RC PSYCH
ROYAL COLLEGE OF PSYCHIATRISTS

ECTAS
ELECTROCONVULSIVE THERAPY ACCREDITATION SERVICE

ECTAS

Dataset report

01 January 2023 – 31 December 2023

CONTENTS

EXECUTIVE SUMMARY

Responses

88

clinics submitted data

65

healthcare providers

2480

submissions received

2153

acute courses

142

continuation courses

168

maintenance courses

Responses were received from **87** out of 91 full member clinics, with one further clinic confirming it had treated no patients in 2023. This represents a clinic response rate of **97%**. Data were submitted for **2153** acute courses of ECT, provided to **1957** individual patients, **142** continuation courses, provided to **121** patients, and **168** maintenance courses, provided to **163** patients.

A full list of ECTAS member services can be found on the network's website.

Results

Most acute courses (**85%**) were given to treat depressive episodes. Much smaller numbers of patients were treated for other conditions, including schizophrenia, manic episode, mixed affective episode and catatonia.

The most common reasons for using ECT were a poor response to other treatments and a requirement for a rapidly acting treatment. Of the patients who lacked the mental capacity to consent to ECT at the beginning of treatment, **29%** had regained capacity by the time of prescription of their final ECT treatment.

Following acute treatment, **88%** improved to some degree, with **66%** 'much improved' or 'very much improved' on the Clinical Global Impression scale. Highly statistically significant reductions in mean scores on all clinician-rated symptom scales were seen, with an average drop of **22.6** points on the most commonly used assessment, the Montgomery-Åsberg Depression Rating Scale.

Furthermore, **64.8%** of patients treated for depressive episode exhibited response (i.e. a 50% reduction in score) to ECT, with **47.3%** reaching remission. Older people, females and those who initially lacked mental capacity had higher rates of response and remission.

Objective cognitive scores slightly improved during acute courses of ECT, with a highly statistically significant mean increase of **1.7** points on the Mini-Mental State Examination, the most commonly used assessment. In terms of subjective memory functioning, in **13%** of cases patients felt their memory had worsened after an ECT course, in **12%** it had improved and in the remaining **75%** it remained stable.

Continuation ECT followed about **7%** of acute courses. Maintenance ECT was rarely used, with just **163** patients, on average fewer than **2** patients per clinic receiving this. Findings from this dataset suggest cognitive functioning is not diminished by continuation or maintenance ECT.

Summary of recommendations

For clinics

- To assist in data analysis, ECTAS strongly recommends that the original 17-item version of the Hamilton Depression Rating Scale (HAM-D17, Appendix 3) is adopted universally by clinics for use when treating patients for depressive episode.
- Similarly, the Brief Psychiatric Rating Scale (BPRS, Appendix 4), the Bush-Francis Catatonia Rating Scale (BFCRS, Appendix 5) and the Young Mania Rating Scale (YMRS, Appendix 6), should be used when treating patients for schizophrenia, catatonia and manic episode, respectively.
- There is no single objective cognitive test that is recommended over any other but, given that most clinics use either MoCA or MMSE, it will assist in data analysis if other clinics do so too.
- Bilateral ultrabrief-pulse ECT may be less effective than other forms of the treatment, confers no secondary advantages, and should not be routinely used.
- Because high-dose right unilateral ECT is as effective as bilateral ECT in depressive episode, but has cognitive advantages, it should be considered the first-line form of the treatment for right-handed patients with depressive episode.
- Decisions on electrode placement, pulse width and electrical charge should all be made within clinics by ECT specialists, and not by referring psychiatrists.
- Twelve treatments must not be considered a 'standard course'; patients must be reviewed frequently, and treatment plans must be individualised according to response.

- Whilst balancing the needs of individual patients who have shown a steady response to acute ECT, twice-weekly treatments should generally be continued until remission from symptoms has been achieved or there is a clear plateauing of therapeutic effect.
- ECT Lead Clinicians should ensure the education of their referring colleagues on these and other ECT-related matters is continuous.
- ECTAS is very grateful to all clinicians who submitted their anonymised data and reminds staff at the very small number of clinics which did not that submission is a mandatory requirement for ongoing accreditation.

For ECTAS

- ECTAS to encourage all clinics to return data. This should include regular communication with individual clinics on the number of responses as well as how to use the system.
- As part of its accreditation process, ECTAS continues to support clinics to have systems in place locally for specific information to be adequately recorded.
- Guidance on the use of the HAMD-17 can be found in the “Structured Interview Guide for the Hamilton Depression Rating Scale" (Williams, 1988). https://sabi.unc.edu/pdf/Structured%20Interview%20Guide%20for%20the%20Hamilton%20Depression%20Rating%20Scale_Williams.pdf

INTRODUCTION

The Electroconvulsive Therapy Accreditation Service (ECTAS) was established in 2003 to improve standards of practice in ECT services in England, Wales, Northern Ireland and the Republic of Ireland, and to award accreditation to clinics that perform well against the standards. ECTAS is one of around 30 quality networks, accreditation and audit programmes organised by the Royal College of Psychiatrists' College Centre for Quality Improvement.

ECTAS is a voluntary network which uses a system of self and peer review to improve the quality of services, using standards agreed by the network. In this way ECTAS seeks, over time, to support members to raise standards.

ECTAS does not provide regulation of ECT; this is the responsibility of the Care Quality Commission in England, the Healthcare Inspectorate Wales in Wales, Healthcare Improvement Scotland in Scotland and the Regulation and Quality Improvement Authority in Northern Ireland.

ECTAS has member ECT clinics in England, Wales, Northern Ireland and Republic of Ireland. ECTAS does not collect data from ECT clinics in Scotland, this is collected through the Scottish ECT Accreditation Network (SEAN). As of 31 December 2023, 91 clinics were full members of the network. These comprised 72 in England, 5 in Northern Ireland, 5 in Wales and 9 in the Republic of Ireland. In addition, there were 3 affiliate member clinics in Scotland.

THIS REPORT

Methodology

From February 2021, ECTAS mandated clinics to submit outcome data, making this essential for clinics to achieve accreditation (Standards for the Administration of ECT, 15th Ed., originally published in March 2020). In previous years, the submission of data to the ECTAS dataset had been optional.

The data collected included patients completing an acute, continuation or maintenance course of ECT in the twelve months between 1 January 2023 and 31 December 2023.

The completed raw data were reviewed by the clinicians on the ECTAS Dataset Steering Board. Inconsistencies, duplicate responses and potentially inaccurate information were highlighted and queries sent to the relevant ECT clinic for clarification. Data were then revised, if necessary, before analysis was performed. Further details on data cleaning for each part of the analysis can be found throughout this report.

2023 data collection tool

The Dataset Steering Board updates the data collection tool every year to ensure continued relevance to ECT clinics. As a result, the 2023 data collection tool differs slightly from the format used in previous years, with the inclusion of new questions covering the following topics:

- Clinics using the HAM-D scale were asked which item scale they were using (6, 17, 21 or 24).
- A new question on whether the patient has previously received a course of ECT was added: “Is this the first acute course being submitted for this calendar year?" with the following response options: - “Yes, this is the first acute course" - "No, this is the second acute course" - "No, this is the third acute course" - "No, this is the fourth acute course".
- Where a maintenance course was stopped and then re-started, clinics could answer "no" for the question: “Is this the first maintenance course being submitted for this calendar year?”
- A new question has been added regarding serious incidents relating to the patient. If there had been any serious incidents relating to that patient, there was a free text to provide brief details. The dataset guidance noted that this should be kept anonymous.
- For acute courses, a new question: "Was this course stopped prematurely?" was added. If yes, clinics could answer one of the following: - "Patient withdrew informal consent against medical advice" - "Physical health problems precluded further treatments" - "Course stopped prematurely due to other reasons", with an option to provide more details. The full list of questions contained in the online data collection tool can be found in Appendix 2.

Limitations

As stated above, all clinics are mandated to submit data, whilst the online collection data tool demands that all questions are completed for each patient. The changes to the data collection tool, outlined above, should have prevented clinicians being obliged to enter arbitrary values, such as zero, when a symptom or cognitive score had not, in fact, been recorded. This should have resulted in significantly greater data integrity for 2023 than in previous years.

It is the norm for ECT clinics to rely on referring clinicians and their teams to complete such rating scales and cognitive assessments. Either way, it is recognised that many of these clinicians will have had little, if any, formal training in their use. There may be a lack of knowledge amongst clinicians of the variations between different versions of tests with very similar titles, rendering some data difficult to interpret.

For these reasons, some of the results of the 2023 dataset should be interpreted with a degree of caution. As a consequence of the preparation of this dataset report, ECTAS intends to disseminate information nationally with the aim of improving future data collection, such that its reports on ECT practice and outcomes in the years to come will contain more reliable data. It should be noted, however, that data collection for what will form the 2024 dataset report is now complete, and that improvements may not be immediate.

Lastly, the ECTAS member clinic response rate was **97%**. Whilst this means the data cannot be considered entirely comprehensive, there is no evidence to suggest that the findings are not representative.

Definitions

For the purpose of this report, an acute course of ECT is defined as a series of individual ECT treatments, usually given twice weekly, to relieve the symptoms of illness.

Continuation ECT (cECT) is defined as ECT that begins after an acute course, typically delivered at intervals of one week or more, for a period of up to six months, that is used to prevent a relapse of the episode of illness.

Maintenance ECT (mECT) is defined as ECT that begins after a continuation course, typically delivered at longer intervals, that is used to prevent a recurrence of the illness. mECT can continue for an indefinite period, but for the purpose of data collection, ECT clinics were asked to submit data annually on patients who were still receiving mECT at the end of the calendar year, or when a course of mECT came to an end.

Acute courses of ECT

2153

submissions

Numbers of courses and patients

Data were submitted for **2153** acute courses of ECT, provided to **1957** individual patients. Of these patients, **one** had **four courses, 16** had **three courses,** and **160** had **two acute courses** of ECT that ended during the 12-month data collection period.

Age

The mean age of patients receiving acute courses of ECT was **61.7** years (standard deviation (SD) = 16.2), with a range of **17 – 95**. Age data were not submitted for five patients. Figure 1 plots the distribution of patients by age.

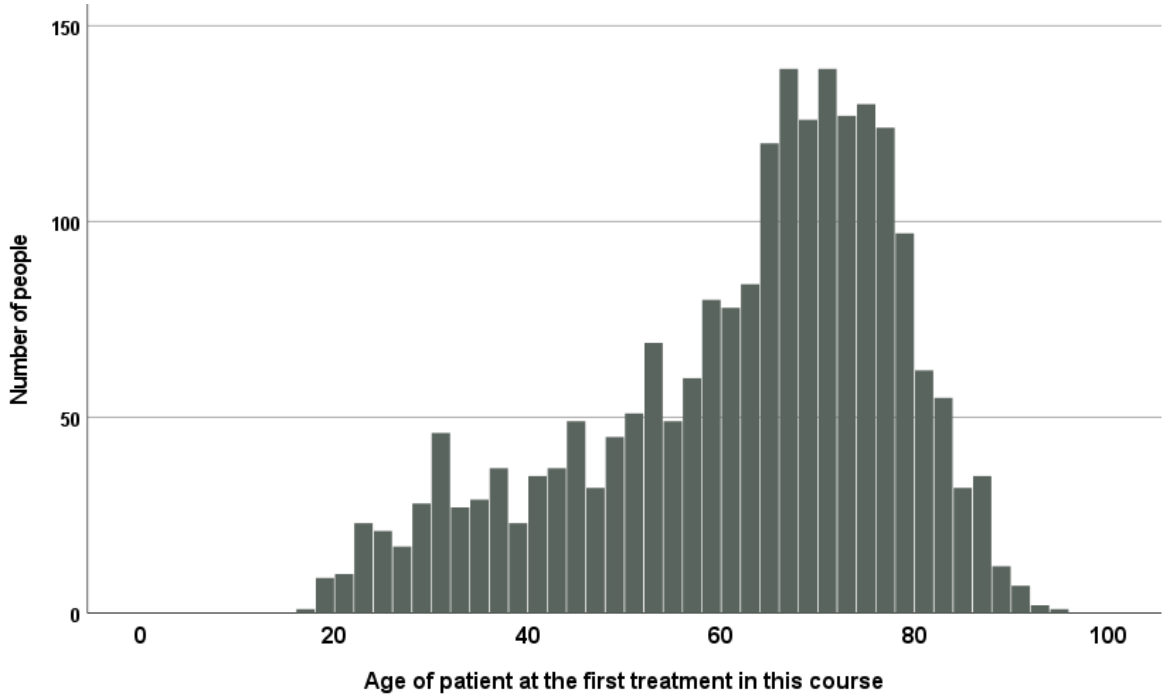

Figure 1: Age distribution for acute courses of ECT. Ages are at the first treatment in the acute ECT course completed by each individual patient during 2023.

