Western Health and Social Care Trust

# Operational Policy for Electroconvulsive Therapy for Inpatients and Outpatients

**February 2018**

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| **Title:** | Operational Policy for Electroconvulsive Therapy for Inpatients and Outpatients | | |
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## 1.0 INTRODUCTION / PURPOSE

### 1.1 Background

Electroconvulsive Therapy (ECT) has been used since the 1930's for the treatment of severe depressive illness and other severe mental disorders. The commencement of dual channel monitoring combined with stimulus dose titration ensures the safest and most effective delivery of ECT. Our ECT practice has developed over the years and will continue to be reviewed to ensure best practice. ECT remains among the most efficacious treatments for those with severe or treatment resistant mental illness.

### 1.2 Purpose

This policy and accompanying procedures aim to clearly identify the action to be taken in all instances of a patient requiring Electroconvulsive Therapy (ECT). This includes:

- The WHSCT ECT integrated care pathway (ICP)
- Guidelines for patient preparation at ward level
- Procedure for Electroconvulsive Therapy using The Spectrum 5000M
- Procedure for the Management of Problematic Treatments
- Procedure for ECT in the Elderly
- Procedure for ECT in people with learning disability
- Procedure for ECT in young people
- Procedure for maintenance/continuation ECT
- Procedure for discontinuation of ECT
- Guidelines for prescribing outpatient ECT
- Guidelines for ECT session management
- Guidelines for Medical Staff Administrating ECT
- Guidelines for Nursing Staff for ECT
- Regular review of ECT policies minimum of every 2 years.

This policy is to be read in conjunction with the following guidelines and policies:-

- Operational Guidelines for Consent in Mental Health Care.
- Infection Control Policy
- COSHH Guidelines
- Policy for Untoward Events
- Policy on Checking Pregnancy prior to Surgery & Anaesthetics
- NICE Guidance on the use of Electroconvulsive Therapy.
- ECT handbook 3rd Edition– Royal College of Psychiatrists.
- Mental Health (Northern Ireland) Order 1986.

## 2.0 SCOPE OF THE POLICY

This policy applies to all patients having electroconvulsive therapy in the Western Health and Social Care Trust.

## 3.0 ROLES AND RESPONSIBILITIES

The policy is jointly implemented between Older People's Services and Acute Mental Health, and its adherence and implementation is the responsibility of those working in the ECT service.

## 4.0 KEY PRINCIPLES

- All patients will follow an integrated care pathway (ICP)
- All patients will have dual channel EEG monitoring during each ECT treatment
- All non-emergency ECT patients will follow the dose titration procedure
- Emergency ECT patients will follow the emergency titration procedure
- Written and verbal information will be given to each patient prior to the commencement of treatment with ECT, a copy of which is in the ICP
- All medical and nursing staff will receive appropriate training and be suitably qualified/experienced to their designated role
- All medical/nursing staff will be trained to ILS minimum
- Staff will have a knowledge of the legal status and consent of each patient prior to treatment and this will be recorded in the ICP
- All staff will follow the accompanying procedural guidelines and procedures for the delivery of ECT for Inpatients and Outpatients
- All patients will wear an identity bracelet during ECT treatment
- Outcome audit will be kept on all patients receiving ECT
- Equipment will be checked prior to treatment and records maintained
- The policy refers to both voluntary and detained patients
- This policy applies to all patients receiving ECT in the Western health and Social Care Trust
- Training/Education sessions for staff will be provided/co-ordinated at ECT induction sessions.

## 5.0 ECT BACKGROUND

### 5.1 Indications for ECT

The NICE guidelines reserve ECT for treatment in cases of severe depression, and it is usually used in those cases where a patient's life is at risk due to self-neglect or where other treatments have failed. ECT can also be used, under NICE guidance, as a treatment of last resort in severe mania with life threatening exhaustion.

ECT may also be prescribed due to patient preference, possibly due to a previous positive response.

ECT is relatively safe in pregnancy and may be used during pregnancy.

The Royal College of Psychiatrists does acknowledge the uses of ECT outside the limitations advised by NICE. Among these ECT has been used as a treatment for schizophrenia if Clozapine is ineffective, and as a treatment for Parkinson's Disease. It has some potential role in treatment of neuroleptic malignant syndrome, Huntingdon's chorea and epilepsy. Use for these disorders is possible under this policy, but as described below **must** be discussed with the Consultant for ECT.

### 5.2 Guidelines for Patient Preparation at Ward Level

**Patient Information**

The patient will be provided with an ECT information leaflet (based on the fact-sheet in the RCPsych Guidelines Appendix 1), and staff will respond promptly to any further enquiry from the patient and, when appropriate, relatives. Outpatients will be supplied with appropriate information leaflets and given contact details to discuss any queries prior to treatment.

