Cheshire and Wirral Partnership
NHS Foundation Trust

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Electro Convulsive Therapy (ECT) policy

Lead executive	Medical Director
Authors details	ECT Team, Bowmere Hospital

Type of document	Policy
Target audience	All clinical staff
Document purpose	Trustwide policy on care and after care of those individuals receiving ECT.

Approving meeting	Clinical Practice & Standards Sub-Committee	Date 20-May-21
Implementation date	20-May-21	

CWP documents to be read in conjunction with	
HR6	Mandatory Employee Learning (MEL) policy
	Trust leaflets on ECT Therapy and anaesthesia for ECT
CoP	Code of Practice – Mental Health Act 1983
GR1	Incident reporting and management policy
CP19	Supporting service users completing an advance statement
CP24	Cardiopulmonary Resuscitation (CPR) policy
CP30	Do Not Attempt Resuscitation (DNAR) policy
CP35	Physical health pathway and policy
CP59	Medical device and equipment policy
MP1	Medicines policy

Document change history	
What is different?	Quick reference flowchart, Clinical governance, Appendix 1 ECT consent form, Appendix 3 - Anaesthetic investigations prior to ECT in adults, Appendix 7 Seizure threshold, Appendix 8 - ECT Recovery Checklist, Appendix 9 – Assessments to review clinical outcome
Appendices / electronic forms	
What is the impact of change?	It reflects changes to national guidelines

Training requirements	Yes - Training requirements for this policy are in accordance with the CWP Training Needs Analysis (TNA) with Education CWP. A full training needs analysis for ECT suites and equipment is outlined within the Trust Medical Devices policy, with training for Consultants, specialist trainees and nursing staff. Nurses will also attend recovery training at a standard required by the Trust delivering the anaesthetic service, and which meets the standards set out by RCoA and AAGBI. Guidance on training can also be found in The ECT Accreditation Service (ECTAS) standards for the administration of ECT document.

Document consultation

Clinical Services	
Corporate services	
External agencies	

Financial resource implications	Yes - Resources to meet and maintain service delivery to best practice standards.

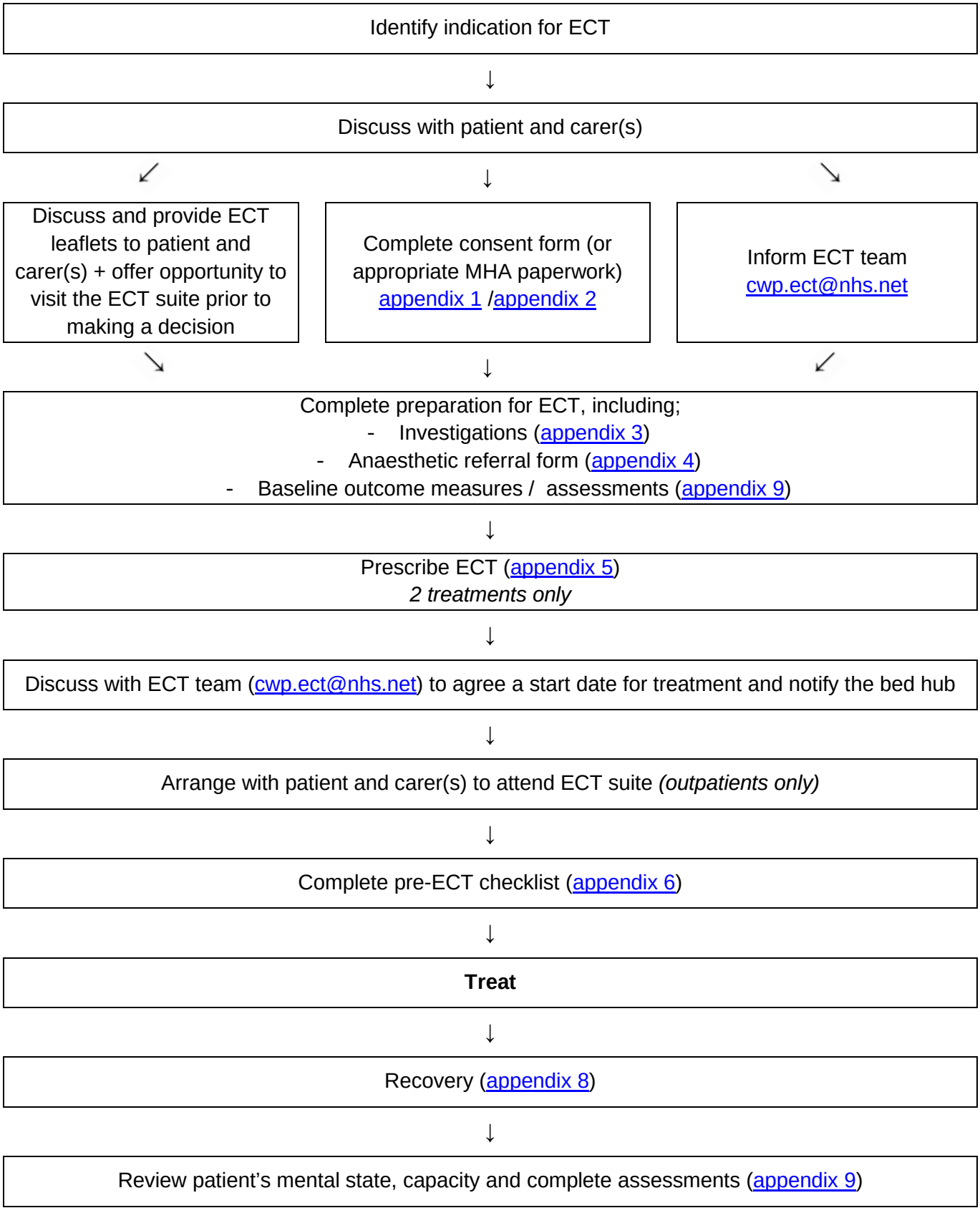
External references
1. NICE Guidance CG192 (Antenatal and postnatal mental health: clinical management and service guidance, 2014) 2. NICE Guidance CG90 (Depression in Adults (2009, Updated 2016) 3. NICE Guidance TA59 (Guidance on the use of Electroconvulsive therapy, 2003) Updated 2009, 2014. 4. Hamilton, M., (1960), 'A Rating Scale for Depression', Journal of Neurology, Neurosurgery and Psychiatry, 23:56-62. http://healthnet.umassmed.edu/mhealth/HAMD.pdf 5. NICE Pre-operative tests, the use of routine pre-operative tests for elective surgery.(NICE, 2003). 6. AAGBI (2016) Recommendations for standards of monitoring during anaesthesia and recovery 2015 Anaesthesia, 71, 85-93. 7. The ECT Handbook Fourth edition (2019) 8. ECTAS - Standards of administration of ECT (15th Edition) 2020.