Sex and Gender

Of 1949 unique people who had their sex recorded, 1292 (**66%**) were reported as female and 657 (**34%**) as male. Perhaps because data were entered by a clinician rather than patients themselves, the 'prefer not to say' and 'prefer to self-describe' options were not selected for any patients.

Of 1956 patients who had their gender recorded, 1287 (**66%**) were reported as female and 651 (**33%**) as male, two as 'transgender female', one as 'non-binary',

one 'preferred not to say' and for 14 this was not known. Nobody was described as 'transgender male'.

Diagnostic indication

For **85%** of acute courses, the patient was treated for a depressive episode. Less common indications included mixed affective episode (**4%**), manic episode (**3%**), and schizophrenia (**5%**). Whilst the syndrome of catatonia is usually caused by one of the aforementioned illnesses, **2%** of patients were treated for catatonia of another or unknown cause. There were **19** courses (**1%**) in the 'other' diagnostic category. Presenting diagnostic indications are listed in Table 1.

Diagnostic indication for ECT	No. of courses	% of courses
Depressive episode:	1825	84.7
With catatonic symptoms	214	11.7
Without catatonic symptoms	1611	88.3
With psychotic symptoms	625	34.2
Without psychotic symptoms	1200	65.7
Mixed affective episode:	90	4.2
With catatonic symptoms	8	8.9
Without catatonic symptoms	82	91.1
With psychotic symptoms	61	67.8
Without psychotic symptoms	29	32.2
Manic episode:	63	2.9
With catatonic symptoms	11	17.5
Without catatonic symptoms	52	82.5
With psychotic symptoms	47	74.6
Without psychotic symptoms	16	25.4
Schizophrenia:	117	5.4
First episode	8	6.8
Recurrent or chronic	109	93.1
With catatonic symptoms	36	30.8
Without catatonic symptoms	81	69.2
With psychotic symptoms	98	83.8
Without psychotic symptoms	19	16.2
Catatonia of another or unknown cause	40	1.8
Other	17	0.8

Table 1: Diagnostic indications for all acute courses of ECT. n=2152 (one missing value).

Reason for using ECT

Respondents were asked to list the reasons for using ECT. They were presented with a drop-down menu of nine options, with multiple responses possible, including an 'other' option, for which further information was requested. Other free-text responses included "previous good response to ECT", "high levels of EPSEs [extrapyramidal side effects], NMS [neuroleptic malignant syndrome] and intolerance of neuroleptics", "suicidal ideation" and "rapid relapse following improvement with recent acute course of ECT". The results from all **2153** acute courses are detailed in Table 2.

Reason for using ECT	No. of courses	% of courses
Rapid response required	705	33
Poor-response to pharmacological and/or psychological treatments i.e. treatment resistance	1093	51
Poor concordance with drug treatment	280	13
Co-morbidities make drug treatment less desirable	46	2
Pregnancy makes drug treatment less desirable	1	0.05
Breastfeeding makes drug treatment less desirable	3	0.14
Patient choice	238	11
Carer choice	109	5
Other	17	1

Table 2: Reasons for referral for an acute course of ECT. n=2153. Percentages do not add up to 100% because multiple responses for each course were allowed.

Legal status

For each acute course of ECT, clinics were asked to specify the patient's legal status at the commencement and end of treatment. Firstly, respondents were asked to specify whether the patient was informal or detained in hospital under formal legislation (namely, the Mental Health Act 1983 in England and Wales, the Mental Health (Northern Ireland) Order 1986 in Northern Ireland and the Mental Health Act 2001 in the Republic of Ireland) and, secondly, whether the patient had the mental capacity to consent to treatment with ECT. If the patient was detained, respondents were asked whether an urgent treatment authorisation (such as Section 62 in England and Wales) was used to initiate treatment. The results are shown in Table 3 and Figure 2 below and include all **2153** acute courses, rather than individual patients, some of whom had differing situations during multiple courses in the calendar year.

Legal Status	Start of ECT course		End of ECT course	
	n	%	n	%
Informal	923		1034	
With mental capacity	895	97	1014	98
Without mental capacity	28	3	20	2
Detained	1229		1118	
With mental capacity	151	12	353	32
Without mental capacity	1078	88	765	68
Urgent authorisation used	747	61		
Urgent authorisation not used	482	39		

Table 3: Detention status and mental capacity of patients at the beginning and end of acute courses of ECT. n=2152, due to missing data in one case. Patients receiving two or more acute courses are represented more than once.

It should be noted that 'end of treatment' relates to the detention status and mental capacity at the time of delivery of the last ECT treatment, rather than following it. Of the **1106** people who lacked capacity at the start of the course, **351** (**32%**) had regained capacity by the end of treatment. Of the **1046** patients who had capacity at the start, **30** (**3%**) were judged to have lost capacity by the end.

It is assumed that the **28** patients who were informal but lacking in mental capacity were treated under mental capacity legislation in the relevant jurisdiction (e.g. the Mental Capacity Act 2005 in England and Wales), although this information was not specifically collected. The data in Table 6 confirm that, when a person might require ECT but lacks the mental capacity to consent to it, it

is usually mental health legislation (e.g. the Mental Health Act 1983 in England and Wales) that is used to seek legal authorisation of the treatment, even if he or she is not objecting to it. This is presumably because that legislation contains provisions that relate specifically to ECT, including important safeguards for the patient and conditions that must be met before treatment can be given. There are, however, unusual situations in which such a person who is lacking capacity but not objecting to the treatment, might instead be treated in their best interests, under more generalised mental capacity legislation. In England and Wales, these might include:

- objection by the Nearest Relative to formal detention in hospital, despite their agreement with the treatment itself
- reluctance of an Approved Mental Health Professional to apply for detention in hospital when the patient has the mental capacity to make the less complex decision to be admitted to hospital and has opted to accept this
- treatment being given as an outpatient with no requirement for an overnight stay in hospital.

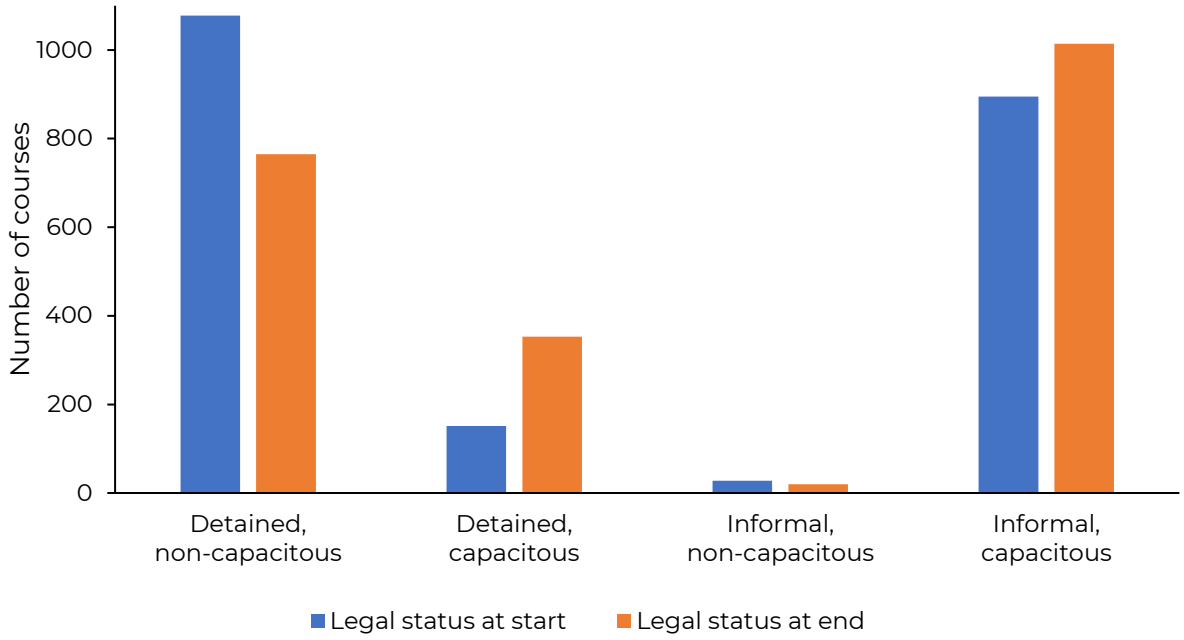

Figure 2: **Detention status and mental capacity of patients at the beginning and end of acute courses of ECT.** n=2152 due to missing data in one case.

Number of treatments

Respondents were asked to record the number of treatments the patient received during each acute course. The mean was **10.4** (SD = 4.9) and the mode **12,** with a range of **1 to 48. 5.5%** of courses were of three treatments or fewer;

14.9% were of 13 treatments or more. Six courses had data missing for the number of treatments.

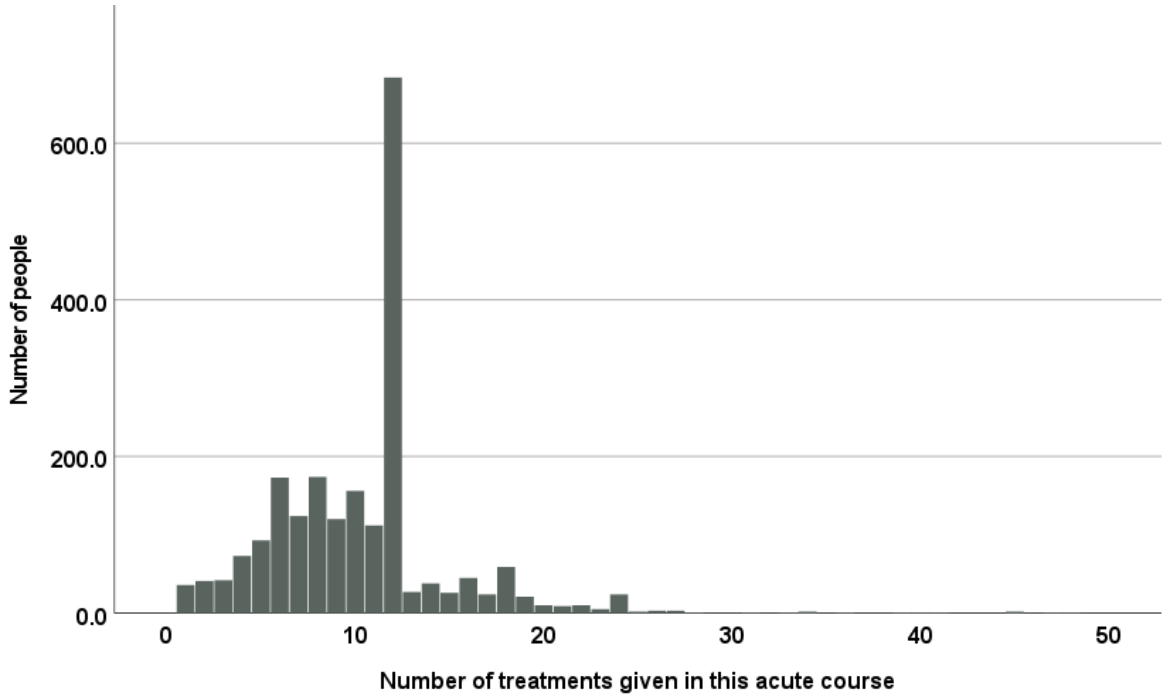

Figure 3: Number of treatments in each acute ECT. n=2147, due to missing data for 6 courses.