## Consent

The following notes relate to the consent procedure in ECT using DHSSPS consent Form 1. The Responsible Medical Officer for the patient is responsible for overseeing the process of obtaining consent for ECT before prescribing this treatment. Best Practice is for consent to be obtained by member of medical staff who is trained in ECT; exceptionally a member of junior medical staff may obtain consent. It involves the following:

Explain what Electroconvulsive Therapy is, the reason for its use at this time, the desired benefits and any common or potentially serious problems that may arise.

| **Side Effect** | **Rate** |
|---|---|
| Muscle pain | 8% |
| Headache | 33% |
| Memory problems | 20% |
| Confusion or dizziness | 5% |
| Nausea or vomiting | 1-2% |
| Dental injury | Risk modified by use of bite guard |
| Death | 2/100,000 over a 5yr period |

- Explain how the procedure is carried out, including the need for general anaesthetic.
- Explain the need for a course of treatments (of specified duration e.g. up to maximum of 12 treatments) if necessary.
- Ascertain any particular medical problems which may pertain to the patient and discuss how these may affect the treatment or lead to complications.
- Allow the patient to ask questions and clarify any queries they may have.
- Record any instructions that may reasonably pertain to the treatment that the patient gives.
- Obtain consent to retain the EEG recording for audit and teaching purposes, or document the refusal of consent.
- Ensure that the patient has the capacity to consent to the procedure in that:
    1 The patient understands the information given.
    2 The patient can remember and retain that information.
    3 The patient can weigh up the information given and come to a decision.
    4 The patient can communicate their decision to the interviewer.
- Capacity assessment within care pathway must be completed by a junior doctor on the prescribing team prior to each treatment
- Consent should be confirmed prior to each treatment by the Doctor who is administering ECT.

You are reminded that:

- You should read the patient's medical notes before starting the consent process and take into account any relevant information therein.
- Form 1 (see appendix 1) is a record that the consent process has taken place but not legal proof of the act of consent.
- The patient may withdraw their consent at any time.
- You should make full use of any information for patients pertaining to the treatment that has been provided by your hospital.
- The completed Consent Form 1 should be kept within the ICP
- Consent should be recorded separately in the patient's medical notes and a copy of Form 1 also placed therein.
- Any problems with the consent process at any stage must be discussed with the patient's responsible medical officer.

**Incapacitous Patient**

Should the patient lack capacity to provide informed consent for the procedure and it is felt by the treating RMO to be in the patient's best interest then assessment under Part IV of the Mental Health Order should be arranged. Equally if a patient requires ECT treatment against their will a Part IV opinion should be sought. A Part IV opinion should be sought via RQIA (02890517530), prior to this request the patient must be undergoing the process of detention for assessment, or else be already detained for assessment or treatment. The opinion cannot be provided until the Form 7 has been completed.

It is legal to give ONE emergency treatment prior to the Part IV opinion being available, and if this is done it must be recorded carefully in the care pathway and patient's notes; and the consent over-ride in the patient's best interests should be documented using a consent Form 4, and discussing it with the patient's next of kin would also be good practice.

## 5.3 ECT and NICE Guidelines

The referring psychiatrist must state that the referral for ECT is within NICE guidelines or indicate the reason for any exception.

Before ECT is prescribed outside of NICE guidelines, the referring psychiatrist **must** discuss the case with the ECT consultant.

The patient must be informed if they have been prescribed ECT outside of NICE guidelines.

All decisions and information discussed should then be clearly documented in the patient's notes/ ICP.

## 5.4 Clinical Global Impression

Clinical Global Impression (CGI) is a brief clinical impression of the patients overall clinical state prior to, during and after initiating treatment. CGI form must be completed before each treatment and after the course has been completed. This this is documented within the ICP.

## 6.0 ECT PROCESSES

### 6.1 Anaesthesia - Pre ECT Work Up

Safe treatment of the patient in the ECT Suite is the responsibility of the prescribing team. The anaesthetist must be provided with FULL information;

1. Patient's current medical status
2. Previous medical history
3. History of adverse side effects/reactions to anaesthetic agents
4. Allergy or suspicion of the same, with as much detail as possible, e.g. Urticarial rash and wheezing in association with drug X.
5. Family history is relevant and should always be available. If the patient is not in a position to offer this then one should make attempts to discuss this with family/close friends and, of course, with any other treating doctor (especially the G.P).

For further details refer to the Appendices.

**NOTE: If there is no relevant family medical history then this should clearly be stated, e.g. "No family medical history on enquiry".**

It is the prescribing Consultant and / or ECT nursing team's responsibility to inform the anaesthetist of any disability and communication needs.

There will be instances when the opinion of an anaesthetist will be desirable prior to the day of treatment and this can be obtained by contacting the Anaesthetic Office at the South West Acute Hospital or the anaesthetic office in Altnagelvin.

All patients who have "systemic disease with functional limitations of life-style" should be referred in advance for an anaesthetic opinion/consultation.

For patients in the T&F, based on the patient's condition/risk, the Anaesthetist may have to consider whether administering ECT at TCH is the safest option. In such case he will inform the Anaesthetic Lead Clinician who would then coordinate with the Theatre Co-coordinator in Altnagelvin. It is the role of the Anaesthetist in TCH to liaise directly with their counterpart in Altnagelvin and explain their rationale.

It is expected that all patients undergoing a course of ECT should have a Pre-Anaesthetic Assessment form filled in by the start of their treatment. In Altnagelvin this pre-anaesthetic assessment should be completed by the Anaesthetic Nurse prior to ECT. For patients in the T&F this may be carried out by the Pre-Assessment Team at the Pre-Assessment clinic at TCH, at the Tyrone and Fermanagh Hospital or it may be completed by telephone.

This process takes time and the Anaesthetic Pre-Assessment team needs to be informed about a client who will require ECT early to allow for investigations to be sent to the labs and results correlated. There will be provision for emergency ECT when there may not be time for investigation, but this significantly increases the risk to the patient.

The Pre-Assessment team should have ready access to up to date investigations. These must be completed by the prescribing team and the results available to the pre-assessment team. It is the responsibility of the patient's team to notify and up-date the team of any relevant developments, including the need for physical review and/or investigations during the course of treatment.