Equality Impact Assessment (EIA) - Initial assessment	**Yes/No**	**Comments**
Does this document affect one group less or more favourably than another on the basis of:		
- Race	No	
- Ethnic origins (including gypsies and travellers)	No	
- Nationality	No	
- Gender	No	
- Culture	No	
- Religion or belief	No	
- Sexual orientation including lesbian, gay and bisexual people	No	
- Age	No	
- Disability - learning disabilities, physical disability, sensory impairment and mental health problems	No	
Is there any evidence that some groups are affected differently?	No	
If you have identified potential discrimination, are there any exceptions valid, legal and/or justifiable?		
N/A		
Is the impact of the document likely to be negative? - If so can the impact be avoided? - What alternatives are there to achieving the document without the impact? - Can we reduce the impact by taking different action?	No N/A N/A N/A	
Where an adverse or negative impact on equality group(s) has been identified during the initial screening process a full EIA assessment should be conducted. If you have identified a potential discriminatory impact of this procedural document, please refer it to the human resource department together with any suggestions as to the action required to avoid / reduce this impact. For advice in respect of answering the above questions, please contact the human resource department.		
Was a full impact assessment required?	No	
What is the level of impact?	Low	

Contents

Quick reference flowchart

For quick reference the guide below is a summary of actions required.



1. Introduction

The purpose of the policy is to outline the management of ECT for both inpatients and day patients and to set out the roles and responsibilities.

2. Indications for ECT

NICE guidelines which cover indications are;

- Guidelines for use of Electroconvulsive Therapy (2003, NICE, TA59) Updated in 2009, 2014.
- Depression in adults (update) (2009, NICE CG90) Updated in 2016
- Antenatal and postnatal mental health: clinical management and service guidance (2014, NICE CG192).

The decision to use ECT should be made jointly by the individual and the clinician responsible for the treatment, on the basis of an informed discussion enabled by full and appropriate information. In all the above situations advice must be sought from the supervising consultant. Further guidance can be obtained from the ECT Handbook (4th Edition, 2019).

If prescribing outside the NICE guidelines, the referring consultant must liaise with the lead ECT consultant.

3. Special Groups

- Older adults;
- Persons under the age of 18 and children;
- Persons with physical illness;
- Pregnant Women;

Older adults

Older adults are no less likely to respond to ECT and should have access to ECT treatment. ECT is a rapidly effective treatment option, particularly for depression, in the elderly. Co-morbid dementia should not prejudice the use of ECT for depression. All co-existing medical and surgical conditions should be assessed and where possible stabilized or treated before ECT. The monitoring of older people who are receiving ECT should include attention to possible changes in their physical state and cognitive function during a course of treatment. ECT technique should be modified as necessary to minimize any cognitive adverse effects.

People under the age of 18

ECT is rarely used in the 17 and under age group, where its use should be limited to patients resistant to other treatments or in potentially life threatening situations. A Second opinion should be obtained before the prescription of ECT in this age group. The anesthetist should have experience in the management of adolescents. Patient and family consent should be obtained following appropriate legislation.

Limited data suggest that cognitive side effects are not disproportionately severe. When the patient is treated, the stimulus dose titration must take into account the tendency for younger persons to have considerably lower seizure thresholds.

There are special provisions for the consent process if they are detained under the Mental Health Act or not. It is advised that early discussions take place with the ECT team. Further guidance can be obtained from the ECT Handbook (4th Edition, 2019).

