



Dundee Advanced Interventions Service

Six-month Report

1 April 2013 to 1 October 2013



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1. Foreword

In this report, Dundee Advanced Interventions Service (AIS) describes the activity undertaken in the first six months of the financial year 2013/14; covering the period 1 April 2013 – 1 October 2013. We have decided to continue to make the annual report the primary focus for reporting of clinical outcomes and so this report does not cover outcomes. We continue to believe that reporting of outcomes for small numbers of people is undesirable and less informative than reporting outcomes in a larger cohort of individuals.

For more information on the service, and previous reports, readers are advised to refer to our website.¹

¹ www.advancedinterventions.org.uk

2. Activity Data: 1 April 2013 – 1 October 2013

2.1 Overview

An overall summary of activity in the first six months of this year is given below in Table 1.

Table 1 | Overview of Activity Data for April 2013 – October 2013

	Actual	Planned (Whole Year)
Assessments	13	24
Anterior Cingulotomy (ACING)	2	5
Follow-up	3	12

2.2 Referrals

2.2.1 Referrals received during reporting period

During the first six months of 2013, twenty-eight referrals have been received. This represents an increase in the number of referrals in the same period last year. For the first time, the number of referrals for patients with OCD exceeds other disorders. The breakdown of referral diagnoses over the last six months is as follows: Bipolar Disorder (10.7%); Depression (32.1%); Anxiety Disorders and Other (10.7%); OCD (46.4%).

The referring organisation is given below in Table 2. The male: female ratio was 1:1.8, which represents a slight shift to more female referrals compared to the same period last year. The mean \pm SD age of patients referred is 45.8 ± 13.5 , with a range of 23.5 – 74.4 years.

Not all referrals progressed to an assessment, and reasons for this will be detailed in the Annual Report when 12-months of data have been compiled. In many cases, advice was given to the referrer regarding ongoing management or referral to other services. In some cases, the patient wasn't suitable for the service. Where possible, clinicians in the AIS provided advice on more appropriate services for referral and gave advice on further treatment.

2.2.2 Referring NHS Organisation

The majority of referrals (85.7%) continue to come from Scotland, and 7.1% of referrals have come from England and Northern Ireland respectively. This is a slightly higher proportion of Scottish referrals than in previous reporting periods. It is possible that our increased contact with Scottish NHS services has promoted referrals to the service.²

Table 2 | New Referrals - NHS Organisation referring

NHS Organisation	Country	No. of Referrals
NHS Ayrshire & Arran	Scotland, UK	1
NHS Borders	Scotland, UK	2
NHS Dumfries and Galloway	Scotland, UK	1
NHS Eileen Siar, NHS Orkney, and NHS Shetland	Scotland, UK	1
NHS Fife	Scotland, UK	5
NHS Grampian	Scotland, UK	2
NHS Greater Glasgow and Clyde	Scotland, UK	3
NHS Highland	Scotland, UK	1
NHS Lanarkshire	Scotland, UK	1
NHS Lothian	Scotland, UK	1
NHS Tayside	Scotland, UK	6
Cheshire and Wirral Partnership NHS Trust	England, UK	1
Hertfordshire Partnership NHS Trust	England, UK	1
Southern Health and Social Care Trust	Northern Ireland	1
Western Health and Social Care Trust	Northern Ireland	1
Total		28

2.3 Assessments

2.3.1 Total Assessments

So far, 13 assessments have been conducted. Details given are below.

² More details on our 'outreach' activities will be provided in the annual report.

Referring NHS Organisation

The referring NHS organisation (NHS Board or Primary Care Trust) for each assessment is shown below in Table 3.

Table 3 | New Assessments: NHS Organisation

NHS Organisation	Country	No. of assessments
NHS Borders	Scotland, UK	1
NHS Dumfries and Galloway	Scotland, UK	2
NHS Fife	Scotland, UK	2
NHS Forth Valley	Scotland, UK	1
NHS Grampian	Scotland, UK	1
NHS Greater Glasgow and Clyde	Scotland, UK	1
NHS Lothian	Scotland, UK	1
NHS Tayside	Scotland, UK	4
No. of assessments not covered by SLA:		0
Total Number of Assessments:		13

2.4 Procedures

2.4.1 Procedures performed

A summary of procedures is given below in Table 4.