**NOTE: If a patient has recently discontinued or had an abrupt change of dosage of any psychotropic agent, this should be clearly stated, especially with regard to MAOIs.**

### 6.2 Pre-Treatment

Appropriate communication must be used to inform the patient of the requirements regarding general anaesthesia.

The patient should be fasted for >6 hours for solids and >2 hours for clear fluids

Females from 15 to 55 should have a pregnancy test completed prior to each treatment. If the patient is unable, or unwilling due to mental state, to provide a sample prior to every treatment then if they have not left the Psychiatric Unit or staff observation it may be appropriate to forego this requirement.

### 6.3 During Treatment

The Theatre Safety Checklist (Modified for ECT) should be used as part of each patient's care.

Current monitoring recommendations for the anaesthetised patient:

- Blood pressure
- ECG
- Pulse oximetry
- End-tidal CO2
- Respiratory rate
- Temperature

### 6.4 Post-Treatment

- Blood pressure
- Pulse oximetry
- ECG

## 6.5 Medication

- Review medications prior to commencing ECT course
- Omit night time sedation 24 hours before ECT
- If overweight or history of gastroesophagel reflux – commence Ranitidine 150mg bd if not already prescribed a similar preparation.
- Immediately prior to ECT omit all medications except those needed for cardiac conditions, asthma, and proton-pump inhibitors. Benzodiazepines and other anticonvulsants must be omitted. Anti-diabetic medication should be discussed with the anaesthetist prior to the day of ECT**.**
- Medication which is being administered prior to ECT should be given at 8am with a sip of water.
- Instructions should be made on the medicine Kardex and within the patients notes for the nursing staff to inform them which medicines should be given or omitted prior to ECT.
- If you are unsure seek advice from the anaesthetist involved in the administration of ECT.

## 6.6 ECT Care Pathway and List

- All relevant sections of the ECT Care Pathway must be completed before treatment.
- Book a place on the ECT list for the appropriate date; this is done by the Ward Clerk in Elm Ward in the T&F and the secretary responsible for ECT in Grangewood.
- Patient's Named Nurse to make verbal contact with the Anaesthetic Nurse.

## 6.7 Stimulus Dose Titration

- The aim of stimulus dosing is to determine the seizure threshold and to then give the treatment dose appropriate to the electrode placement.

- The determination of threshold is done at the initial session(s) and should be achievable using no more than three stimulations but may in exceptional cases require more.

- There is no current evidence of a minimum requirement for length of seizure in ECT. Evidence of seizure activity on both EEG and motor response is considered satisfactory. EEG alone may be acceptable or motor response on rare occasions.

- If after the initial stimulus the seizure threshold has not been determined, a further 2 stimulations may be given if required on each treatment day.

- There should be at least a 20 second gap between each re-stimulation given.

- If there is a missed or absent seizure after the third stimulation continue to progress up the titration schedule on the next treatment day until the seizure threshold is achieved. For titration doses if it is necessary to use more than 2 doses then dose 1 then 2 then 4 would be used to titrate. If the patient has a seizure at dose 4 the on next treatment the dose level 3 should be tried first, before using 4 in the event of a failed seizure.

- If seizure threshold is not reached within three stimulations the treatment technique, anaesthetic agent used previous medical history and concurrent medication should all be reviewed.

- If a third stimulation is required then a stimulus level should be skipped due to the effect of repeated sub-convulsive stimulation raising the seizure threshold. If the third stimulation results in an adequate seizure the patient should be stimulated with the skipped level's treatment dose. This should be at the next session. This is to determine whether this might be the real seizure threshold.

- If after three stimulations a seizure is not elicited, then stimulation should resume at the next session with the highest dose used in the last session.

- If switching from bilateral to unilateral, go to the next level on the unilateral table.

## 6.8 Emergency ECT

It should be discussed with the patient's consultant if an emergency procedure should be followed. Bilateral treatment should be given. Follow the emergency ECT procedure (Appendix 3).

## 7.0 PROCEDURE FOR ELECTROCONVULSIVE THERAPY USING THE SPECTRUM 5000M

### 7.1 Treatment

- Turn on the master switch at least 5 minutes prior to treatment to allow the Capacitors to charge fully.

- Routine maintenance tests should be performed and recorded.

- Establish if this is new treatment course. If yes select the appropriate stimulus level (Appendix 2) If no, continue the dose given the previous time unless a change of dose is communicated to the ECT team by recording this on the ECT ICP.

- Adjust treatment dial to the prescribed dose, by Medical Staff or appropriately trained Nursing Staff.

- Prepare the electrode sites with alcohol wipes.

- Attach EEG electrodes. Pad 1 is placed 1cm above mid-point of eyebrow and pad 2 on ipsilateral mastoid. Grey pads on the right and brown pads on the left. The green (grounding) pad is to be placed on clavicle or sternum.

- Perform EEG test strip, to establish a baseline before each treatment.

- The anaesthetist delivers the induction agent and muscle relaxant.

- The anaesthetist pre-oxygenates the patient and inserts disposable mouth guard.

- Cover electrodes with gel and place them according to the RCPsych guidelines. For Bitemporal placement place the electrodes 5cm above the midpoint of a line joining the outer canthus and the tragus of the ear. For unilateral ECT use the d'Elia position on the non-dominant side (determined by the consultant team). Press with firm, consistent pressure, with a slight oscillating rotation. See Appendix 8 for diagrams of electrode positions.