Physical illness

The balance of risks and benefits to physical and mental health must be considered for each individual. When a patient is thought to be at greater risk during ECT, consideration should always be given to ways of minimizing risk by modifying medical management or ECT technique. It is useful to involve the Lead Anesthetist for ECT and the ECT team early in these discussions. When ECT is

prescribed to save life, there is no absolute contraindication to it and the decisions needs to be made following an analysis of risks versus benefits.

High risk patients will be considered for treatment in an environment allowing rapid intervention should complications occur, for example, a theatre suite or its recovery area.

4. The ECT Team

The following staff must be present during administration and recovery of ECT

- Consultant Anesthetist;
- Operating Department Practitioner;
- Competent Psychiatrist or Nurse trained to administer ECT;
- A team of nurses in the waiting, preparation, treatment and recovery areas;
- Recovery staffing who meet the standards agreed with the anesthetic team.

5. Discussion with the patient

During initial discussions with the patient, their family and carers, the ECT and anesthetic process should be described and leaflets provided.

The leaflets that should be provided are;

1. Information about ECT (Electro-convulsive therapy)
2. CWP Anaesthetic Leaflet
3. ECT – Your rights about consent to treatment (CQC, August 2012) – for detained patients.

6. Consent

The consultant in charge of the patient's treatment is responsible for obtaining the patient's consent for ECT and for giving an acceptable explanation of the nature, purpose, risks and likely side effects of ECT.

Consent for detained patients should be obtained in line with the Mental Health Act 1983 (amended 2007) and Mental Capacity Act. Consent for ECT must be obtained at all times ie: the 3 month (in-patients) and 1 month rule (CTO) for consent to medication does not apply.

The patient is capable and consents to ECT

A clear note of discussions with the patient regarding ECT treatment should be made in the patient's medical records. The fact that the patient has been reminded of their right to withdraw consent at any time must also be recorded.

All patients - Complete ECT consent form (appendix 1).

Out-patient – (in addition) complete consent supplement form (appendix 2).

Detained patient – (in addition) Form T4 completed by the Responsible Clinician (RC) (in-patients) or Form CTO12 completed by community RC (patients subject to Community Treatment Orders)

The patient is incapable of consent

If the patient is not liable to be detained under the Mental Health Act and does not express dissent in any form, then treatment can be administered to informal or outpatients under Section 5 of the Mental Capacity Act (MCA). The doctor in charge of the patient's treatment should seek a second opinion from a colleague as to the appropriateness of ECT treatment. The doctor should follow all principles of MCA and discussing the matter widely, especially with the patient's family, carer or advocate as appropriate. Consent Form 4 (MCA) should be completed.

If the patient is detained under the Mental Health Act 1983, a second opinion must be sought from the Care Quality Commission. The Second Opinion Appointed Doctor (SOAD), after consultation with the professionals, will complete Form T6 (if an in-patient) or Form CTO11 (if a CTO patient).

The SOAD will not be able to authorise ECT treatment if it conflicts with any of the following:

- Any decision of an attorney appointed under a Lasting Power of Attorney or deputy (appointed by the Court of Protection) of the patient as provided for by the Mental Capacity Act 2005;
- Any decision of the Court of Protection;
- Any advance decision to refuse treatment that is valid and applicable under the Mental Capacity Act 2005.

The Patient is capable but refuses to consent to ECT

If a patient who is either informal or detained under the Mental Health Act 1983 has the capacity to consent to ECT, but refuses to consent, the patient cannot be administered ECT.

Emergency ECT

For patients detained under the Section 2 or 3 or 37 who require ECT urgently, and where a second opinion cannot be obtained in time, the Responsible Clinician in charge of the patient's treatment may prescribe ECT under Section 62 of the Mental Health Act 1983 if one of the following two criteria within that section is met:

- Is immediately necessary to save the patient's life;
- A treatment which is not irreversible, but which is immediately necessary to prevent a serious deterioration in his / her condition.

This form is valid for one ECT treatment only. Until the patient has been assessed by the SOAD the treatment plan must be reviewed by the Responsible Clinician to ensure the relevant criterion is still met before continuing to treat under Section 62. A new form must be completed by the Responsible Clinician in charge of the patient's medical treatment for each emergency treatment required.

For patients subject to community treatment orders, the Responsible Clinician must authorise emergency treatment under section 64G if the patient is incapable. As above, each form is valid for one ECT treatment only, and a review must be undertaken prior to completing a new form.

Consent forms and the ECT Team

A lead nurse in the ECT suite will check the consent forms and capacity before each treatment. In the case of detained patients, Form T4, T5, T6 or Section 62 must be seen by them. In the case of a patient subject to a community treatment order, a Form CTO 11 or CTO12 must be in place, unless treatment is given in an emergency. In this case, a form section 64G must be evident.

7. Prescribing ECT

The decision to initiate ECT is the responsibility of the consultant in charge of the patient's care, (Responsible Clinician if the patient is detained). A maximum of two treatments can be prescribed at a time. A patient's clinical progress will be reviewed after every two treatments by the prescribing team and recorded in medical notes. Following the initial prescription, another doctor in the team can prescribe treatments but if the consultant in charge is absent for longer than a week another senior doctor should review further prescriptions. The prescription must indicate whether treatment is to be given bilaterally or unilaterally.
The prescription sheet is included in appendix 5.