Table 4 | Procedures performed between 1 April 2013 and 1 October 2013

Anterior Cingulotomy (ACING)	
As first operation:	0
As second operation:	1
As third procedure:	1
Total:	2
Total number of Procedures:	2

At the time of writing, one patient has received approval from the Mental Welfare Commission to proceed to Anterior Cingulotomy, and discussions are occurring about the

post-operative care for a further two neurosurgical patients. It is likely that they will undergo neurosurgery in this financial year. Currently, two patients have had Deep Brain Stimulation as part of the clinical study described below (page 17).

2.4.2 Indications for surgery

The primary indication for surgery in both cases was *F33.2 Recurrent depressive disorder, current episode severe without psychotic symptoms*.

2.4.3 NHS Organisation Funding Surgery

The NHS Organisation responsible for patients undergoing neurosurgery is shown below in Table 5.

Table 5 | NHS Organisation responsible for Neurosurgical patients

NHS Organisation	Country	Procedure	No. of procedures
NHS Fife	Scotland, UK	ACING	1
NHS Highland	Scotland, UK	ACING	1

2.4.4 Procedures not covered by SLA

No ablative procedures were performed outwith the SLA. Deep Brain Stimulation procedures are not covered by the SLA.

2.4.5 Durations of Inpatient stay

Details of inpatient admissions are shown below in Table 6.

Table 6 | Duration of inpatient stay (all categories). Duration in days

	N	SLA	Non-SLA
Total inpatient stay - all NMD* patients, Carseview (days):	2	12	-
Mean inpatient stay - all NMD patients, Carseview (days):	2	6	-
Total inpatient stay - all NMD patients, Ward 23 (days):	3	6	-
Mean inpatient stay - all NMD patients, Ward 23 (days):	3	2	-
Total inpatient stay - Inpatient ERP, Carseview (days):	2	105	-
Mean Inpatient stay - Inpatient ERP, Carseview (days):	2	52.5	-
Total inpatient stay - Other, Carseview (days):	0	-	-
Total inpatient stay - Reviews (days):	-	-	-

* NMD includes ablative neurosurgery

2.5 Comments on activity levels

2.5.1 Assessments

In the first six months of the financial year, the service has seen more than 50% of the planned assessments for the year. Although the actual number is slightly lower than the same period last year, this reflects the additional work involved in treatment planning for patients with OCD. Typically, this might involve the delivery of workshops to local teams (this will be reported in more detail in the annual report), and working closely with local therapists to optimise treatment. It is predicted that by the end of the 2013/14 financial year, the service will have met the planned number of assessments and a number of assessments have already been arranged.

2.5.2 Procedures

As discussed in previous reports, since the overall numbers of procedures are low, it is to be expected that there will be a degree of year-to-year variation in neurosurgical activity levels. Vagus Nerve Stimulation is no longer part of the Service Level Agreement and no further VNS procedures have been performed in Dundee since the AIS five-year review.

One patient is awaiting a replacement of the pulse generator due to battery depletion – this is being funded by the patient's own NHS Board as it is not covered by the SLA.

A number of procedures are expected to have taken place by the end of this financial year. Based on planned and predicted activity over the next six months, it is estimated that the service will have performed between 4-5 ablative procedures by the end of the financial year.

3. Mortality and Morbidity Data

3.1 No. of Deaths

No deaths occurred during the reporting period and at the time of writing, Dundee AIS is not aware of any deaths relating to neurosurgery having occurred during the lifetime of the Dundee NMD service (1992 – October 2013). As reported previously, there have been no suicides of patients who have received neurosurgical intervention in Dundee in the last nineteen years.

4. Waiting Times

4.1 Introduction


Scottish patients do not require additional funding for assessment or treatment. However, patients from outside of Scotland require funding approval and this may incur delays over which Dundee AIS has no control. The service tries to work closely with referring services to minimise delay in patients out with Scotland being seen.

4.2 Waiting times from referral to assessment

An overview of waiting times over the previous six months is given below in Table 7. These are averages for all patients who did not have additional factors affecting the time taken to assessment. For Scottish patients where there are no delays, patients are usually seen within 2-3 months of referral.

Table 7 | Waiting times for the service

All times expressed in weeks from date that referral is received to date of first consultant assessment

	N	Mean (average) waiting time from referral to assessment (\pm SD)
 Scotland	11	8.8 \pm 2.3

Please note that the number of patients included in this table may be less than the total number of assessments reported in Section 2.3.1 above.