- The nurse checks that the impedance is within range and if within range then states "impedance within range" and the dose to be delivered.

- Doctor states "Delivering Stimulus" and presses the stimulus button on the handset. The button **must** be held down for the duration of the three beeps and the following tone, otherwise the treatment will be aborted.

- Observe for a seizure. A technically adequate treatment should produce a generalised tonic clonic seizure. Time the peripheral seizure activity from the end of the last tone until the end of obvious motor activity. Read the EEG print out to determine the end of seizure activity (i.e. “three per second spike and wave” form on the EEG).

- To stop the EEG print out press the “Done” button on the *monitor*. This will enable the treatment parameters to be printed out automatically. Record peripheral and EEG seizure length and dose delivered within the ICP.

- Any problems encountered during the treatment must be recorded in the communication section of the ICP.

- Where it is unclear how long a seizure has lasted, the assessment of adequate seizure duration should be determined by the presence and duration of seizure activity on the EEG in preference to the presence of a peripheral seizure.

### 7.2 Post-Treatment

- The psychiatrist rostered for ECT and the anaesthetist must remain within the operating area until all patients regain consciousness and no other significant problems remain which might require attention. The prescribing team should be informed of any significant problems which should be documented in the patient’s health record.
- Patients are to be offered toast and a beverage after ECT, but patients should not eat and drink until at least one hour following a general anaesthetic.

### 7.3 Return of Patients to the Tyrone and Fermanagh Hospital

- It is expected that patients will spend a minimum of two hours between phases 1 and phase 2 Recovery, and would not be returning to the Tyrone and Fermanagh Hospital until after this period. There is a risk of reversion to anaesthesia within two hours of treatment, and so they should be observed for this long.
- When patients are returning to the Tyrone and Fermanagh Hospital, there should be a bag/valve mask and a Guedel airway adjunct available with the patient and an oxygen cylinder in the transport in case of need for airway support during transfer.

## 7.4 Review of patients during ECT course

- Cognitive assessment should be performed after each treatment (10 question orientation score completed once conscious, repeated every 5 minutes until oriented as per ECTAS).

- Cognitive assessment should be completed weekly by the prescribing team.

- The prescribing team should complete the CGI in the ICP after each treatment

- Enquire about side effects of ECT after each treatment.

- Assess medical fitness for further General Anaesthetic & ECT. Repeat physical examination, U&E, ECG etc. as appropriate.

- Problems should be addressed at the prescribing team's multidisciplinary meeting and also reported to the ECT staff. In addition notes should be made in the patient's health record.

- Follow any instructions left by the anaesthetist.

## 8.0 PROCEDURE FOR THE MANAGEMENT OF PROBLEMATIC TREATMENTS

### 8.1 Equipment self-test failure – Prior to treating patient

If the equipment self-test fails because:

- The impedance is too low; this suggests a short circuit. Make sure that the inter-electrode scalp area is dry and free from excess conduction gel or hair preparations. Another possibility is electrode failure.

- The impedance is too high; scalp-electrode contact is poor, so apply more gel to the electrodes, prepare the scalp with more scrub, and apply the electrodes with greater pressure.

- If no stimulus is delivered despite attempts to correct any mechanical failure, the contingency machine should be used for all subsequent patients on that treatment day. The current patient will be unable to have treatment on this occasion and the treating team must be notified. The malfunctioning machine should be immediately serviced and repaired if required.

### 8.2 Failed Seizures

- A failed seizure is when there is no evidence of a generalised tonic clonic seizure or any cerebral activity on EEG. Ask the anaesthetist to continue ventilation with oxygen and, if necessary, to augment anaesthesia. Increase the dose to the next highest level on the dosing procedure and re-stimulate. If the response to re-stimulation is inadequate, do not re-stimulate again at this session. Report the incident to the patient's consultant.

- If from review of the patient the problem seems to be due to remediable factors (e.g. drugs, electrode placement etc.) modify these before the next treatment and make no adjustment to the original stimulus level selected at the previous treatment. If remedial factors do not appear to be the cause go to the next level on the dosing schedule. If this does not produce a seizure, re-stimulate at this session repeating the above procedure.

- For missed or absent seizures there must be a minimum of 20 seconds interval before re-stimulation which is addressed by the machine recalibrating after a stimulus is delivered.

- If the seizure shortens during the treatment course by more than 20%, increase the current to the next highest level on the dosing procedure.

- If the patient fails to clinically improve after 2-3 treatments increase the current to the next highest level on the dosing procedure. Consideration should be given to changing the pulse width by the treating team before the next treatment.

- The dose should not be increased over 3 times the seizure threshold for short seizures with bilateral treatment. For unilateral treatment, 8 times the seizure threshold should not be exceeded. Consider other strategies such as changing the anaesthetic agent.

### 8.3 Prolonged Seizures

- For long seizures, 70-120 seconds, reduce the dose to the previous level on the stimulus dosing chart.

- For seizures longer than 120 secs terminate with an initial dose of 4mg of lorazepam IV. Report the incident to the patient's prescribing team for a full review of further treatment. If treatment is to continue reduce the charge at next treatment to the next lowest dose in the treatment procedure.

### 8.4 Marked Cognitive Impairment

- Report the incident to the patient's prescribing team for a full review of further treatment. If the treatment is to continue reduce the charge at the next treatment to the next lowest dose in the treatment procedure. Consider unilateral ECT. An increase in the awareness of the patient's capacity to consent is required.

### 8.5 Untoward Events

- Follow appropriate guidelines for initial management.