8. Uni/ Bi lateral ECT

The responsible clinician must consult with patients (and liaise with the ECT team if necessary) while choosing laterality to balance the benefits and risks for individual patients.
The administering psychiatrist should document the dose administered.

9. Frequency of treatment

Treatment will usually be given twice weekly unless otherwise stated by the Responsible Clinician. ECT treatments must be prescribed on the ECT Treatment Record and Prescription sheet (appendix 5).

10. Preparation for ECT

- Record full history including medical history, drug therapy and known allergies, records of previous anesthetic problems and, if relevant, previous ECT treatment noting both response and complications.
- For out-patients, prior to treatment the prescribing consultant should obtain a summary from the GP of all medicines and allergies and check whether and how often the person uses any PRN medicines. This should be recorded on the ECT Treatment Record and prescription form (Appendix 5).On each subsequent review, the patient should be asked if there have been any changes to their medicines.
- Physical examination – Should be carried out in the week before the commencement of treatment. Any concerns should be discussed with the anaesthetist.
- Investigations – As indicated by the patient's clinical condition (appendix 3).
- Complete anesthetics referral form (appendix 4)
- The patient's general medical notes must be available for anesthetic review before the first ECT treatment is given;
- Baseline CGI-S, HAM-D, subjective assessment of memory and Mini ACE to be completed (appendix 9).
- Prescribed medication, particularly diabetic or anti-hypertensive medication, should be omitted before treatment unless otherwise directed by the anaesthetist. Any individual concerns should be raised with the anaesthetist.
- Outpatients should bring with them the medicines they need to take following ECT with them.
- On the day of ECT, the patient is required to have fasted from midnight. Water can be taken until 06.00 am.

Outpatients must be accompanied by a responsible adult.

Any medication brought in from home will be stored in a locked cabinet so that the outpatient can take the medication once ECT treatment has taken place. Any additional medicines that may be required post ECT treatment that are not normally taken by the patient, such as analgesia, will be prescribed on a medicine prescription card so that administration can take place. Staff may need to support outpatients taking medicines post-ECT and should refer to the medicines summary from the GP for correct medication.

A pre ECT checklist will be completed in preparation for a general anaesthetic (appendix 6).
No fewer than two recovery staff should be present when there is a patient in recovery who does not fulfil the criteria for discharge from recovery area. All clinical staff present during a treatment session will be trained in Basic Life Support.

11. Finding the seizure threshold

ECT will be administered using a locally approved stimulus dosing protocol based on the Royal College of Psychiatrists Guidelines (appendix 7).

Treating clinician need to consider several clinical factors which are associated with increased seizure threshold (ST) like older age, male gender, anticonvulsant medications, electrode placement, Anaesthesia, subcutaneous adipose tissue and recent treatment with ECT. Wherever possible discussion needs to take place with the patient's RC to decide on medications which tend to increase seizure threshold.

Before stimulation, two baseline EEG traces of 5-10 seconds should be recorded. The first with the patient awake, helps determine that the leads are correctly attached, there is a good signal with little artefact, and the machine is functioning correctly. The second, under anaesthesia, allows

establishment of baseline immediately before ECT stimulation for direct comparison with the ictal EEG, to determine whether a seizure activity has definitely occurred and post-ictal suppression is present.

The first stage is to administer the starting dose and look for a clear bilateral tonic-clonic seizure activity and/or presence of typical EEG features: polyspike activity, spike and wave/delta activity and post ictal suppression-of no specific duration. If there is no fit, increase the energy by one setting and re-stimulate. If there is still no adequate fit,then increase the setting by two more steps and re-stimulate (the idea of jumping two steps on the third attempt is to ensure that high threshold patients reach effective doses sooner).

There should be a **maximum of three applications** for each attendance. If the third stimulation results in an adequate seizure, the patient should be stimulated with the 'skipped' threshold dose level at the next session to determine whether this might be the real seizure threshold and then treated at supra threshold ECT thereafter. If after 3 stimulations a seizure is not elicited, stimulations should resume at the next daily session with the highest dose used at the last session.

12. Inadequate Seizure
Once the threshold dose, and hence the treatment dose (threshold + 50%), is found, then treatment continues at the treatment dose, unless the clear bilateral tonic-clonic seizure activity and/or presence of typical EEG features: polyspike activity, spike and wave/delta activity and post ictal suppression-of no specific duration does not occur. Under these circumstances a single step increase and re-stimulation is done (a maximum of 3 applications in any one session).

13. Prolonged Seizure
When a prolonged (i.e. >90 s) seizure occurs it should be terminated according to standard protocol usually involving either extra doses of the initial anaesthetic or IV benzodiazepine medication.

14. Increasing Threshold
In the event that a patient is re-stimulated due to an inadequate seizure, and the resulting seizure is **even less adequate** than before, this may mean that the patient's threshold has been artificially elevated by the prior inadequate seizure. In this instance, it may be appropriate to avoid further re-stimulations and start the next attendance on the same setting.

Seizure threshold tends to rise during a course of ECT, but there is wide variation.
Clinical progress is more important than seizure duration – some patients will always have "short" seizures.