Patient outcomes

Clinical Global Impression

In order to assess patients' response to treatment, clinics were asked to use the Clinical Global Impression Scale - Severity (CGI-S) to rate each patient's clinical status prior to the start of treatment, and the Clinical Global Impression Scale - Improvement (CGI-I) at the end of the course.

As shown in Table 4, **83%** of patients in the recorded courses were rated as 'markedly ill' or worse at the start of treatment. The proportion showing any improvement was **88%**, with **67%** 'much improved' or 'very much improved' by the end of treatment.

CGI-S score before treatment	n	%	CGI-I score after treatment	n	%
7 - Amongst the most severely ill	240	11.6	7 - Very much worse	3	0.1
6 - Severely ill	777	37.4	6 - Much worse	11	0.5
5 - Markedly ill	699	33.6	5 - Minimally worse	25	1.2
4 - Moderately ill	312	15.0	4 - No change	204	9.8
3 - Mildly ill	31	1.5	3 - Minimally improved	449	21.6
2 - Borderline mentally ill	12	0.6	2 - Much improved	885	42.7
1 - Normal, not at all ill	8	0.4	1 - Very much improved	497	24.0
Total	**2079**			**2074**	

Table 4: Distribution of CGI-S scores before starting ECT and CGI-I scores at the end of the acute course of ECT. n=2079 for CGI-S score before treatment, n=2074 for CGI-I score after treatment, due to scores not having been recorded for 74 and 79 courses respectively. Data include all diagnostic indications. CGI-S, Clinical Global Impression (Severity) scale; CGI-I, Clinical Global Impression (Improvement) scale.

Patients having treatment for conditions other than depressive episode tended to have more severe illnesses than those with depressive episode. The highest rates of improvement were recorded for patients affected with manic episodes and the lowest among those suffering from schizophrenia. These data are shown in Table 5.

Diagnostic indication	Before ECT, using CGI-S		After ECT, using CGI-I	
	n	% of patients rated 'markedly ill' or worse	n	% of patients rated 'much improved' or better
Depressive episode	1761	80.9	1756	67.3
Mixed affective episode	89	87.6	87	67.8
Manic episode	61	95.1	61	73.8
Schizophrenia	113	91.2	114	56.1
Catatonia of other or unknown cause	39	97.4	40	67.5
Other	16	93.8	16	37.5
All indications	**2079**	**82.5**	**2074**	**66.6**

Table 5: Summary of CGI-S and CGI-I findings before and after acute courses of ECT according to diagnostic indication. CGI-S, Clinical Global Impression (Severity) scale; CGI-I, Clinical Global Impression (Improvement) scale.

Table 6 shows the highest rates of improvement were in the **15%** of patients given unilateral ECT. For the **85%** of courses that used bilateral placements, rates of improvement were markedly poorer in those given ultrabrief-pulse (UBP) stimuli (pulse widths of 0.25 to 0.3 ms) compared to brief pulse (≥0.5 ms). Notably, when UBP was used, it was predominantly given in combination with a bilateral (**93%**) rather than unilateral (**7%**) electrode placement.

Electrode placement and pulse width combination	Before ECT, using CGI-S		After ECT, using CGI-I	
	n	% of patients rated 'markedly ill' or worse	n	% of patients rated 'much improved' or better
Bilateral, brief-pulse	1589	81.7	1593	66.5
Bilateral, ultrabrief-pulse	183	88.0	177	58.2
Unilateral, brief-pulse	293	84.3	290	72.1
Unilateral, ultrabrief-pulse	14	71.4	14	71.4
All courses	**2079**	**82.5**	**2074**	**66.6**

Table 6: Summary of CGI-S and CGI-I findings after acute courses of ECT according to electrode placement and pulse width combination. CGI-S, Clinical Global Impression (Severity) scale; CGI-I, Clinical Global Impression (Improvement) scale.

Symptom rating scales

As well as using CGI ratings, clinics were asked to employ standardised symptom rating scales to obtain a more objective measure of clinical improvements. Clinics were able to use any appropriate scale, according to whether depressive, manic, psychotic, or catatonic symptoms were the primary target of treatment.

For the vast majority of courses, during which the patient was being treated for depressive episode, the most commonly used rating scales were the Montgomery-Åsberg Depression Rating Scale (MADRS) and the various versions of the Hamilton Depression Rating Scale (HAM-D). Additionally, several scales were used only by a very small number of clinics each and are listed in Table 7.

Courses for which the initial score on the scale had been entered as 0 were not included in the analysis. It is highly improbable that a patient with a diagnosis of depressive episode, starting a course of ECT, would genuinely score 0 (denoting a complete lack of symptoms) on a depressive symptom rating scale.

A score of 0 at the end of an acute treatment course was more difficult to interpret, as such a rating could plausibly denote a complete lack of symptoms. Nevertheless, such scores were removed from the analysis, unless they were either explicitly confirmed by correspondence with the clinic in question, or implicitly supported by a CGI-I score of 1 (very much improved) or 2 (much improved).

Table 7 shows the mean scores on these scales before and after acute courses of ECT, for those treated for depressive episode. On the two most frequently used tools, the Montgomery-Åsberg Depression Rating Scale and the 17-item version of

the Hamilton Depression Rating Scale, the mean symptom reductions were **22.6** and **15.9** points respectively.

Symptom rating scale	Patients, n	Mean score		Mean points reduction	p-value
		before ECT	after ECT		
Clinician-rated scales					
MADRS	398	38.2	15.6	22.6	$2.7x10^{-113}$
HAM-D 6-item	43	14.8	5.6	9.2	$1.8x10^{-12}$
HAM-D 17-item	274	24.7	8.8	15.9	$1.9x10^{-78}$
HAM-D 21-item	109	25.1	10.6	14.5	$2.3x10^{-35}$
HAM-D 24-item	46	26.2	12.3	13.9	$9.7x10^{-11}$
Patient-rated scales					
HADS	86	29.3	15.1	14.2	$8.1x10^{-20}$
MDI	31	31.7	10.7	21.0	$3.8x10^{-7}$
BDI	31	33.1	13.3	10.7	$4x10^{-11}$
PHQ-9	27	23.7	11.9	11.8	$1.4x10^{-5}$
QIDS	7	18.6	11.7	6.9	0.0008

Table 7: Mean symptom rating scale score before and after an acute course of ECT for depressive episode. n=1052, as only courses for which there were scores before and after ECT are included and results on rating scales used for fewer than five patients are not presented. p-values are based on paired-samples t-tests and are highly significant for all scales. Lower scores indicate fewer and/or less severe symptoms. MADRS, Montgomery-Åsberg Depression Rating Scale; HAM-D, Hamilton Depression Rating Scale; HADS, Hospital Anxiety and Depression Scale; MDI, Major Depression Inventory; BDI, Beck Depression Inventory; PHQ, Patient Health Questionnaire; QIDS, The Quick Inventory of Depressive Symptomatology

Results on rating scales for other disorders

For the treatment of conditions other than depressive episode, alternative symptom scales should be used. Only **13** cases had valid results using the **Young Mania Rating Scale** (indicated in manic episode). The scores reduced from a mean of 36.2 to 15.9 points ($p = 0.002$). There were **24** valid results using the **Brief Psychiatric Rating Scale** (indicated in schizophrenia, but also used for some cases of mixed affective disorder, mania and others), with a mean baseline score of 73.7 reducing to 34.6 at the end of treatment, a mean reduction of 53.1% ($p = 10^{-6}$). There were **21** valid results using the **Bush-Francis Catatonia Rating Scale**

(indicated in catatonia), with a mean baseline score of 12.3 reducing to 4.3 at the end of treatment (p = 0.0002).

Response and remission rates

The use of clinician-rated standardised symptom rating scales allows for the estimation of rates of response and remission achieved by patients receiving ECT. Given the relatively small number of patients being given ECT for other indications, this analysis was restricted to patients being treated for depressive episode.

For the Montgomery-Åsberg Depression Rating Scale (MADRS), remission is defined as ≤ 10 points (Hawley et al., 2002). For the Hamilton Depression Rating Scale (HAM-D), the following validated cut-offs for defining remission were used, depending upon the version:

- 6-item scale (HAM-D6) ≤ 4 points (Frank et al., 1991)
- 17-item scale (HAM-D17) ≤ 7 points (Kyle et al., 2016)
- 21-item scale (HAM-D21) ≤ 8 points (Degenhardt et al., 2012)
- 24-item scale (HAM-D24) ≤ 10 points (Fenton & McLoughlin., 2021).

Using these definitions, remission was achieved in 481 out of 1017 acute courses for which MADRS or HAM-D scores were recorded at the end of the course. This gives a remission rate of **47.3%**. Data submission has improved from 2022, when only 819 courses had an outcome score recorded. It should be noted that some researchers have suggested two consecutive ratings should be required to confirm remission (Hawley et al., 2002), but that only one rating has been used here.

For all scales used, response is defined as a 50% reduction from baseline (Koesters et al., 2017). Analysing the 1092 cases with valid pre- and post-treatment scores on a clinician-rated scale (MADRS or HAM-D), 708 courses ended in clinical response, giving a response rate of **64.8%**.

Objective cognitive assessments

For each acute course, clinics were asked which objective cognitive assessment tool had been used and to submit the scores at baseline and after the patient's final treatment.

Table 8 shows the results for the most frequently used tools, for patients who had both pre- and post-ECT ratings. ECT courses for which a score of 0 was entered, either before or after treatment, were excluded from the analysis. This score is typically entered when a patient is too impaired by illness to complete a test or to co-operate in completing a test or, perhaps, when the test has simply not been carried out. This was confirmed by communication with clinics. Excluding these 0 scores should protect against artificial inflation of any positive effect of ECT upon

cognition. This analysis is based on all acute courses for the treatment of depressive episodes.

Cognitive assessment tool	Maximum score	Acute courses, n	Mean score		p-value
			Before ECT	After ECT	
MMSE	30	455	25.5	27.2	$1.6x10^{-16}$
MoCA	30	404	22.1	24.1	$9.0x10^{-15}$
Mini-ACE	30	151	22.0	23.9	$6.0x10^{-6}$
ACE-III	100	6	76.3	72.8	n.s.
Hodges	6	50	2.7	2.5	n.s.
6CIT	28	98	7.1	4.0	$1.2x10^{-4}$

Table 8: Mean scores on cognitive assessment tools for patients treated for depressive episodes who had both pre- and post-ECT tests.

Lower scores indicate a greater degree of cognitive impairment, except on Hodges and 6CIT, for which the reverse holds. Scores of zero were not included in the analysis, except for Hodges and 6CIT, for which such a score indicates intact cognition. p-values are based on paired samples t-tests. MoCA, Montreal Cognitive Assessment; MMSE, Mini-Mental State Examination; mini-ACE, mini-Addenbrooke's Cognitive Examination; ACE-III, Addenbrooke's Cognitive Examination version 3; 6CIT, 6-item Cognitive Impairment Test; n.s., not significant.

These data show significant improvements in cognitive functioning on most assessment tools. This contrasts with the findings of a large meta-analysis (Semkovska & McLoughlin, 2010) which found an overall deterioration in cognitive functioning when tests were performed up to three days after the last ECT, but an improvement when tests were performed two or more weeks later. Notably, precise data regarding the exact timing of such assessments were not collected here.

However, patients scoring above 22 on either MMSE or MoCA at baseline had a clinically insignificant mean change at the end of treatment of less than 0.5 points. Hence, in keeping with analyses on previous ECTAS datasets, the modest mean improvement in cognition across the whole sample is driven by dramatic cognitive improvements in a subset of patients who had performed very poorly on testing prior to ECT, whereas the majority of patients exhibit stability.

Subjective memory ratings

Clinics were directed to ask item No. 17 of the Comprehensive Psychopathological Rating Scale (CPRS) immediately before every ECT treatment and following

completion of the course. This item has been used in ECT-related research (Sigström et al., 2020). The outcomes are shown in Table 9 and suggest that severe problems with memory are slightly more frequent before than after ECT, a finding likely to reflect the severity of the psychiatric illnesses being treated. The only categories showing increases after ECT were 2 ("occasional increased lapses of memory") and the yet milder category of 1, lying between the aforementioned category and normality.

