine, citalopram, sertraline or escitalopram) at a maximally tolerated dose for a period of 12-16 weeks. This may involve the prescription of these drugs at a dose in excess of the BNF maximum recommended dosage. Other than in exceptional circumstances, ALL of the drugs from the SSRI class ought to be tried, sequentially, in full dosage (or maximum tolerated dosage), for an adequate period of time. (the target dose for fluoxetine would be at least 60 mg/day, fluvoxamine at least 300 mg/day, sertraline at least 200mg/day, citalopram at least 60 mg/day and paroxetine 60-80 mg/day).
  - 3) A single trial of a maximally tolerated dose of the serotonin and noradrenaline reuptake inhibitor venlafaxine.
  - 4) At least one trial of clomipramine or an SSRI plus antipsychotic drug augmentation for a period of 12 weeks. Please note – antipsychotic drugs are not effective as monotherapy for OCD and should be avoided other than as augmenting agents. The drugs which have been demonstrated to exert some benefit in resistant OCD are risperidone (up to 3mg daily) and quetiapine (up to 200-300mg daily).
  - 5) The value of olanzapine, amisulpride and clozapine is uncertain. Clozapine has been reported to provoke OCD symptoms, in the absence of co-morbid schizophrenia, should generally be avoided. (NB: older antipsychotic drugs such as pimozide and haloperidol may be tried particularly where OCD is co-morbid with Tic disorders or psychotic symptoms).
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- 6) It is also anticipated that additional strategies may have been tried (e.g. combination of two SSRI's or SSRI with clomipramine, intravenous administration of clomipramine) but these are not absolute requirements. There is insufficient evidence upon which to base a recommendation for a trial of either ECT or transcranial magnetic stimulation (rTMS) for refractory OCD. However, for patients with severe co-morbid depression, ECT may be considered.

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## **2.2. Psychological treatment methods**

- 1) At least one sustained trial (>26 weeks) of exposure and response prevention under the supervision of a BABCP-accredited therapist (minimum therapist contact time 90min per week). Whenever possible, we would expect a period (12 weeks) of in-patient behavioural therapy, conducted in a specialist unit. However, many sufferers are unwilling, for a variety of reasons, to consent to this. Cognitive therapy can also be an effective adjunct to exposure treatment if intrusive thoughts and ruminations are prominent. Again, trials of cognitive therapy ought to be conducted under the supervision of a BABCP-accredited therapist.

**Section G: Appendix 2 – Responses from patient satisfaction questionnaires**

1. (Can you say why was better?) “1) Extended 1:1 sessions; 2) Confidence in staff and care taken; 3) Initial welcome on arrival” (#44)
2. “Wash-up (sic) session at the end of the day was appropriate and helpful...many thanks for your patience and assistance on the day” (#44)
3. “This type of service should be standard practice in all psychiatric wards in the UK, rather than being a ‘last resort’. If this standard and method of assessment had been available to me when my problems first started, I would be in a much better situation now.” (#45)
4. “Professor Matthews and Mr. MacVicar and the reception staff all made me feel comfortable. At some other assessments, I have felt very embarrassed.” (#46)
5. “Overall very high standard of care. Excellent service. Treated with Respect.” (#47)
6. (Compared to attendance at other outpatient assessments, my attendance at the Dundee AIS was) “Better. Interviewers were more knowledgeable about my OCD”. (#51)
7. “All staff sported warm smiles and were kind and helpful. Very nice cuppa as well” (#51)
8. (Compared to attendance at other outpatient assessments, my attendance at the Dundee AIS was) “More knowledgeable staff, who knew my problems and how to treat me.” (#52)
9. “I felt that I was listened to and given the opportunity to go into my problems in their entirety and not as separate issues.” (#53)
10. “I felt more hopeful about my situation now that I know there is still some options for treatment. I felt both my appointments went well and I was able to cover all the issues that have been causing me problems.” (#53)
11. “Reception welcoming – offered coffee, relaxed feel...TIME spent with patient – no feeling of being rushed” (#54)
12. “Excellent empathy from doctor/ nurse. Weren’t made to feel like an inconvenience for not having responded as expected to previous medication. Talked to as equal. Accepting and non-critical of any information revealed whether history or feelings.” (#54)
13. “Felt respected and listened to and given time.” (#56)
14. “Found the service excellent. Has been like a life-line to know that even after all these years, there is still possibility of something better, and people have not given up on me. Thank you.” (#56)
15. “I liked the question and answer system because being depressed I would have found my illness hard to describe. If I didn’t understand a question it was quickly explained to me in such a way that I didn’t feel silly for asking for it to be explained.” (#57)

16. "Thank you...for putting me as much at ease as was possible...I feel much more hopeful about the future treatment of my illness and that takes a great weight off my shoulders...Thank you all from the bottom of my heart for your most caring attitude to us." (#57)

## Section H: References

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