If confusion or other cognitive symptoms appear, consider unilateral ECT. It is also important to recognise that cognitive side-effects of ECT are greater if the stimulus dose is above seizure threshold. If clinical improvement is poor, consider switching from unilateral to bilateral, or increasing the dose by one setting.

15. Medical complications during ECT treatment
Rarely, acute medical complications can occur during anaesthesia, treatment or in the first stage recovery area. The anaesthetist is responsible for leading the management of acute medical complications, and should follow the relevant protocols and guidelines provided by ECTAS, the Royal College of Anaesthetists and Association of Anaesthetists. The Clinical Support team are also available if necessary.

If necessary, the anaesthetist must work with the team to arrange transfer to the nearest appropriate acute care facility (e.g. accident and emergency department, critical care or intensive care unit). They, or an appropriately experienced deputy, must remain with the patient until the acute care facility has taken over the care of the patient.

16. Post ECT

Each patient must have continuous individual observation on a one-to-one basis (See recovery checklist; appendix 8).

Patients will remain in the recovery areas until they:

- Have total control of their airway;
- Have stable cardiovascular parameters;
- Clinical observations and orientation will be performed at 30 minutes, 1 hour and 2 hours post ECT treatment;
- Out patients must be clinically reviewed prior to leaving the department;
- Out patients must be reminded that they should not drink alcohol in the 24 hrs before or after ECT treatment, operate machinery or sign any legal documents, following ECT (appendix 2);
- Out patients should not drive without prior discussion with the treating Consultant;
- Out patients must be accompanied continually by a responsible adult at least until the morning after the day they receive each treatment.

Follow up between treatments:

- Patients should be assessed by a member of their clinical team prescribing the treatment at least between every 2 treatments. This assessment should include review of the patient's mental state, capacity and completion of assessments appendix 9;
- Any major changes or developments with the patient's clinical condition should be reported directly to the ECT Team;

17. Continuation ECT and maintenance ECT

Continuation ECT (c-ECT) is the term used for treatments designed to prevent relapse of an index episode of illness. Maintenance ECT (m-ECT) is applied to use of ECT to maintain remission in long term.. By custom, continuation ECT has been defined as prophylactic treatment over the first 6 months of remission.

Patients should give valid consent for c-ECT over and above their consent for a course of ECT treatment, and understand that there is little in the way of research evidence to back up the usefulness of c-ECT. There is, however, no firm evidence against it. Patients should understand how many c-ECT treatments they are consenting to on each occasion.

Maintenance ECT (ECT-M)

It may sometimes be necessary to continue treating patients for extended periods with ECT. Criteria for m-ECT might include:-

- The patient has responded to ECT in the past.
- The patient has relapsed despite adequate antidepressant medication and /or has unacceptable side-effects of medication.
- The patient is physically fit for repeated general anaesthesia and ECT.
- The patient's attitude is conducive to having ECT.

Patients on m-ECT should be reviewed after every second treatment and consent to treatment with m-ECT should include a stipulated number of treatments (i.e. it should not be an open-ended prescription). Patients should be advised and understand that the NICE Technology Appraisal has concluded that there is insufficient evidence to support the use of m-ECT at present.

There must be a physical health review (with blood tests) at least every 6 months and full repeat of all psychometric assessments every 12 months. Patients must be re-consented at least after every 12 treatments.

18. When to discontinue ECT

ECT is usually prescribed one or two treatments at a time, given twice weekly. It is not appropriate to determine the actual number of treatments at the outset, but an upper limit should be stated when

written consent is being obtained. This would typically be 12 treatments in the first instance, but this is not an absolute upper limit.

If ECT is omitted, the course may be resumed if less than three weeks have passed since the last application. A break of three or more weeks constitutes an end to that course of treatments. Further treatment is then to be regarded as starting a new course of ECT.

An existing course of ECT should be discontinued in the following circumstances:

- The patient who has capacity to consent to ECT decides not to receive further treatments.
- The physical state of the patient makes further ECT treatment inappropriate.
- Side effects such as cognitive impairment are such that the treating team feels that the potential benefits of ECT are outweighed by the side effects.
- The patient has recovered or can be treated without ECT.

19. Clinical Governance

The ECT good practice group will have the responsibility to ensure that the quality of care for all patients is consistently high. The five main areas of focus for the group will be:-

- Quality Improvement,
- Evidence based care,
- Outcome focused care,
- Reducing unwarranted variation & health inequalities and
- Research and innovation.

This will be chaired by the ECT lead Nurse and have representation from all stakeholders including patients and / or carers.

20. ECT clinic capacity

The ECT team will work closely with referring teams to ensure that treatment is delivered in a timely manner. If there are referrals excess to capacity the team will explore the options of increasing clinic capacity for a short period of time.

Any delays in treatment due to clinic capacity will be captured as an adverse incident via DATIX.