Score on CPRS item-17	Cases before ECT		Cases after ECT	
	n	% of recorded entries	n	% of recorded entries
0 - Memory as usual	866	57.7	942	53.2
1 -	123	8.2	194	11.0
2 - Occasional increased lapses of memory	316	21.0	479	27.1
3 -	75	5.0	63	3.6
4 - Reports of socially inconvenient or disturbing loss of memory	78	5.2	74	4.2
5 -	16	1.1	8	0.5
6 - Complaints of complete inability to remember	28	1.9	10	0.6
Total cases with valid ratings	**1502**		**1770**	

Table 9: Subjective memory ratings by patients before and after an acute course of ECT. Patients having more than one course of ECT are represented more than once. Patients with any diagnosis are included. CPRS = Comprehensive Psychopathological Rating Scale.

Further analysis of the data included the **1451** courses for which both pre- and post-ECT scores were available. Defining stability as a 0 or ±1 point change on CPRS item 17, in **194** cases (**13%**) memory subjectively worsened after ECT, in **175** (**12%**) it improved and in the remaining **1082** (**75%**) it remained stable. These findings are similar, although of a smaller magnitude, to the findings of Sigström and colleagues (2020), who reported 16% of their sample worsening and 31% improving, using the same criteria but over a longer follow-up period.

Conclusions

Of some **2153** acute courses of ECT completed during 2023, the vast majority (**85%**) were used to treat a depressive episode. Improvement in symptoms on the CGI scale was demonstrated, with the vast majority markedly ill or worse at the outset of treatment, and **67%** 'much improved' or 'very much improved' following treatment. Interestingly, a lower improvement rate of **58%** was seen in those having bilateral, ultrabrief-pulse treatment.

Almost **32%** of patients who were too unwell to have mental capacity to consent to ECT at the outset of their treatment had regained capacity in this regard by the end of their course.

In the treatment of depressive episodes, scores on symptom rating scales improved markedly, with **65%** of patients exhibiting a pre-defined response using clinician-rated symptom scales and **47%** reaching remission.

Whilst cognitive scores significantly improved overall during acute courses of ECT, this recovery was seen mainly in patients whose cognition was significantly impaired prior to initiation of treatment.

Finally, subjective memory ratings were much improved following ECT. These changes were particularly pronounced in those who had memory problems at baseline, with **175** showing improvements. Conversely, only **194** of **1451** patients reported a deterioration in memory.

In summary, acute ECT is an effective and well-tolerated treatment for depressive episode and other illnesses.

CONTINUATION COURSES OF ECT

142

submissions

As stated in the introduction to this report, continuation ECT (cECT) is defined as ECT, usually delivered at intervals of one week or more, used to prevent a relapse of symptoms, for a period of up to six months after an acute course of ECT has brought about a resolution of such symptoms. The odd missed treatment during an acute course does not constitute cECT: there must be an intention to lower the frequency and a change in purpose of the ECT (from active treatment of symptoms to prevention of relapse) for the course to be considered "continuation".

Returns were made by **43** clinics for a total of **142** courses of cECT completed during 2023 given to **121** individual patients. **13** of those had two continuation courses and **four** had three courses. Given the similar numbers of acute courses (1980 and 2153) completed in the years 2022 and 2023 respectively, these figures suggest that approximately **7%** (142 of 2153) of acute courses are being followed by continuation treatments.

Age and Gender

The mean age of patients receiving cECT was **63.6 years** (standard deviation (SD) = 15.6 years). The range was **22 – 85 years**. Of these, 76 (**62.8%**) patients were of female gender and 45 (**37.2%**) male.

Diagnostic indications

Of the 142 cECT courses, **118** followed depressive episodes, **6** schizophrenia, **3** manic episodes, **8** mixed affective episodes, **5** catatonia of another or unknown cause, and **2** following other diagnoses.

Reasons for using cECT

Clinics were asked to list the reasons for using continuation ECT. They were presented with a drop-down menu with eight options, with multiple responses possible, including an "other" option, for which further information was required. The results from the **142** continuation courses are detailed in Table 10. In most cases (**75.3%**) a previous relapse was listed as a reason for giving cECT. Of the 20 "other" reasons, the most frequently given, in ten cases, was "to prevent relapse".

Reason for using continuation ECT	Courses	
	n	%
Previous relapse soon after cessation of a prior acute course of ECT	107	75.3
Poor concordance with prophylactic drug treatment	23	16.2
Comorbidities make prophylactic drug treatment less desirable	4	2.8
Pregnancy makes prophylactic drug treatment less desirable	0	0.0
Breastfeeding makes prophylactic drug treatment less desirable	0	0.0
Patient choice	54	38.0
Carer choice	32	22.5
Other	20	14.0

Table 10: Reason for referral for a continuation course of ECT. n=142. Multiple responses allowed for each course.

Legal Status

Clinics were asked about the patient's mental capacity and detention status. Results are depicted in Table 11. Although only four patients regained capacity during their courses, symptomatic improvement is not the aim of cECT. Eleven fewer patients were still detained at the end of the cECT.

Legal Status	Start of cECT course, n	End of cECT course, n
Informal	109	120
With mental capacity	106	117
Without mental capacity	3	3
Detained	33	22
With mental capacity	10	3
Without mental capacity	23	19

Table 11: Detention status and mental capacity of patients before and after a course of continuation ECT. n=142. cECT, continuation ECT.

Hospital status

51 patients (**35.9%**) began cECT as inpatients, but only 33 (**23.9%**) were still in hospital at completion of the continuation course.

Number of treatments

The mean number of treatments per continuation course was **8.5** (standard deviation = 6.3). The number of courses of each duration are listed in Table 12.

Treatments in continuation course, n	Courses, n
1	6
2	7
3	18
4	11
5	12
6	16
7	7
8	5
9	8
10	9
11	7
12	11
13-18	13
>18	10

Table 12: Number of continuation treatments in each course. n=140, due to missing data in two cases.

Treatment frequency

Clinics were asked to state the frequency with which treatments were administered during each cECT course. These data are shown in Table 13.

Frequency of treatments	Courses, n
Every 1 week	53
Every 1½ weeks	2
Every 2 weeks	20
Every 3 weeks	5
Every 4 weeks	7
A varied schedule of decreasing frequency over time	55

Table 13: Frequency of continuation ECT treatments.

Severity of illness

At the start of the continuation course, **69.7%** of patients were rated as being 'mildly ill' or better, with **12.0%** being 'markedly ill' or worse, as shown in Table 14. This latter finding is surprising, given the expectation that cECT would be given to relatively well patients, with the intention of preserving the symptomatic improvements achieved during a recent acute course (Kellner et al., 2006).

CGI-S rating	Courses, n	Courses (%)
1 = normal, not at all ill	36	25.4
2 = borderline mentally ill	33	23.2
3 = mildly ill	30	21.1
4 = moderately ill	18	12.7
5 = markedly ill	12	8.5
6 = severely ill	5	3.5
7 = amongst the most severely ill	0	0.0

Table 14: Severity of illness at the outset of continuation ECT. n=134, due to missing data in 8 cases. CGI-S, Clinical Global Impression (Severity) scale.

Patient outcomes

Clinical global impression

As the purpose of cECT is to prevent a relapse of symptoms following an acute course, it was intended that clinics would record symptom severity, using CGI-S, both before and after continuation treatment. Unfortunately, due to an error in the design of the online data collection form, clinics were instead asked to rate the degree of symptomatic improvement, using CGI-I, following cECT. Consequently, the returned data cannot be reliably analysed, not least because the time point of the baseline, against which any improvement or deterioration has been judged, is unclear for any given patient. Instead, this report focuses on symptom rating scale data, outlined below.

Symptom rating scales

Of the **118** courses of cECT following a depressive episode, **51** were rated with HAM-D both at the start and the end, and **19** courses were rated with MADRS at the start and at the end. Table 15 shows no significant change on the scores, using paired samples t-tests. **28** patients of the **70** were in remission at the start. **9** patients who were not in full remission at the start of the cECT course had reached remission at the end, but **4** who were in remission at the start were rated as not being in remission at the end.

Symptom rating scale	Patients, n	Mean score before cECT treatment	Mean score after cECT treatment	p-value
HAM-D	51	9.4	8.0	n.s.
MADRS	19	16.4	14.6	n.s.

Table 15: Mean scores on symptom rating scales before and after courses of continuation ECT. MADRS, Montgomery-Åsberg Depression Rating Scale; HAM-D, Hamilton Depression Rating Scale; cECT, continuation ECT; n.s., not significant.

Objective cognitive assessments

Objective cognitive rating scale scores were reported at the start and end of **109** continuation treatment courses. Table 16 shows that the start and end scores are very similar for all rating scales, suggesting that patients did not experience any clinically significant cognitive changes during continuation treatment, as measured by these scales.

Cognitive assessment	Courses, n	Mean score before cECT	Mean score after cECT	p-value
MMSE	36	27.4	28.2	n.s.
MoCA	38	23.4	24.3	n.s.

Table 16: Objective cognitive assessment scores at before and after continuation ECT. n=74, due to missing data in 59 cases and other scales used in 35 cases. cECT, continuation ECT; MMSE, Mini-Mental State Examination; MoCA, Montreal Cognitive Assessment.

Subjective memory ratings

As for acute courses, clinics were asked to collect data using a subjective rating of memory functioning, namely item no. 17 of the Comprehensive Psychopathological Rating Scale (CPRS), prior to starting cECT and following completion of the course. The scores are shown in Table 17 and suggest that memory is essentially unchanged. This indicates that cECT courses did not lead to any additional subjective memory complaints.

Score on CPRS item no. 17	Cases before cECT		Cases after cECT	
	N	%	n	%
0 - Memory as usual	60	46.5	54	41.2
1 -	12	9.3	20	15.3
2 - Occasional increased lapses of memory	46	35.7	44	33.6
3 -	6	4.7	7	5.3
4 - Reports of socially inconvenient or disturbing loss of memory	3	2.3	4	3.1
5 -	0	0.0	0	0.0
6 - Complaints of complete inability to remember	2	1.6	2	1.5
Total cases with valid ratings	**129**		**131**	

Table 17: Subjective memory ratings by patients before and after a continuation course of ECT. CPRS, Comprehensive Psychopathological Rating Scale; cECT, continuation ECT.

Conclusions

Continuation ECT was prescribed after roughly **7%** of acute courses, primarily in cases where there has been a rapid relapse following an earlier acute course, to lower the risk of a further relapse. Both subjective and objective measures of cognitive functioning suggest there is no evidence that continuation ECT leads to further cognitive problems. In view of this positive safety profile, the well documented significant risk of relapse following successful acute treatment of depressive episode (Kirov et al., 2021) and the evidence of efficacy from randomised controlled trials (Jelovac et al., 2025), it could be postulated that continuation treatment should be used more frequently.

MAINTENANCE COURSES OF ECT

168

submissions

As stated in the introduction to this report, maintenance ECT (mECT) is defined as ECT, usually delivered at intervals of between one week and three months, used to prevent a recurrence of illness, starting from six months after an acute course of ECT has brought about a resolution of symptoms (i.e. from the end of a six-month period of continuation ECT). Subject to regular clinical review, mECT can continue for an indefinite period, but for the purpose of data collection, ECT clinics were asked to submit data annually on patients who were still receiving mECT at the end of the calendar year, or when a course of mECT came to an end.

Returns were made by **54** clinics for a total of **168** maintenance courses received by **163** patients (**5** patients received two maintenance courses, presumably after their illness recurred upon discontinuation of the first maintenance course).

Age and Gender

The mean age of patients receiving mECT was **66.2 years** (standard deviation (SD) = 15.3 years), with no data missing. The range was **22 – 91 years**. Forty patients were male (**23.8%)** and 128 were female (**76.2%**).

Diagnostic indications

Most courses of mECT (**124**) were for the treatment of recurrent depressive disorder, **20** for bipolar affective disorder, **15** for mixed affective disorder, **5** for schizophrenia, **2** for recurrent catatonia of another cause or unknown cause, and **2** for other conditions.