For the two Scottish patients who were not seen within 18 weeks, the reasons were: delays in obtaining additional information (N=1); and, further discussions with the referrer regarding the most appropriate way forward / waiting for ongoing treatment plans to be completed (N=1).

4.3 Waiting times from assessment to surgery

For patients proceeding to ablative neurosurgery (Anterior Cingulotomy), there is usually a delay of approximately 6-8 weeks in order that the Mental Welfare Commission for

Scotland can make arrangements to assess them and approve the procedure. This process is specified by Section 235 of the Mental Health (Care & Treatment)(Scotland) Act 2003³.

Once Dundee AIS has received the necessary paperwork (Form T1), there is a typically a further 6-8 weeks whilst operating theatres, admission to hospital, and the necessary preoperative assessments are arranged. In most cases, further post-operative care planning is undertaken during this period.

The service is currently using the receipt of the T1 form in the context of the current NHS Scotland waiting time initiatives. The 'clock' starts when the form is received and stops when surgery takes place. There is a range of factors outwith the control of the service that impact upon the time from assessment to treatment⁴ and such an indicator is not always considered appropriate for interventions such as these; particularly where fast-tracking patients to psychiatric neurosurgery is inappropriate.

³ <http://www.opsi.gov.uk/legislation/scotland/acts2003/20030013.htm>

⁴ Such as the need to plan post-operative care, and liaise with local services. Many patients may require additional visits to discuss treatment and plan care.

5. Quality of Care

5.1 Formal Complaints

There have been no formal complaints received during this reporting period.

6. Clinical Audit and Outcomes

6.1 Specific Issues

6.1.1 Survival Data

Survival data are of lesser relevance at the current time since the survival rate for neurosurgical interventions (VNS and Anterior Cingulotomy) remains 100%. Only one patient is known to have died since 1992, and this was from an illness unrelated to neurosurgery.

No patients have died during this reporting period.

6.1.2 Number of Hospital Acquired Infections

None.

6.1.3 Number of Critical Incidents

None.

6.1.4 Readmissions

No patients have been readmitted to the neurosurgical wards during their inpatient stay. Admission durations have not exceeded planned stays.

6.2 Clinical Audit

6.2.1 Outcome Data

As previously intimated, we do not consider outcomes prior to 12 months to be a meaningful indicator of an individual's recovery. In addition, reporting of outcomes in a 'piecemeal' fashion six-monthly does not permit sufficient numbers for meaningful conclusions to be drawn. Since a patient's outcome at six-months may not truly reflect their response to the interventions provided, we continue to assess outcomes at 12-months, 24-months, and 5-years after the procedure. Although we closely monitor treatment response in the interim, these data are not used to make decisions about overall response.

Therefore, in accordance with the principles described in our previous annual reports⁵, we will continue to report outcomes annually. We are in the process of determining the best way of reporting complex outcomes visually, and we are in discussions with NSD regarding key performance indicators for the service. We predict that these will be introduced by the next Annual Report in May 2014.

⁵ http://www.advancedinterventions.org.uk/pdf/AIS_Annual_Report_2008.pdf

7. Developments

7.1 Update on clinical trials

Detailed descriptions of the clinical trials and research projects being undertaken by the AIS can be found in last year's Annual Report⁶ and on our website⁷.

7.1.1 Multi-site, International Study of Deep Brain Stimulation for Treatment-Refractory Depression (the BROADEN Study)

Two patients have now undergone implantation of DBS. Both have completed 12 months of follow-up. We do not expect to report their outcomes as this intervention is out with our Service-Level Agreement and is being conducted as part of a multi-centre clinical trial.

7.1.2 Intensive psychotherapy for chronic, treatment-resistant depression: a pilot investigation of clinical effectiveness and mediators of learning in the Cognitive Behavioural Analysis System of Psychotherapy (CBASP)

One hundred and thirteen patients (referred from Primary and Secondary Care) were referred to this study which started on the 1st November 2010. Seventy-three patients met inclusion criteria and entered the 6 month treatment phase consisting of up to 20 sessions of one to one therapy (CBASP) in a 6 month period.

Significant reductions in depressive symptoms were seen in 30% of participants; a further 30% made clinically significant improvement; and 40% experienced no change in symptoms. Overall, 60% of participants were substantially improved on measures of depression, general health, social functioning, quality of life and the quality of interpersonal relationships.