- The patient is to remain in the general Hospital until medically fit for discharge; this may require an acute medical admission.

- Inform prescribing team.

- Complete incident on DATIX.

- Arrange meeting for critical incident analysis and debriefing.

## 8.6 Less Than Prescribed Stimulus Delivered

This will be indicated by the readout on the screen of the ECT machine. The most likely cause of this will be inadequate electrode placement (see increased impedance guidance) or not holding the treatment button for long enough during treatment.

If this occurs then the patient should be treated according to their response. If there is a failed seizure then they should be restimulated. If they have a seizure then the dose delivered should be recorded and the seizure length on EEG and peripherally. An incident should also be filed on DATIX.

## 9.0 GUIDELINES FOR ECT SESSION MANAGEMENT

Aim – Promote patient safety and ensure adequate staffing level to do this

There are at most 4 places available for ECT in Altnagelvin and at most 3 places available in Tyrone County Hospital. It is necessary to ensure that those units supplying staff have sufficient staff available to allow ECT to proceed for up to these numbers of patients on days when ECT is administered.

If a referral is made while the ECT list is at capacity the case must be discussed with the ECT consultant. Ideally there will not be a waiting list.

### 9.1 Waiting list management

In the event of an urgent referral, priority will be based on clinical need. This will be discussed with the prescribing team; however the final decision re prioritising patients on the waiting list will be made by the ECT Consultant. It is the responsibility of the prescribing team to put in place an alternative management plan whilst awaiting ECT. Reference may be made to NICE guidelines on the use of electroconvulsive therapy.

If a patient requires ECT urgently whilst the ECT list is at capacity, the following are alternative options to consider:

1. Treating an additional patient – to be discussed with anaesthetist and evaluation of risks/benefits of breaching capacity required.
2. Use of ECT facilities in other sector.
3. Reduce the frequency of another patient's treatments to once per week. This will be discussed with the prescribing team.
4. Treat on emergency theatre list
5. Treatment to be organised for other days than normally available.
6. Consideration may be given to ECR referral to another Trust for treatment.

## 10.0 ECT IN SPECIALISED CASES

### 10.1 Additional Considerations for ECT in the Elderly

- Age is not a contraindication for ECT
- All coexisting medical or surgical conditions should be stabilised prior to ECT.
- Treatment will take into account the increased likelihood of high seizure thresholds among elderly people
- Older people are at increased risk of cognitive impairment associated with ECT. Unilateral ECT should be the considered for those with pre-existing cognitive impairment.
- Assess cognitive function at least 24 hours after the administration of ECT in addition to usual cognitive assessments.

### 10.2 Additional Considerations for ECT in learning disability

ECT should be used only in carefully selected patients with learning disability, usually when –

- Psychiatric illness has proved refractory to medical treatment
- There are intolerable adverse effects of medication
- The patient's clinical condition has severely deteriorated

There are no absolute contraindications to the use of ECT in patients with a learning disability.

### 10.3 Additional Considerations for ECT in Young People

- Treatment should be provided in Belfast from the Beechcroft Regional Unit in Belfast, unless there are exceptional circumstances. This should be discussed with the ECT consultant.
- For those under 16 two independent opinions should be available from child and adolescent psychiatrists
- For 16-17 year olds, one opinion from a child and adolescent psychiatrist is required and a second opinion is desirable.
- All non-essential medications should be stopped during ECT because of reports of long seizures and post ECT convulsions
- Stimulus dosing should take into account the lower seizure threshold in younger people. Initial treatment should be with a dose of 25mC
- Parents and the child should be involved in the consent process. Where it is not possible to obtain informed consent, ECT should be given only when the patient's life is at risk from suicide or physical debilitation because of depressive illness.

## 10.4 Additional Considerations for ECT for Patients in General Hospital

- Due to physical health considerations ECT is sometimes required whilst a patient is an acute medical inpatient, this should not prevent them accessing necessary treatment
- This should be done in coordination with the relevant liaison consultant in PCOP and the crisis consultant in Adult Mental Health
- In these cases the patient will be accompanied to DESU by a trained staff nurse with;
  - Knowledge of the patient they are escorting and aware of their legal status, consent and medical complications/history.
  - Up to date training in basic life support.
- The 2nd stage recovery will be completed in these cases by the DESU Recovery Staff. This will be on a trial basis in the first instance and kept under review via the ECT Group Meetings.
- Nurses on teams with patients who may require ECT should be familiar with this policy
- Please see also appendices 12 and 13

## 11.0 PROCEDURE FOR MAINTENANCE / CONTINUATION ECT

Continuation ECT is the use of ECT to prevent relapse of symptoms.
Maintenance ECT is the use of ECT to prevent further episodes.

### 11.1 Continuation ECT should be considered when

- The index episode of illness responded well to ECT
- There is early (0-6 months) post ECT relapse not controlled by medication
- There is later recurrence (6-12 months) not controlled by medication
- There is an inability to tolerate prophylactic medication
- There is repeated relapse because of poor compliance
- The patient requests it

### 11.2 Maintenance ECT

- Maintenance ECT should be considered for those whose illness recurs after continuation ECT.