Reasons for using mECT

Clinics were asked to list the reasons for using mECT. They were presented with a drop-down menu with eight options, with multiple responses possible, including an "other" option, for which further information was required. The results from all **168** maintenance courses are detailed in Table 18. In the "other" category, the free-text responses mainly included variations on the theme of reducing the risk of a return of symptoms. Additionally, intolerable side effects of medication were listed as a reason for using mECT.

Reason for using maintenance ECT	Courses	
	n	%
Previous recurrence after cessation of a prior continuation course	141	83.9
Poor concordance with prophylactic drug treatment	23	13.6
Comorbidities make prophylactic drug treatment less desirable	5	3.0
Patient choice	67	39.9
Carer choice	30	17.9
Other	6	3.6

Table 18: Reason for referral for a maintenance course of ECT. n=168. Multiple responses were allowed for each course of treatment.

Legal Status

Clinics were asked about the patient's mental capacity and detention status at the beginning and end of the maintenance course (or, in the case of a longer course of mECT lasting more than 12 months, at the beginning and/or end of the calendar year). Results are depicted in Table 19 and show the vast majority of patients were informal and had capacity to consent.

Legal Status	Start of mECT course, n	End of mECT course, n
Informal	146	150
With mental capacity	143	143
Without mental capacity	3	7
Detained	22	18
With mental capacity	5	5
Without mental capacity	17	13

Table 19: Detention status and mental capacity of patients before and after a course maintenance ECT. mECT, maintenance ECT.

Hospital status

29 (**17.3%**) patients began mECT as inpatients; 35 (**20.8%**) were in hospital at the end of the maintenance course (or at the end of the data collection year for ongoing courses).

Number of treatments

The mean number of treatments during maintenance courses (or, in the case of a prolonged course lasting over 12 months, during the 2023 calendar year) was **13.4** (SD = 10.2, range **2 – 61**), with data missing in only one case. The mean total number of consecutive maintenance treatments, including those given prior to 2023, was **39.6** (SD = 59.4, range **2 – 495**), with data missing in three cases. **13** people had received over 100 ECT treatments, presumably over a period of some years.

Treatment frequency

The frequencies of treatments in courses of mECT are shown in Table 20. The frequency was constant in **128** cases, most commonly using two to four-week intervals, but longer intervals of six weeks or more are used in the care of some patients. The rate underwent changes in the remaining **43** cases, mostly in the direction of reducing frequency.

Frequency of treatments	Patients, n
½ week	0
1 week	22
1½ weeks	2
2 weeks	29
3 weeks	23
4 weeks	33
5 weeks	2
6 weeks	5
8 weeks	4
10 weeks	3
12 weeks	2
A varied schedule	43

Table 20: Frequency of maintenance ECT treatments. n=168.

Patient outcomes

Clinical global impression

As the purpose of mECT is to prevent a recurrence of illness following an acute course and a period of continuation treatment, it was intended that clinics would measure symptom severity, using CGI-S, at the beginning and end of maintenance treatment. Unfortunately, due to an error in the design of the online data collection form (the same error that is outlined in the section above covering continuation ECT), clinics were instead asked to rate the degree of symptomatic improvement, using CGI-I, following mECT. Consequently, the returned data cannot be reliably analysed, not least because the time point of the baseline, against which any improvement or deterioration has been judged, is unclear for any given patient. Instead, this report focuses on symptom rating scale data, outlined below.

Symptom rating scales

Only **69** of the 124 courses of mECT for recurrent depressive disorder had scores, both at the start and at the end of the course, using HAM-D (37 cases) or MADRS (32 cases). Table 21 shows stability or slight improvement of mean scores using each scale. Other rating scales used were the HADS (**12** patients), MDI (**12** patients), BPRS (**1** patient) and **4** "self-rating", but these numbers were too small to allow analysis.

Symptom rating scale	Patients, n	Mean score before mECT	Mean score after mECT	p-value
HAM-D	37	10.8	8.5	n.s.
MADRS	32	17.8	12.6	0.01

Table 21: Mean scores on symptom rating scales at the start and end of a course of maintenance ECT in patients with an index depressive episode. For prolonged maintenance courses lasting over 12 months, scores were taken at the start and/or end of the 2023 calendar year. MADRS, Montgomery-Åsberg Depression Rating Scale; HAM-D, Hamilton Depression Rating Scale; mECT, maintenance ECT; n.s., not significant

Objective cognitive assessment

Table 22 shows the results for the assessment tools that were applied at the start and end of treatment on 20 or more patients. Overall, there was no significant cognitive change during maintenance treatment.

Cognitive assessment	Patients, n	Mean score before mECT	Mean score after mECT	p-value
MMSE	34	27.6	27.6	n.s.
MoCA	49	24.2	24.7	n.s.

Table 22: Objective cognitive assessment scores before and after maintenance ECT. For prolonged maintenance courses lasting over 12 months, scores were taken at the beginning and/or end of the 2023 calendar year. p-values calculated using paired samples t-test. Includes patients treated for any diagnostic indication. mECT, maintenance ECT; MMSE, Mini-Mental State Examination; MoCA, Montreal Cognitive Assessment; n.s., not significant.

Subjective memory rating

As for acute and continuation courses, clinics were asked to collect data using a subjective rating of memory functioning, namely item no. 17 of the Comprehensive Psychopathological Rating Scale (CPRS), prior to starting mECT and following completion of the course (or, for prolonged courses lasting more than 12 months, around New Year). The mean scores are shown in Table 23 and are essentially unchanged. This indicates that mECT courses did not lead to additional subjective memory complaints, with a trend towards a gradual improvement in memory functioning.

Score on CPRS item-17	Cases at start		Cases at end	
	N	%	n	%
0 - Memory as usual	68	48.2	72	48.6
1 -	16	11.3	17	11.5
2 - Occasional increased lapses of memory	46	32.6	43	29.1
3 -	5	3.5	8	5.4
4 - Reports of socially inconvenient or disturbing loss of memory	5	3.5	8	5.4
5 -	1	0.7	0	0
6 - Complaints of complete inability to remember	0	0	0	0
Total cases with valid ratings	**141**		**148**	

Table 23: Subjective memory ratings by patients at the start and end of a course of maintenance ECT. For prolonged maintenance courses lasting over 12 months, scores

were taken around the beginning and/or end of the 2023 calendar year. CPRS, Comprehensive Psychopathological Rating Scale; mECT, maintenance ECT.

Conclusions

Maintenance ECT is used only rarely in the UK and Republic of Ireland, with just over half of clinics reporting an average of just under three cases each, and the remainder reporting no cases. The evidence collected here suggests that symptom ratings remain stable and that there is no evidence of deteriorating cognitive functioning over the period in question, as measured by both objective assessments and subjective reports. The most frequent reasons for initiating the treatment are previous recurrence after an earlier successful course of continuation ECT, patient choice and carer choice.

FURTHER DISCUSSION AND RECOMMENDATIONS

OUTCOME MEASURES

It has previously been recommended by ECTAS that the original 17-item version of the Hamilton Depression Rating Scale (HAM-D17, Appendix 4) (Hamilton, 1960) is adopted universally by accredited clinics for use when treating patients for depressive episode. This practice should have been adopted across the ECTAS regions by the beginning of 2024, such that the report for that year's activity will be able to provide a more comprehensive analysis of outcomes than ever before. However, it is important that ECT clinic staff, as well as the clinicians in the teams who refer patients for ECT, have adequate training and/or guidance in the use of this scale. Such training and guidance should be provided by ECTAS as required.

Similarly, it has been previously recommended that the Young Mania Rating Scale (YMRS) (Young et al., 1978) and the Brief Psychiatric Rating Scale (Gorham et al., 1960) be used when treating patients for manic episode and schizophrenia respectively. The Bush-Francis Catatonia Rating Scale (BFCRS) (Bush et al., 1996) should be used when catatonia dominates the clinical picture. A copy of each of these scales is appended to this report. By doing so, it is hoped the 2024 dataset report will provide more useful information about outcomes in these patient groups than this report has been able to. However, it is recognised that ECT clinics tend to encounter such patients relatively infrequently, which may lead to difficulties reaching a sufficient degree of expertise in administering these tests.

There is no specific objective cognitive test that is perfectly suited to use in the ECT setting. The domains that have been shown to be adversely affected by ECT, namely anterograde and retrograde memory, processing speed and executive functioning (Semkovska et al., 2010), are not well covered by standard tests such as the MoCA, MMSE or even the full version of the ACE. Additionally, all these tests feature various domains known to be affected by the symptoms of a severe depressive episode but not by ECT (other than in the immediate post-recovery period), such as attention and orientation.

In light of this, although it would be ideal to have standardised, homogeneous cognitive data for analysis, there is currently no one test that is recommended over others.

Although it has been designed specifically for use in ECT, the Electroconvulsive Cognitive Assessment (ECCA) (Hermida et al., 2020) is not recommended by ECTAS. It combines elements of both patient and collateral history, along with objective tests of cognition, into one numerical score. The objective tests cover registration, attention and short-term recall, but also include culturally sensitive

tests of general knowledge and autobiographical memory. Consequently, its value in international ECT practice remains unclear.

ELECTRODE PLACEMENT AND PULSE WIDTH

Our data suggest there are several clinics routinely using bilateral, ultrabrief-pulse (UBP) ECT, which was associated with relatively poor outcomes.

There appears to be little reason for using bilateral UBP ECT. When treating depressive episodes in right-handed patients, clinicians who are mindful of cognitive outcomes should use high-dose right unilateral, brief-pulse ECT. This is because it is just as effective as bilateral brief-pulse ECT, but is associated with quicker post-procedure recovery of orientation and a lower incidence of autobiographical memory loss (Kolshus et al., 2017).

Right unilateral UBP ECT may be considered in a small minority of cases in which cognitive sparing is considered more important than symptom resolution. However, caution should be exercised because, while it does convey some cognitive advantages, it is less effective than right unilateral, brief-pulse treatment (Tor et al., 2015).

Bilateral UBP stimulation, on the other hand, has not been shown to hold any cognitive or efficacy advantage over other forms of ECT. Its use is discouraged by ECTAS.

This report also shows that, despite its equivalent efficacy in depressive episode and its superior side-effect profile, right unilateral ECT is vastly underused in the UK compared to most other high-income countries.

Consequently, ECTAS suggests that, just like selection of the dose, decisions with patients about electrode placement and pulse width should be made, not by referring psychiatrists, but by ECT specialists.

DURATION OF TREATMENT

Remission and response rates in this dataset were consistent with those observed in some randomised trials (e.g., Semkovska et al., 2016), but lower than in a recent meta-analysis of a combination of retrospective, prospective, observational, and interventional studies in major depression (van Diermen et al., 2018). Reaching remission, defined in this context as a very low degree of symptomatology, is self-evidently a particularly important goal for patients and their families.

Consequently, there is no clinical logic to explain the ongoing, habitual use of 12 treatments in acute courses of ECT. Referring clinicians must dispense with the erroneous idea that 12 sessions somehow constitute a 'standard course' of ECT that will reliably bring about remission without exposing patients to unnecessary treatments. Many patients require significantly fewer than 12 treatments, whilst others need more. Patients must be reviewed regularly between treatments, with no more than two treatments prescribed at once.

Towards the end of an acute course of ECT during which a steady response has been observed, clinicians will naturally consider all the needs of each individual patient, taking into account any adverse as well as therapeutic effects of treatment, along with the effects of ending treatment prematurely. In general, however, ECTAS encourages clinicians to continue twice-weekly treatments, either until remission is achieved or there is a clear plateauing of therapeutic effect. In many cases, this will require courses of a duration that necessitates fresh legal authorisation for treatment, be that a new informal consent form or a repeat formal application. But clinicians are reminded that the goal of each individual patient reaching remission should be at the forefront of clinical decision-making.

It is incumbent upon ECT Lead Clinicians to ensure the education of their referring colleagues on these and other ECT-related matters.

ENGAGEMENT IN SUBMISSION TO THE DATASET

Not every ECTAS member clinic submitted data. ECTAS should encourage all clinics to do so, including regular communication with individual clinics including instruction on how to use the online data submission system. As part of its accreditation process, ECTAS continues to provide support to clinics to ensure systems are in place locally to allow the necessary information to be adequately recorded.