Appendix 1 - ECT Consent form

Patient		Hospital Number	
Date of birth		NHS Number	
Ward		Consultant	

For all patients who are consenting to ECT

I _____ consent to a course of **unilateral / bilateral** (*delete as appropriate*) ECT including general anaesthesia, up to 12 treatments (as per NICE guidelines)*

I confirm that:

- Dr _____ has explained the procedure to my satisfaction and I understand what will happen;
- I have been given verbal information & had the chance to read the information booklets on Electroconvulsive Therapy and "Anaesthesia for Electroconvulsive Therapy". I am aware of the benefits of treatment, possible side effects and risks of the treatments versus no treatment or alternative treatment. I accept that I may experience side-effects as described by my doctor and outlined in the ECT information booklet given / offered to me.
- I have had the chance to discuss the treatment with an independent advocate &/or a person of my choosing;
- I have had time to make my decision and understand that I can withdraw my consent at any time;
- I have been advised to abstain from driving during the course of ECT and to inform the DVLA;
- I have been advised of the alternatives to ECT & that these will be available if I decide not to have ECT

I understand that:

- You take account of my clinical need and preferred choice in the decision on the type of ECT given, i.e. whether unilateral or bilateral and that I understand the difference between the two types. I have agreed to unilateral / bilateral ECT (*please delete as appropriate*);
- I am entitled to a copy of this consent form and that my continued consent will be checked before each treatment.

Signed by patient		**Date**	
Signed by carer **(as necessary)**		**Date**	
Signed by translator **(as necessary)**		**Date**	

Important note:

☐ See also advance directive / statement / living will e.g. Jehovah's Witness form.

For all patients who consent to ECT, documentation of capacity to consent must be completed.

If the patient is not capable of giving informed consent, appropriate procedures under the Mental Health Act 1983 or the Mental Capacity Act 2005 must be followed and Consent Form 4 must be used.

Is the patient able to comprehend the information relevant to the decision?	☐ Yes	☐ No
Is the person able to retain this information for long enough to make the decision?	☐ Yes	☐ No
Is the patient able to use and weigh this information to arrive at a decision?	☐ Yes	☐ No

Is the patient able to communicate the decision, whether by talking, using sign language or any other means?	☐ Yes	☐ No

Doctor - I confirm that:

- ECT has been recommended by me in discussion with the above patient;
- The expected benefit and possible risks have been explained to the patient named above and the decision to proceed is recorded in the case notes, date _____;
- I have repeated an explanation of the benefits and possible risks of ECT and anaesthesia, including possible side-effects, to the patient;
- I am of the opinion that the patient has the capacity to consent to this treatment.

Signed			
Name (Block Capitals)		**Date**	

This form should be completed by the patient or health professional each time the patient attends for ECT.

Patient statement: I agree to have ECT today.

Staff statement: On behalf of the team treating the patient, I have confirmed with the patient that they have no further questions and wish for the procedure to go ahead. They retain capacity to agree to this treatment.

Date	**ECT number**	**Patient's own signature**	**Staff member signature** (block capitals) and designation
	1		
	2		
	3		
	4		
	5		
	6		
	7		
	8		
	9		
	10		
	11		
	12		

Appendix 2 - ECT Consent form for outpatients

Consent ***supplement*** for patients leaving hospital on the day of treatment (to be completed before ECT when attending for the relevant ECT session).

Patient's name	
Address	

I consent to a course of **unilateral / bilateral** ECT (delete as appropriate) of up to 12 treatments, including the administration of a General Anaesthetic.

I am receiving electroconvulsive therapy as a day patient and plan to leave the hospital on the same day as treatment is given.

I have been advised that I should remain on the unit for at least two hours after the treatment has been given, and I have been reviewed by a doctor.

I agree not to drink alcohol for 24 hours, operate machinery or sign any important legal documents for 24 hours after the general anaesthetic, and I will make sure that I am accompanied by a responsible adult during this period.

I shall take medical advice given to me about driving during my course of ECT.

I have been given appropriate verbal and written information regarding ECT.

Advance Directive (if required):

Signature of patient	
Signature of clinician	
Date	

Appendix 3 - Anaesthetic investigations prior to ECT in adults

Before starting ECT, all patients should have a global assessment of their physical health using the ASA Grade:

Grade 1: **Normal healthy patient**	Grade 2: **MILD systemic disease**
Grade 3: **SEVERE systemic disease**	Grade 4: **Disease a constant threat to life**

In this policy **MILD refers to ASA 2** and **SEVERE to ASA grade 3 or 4** ASA

Investigations prior to ECT (within 7 days of ECT start date)

For all patients:

- Full blood count
- Renal function – urea, creatinine, eGFR and electrolytes
- Calcium

ECG should be performed

- In patients over 65
- Where the patient is taking medication which may prolong QTc or have other cardiac adverse effects.
- Where there is history of cardiac disease

Chest and cervical spine X-Ray should only be performed if clinically indicated

Routine neuro-radiology is only warranted if there is concern over a potential organic cause for the patients symptoms.

Hep B Status for patients known to abuse I.V. drugs

Pregnancy test – if applicable

Liver: all patients with cachexia, history of alcoholism, drug abuse or recent overdose should have LFTs

Lithium Patients: Li+ level
Warfarin Patients: weekly INR
Diabetic Patients: Should have blood glucose (thumb prick) the morning of (and prior to) treatment.
Afro-Caribbean, Middle Eastern, Asian, and Eastern Mediterranean patients: Should be sickle-cell tested once.
If multiple morbidity / risks: Follow guidance for each system in turn.