### 11.3 Assessment for continuation ECT

- Review the case to ensure the diagnosis is correct
- ECT has been proven to be of benefit
- Alternative options have been explored
- Obtain the patients informed consent, discussion with patient and family must be conducted and documented to address treatment purpose, benefits side effects etc.
- Perform a full medical screening and examination, ideally in collaboration with an experienced anaesthetist
- Complete investigations as appropriate e.g. Bloods, ECG, CXR.
- Perform baseline standardised assessment of illness severity e.g. HAM-D, or MADRS.
- Obtain a second opinion from a consultant with experience in ECT.
- Review concurrent medication.
- A treatment plan should be clearly documented in the notes.
- Inform patient, and if they consent family, of the possible cognitive side effects of longer term ECT

### 11.4 ECT procedure –

- Follow procedure as for acute ECT
- Outpatient treatment can be given once recovery is achieved
- Electrode placement would normally be the same as used during the acute phase.
- Stimulus dosing should be used.
- Clinical response will indicate efficacy and determine if the dose should be increased.
- Once clinical recovery has occurred, reduce the frequency of ECT to the minimum required to maintain clinical response.

e.g.

  - give as acute ECT until clinical response is achieved
  - reduce to weekly
  - reduce to every 10 days (rounded to nearest session day)
  - reduce to every 2 weeks
  - reduce to every 3 weeks
  - reduce to monthly

- In patients who are not commencing continuation ECT immediately after acute ECT it may be possible to start at a lower frequency of every 2 weeks
- Review efficacy after every 2 sessions
- Review frequency monthly
  - Once established, review may be possible less often
  - Feedback from carers is essential
  - Deterioration in the mental state that suggests the return of depressive disorder should result in a return to the previous level of frequency until improvement is re-established
  - Once initial recovery has been achieved, a full baseline psychometric assessment should be performed.
  - Complete cognitive assessment monthly
  - Review by a senior anaesthetist every 6 months
  - Repeat psychometric assessment every 12 months

### 11.5 Stopping continuation ECT

- Since relapse is most likely within the first 12 months of recovery, continuation ECT should be given for at least one year after recovery
- After one year, review the need for long term ECT
- For continuation ECT it is reasonable to consider terminating the course at this stage
- Consider maintenance ECT if there is return of symptoms
- For maintenance ECT the course should be continued indefinitely

## 12.0 DISCONTINUATION OF ECT

### 12.1 Overview

- The prescribing and discontinuation of ECT are the decision of the patient's Consultant/RMO. However, the decision to discontinue ECT may also take place in the context of discussion with the ECT Consultant and/or Anaesthetist in the light of adverse reactions to ECT such as cognitive problems or anaesthetic problems.
- Discontinuation may also take place because of poor efficacy or because the patient has withdrawn consent.
- The clinical status of a patient should always be assessed between each ECT session and treatment should be stopped when a response has been achieved.
- A patient should not receive more treatments than is required to achieve an adequate response, even if more have been prescribed, hence the patient must be reviewed after each treatment during the treatment course.

### 12.2 Recommendations (from ECT Handbook)

- A set course of treatments should not be prescribed – the need for further treatments should be assessed after each individual treatment.
- The majority of remissions occur before the 9$^{th}$ treatment. However 40%of patients who had not responded after 6 treatments went on to gain remission. A patient who has had no response within 12 treatments is unlikely to have a sustained response to ECT.
- If no clinical improvement at all is seen after six properly-given bilateral treatments, then the course re-evaluated.
- It may be worth continuing up to 12 bilateral treatments before abandoning ECT in patients who have shown definite but slight or temporary improvement with early treatments.

Unilateral ECT

- For patients who do not respond to unilateral ECT, consideration should be given to switching to bilateral treatment. It will be necessary to recalculate seizure threshold in this case.

## 13.0 GUIDELINES FOR MEDICAL STAFF ADMINISTRATING ECT

### 13.1 Duties of Responsible Medical Officer (RMO) and Prescribing Team

- Be responsible for prescribing, reviewing and terminating a course of ECT.
- Be responsible for all issues relating to informed consent or the use of legislation.
- Make sure that there is adequate review of the patient's physical health and the communication of this and other relevant information to the treating anaesthetist.
- Make sure that the patient's cognitive status is established prior to the first treatment and reviewed weekly thereafter.
- Make sure that all relevant sections of the local ECT record form are completed before the patient is sent for treatment.
- Make sure Capacity Assessment is completed within 24 hours before each treatment.
- Make sure Clinical Global Impression is completed before each treatment and at the end of the ECT course.
- Review patients at 3 and 6 months after ECT course, or hand this over to the team with responsibility at that time

### 13.2 The ECT Consultant:

- The named consultant has dedicated sessional time for ECT and this should be included within their job plan.
- In consultation with management, make sure that procedures, equipment and facilities comply with Royal College of Psychiatrist (RCPsych) guidelines.
- Make sure that there is a reliable procedure to communicate information to the prescribing team about any treatment problems.
- Ensure there is adequate cover during absence by a suitably competent psychiatrist.
- Arrange training for medical staff in the indications and delivery of ECT.

### 13.3 Training and Supervision

Doctors new to the ECT rota should be assessed and trained even if they've had ECT training elsewhere, using the Royal College of Psychiatrists ECT Competencies as a framework.

Training should include:

- Theoretical basis of ECT treatment
- Familiarity with procedure and clinic layout
- Observation before administering
- Supervision 3 times before administering alone
- Supervision directly or through examination of treatment charts once weekly
- Opportunity to appraise papers on ECT e.g. through journal club

## 14.0 GUIDELINES FOR NURSING STAFF FOR ECT

### 14.1 The ECT Lead Nurse

- The ECT Lead nurse will be responsible for the running of the ECT Service. This nurse will have responsibility for training, supervising and co-ordinating the escort nurses and should be at least Band 6 level. The Lead Nurse should attend RCPsych training and should have a good working knowledge of the ECT procedure, complications and possible side effects, both common and rare.