The widespread use of zeros to signify missing data, has largely been stopped by allowing clinics to state that a particular measurement has not been taken. However, it is important that this option is not systemically misused. All clinics should have systems in place to try to gather the relevant data in as many cases as possible. Any systemic inability by a specific clinic to provide certain types of data on their patients can be readily identified and raised during that clinic's next accreditation cycle.

ECTAS would like to thank all staff members at its member clinics for their time and effort in submitting their anonymised patients' data. Without their dedicated input, it would not be possible to produce this report.

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APPENDIX 1: FULL DATA COLLECTION TOOL

Name of ECT Clinic *

Stonebow (Hereford)

Demographic Details

Patient's local clinic ID *

ⓘ Either use the patient's local medical records number, or assign unique numbers to each of your ECT patients for the purpose of these data returns. Do NOT use NHS numbers.

Age of patient (at the first treatment in this course)

ex: 23

ⓘ Age in years; do not use decimal points or fractions.

What sex is the patient?

- ◯ Male
- ◯ Female
- ◯ Prefer not to say
- ◯ Prefer to self-describe (please enter below)

To which gender does the patient most identify?

- ◯ Male
- ◯ Female
- ◯ Transgender male
- ◯ Transgender female
- ◯ Non-binary
- ◯ Prefer not to say
- ◯ Don't know
- ◯ Prefer to self-describe (please enter below)

Serious Incidents

Have there been any serious incidents in relation to ECT and this patient? *

- ◯ Yes
- ◯ No

ECT Parameters

Type of ECT course (see FAQs for complete definitions) *

- ◯ Acute (i.e. at least twice-weekly, to treat active symptoms)
- ◯ Continuation (i.e. for preventing early relapse (≤6 months))
- ◯ Maintenance (i.e. for preventing recurrence (>6 months))

Acute

Is this the first acute course being submitted for this calendar year?

- ◯ Yes, this is the first acute course
- ◯ No, this is the second acute course
- ◯ No, this is the third acute course
- ◯ No, this is the fourth acute course

Number of treatments given in this acute course

ex: 23

ⓘ It is not uncommon for an acute course to be longer than 12 treatments.

Frequency of treatments

- ◯ Two times weekly
- ◯ Three times weekly
- ◯ Daily
- ◯ Three times weekly then two times weekly
- ◯ Other

Was this course stopped prematurely? *

- ◯ Yes
- ◯ No

Stimulus dosing method used at first session(s) *

- ◯ Dose titration (i.e. establish seizure threshold then use e.g. 6 x ST for unilateral or 1.5 x ST for bilateral ECT)
- ◯ Age-based
- ◯ Fixed dose
- ◯ Other

Clinical Details

Medical condition treated with ECT *

- ◯ Depressive episode
- ◯ Mixed affective episode
- ◯ Manic episode
- ◯ Schizophrenia
- ◯ Catatonia of another cause or unknown cause
- ◯ Neuroleptic malignant syndrome
- ◯ Other (please only use this option if it is impossible to use any of the diagnostic categories above)

Reason for using ECT (tick all that apply) *

- ☐ Rapid response required
- ☐ Poor-response to pharmacological and/or psychological treatments (i.e. treatment resistance)
- ☐ Poor concordance with drug treatment
- ☐ Co-morbidities make drug treatment less desirable
- ☐ Pregnancy makes drug treatment less desirable
- ☐ Breastfeeding makes drug treatment less desirable
- ☐ Patient choice
- ☐ Carer choice
- ☐ Other

Location of patient at initiation of acute course of ECT *

- ◯ Inpatient
- ◯ Outpatient

Legal Status

Legal status at initiation of acute course of ECT *

- ◯ Informal
- ◯ Detained

Mental capacity at initiation of acute course of ECT *

- ◯ Had capacity to consent to ECT
- ◯ Lacked capacity to consent to ECT

Legal status at end of acute course of ECT *

- ◯ Informal
- ◯ Detained

Mental capacity at end of acute course of ECT *

- ◯ Had capacity to consent to ECT
- ◯ Lacked capacity to consent to ECT

Outcome

Clinical Global Impression Severity (CGI-S) score prior to first treatment in this acute course *

- ◯ 1. Normal, not at all ill
- ◯ 2. Borderline mentally ill
- ◯ 3. Mildly ill
- ◯ 4. Moderately ill
- ◯ 5. Markedly ill
- ◯ 6. Severely ill
- ◯ 7. Amongst the most severely ill patients
- ◯ The score was not recorded

Clinical Global Impression Improvement (CGI-I) score after completion of this acute course *

- ◯ 1. Very much improved
- ◯ 2. Much improved
- ◯ 3. Minimally improved
- ◯ 4. No change
- ◯ 5. Minimally worse
- ◯ 6. Much worse
- ◯ 7. Very much worse
- ◯ The score was not recorded

Psychiatric symptom rating scale used prior to first treatment (tick all that apply)

- ☐ Montgomery-Asberg Depression Rating Scale (MADRS)
- ☐ Hamilton Depression Rating Scale (HAM-D)
- ☐ Young Mania Rating Scale (YMRS)
- ☐ Bush-Francis Catatonia Rating Scale (BFCRS)
- ☐ The score was not recorded
- ☐ Other

Psychiatric symptom rating scale used after final treatment (tick all that apply)

- ☐ Montgomery-Asberg Depression Rating Scale (MADRS)
- ☐ Hamilton Depression Rating Scale (HAM-D)
- ☐ Young Mania Rating Scale (YMRS)
- ☐ Bush-Francis Catatonia Rating Scale (BFCRS)
- ☐ The score was not recorded
- ☐ Other

Subjective memory assessment score (using Item 17 on the Comprehensive Psychopathological Rating Scale (CPRS)) prior to first treatment in this acute course

- ◯ 0 - Memory as usual
- ◯ 1
- ◯ 2 - Occasional increased lapses of memory
- ◯ 3
- ◯ 4 - Reports of socially inconvenient or disturbing loss of memory
- ◯ 5
- ◯ 6 - Complaints of complete inability to remember
- ◯ This was not recorded
- ◯ The patient was too unwell to give a response

Subjective memory assessment score (using Item 17 on the Comprehensive Psychopathological Rating Scale (CPRS)) after last treatment in this acute course

- ◯ 0 - Memory as usual
- ◯ 1
- ◯ 2 - Occasional increased lapses of memory
- ◯ 3
- ◯ 4 - Reports of socially inconvenient or disturbing loss of memory
- ◯ 5
- ◯ 6 - Complaints of complete inability to remember
- ◯ This was not recorded
- ◯ The patient was too unwell to give a response

Objective cognitive test used prior to first treatment (tick all that apply) *

- ☐ Montreal Cognitive Assessment (MOCA)
- ☐ Mini-Mental State Examination (MMSE)
- ☐ The patient was too unwell to assess
- ☐ This score was not recorded
- ☐ Other

Objective cognitive test used after final treatment (tick all that apply) *

- ☐ Montreal Cognitive Assessment (MOCA)
- ☐ Mini-Mental State Examination (MMSE)
- ☐ The patient was too unwell to assess
- ☐ This score was not recorded
- ☐ Other

Continuation

Is this the first continuation course being submitted for this calendar year?

- ◯ Yes, this is the first continuation course
- ◯ No, this is the second continuation course
- ◯ No, this is the third continuation course

Number of treatments given in this continuation course

ex: 23

① Do not include any treatments given in the preceding acute course of ECT, which should have been counted as part of a separate ECTAS data submission.

Frequency of treatments

- ◯ Every 1 week
- ◯ Every 1½ weeks
- ◯ Every 2 weeks
- ◯ Every 3 weeks
- ◯ Every 4 weeks
- ◯ A varied schedule of decreasing frequency over time

Clinical Details

Medical condition treated with the acute course of ECT that preceeded this continuation course *

- ◯ Depressive episode
- ◯ Mixed affective episode
- ◯ Manic episode
- ◯ Schizophrenia
- ◯ Catatonia of another cause or unknown cause
- ◯ Neuroleptic malignant syndrome
- ◯ Other (please only use this option if it is impossible to use any of the diagnostic categories above)

Reason for using continuation ECT (tick all that apply) *

- ☐ Previous relapse soon after cessation of a prior acute course of ECT
- ☐ Poor concordance with prophylactic drug treatment
- ☐ Co-morbidities make prophylactic drug treatment less desirable
- ☐ Pregnancy makes prophylactic drug treatment less desirable
- ☐ Breastfeeding makes prophylactic drug treatment less desirable
- ☐ Patient choice
- ☐ Carer choice
- ☐ Other

Location of patient at first treatment in this continuation course *

- ◯ Inpatient
- ◯ Outpatient

Location of patient at last treatment in this continuation course *

- ◯ Inpatient
- ◯ Outpatient

Legal Status

Legal status at first treatment in this continuation course *

- ◯ Informal
- ◯ Detained

Mental capacity at first treatment in this continuation course *

- ◯ Had capacity to consent to ECT
- ◯ Lacked capacity to consent to ECT

Legal status at last treatment in this continuation course *

- ◯ Informal
- ◯ Detained

Mental capacity at last treatment in this continuation course *

- ◯ Had capacity to consent to ECT
- ◯ Lacked capacity to consent to ECT

Outcome

Clinical Global Impression Severity (CGI-S) score prior to first treatment in this continuation course *

- ◯ 1. Normal, not at all ill
- ◯ 2. Borderline mentally ill
- ◯ 3. Mildly ill
- ◯ 4. Moderately ill
- ◯ 5. Markedly ill
- ◯ 6. Severely ill
- ◯ 7. Amongst the most severely ill patients
- ◯ The score was not recorded

Clinical Global Impression Severity (CGI-S) score after completion of this continuation course *

- ◯ 1. Normal, not at all ill
- ◯ 2. Borderline mentally ill
- ◯ 3. Mildly ill
- ◯ 4. Moderately ill
- ◯ 5. Markedly ill
- ◯ 6. Severely ill
- ◯ 7. Amongst the most severely ill patients
- ◯ The score was not recorded

Psychiatric symptom rating scale used prior to first treatment in this continuation course (tick all that apply)

- ☐ Montgomery-Asberg Depression Rating Scale (MADRS)
- ☐ Hamilton Depression Rating Scale (HAM-D)
- ☐ Young Mania Rating Scale (YMRS)
- ☐ Bush-Francis Catatonia Rating Scale (BFCRS)
- ☐ The score was not recorded
- ☐ Other

Psychiatric symptom rating scale used after last treatment in this continuation course (tick all that apply)

- ☐ Montgomery-Asberg Depression Rating Scale (MADRS)
- ☐ Hamilton Depression Rating Scale (HAM-D)
- ☐ Young Mania Rating Scale (YMRS)
- ☐ Bush-Francis Catatonia Rating Scale (BFCRS)
- ☐ The score was not recorded
- ☐ Other

Subjective memory assessment score (using Item 17 on the Comprehensive Psychopathological Rating Scale (CPRS)) prior to first treatment in this continuation course

- ◯ 0 - Memory as usual
- ◯ 1
- ◯ 2 - Occasional increased lapses of memory
- ◯ 3
- ◯ 4 - Reports of socially inconvenient or disturbing loss of memory
- ◯ 5
- ◯ 6 - Complaints of complete inability to remember
- ◯ This was not recorded
- ◯ The patient was too unwell to give a response

Subjective memory assessment score (using Item 17 on the Comprehensive Psychopathological Rating Scale (CPRS)) after last treatment in this continuation course

- ◯ 0 - Memory as usual
- ◯ 1
- ◯ 2 - Occasional increased lapses of memory
- ◯ 3
- ◯ 4 - Reports of socially inconvenient or disturbing loss of memory
- ◯ 5
- ◯ 6 - Complaints of complete inability to remember
- ◯ This was not recorded
- ◯ The patient was too unwell to give a response

Objective cognitive test used prior to first treatment in this continuation course (tick all that apply) *

- ☐ Montreal Cognitive Assessment (MOCA)
- ☐ Mini-Mental State Examination (MMSE)
- ☐ The patient was too unwell to assess
- ☐ The score was not recorded
- ☐ Other

Objective cognitive test used after final treatment in this continuation course (tick all that apply) *

- ☐ Montreal Cognitive Assessment (MOCA)
- ☐ Mini-Mental State Examination (MMSE)
- ☐ The patient was too unwell to assess
- ☐ The score was not recorded
- ☐ Other

Maintenance

Is this the first maintenance course being submitted for this calendar year?