Blood investigations and urinalysis remain current for a period of six weeks, an ECG for six months and a CXR for twelve months. For patients receiving ECT-M, an ECG is valid for six months and a CXR for twelve months. Blood investigations and urinalysis should be repeated every six months, or sooner if the patient's physical condition has changed.

Previous medical history including general hospital notes must accompany the patient.

Appendix 4 - Anaesthetist referral form

Date of referral: Date due to commence ECT:
Referrer: Contact details:

Name	DOB	RC	Ward	Contact number

ASA Grade	
Detail any previous anaesthetic and any problems	
Allergies and drug sensitivities (including egg allergy)	
Cardio respiratory problems	
Renal problems	
Medication	
Weight/BMI and baseline observations	
Dental state (including any fillings, caps, implants, etc.)	
Any other medical problems (including cochlear implant)	

PLEASE EMAIL THIS REFERRAL FORM TO:- wuth.anaessecs@nhs.net

Please ensure that the results of all relevant investigations are available and file original in the paper notes if there are significant physical health concerns (including ASA 4) please discuss this with the anaesthetist directly.

The anesthetists can be contacted Tuesday or Friday AM. The number for ECT is 01244 397357.

Appendix 5 - ECT treatment record and prescription form

Name		DOB		Age	
Ethnic Origin		Sex			
Hospital Number		Ward			
Consultant					
Status (if detained)	☐ T4 ☐ CTO 11	☐ T6 ☐ CTO 12	☐ Form 62		
Diagnosis ICD10 Code:					

Is the indication for ECT covered in the NICE guidelines?
☐ Yes ☐ No
If No, has a discussion taken place with the lead ECT consultant?
☐ Yes ☐ No

Date of last course of ECT	
Current Drugs	
Special Hazards	

Date Prescribed	Placement R / L / B	Signature	Date Given	Treatment Number	Stimulus Dose mC	Adequate, Fit (Y / N)	Anaesthetic	Muscle Relaxant	FiO2 / Machine check	Cannula Flushed (Y / N)	Fit Duration (Motor)	Fit Duration (EEG)	Psychiatrist Anaesthetist Signature	**Information** Please highlight dose if Unilateral ECT used

Appendix 6 - Pre- Electroconvulsive Therapy (ECT) checklist

Name		DOB	
Known as		Hospital No	
MHA status		Ward	
Consultant		Ethnic origin	
Known medical conditions			
Precautions / allergies	(Record allergies on a red alert arm band)		

Observations							
BP		Pulse		Resp		Weight	
BM (for diabetic patients)				O2 Sats :	Temperature		
Patient prescribed for (select)	☐ UNILATERAL			☐ BILATERAL			

	Ward check	Prep room check	Comments
1. Has the patient any conditions which may inhibit positioning e.g. arthritic joints?	Yes / No	Yes / No	
2. Any physical disability? E.g. deaf, blind	Yes / No	Yes / No	
3. Consent / prescription forms / MHA in date	Yes / No	Yes / No	
4. Documentation signed and up to date	Yes / No	Yes / No	
5. Confirm patient capacity and consent status'		Yes / No	
6. Any complicated dental work, e.g. caps, crowns, fillings, veneers, implants etc	Yes / No	Yes / No	
7. Physical examination and investigations as required by protocol.	Yes / No	Yes / No	
8. Current medication prescription in case sheet?	Yes / No	Yes / No	
9. Time last food and drink taken?	hrs		
10. Identification band in place.	Yes / No	Yes / No	
11. Allergy band in place.	Yes / No	Yes / No	
12. Is the patient wearing loose clothing?	Yes / No	Yes / No	
13. Time patient last passed urine?	hrs		
14. Does the patient have a pacemaker or other prostheses? (specify)	Yes / No	Yes / No	
15. Have the following been removed: • Hair accessories • Make up • Nail varnish • Jewellery • Dentures • Contact lenses • Glasses • Hearing aid • Other (specify) • Socks	 Yes/No/N/A Yes/No/N/A Yes/No/N/A Yes/No/N/A Yes/No/N/A Yes/No/N/A Yes/No/N/A Yes/No/N/A Yes/No/N/A Yes/No/N/A	 Yes/No/N/A Yes/No/N/A Yes/No/N/A Yes/No/N/A Yes/No/N/A Yes/No/N/A Yes/No/N/A Yes/No/N/A Yes/No/N/A Yes/No/N/A	
16. Is the patient able to communicate?	Yes / No	Yes / No	
17. Does the patient have any Cochlea implants?	Yes / No	Yes / No	

18. Any medication given (including pre meds)? Specify	Yes / No	Yes / No	

Ward check completed by		Date	

Prep room check completed by		Date	

Appendix 7 - Stimulus dosing table

Stimulus Dosing (SD) refers to the individual titration of electrical charge (dose measured in milliCoulombs), used for each patient when starting a course of electroconvulsive therapy (ECT). This is because too much electricity increases the risk of side effects and few people will benefit following exceptionally low doses.

Determining Seizure activity

The early view that seizure adequacy corresponded to quantitative measures – 15 seconds of a motor response and/or 25 seconds of clear seizure activity on EEG has been superseded by qualitative criteria.