- The nurse will be seconded to this role and should have protected time to carry out all the duties required and should not be expected to cover a ward or other responsibilities during this protected time.

- The ECT lead nurse will ensure that the ECT Patient Satisfaction questionnaires are distributed, and will arrange 1, 2 and 3 month reviews for patients following ECT.

### 14.2 Areas of Responsibility

- Liaison between prescribing teams and ECT team.
- Assisting in treatment sessions.
- Review and update ECT Policy, procedures and ECT Care Pathway.
- Performing audit and risk assessment.
- To ensure a high standard of record keeping and documentation.
- Supervision, Training and Appraisal (staff and personnel)
- Organise teaching sessions for students and new staff.
- Provide training and support to escort nurses.

### 14.3 **Administrative Duties:** The ECT Lead nurse should –

- Know local and national guidelines and update procedures and policies accordingly.

- Be responsible for co-ordinating the ECT Rota for nursing staff

- Maintain records of ECT Activity for RQIA and ensure their submission via Epex and other relevant systems.

- Carry out audits of practice and patient care.

- Oversee the systems and processes for the administration and transport of patients receiving ECT treatment.

- Ensure that all patients receive written and verbal information on ECT and oversee the completion of any satisfaction questionnaires.

- Once a course of ECT is completed the ECT Lead Nurse will arrange with the relevant community team a follow-up appointment to allow the post-treatment CGI to be completed and the follow-up assessments to be undertaken. The ICP remains active until this is completed and should be used to document these assessments.

- Following this assessment the ICP is completed for that treatment and the audit form will be removed from the ICP and retained for audit

- Ensure that following a treatment course of ECT patients receive a satisfaction survey.

### 14.4 Role of the ECT Nurse

**The ECT nurse should –**

**Before the Treatment Session**

- Liaise with wards and prescribing team to ensure all relevant investigations have been carried out before treatment.
- Organise and schedule times for both in-patients and day-case patients to minimise waiting times where possible.
- Provide information and support for patients, relatives and staff.
- The ECT nurse will also need to be aware of the required routine investigations and the significance of their results.
- Both written and verbal information on ECT should be given to all patients and specific day-case information should be given to those attending for day-case ECT.
- Complete Pre ECT preparation checklist (See Appendix)

**During a treatment session**

- Carry out and record routine pre ECT nursing checks, or delegate this task to a suitably trained deputy.
- Check patient's legal status and consent.
- Ensure that any concerns re patients are passed onto relevant members of the ECT team.
- Provide support and reassurance for patients.
- Ensure the safety throughout the treatment.
- Introduce the ECT team to the patient.
- Carry out any required preparation of patient e.g. EEG Monitoring.
- Assist the psychiatrist with the timing, in accordance with local procedure.
- Observe patient throughout treatment and record observations.
- Assist with placing patient in recovery position.

- Escort the patient through to recovery area.
- Prepare the treatment room for the next patient.
- Discuss the treatment of the next patient with the ECT team.
- The nurse should be fully conversant with the use of the particular ECT machine in the clinic.
- The ECT nurse should not administer the treatment, but check the dose and confirm verbally with the psychiatrist.
- There should be a minimum of two trained nurses in the treatment room.
- The ECT nurse should have knowledge of the actions required in the event of a medical emergency, e.g. Suxamethonium apnoea, malignant hyperpyrexia.
- The ECT nurse should have knowledge of the drugs used for ECT.
- The local procedure for termination of prolonged seizures and have required drugs available.

**After Treatment**

- The ECT nurse should ensure that outpatients are not discharged until fully recovered. They should be seen by a doctor beforehand.
- Out patients must be collected by a responsible adult and advised to follow information advice sheet.
- Complete ECT records according to local procedure

**Maintenance/Environment**

- Ensure the ECT clinic is safe for both patients and staff.
- Regular maintenance of equipment and keeps detailed record on this.
- Carry out and keep updated risk assessments.
- Be familiar with the use of all the equipment in the ECT clinic.
- Check expiry dates on all disposable equipment and maintain stock.
- Check expiry dates on all drugs and order as appropriate.

**Staff Training and Personal Development**

- Have a good knowledge of possible drug interactions, side effects and the required treatment.
- Undertake regular training in Basic Life Support (BLS) and Immediate Life Support (ILS) to meet requirements of procedures.
- Have a reasonable level of training and experience of airway management.
- Have knowledge of legal status and consent.
- Attend ECT Refresher training as required.

### 14.5 Role of the Escort Nurse

- Spend time with patients and relatives in order to provide support and information.
- The escort nurse must always be a trained nurse.
- Each patient should be individually escorted.
- On arrival to ECT Suite, check the details on the identity bracelet on the patient's wrist.
- Ensure the patient's safety within the recovery room, remain with them, providing support and orientation until they return to the ward or are collected by a responsible adult.
- Monitor the patient following their recovery from the anaesthetic while they remain in the ECT area. This includes monitoring cognition and providing a light snack.
- They should carry out pre ECT nursing checks and ensure all relevant documentation is available.
- They should ensure safekeeping of patient's valuables.
- He/she should check the patient in recovery in accordance with local procedure.

**The Escort Nurse Should Have –**

- Knowledge of the patient they are escorting be aware of their legal status, consent and medical complications/history.
- Up to date training in basic life support and be competent in it.
- Awareness of the ECT process, the side effects and the action required if they occur.
- Familiarity with the clinic environment and the location of emergency equipment.