- ◯ Yes
- ◯ No

Number of treatments given in this maintenance course

ex: 23

Do not include any treatments given in the preceding acute or continuation courses

Total number of consecutive maintenance treatments given

ex: 23

e.g. for an annual data return of a patient who has had fortnightly mECT for 3 years, you might enter 78 here, but just 26 in the box above.

Frequency of treatments

- ◯ Every 1 week
- ◯ Every 1½ weeks
- ◯ Every 2 weeks
- ◯ Every 3 weeks
- ◯ Every 4 weeks
- ◯ Varied schedule of decreasing frequency over time
- ◯ Other

Clinical Details

Medical condition requiring maintenance course of ECT *

- ◯ Recurrent depressive disorder
- ◯ Bipolar affective disorder
- ◯ Schizoaffective disorder
- ◯ Schizophrenia
- ◯ Recurrent catatonia of another cause or unknown cause
- ◯ Other (please only use this option if it is impossible to use any of the diagnostic categories above)

Reason for using maintenance ECT (tick all that apply) *

- ☐ Previous recurrence after cessation of a prior continuation course of ECT
- ☐ Poor concordance with prophylactic drug treatment
- ☐ Co-morbidities make prophylactic drug treatment less desirable
- ☐ Pregnancy makes prophylactic drug treatment less desirable
- ☐ Breastfeeding makes prophylactic drug treatment less desirable
- ☐ Patient choice
- ☐ Carer choice
- ☐ Other

Location of patient at first treatment in this maintenance course *

- ◯ Inpatient
- ◯ Outpatient

Location of patient at last treatment in this maintenance course *

- ◯ Inpatient
- ◯ Outpatient

Legal Status

Legal status at first treatment in this maintenance course *

- ◯ Informal
- ◯ Detained

Mental capacity at first treatment in this maintenance course *

- ◯ Had capacity to consent to ECT
- ◯ Lacked capacity to consent to ECT

Legal status at last treatment in this maintenance course *

- ◯ Informal
- ◯ Detained

Mental capacity at last treatment in this maintenance course *

- ◯ Had capacity to consent to ECT
- ◯ Lacked capacity to consent to ECT

Outcome

Clinical Global Impression Severity (CGI-S) score prior to first treatment in this maintenance course (NB it is normal for patients to have a relatively low score) *

- ◯ 1. Normal, not at all ill
- ◯ 2. Borderline mentally ill
- ◯ 3. Mildly ill
- ◯ 4. Moderately ill
- ◯ 5. Markedly ill
- ◯ 6. Severely ill
- ◯ 7. Amongst the most severely ill patients
- ◯ The score was not recorded

Clinical Global Impression Severity (CGI-S) score after last treatment in this maintenance course *

- ◯ 1. Normal, not at all ill
- ◯ 2. Borderline mentally ill
- ◯ 3. Mildly ill
- ◯ 4. Moderately ill
- ◯ 5. Markedly ill
- ◯ 6. Severely ill
- ◯ 7. Amongst the most severely ill patients
- ◯ The score was not recorded

Psychiatric symptom rating scale used prior to first treatment in this maintenance course (tick all that apply)

- ☐ Montgomery-Asberg Depression Rating Scale (MADRS)
- ☐ Hamilton Depression Rating Scale (HAM-D)
- ☐ Young Mania Rating Scale (YMRS)
- ☐ Bush-Francis Catatonia Rating Scale (BFCRS)
- ☐ The score was not recorded
- ☐ Other

Psychiatric symptom rating scale used after last treatment in this maintenance course (tick all that apply)

- ☐ Montgomery-Asberg Depression Rating Scale (MADRS)
- ☐ Hamilton Depression Rating Scale (HAM-D)
- ☐ Young Mania Rating Scale (YMRS)
- ☐ Bush-Francis Catatonia Rating Scale (BFCRS)
- ☐ The score was not recorded
- ☐ Other

Subjective memory assessment score (using Item 17 on the Comprehensive Psychopathological Rating Scale (CPRS)) prior to first treatment in this maintenance course

- ◯ 0 - Memory as usual
- ◯ 1
- ◯ 2 - Occasional increased lapses of memory
- ◯ 3
- ◯ 4 - Reports of socially inconvenient or disturbing loss of memory
- ◯ 5
- ◯ 6 - Complaints of complete inability to remember
- ◯ This was not recorded
- ◯ The patient was too unwell to give a response

Subjective memory assessment score (using Item 17 on the Comprehensive Psychopathological Rating Scale (CPRS)) after last treatment in this maintenance course

- ◯ 0 - Memory as usual
- ◯ 1
- ◯ 2 - Occasional increased lapses of memory
- ◯ 3
- ◯ 4 - Reports of socially inconvenient or disturbing loss of memory
- ◯ 5
- ◯ 6 - Complaints of complete inability to remember
- ◯ This was not recorded
- ◯ The patient was too unwell to give a response

Objective cognitive test used prior to first treatment in this maintenance course (tick all that apply) *

- ☐ Montreal Cognitive Assessment (MOCA)
- ☐ Mini-Mental State Examination (MMSE)
- ☐ The patient was too unwell to assess
- ☐ The score was not recorded
- ☐ Other

Objective cognitive test used after last treatment in this maintenance course (tick all that apply) *

- ☐ Montreal Cognitive Assessment (MOCA)
- ☐ Mini-Mental State Examination (MMSE)
- ☐ The patient was too unwell to assess
- ☐ The score was not recorded
- ☐ Other

APPENDIX 2: RECOMMENDED RATING SCALES

HAMILTON DEPRESSION RATING SCALE
BRIEF PSYCHIATRIC RATING SCALE
BUSH-FRANCIS CATATONIA RATING SCALE
YOUNG MANIA RATING SCALE

HAMILTON DEPRESSION RATING SCALE (HAM-D17)

1. Depressed mood *(sadness, hopeless, helpless, worthless)*
- 0 - Absent
- 1 - These feeling states indicated only on questioning
- 2 - These feeling states spontaneously reported verbally
- 3 - Communicates feeling states non-verbally, i.e., through facial expression, posture, voice, and tendency to weep
- 4 - Patient reports virtually only these feeling states in his/her spontaneous verbal and non-verbal communication

2. Feelings of guilt
- 0 - Absent.
- 1 - Self-reproach, feels he/she has let people down
- 2 - Ideas of guilt or rumination over past errors or sinful deeds
- 3 - Present illness is a punishment. Delusions of guilt
- 4 - Hears accusatory or denunciatory voices and/or experiences threatening visual hallucinations

3. Suicide
- 0 - Absent
- 1 - Feels life is not worth living
- 2 - Wishes he were dead or any thoughts of possible death to self
- 3 - Suicidal ideas or gesture
- 4 - Attempts at suicide (any serious attempt rates 4)

4. Insomnia - early in the night
- 0 - No difficulty falling asleep
- 1 - Complains of occasional difficulty falling asleep, i.e. more than ½ hour
- 2 - Complains of nightly difficulty falling asleep

5. Insomnia - middle of the night
- 0 - No difficulty
- 1 - Patient complains of being restless and disturbed during the night
- 2 - Waking during the night (any getting out of bed rates 2, except for purposes of voiding)

6. Insomnia - early hours of the morning
- 0 - No difficulty
- 1 - Waking in early hours of the morning but goes back to sleep
- 2 - Unable to fall asleep again if he/she gets out of bed

7. Work and activities
- 0 - No difficulty
- 1 - Thoughts and feelings of incapacity, fatigue or weakness related to activities, work or hobbies
- 2 - Loss of interest in activity, hobbies or work – either directly reported by patient, or indirect in listlessness, indecision and vacillation (feels he/she has to push self to work or activities)
- 3 - Decrease in actual time spent in activities or decrease in productivity
- 4 - Stopped working because of present illness

8. Retardation *(slowness of thought and speech; impaired ability to concentrate; decreased motor activity)*
- 0 - Normal speech and thought
- 1 - Slight retardation at interview
- 2 - Obvious retardation at interview
- 3 - Interview difficult
- 4 - Complete stupor

9. Agitation
- 0 - None
- 1 - Fidgetiness
- 2 - Playing with hands, hair, etc.
- 3 - Moving about, can't sit still.
- 4 - Hand wringing, nail biting, hair-pulling, biting of lips.

10. Anxiety - psychic
- 0 - No difficulty
- 1 - Subjective tension and irritability
- 2 - Worrying about minor matters
- 3 - Apprehensive attitude apparent in face or speech
- 4 - Fears expressed without questioning

11. Anxiety - somatic *(physiological concomitants of anxiety) e.g.*
- gastrointestinal - dry mouth, wind, indigestion, diarrhoea, cramps, belching
- cardiovascular - palpitations, headaches
- respiratory - hyperventilation, sighing
- urinary frequency
- sweating

- 0 - Absent
- 1 - Mild
- 2 - Moderate
- 3 - Severe
- 4 - Incapacitating

12. Somatic symptoms - gastrointestinal
- 0 - None.
- 1 - Loss of appetite but eating without encouragement from others. Food intake about normal
- 2 - Difficulty eating without urging from others. Marked reduction of appetite and food intake.

13. Somatic symptoms - general
- 0 - None
- 1 - Heaviness in limbs, back or head. Backaches, headaches or muscle aches. Loss of energy and fatiguability.
- 2 - Any clear-cut symptom rates "2"

14. Genital symptoms *(symptoms such as loss of libido; menstrual disturbances)*
- 0 - Absent
- 1 - Mild
- 2 - Severe

15. Hypochondriasis
- 0 - Not present
- 1 - Self-absorption (bodily)
- 2 - Preoccupation with health
- 3 - Frequent complaints, requests for help, etc.
- 4 - Hypochondriacal delusions

16. Loss of weight *(rate either a or b)*

a) according to the patient	**b) according to weekly measurements**
0 - No weight loss	0 - less than 0.5kg loss in week
1 - Probable weight loss associated with present illness	1 - greater than 0.5kg loss in week
2 - Definite (according to patient) weight loss	2 - greater than 1kg loss in week

17. Insight
- 0 - Acknowledges being depressed and ill
- 1 - Acknowledges illness but attributes cause to bad food, climate overwork, virus, need for rest, etc.
- 2 - Denies being ill at all

TOTAL SCORE / 52

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Ratings should be based upon symptoms over the past one week.

Ratings should be based on a clinical interview, supplemented, where necessary, by collateral history from caregivers.