Outcomes have been accepted for publication in the *Journal of Affective Disorders* and will be published later in 2013.

⁶ <http://www.advancedinterventions.org.uk/index.php/24-ais/ais-other/57-recent-reports.html>

⁷ <http://www.advancedinterventions.org.uk/index.php/the-service/research-projects.html>

7.1.3 Diffusion Tensor and Functional Imaging of Chronic Treatment Refractory Depression and Neurosurgical Treatments

The study has been adopted by the Scottish Mental Health Research Network (SMHRN) and has been running for a number of years. Over fifty participants have been scanned and recruitment of a non-surgical bipolar cohort is on-going and is likely to achieve the target before Christmas 2013.

A range of hypotheses are being tested, and two PhD students have had input into the project, which is supervised by Professor Steele. A range of publications are expected from the study and will be reported on in due course.

7.2 Publications

Publications in 2013 are listed below. Of note is the paper on outcomes from VNS in highly-treatment-refractory patients. We reported response rates of 30 – 35% in two very refractory populations; approximately twice that of less-refractory patients receiving treatment-as-usual.

1. Hazari H, **Christmas D, Matthews K**: The clinical utility of different quantitative methods for measuring treatment resistance in major depression. *Journal of Affective Disorders* 2013; 150:231-236. <http://dx.doi.org/10.1016/j.jad.2013.03.030>
2. Gradin VB, Waiter G, O'Connor A, Romaniuk L, Stickle C, **Matthews K, Hall J, Douglas Steele J**: Saliency network-midbrain dysconnectivity and blunted reward signals in schizophrenia. *Psychiatry Research: Neuroimaging* 2013; 211:104-111. <http://dx.doi.org/10.1016/j.psychresns.2012.06.003>
3. **Christmas D, Steele JD, Tolomeo S, Eljamel MS, Matthews K**: Vagus nerve stimulation for chronic major depressive disorder: 12-month outcomes in highly treatment-refractory patients. *Journal of Affective Disorders* 2013; 150:1221-1225. <http://dx.doi.org/10.1016/j.jad.2013.05.080>
4. **Christmas D, Gabriëls L**: Deep Brain Stimulation in Obsessive Compulsive Disorders in *Neurostimulation: Principles and Practice*. Edited by Eljamel S, Slavin K. Chichester,

Wiley-Blackwell, 2013, pp. 82-88. <http://eu.wiley.com/WileyCDA/WileyTitle/productCd-1118346351.html>

5. Brydges NM, Whalley HC, Jansen MA, Merrifield GD, Wood ER, Lawrie SM, Wynne S-M, Day M, Fleetwood-Walker S, **Steele D**, Marshall I, Hall J, Holmes MC: Imaging Conditioned Fear Circuitry Using Awake Rodent fMRI. PLoS ONE 2013; 8:e54197.
<http://dx.doi.org/10.1371%2Fjournal.pone.0054197>
6. Browne S, **Christmas D**, **Steele JD**, **Eljamel MS**, **Matthews K**: Other Brain Stimulation Treatments, in The ECT Handbook. Edited by Waite J, Easton A. London, Royal College of Psychiatrists, 2013.
<http://www.rcpsych.ac.uk/usefulresources/publications/collegereports/cr/cr176.aspx>
7. **Swan JS**, **MacVicar R**, **Christmas D**, Durham R, Rauchhaus P, McCullough JP, **Matthews K**: Cognitive Behavioural Analysis System of Psychotherapy (CBASP) for Chronic Depression: clinical characteristics and six month clinical outcomes in an open case series [In Press]. Journal of Affective Disorders 2013.
<http://dx.doi.org/10.1016/j.jad.2013.09.024>

7.3 5-year review of Advanced Interventions Service

This has now been published on the AIS website.⁸

7.4 Intensive OCD treatment programme

Since 1 April 2013, the service is now funded to provide a small number of intensive/inpatient treatment programmes for patients with chronic and treatment-refractory OCD each year. This means that Scottish patients no longer have to travel to England to receive specialist treatment, and the AIS is able to work much more closely with local services.

More details about the service, outcomes, and developments will be covered in the annual report.

⁸ <http://www.advancedinterventions.org.uk/index.php/most-recent-reports/31-ais-reports-nsd-2011/8-5-year-review-of-the-advanced-interventions-service.html>

8. Financial Statement

Please note that the financial statement will be sent separately, following reconciliation and confirmation of accuracy.