The seizure threshold is defined as the minimum charge required to induce clear bilateral tonic-clonic seizure activity and/or presence of typical EEG features: polyspike activity, spike and wave/delta activity and post ictal suppression-of no specific duration (ECT Handbook 4th edition).

When bilateral ECT is given, the treatment dose should be **50% higher than the threshold dose**. When unilateral ECT is given, reports vary, but the Trust has adopted a standard of **six times threshold** for unilateral treatments.

Starting Points	Treatment Steps	Machine Setting – 5%-200% range	Charge in mCoulombs
Female (Unilateral)	S1	5%	25
Female (Bilateral) and Male (Unilateral)	S2	10%	50
Male (Bilateral)	S3	15%	75
	S4	25%	125
	S5	40%	200
	S6	55%	275
	S7	80%	400
	S8	110%	550
	S9	140%	700
	S10	200%	1000

The starting dose should be **one step** (50%) higher for over 65s, **or** if there has been another course of ECT within the past month **or** if concurrent anti-epileptics (including benzodiazepines) are being taken. Depending on the number of factors present, increase by a maximum of two steps. .

Appendix 8 - ECT Recovery Checklist

Date / arrival time into recovery	

Patient position:
- ☐ Left lateral
- ☐ Right lateral
- ☐ Supine
- ☐ Sitting

Guedal airway:
- ☐ In situ
- ☐ Removed - Guedal airway removed at _____

35% Oxygen administered: ☐ Yes ☐ No
Time Oxygen discontinued: _____Hrs

	On arrival in recovery room	Time	Time	Time
SAO2				
Pulse				
Blood Pressure				
Respiration				
Sedation Score				

1 = fully awake
2 = slightly drowsy
3 = very drowsy
4 = difficult to rouse
5 = unconscious

Time cannula removed _____hrs

☐ Possessions returned
☐ Dentures returned

Time to re orientation:…….min

Correct responses to 4/5 questions about orientation to:-

- Name
- Date of birth
- Current Age
- Name of Hospital
- Day of the week

0 min corresponds to when the patient resumes spontaneous breathing.

Observations				
	On arrival	**½ Hour**	**1 Hour**	**2 Hours**
Pulse				
B/P				

Exit time from recovery		
Returned to	Ward (please state ward)	
	Other (please state)	

Discharged by (print)	
Designation	
Signature	

Any other comments

Signature	
Designation	

Appendix 9 - Assessments to review clinical outcome

Prior to ECT

- HAM-D (24 item scale) – when indicated
- CGI
- Mini ACE
- Subjective assessment of memory

Monitoring during the course of ECT

- Time to re-orientation (completed by the ECT team) – after each treatment
- CGI-S - after each treatment and after treatment is terminated
- Subjective assessment of memory – after each treatment
- Mental state examination and Capacity assessment – at least weekly during an acute course of ECT or between each session for pts on maintenance treatment.
- HAM-D - weekly during an acute course of ECT or between each session for pts on maintenance treatment, after treatment is terminated and 2 months post ECT.
- Mini ACE– after first treatment and then after every 4th treatment, after treatment is terminated and 2 months post ECT.

These should be recorded on electronic patient record under the ECT outcome measures tab

Appendix 10 - ECT Referral Documentation Checklist

Please complete this checklist prior to referral to Bowmere ECT Team and send all relevant documents to:
ECT Suite
Bowmere Hospital
The Countess of Chester Hospital Health Park
Liverpool Road
Chester
Ch2 1BQ

Please also send electronic copies and **indicate whether a patient needs travel arrangements** to: **cwp.ect@nhs.net**

- ☐ Anaesthetic referral form completed and email to:- wuth.anaessecs@nhs.net If the patient has ASA grade 2 or above please phone the WUTH anaesthetist to discuss: 07813962638 *(Appendix 4 in the CWP ECT Policy)*
- ☐ Treatment prescribed (and signed) by Consultant in charge on ECT treatment record form. A maximum of two treatments should be prescribed at a time. *(Appendix 5 in the CWP ECT policy)*
- ☐ Provide patient the CWP anaesthetic leaflet and Royal College of Psychiatrists information leaflet. If the person receiving ECT is under The Mental Health Act and lacks capacity they will also require the Care Quality Commission ECT leaflet
- ☐ Complete the consent form *(Appendix 1 in the CWP ECT policy)*
- ☐ If an outpatient for ECT, please ALSO complete the consent form for outpatients *(Appendix 2 in the CWP ECT policy)*
- ☐ Physical examination, bloods and ECG results within 7 days of ECT start date *(Appendix 3)*
- ☐ General medical notes or a GP patient summary
- ☐ Outcome measures for ECT *(Appendix 9)* – entered on Care notes on the ECT outcomes from in Outcomes tab
- ☐ If the patient is detained under The Mental Health Act ensure either section 62 is completed, T6 or T4 whichever is deemed appropriate

NOTE: All outpatient patients should provide their own medication to be self-administered after treatment. For more information please refer to the ECT policy: **http://nww.cwp.nhs.uk/Documents/PoliciesandProcedure/CP16%20ECT%20Policy%20Issue%2011.pdf**