Hamilton, M. (1960). A rating scale for depression. *Journal of Neurology, Neurosurgery, and Psychiatry*, *23*(1), 56–62. https://doi.org/10.1136/jnnp.23.1.56

YOUNG MANIA RATING SCALE (YMRS)

1. *Elevated Mood*
   - 0 - Absent
   - 1 - Mildly or possibly increased on questioning
   - 2 - Definite subjective elevation; optimistic, self-confident; cheerful; appropriate content
   - 3 - Elevated, inappropriate to content; humorous
   - 4 - Euphoric; inappropriate to content; singing

2. *Increased Motor Activity – Energy*
   - 0 - Absent
   - 1 - Subjectively increased
   - 2 - Animated; gestures increased
   - 3 - Excessive energy; hyperactive at times; restless (can be calmed)
   - 4 - Motor excitement; continuous hyperactivity (cannot be calmed)

3. *Sexual Interest*
   - 0 - Normal; not increased
   - 1 - Mildly or possibly increased
   - 2 - Definitive subjective increase on questioning
   - 3 - Spontaneous sexual content; elaborates on sexual matters; hypersexual by self-report
   - 4 - Overt sexual acts (towards patients, staff, or interviewer)

4. *Sleep*
   - 0 - Reports no decrease in sleep
   - 1 - Sleeping less than normal amount by up to one hour
   - 2 - Sleeping less than normal by more than one hour
   - 3 - Reports decreased need for sleep
   - 4 - Denies need for sleep

5. *Irritability*
   - 0 - Absent
   - 2 - Subjectively increased
   - 4 - Irritable at times during interview; recent episodes of anger or annoyance on ward
   - 6 - Frequently irritable during interview; short, curt throughout
   - 8 - Hostile, uncooperative; interview impossible

6. *Speech (Rate and Amount)*
   - 0 - No increase
   - 2 - Feels talkative
   - 4 - Increased rate or amount at times, verbose at times
   - 6 - Push; consistently increased rate and amount; difficult to interrupt
   - 8 - Pressured; uninterruptible, continuous speech

7. *Language – Thought Disorder*
   - 0 - Absent
   - 1 - Circumstantial; mild distractibility; quick thoughts
   - 2 - Distractible; loses goal of thought; changes topics frequently; racing thoughts
   - 3 - Flight of ideas; tangentiality; difficult to follow; rhyming; echolalia
   - 4 - Incoherent; communication impossible

8. *Content*
   - 0 - Normal
   - 2 - Questionable plans, new interests
   - 4 - Special project(s); hyper-religious
   - 6 - Grandiose or paranoid ideas; ideas of reference
   - 8 - Delusions; hallucinations

9. Disruptive – Aggressive Behaviour
   - 0 - Absent; cooperative
   - 2 - Sarcastic; loud at times; guarded
   - 4 - Demanding; threats on ward
   - 6 - Threatens interviewer; shouting; interview difficult
   - 8 - Assaultive; destructive; interview impossible

10. *Appearance*
   - 0 - Appropriate dress and grooming
   - 1 - Minimally unkempt
   - 2 - Poorly groomed; moderately dishevelled; overdressed
   - 3 - Dishevelled; partly clothed; garish makeup
   - 4 - Completely unkempt; decorated; bizarre garb

11. *Insight*
   - 0 - Present; admits illness; agrees with need for treatment
   - 1 - Possibly ill
   - 2 - Admits behaviour change, but denies illness
   - 3 - Admits possible change in behaviour, but denies illness
   - 4 - Denies any behaviour changes

TOTAL SCORE / 60

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Where several clinical features are listed for a particular grade of severity, the presence of only one is required to qualify for that rating.

Intermediate scores may be used, e.g. 1, 3, 5 or 7 on the 8-point items or ½ points on the 4-point items.

Ratings should be based upon symptoms over the past 48 hours.

Ratings should be based on a clinical interview, supplemented, where necessary, by collateral history from caregivers.

Young RC et al (1978) A rating scale for mania: reliability, validity and sensitivity. *B J Psychiatry*, *133*, 429–435. https://doi.org/10.1192/bjp.133.5.429

BRIEF PSYCHIATRIC RATING SCALE (BPRS)

0 = not assessed, 1 = not present, 2 = very mild, 3 = mild, 4 = moderate, 5 = moderately severe, 6 = severe, 7 = extremely severe

1. **SOMATIC CONCERN** Degree of concern over present bodily health. Rate the degree to which physical health is perceived as a problem by the patient, whether complaints have a realistic basis or not. SCORE ☐	10. **HOSTILITY** Animosity, contempt, belligerence, disdain for other people outside the interview situation. Rate solely on the basis of the verbal report of feelings and actions of the patient toward others; do not infer hostility from neurotic defenses, anxiety, nor somatic complaints. (*Rate attitude toward interviewer under "uncooperativeness"*). SCORE ☐
2. **ANXIETY** Worry, fear, or over-concern for present or future. Rate solely on the basis of verbal report of patient's own subjective experiences. Do not infer anxiety from physical signs or from neurotic defense mechanisms. SCORE ☐	11. **SUSPICIOUSNESS** Brief *(delusional or otherwise)* that others have now, or have had in the past, malicious or discriminatory intent toward the patient. On the basis of verbal report, rate only those suspicions which are currently held whether they concern past or present circumstances. SCORE ☐
3. **EMOTIONAL WITHDRAWAL** Deficiency in relating to the interviewer and to the interviewer situation. Rate only the degree to which the patient gives the impression of failing to be in emotional contact with other people in the interview situation. SCORE ☐	12. **HALLUCINATORY BEHAVIOR** Perceptions without normal external stimulus correspondence. Rate only those experiences which are reported to have occurred within the last week and which are described as distinctly different from the thought and imagery processes of normal people. SCORE ☐
4. **CONCEPTUAL DISORGANIZATION** Degree to which the thought processes are confused, disconnected, or disorganized. Rate on the basis of integration of the verbal products of the patient; do not rate on the basis of patient's subjective impression of his own level of functioning. SCORE ☐	13. **MOTOR RETARDATION** Reduction in energy level evidenced in slowed movements. Rate on the basis of observed behavior of the patient only; do not rate on the basis of patient's subjective impression of own energy level. SCORE ☐
5. **GUILT FEELINGS** Over-concern or remorse for past behavior. Rate on the basis of the patient's subjective experiences of guilt as evidenced by verbal report with appropriate affect; do not infer guilt feelings from depression, anxiety or neurotic defenses. SCORE ☐	14. **UNCOOPERATIVENESS** Evidence of resistance, unfriendliness, resentment, and lack of readiness to cooperate with the interviewer. Rate only on the basis of the patient's attitude and responses to the interviewer and the interview situation; do not rate on basis of reported resentment or uncooperativeness outside the interview situation. SCORE ☐
6. **TENSION** Physical and motor manifestations of tension "nervousness", and heightened activation level. Tension should be rated solely on the basis of physical signs and motor behavior and not on the basis of subjective experiences of tension reported by the patient. SCORE ☐	15. **UNUSUAL THOUGHT CONTENT** Unusual, odd, strange or bizarre thought content. Rate here the degree of unusualness, not the degree of disorganization of thought processes. SCORE ☐
7. **MANNERISMS AND POSTURING** Unusual and unnatural motor benavior, the type of motor behavior which causes certain mental patients to stand out in a crowd of normal people. Rate only abnormality of movements; do not rate simple heightened motor activity here. SCORE ☐	16. **BLUNTED AFFECT** Reduced emotional tone, apparent lack of normal feeling or involvement. SCORE ☐
8. **GRANDIOSITY** Exaggerated self-opinion, conviction of unusual ability or powers. Rate only on the basis of patient's statements about himself or self-in-relation-to-others, not on the basis of his demeanor in the interview situation. SCORE ☐	17. **EXCITEMENT** Heightened emotional tone, agitation, increased reactivity. SCORE ☐
9. **DEPRESSIVE MOOD** Despondency in mood, sadness. Rate only degree of despondency; do not rate on the basis of inferences concerning depression based upon general retardation and somatic complaints. SCORE ☐	18. **DISORIENTATION** Confusion or lack of proper association for person, place or time. SCORE ☐

TOTAL SCORE / 126

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There is no specific timescale over which to base the rating of recent symptoms.

Ratings should be based on a clinical interview, supplemented, where necessary, by collateral history from caregivers.

Overall JE, Gorham DR (1962) The brief psychiatric rating scale. *Psychological Reports*, 10, 799-812.

BUSH-FRANCIS CATATONIA RATING SCALE (BFCRS)

1. Excitement

Extreme hyperactivity, constant motor unrest which is apparently non-purposeful. Not to be attributed to akathisia or goal-directed agitation.

0 - Absent
1 - Excessive motion, intermittent
2 - Constant motion, hyperkinetic without rest periods
3 - Full-blown catatonic excitement, endless frenzied motor activity

2. Immobility/Stupor

Extreme hypoactivity, immobile, minimally responsive to stimuli.

0 - Absent
1 - Sits abnormally still, may interact briefly
2 - Virtually no interaction with external world
3 - Stuporous, non-reactive to painful stimuli

3. Mutism

Verbally unresponsive or minimally responsive.

0 - Absent
1 - Verbally unresponsive to majority of questions; incomprehensible whisper
2 - Speaks less than 20 words/5 minutes
3 - No speech

4. Staring

Fixed gaze, little or no visual scanning of environment, decreased blinking.

0 - Absent
1 - Poor eye contact, repeatedly gazes less than 20 sec between shifting of attention; decreased blinking
2 - Gaze held longer than 20 sec, occasionally shifts attention
3 - Fixed gaze, non-reactive

5. Posturing/Catalepsy

Spontaneous maintenance of posture(s), including mundane (e.g., sitting/standing for long periods without reacting).

0 - Absent
1 - Less than one minute
2 - Greater than one minute, less than 15 minutes
3 - Bizarre posture, or mundane maintained more than 15 min

6. Grimacing

Maintenance of odd facial expressions.

0 - Absent
1 - Less than 10 sec
2 - Less than 1 min
3 - Bizarre expression(s) or maintained more than 1 min

7. Echopraxia/Echolalia

Mimicking of examiner's movements/ speech.

0 - Absent
1 - Occasional
2 - Frequent
3 - Constant

8. Stereotypy

Repetitive, non-goal-directed motor activity (e.g. finger-play; repeatedly touching, patting or rubbing self); abnormality inherent in its frequency.

0 - Absent
1 - Occasional
2 - Frequent
3 - Constant

9. Mannerisms

Odd, purposeful movements (hopping, walking tiptoe, or exaggerated caricatures of mundane movements); abnormality inherent in act itself.

0 - Absent
1 - Occasional
2 - Frequent
3 - Constant

10. Verbigeration

Repetition of phrases or sentences (like a scratched record).

0 - Absent
1 - Occasional
2 - Frequent, difficult to interrupt
3 - Constant

11. Rigidity

Maintenance of a rigid position despite efforts to be moved, exclude if cogwheeling or tremor present.

0 - Absent
1 - Mild resistance
2 - Moderate
3 - Severe, cannot be re-postured.

12. Negativism

Apparently motiveless resistance to instructions or attempts to move/ examine patient. Contrary behaviour, does exact opposite of instruction.

0 - Absent
1 - Mild resistance and/or occasionally contrary
2 - Moderate resistance and/or frequently contrary
3 - Severe resistance and/or continually contrary

13. Waxy Flexibility

During re-posturing of patient, patient offers initial resistance before allowing himself to be repositioned, similar to that of a bending candle.

0 - Absent
3 - Present

14. Withdrawal

Refusal to eat, drink and/or make eye contact.

0 - Absent
1 - Minimal PO intake/ interaction for less than one day
2 - Minimal PO intake/ interaction for more than one day
3 - No PO intake/interaction for one day or more

15. Impulsivity

Patient suddenly engages in inappropriate behaviour (e.g. runs down hallway, starts screaming or takes off clothes) without provocation. Afterwards can give no, or only a facile explanation.

0 - Absent
1 - Occasional
2 - Frequent
3 - Constant or not redirectable

16. Automatic Obedience

Exaggerated cooperation with examiner's request or spontaneous continuation of movement requested.

0 - Absent
1 - Occasional
2 - Frequent
3 - Constant

17. Mitgehen

"Anglepoise lamp" arm raising in response to light pressure of finger, despite instructions to the contrary.

0 - Absent
3 - Present

18. Gegenhalten

Resistance to passive movement which is proportional to strength of the stimulus, appears automatic rather than wilful.

0 - Absent
3 - Present

19. Ambitendency

Patient appears motorically "stuck" in indecisive, hesitant movement.

0 - Absent
3 - Present

20. Grasp Reflex

As per neurological examination.

0 - Absent
3 - Present

21. Perseveration

Repeatedly returns to same topic or persists with movement.

0 - Absent
3 - Present

22. Combativeness

Usually in an undirected manner, with no, or facile, explanation afterwards.

0 - Absent
1 - Occasionally strikes out, low potential for injury
2 - Frequently strikes out, moderate potential for injury
3 - Serious danger to others

23. Autonomic Abnormality

Circle: temperature, BP, pulse, respiratory rate, diaphoresis.

0 - Absent
1 - Abnormality of one parameter [exclude pre-existing hypertension]
2 - Abnormality of 2 parameters
3 - Abnormality of 3 or more parameters

TOTAL SCORE / 69

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There is no specific timescale over which to base the rating of recent symptoms.

Ratings should be based on clinical observation, supplemented, as necessary, by collateral history from caregivers.

Bush G, Fink M, Petrides G, Dowling F, Francis A. (1996) Catatonia. I. Rating scale and standardized examination. *Acta Psychiatr Scand,* 93(2):129-36

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