### 14.6 The Role of Nurse in Charge of Recovery Area

- There should be one trained nurse with overall responsibility in the recovery area. This must not be the ECT or Escort nurse.

- There should be a minimum of two trained nurses in recovery and the number of staff in the recovery area should exceed the number of unconscious patients by at least one.

- Once the patient has come round from the anaesthetic they hand the care of the patient back to the escort nurse.

**The Recovery Nurse should –**

- Have an awareness of the ECT process.

- Be familiar with the ECT clinic and location of emergency equipment.

- Be competent in all aspects of the BLS and ILS.

- Have received training in recovery procedures, e.g. airway management.

- Receive a handover from anaesthetist.

- Provide a safe environment for both staff and patients while in recovery area.

- Alert the anaesthetist to any concerns or adverse events.

- Orientate patients to their situation and environment.

- Complete relevant documentation.

- Ensure that patients are not discharged back to the ward until fully recovered.

- Remind all out patients to follow the information sheet given to them.

## 15.0 GUIDELINES FOR PRESCRIBING OUTPATIENT ECT

Serious consideration should be given prior to prescribing a course of outpatient ECT.

Factors that should influence the decision –

- Past and present medical condition – cardiac and respiratory problems.
- Previous anaesthetic complications.
- Previous complications or side effects with ECT.
- Domestic situation – Do they live alone? Is support at home available for 24 hours post treatment and between treatments?
- Reliability in taking or omitting medication as prescribed.
- Ability to retain information given to them – to fast from 12 Midnight.
- Any history of suicidal ideation. Be aware that suicidal risk may increase in the early stages of treatment as level of depression may remain static but volition may improve.
- Employment situation – Do they intend to carry on working during their course of treatment? Consider what their job is and how they are going to get there the day after treatment, as they are not insured to drive for 24 hours post anaesthetic.

If all these factors have been considered and it is felt appropriate to go ahead with outpatient ECT then the following procedure should be followed.

### 15.1 Procedure for Outpatient ECT

- Follow procedure as for inpatient ECT.
- In addition to the patient fact-sheet, an outpatient ECT information leaflet should also be supplied.
- Included with the patient's notes should be the consent form and completed ECT Care Pathway (including outpatient agreement form).
- Contact the relevant member of staff as described above to place the patient's name on the ECT list. The patient's GP should also be informed.
- The evening prior to treatment the patient should fast from 12 midnight and take only the medication indicated by their consultant.
- The patient should arrive at the designated clinical area at 8.45am.
- On arrival baseline observations should be recorded and name band attached.
- Following treatment the patient must remain in the unit for a minimum of 90 minutes.
- Prior to discharge the patient must be reviewed by a doctor. The outpatient ECT discharge form must be completed after each session.
- The patient should be collected from by a responsible adult. The patient must not drive. A responsible adult, who is aware of the procedure which the patient has undergone, should remain with them for 24 hours and sign the Outpatient Agreement Form.

- All patients receiving outpatient ECT should be reviewed before each session, and seen by a member of medical staff from the prescribing team at least once per week.

## 16.0 AFTER ECT COURSE COMPLETED

Once the course of ECT is completed it is the responsibility of the prescribing team to complete the RQIA Audit Information located at the end of the ECT Care Pathway. By completing these contemporaneously the Trust will be able to respond to RQIA Audit requests in a timely manner, and will also be able to easily undertake internal ECT Audit. This documentation is to be retained by the ECT Lead Nurse and used to prepare audit returns for RQIA and other audits.

The letter prompting follow-up review of CGI and cognition will be forwarded to the relevant community team, along with the RQIA patient satisfaction survey for distribution to the patient now their treatment course is complete.

## 17.0 IMPLEMENTATION

### 17.1 Dissemination

This policy is suitable for implementation immediately.

Relevant to staff who are involved in administering ECT, staff working in the ECT facilities in the Tyrone County Hospital and Altnagelvin Hospital, relevant to all doctors working in Psychiatry.

### 17.2 Resources

Training will be required for nursing and medical staff around ECT; this is progressed via CEC and the Royal College of Psychiatrists and is ongoing.

### 17.3 Exceptions

None

## 18.0 MONITORING

This policy is monitored locally by audit systems described in the text, and regionally by ECT audit and inspections by the RQIA.

## 19.0 EVIDENCE BASE / REFERENCES

Mental Health (Northern Ireland) Order 1986
ECT Handbook 3rd edition Royal College of Psychiatrists 2013
ECTAS Standards 10th edition (Dec 2012)
NICE Guidance on the use of ECT (update 2010)

## 20.0 CONSULTATION PROCESS

A consultation day was undertaken in Grangewood with input from Theatres, Prescribing Teams, ECT Teams, Community Teams and Senior Management.

## 21.0 EQUALITY STATEMENT

In line with duties under the equality legislation (Section 75 of the Northern Ireland Act 1998), Targeting Social Need Initiative, Disability discrimination and the Human Rights Act 1998, an initial screening exercise to ascertain if this policy should be subject to a full impact assessment has been carried out. The outcome of the equality screening for this policy, procedure, guideline or protocol is:

**No impact.**

## 22.0 APPENDICES


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## APPENDIX 1 EXAMPLE FORM 1 CONSENT FORM FOR ECT

Responsible healthcare professional……DR AN OTHER …… Job Title…CONSULTANT PSYCHIATRIST

Name of proposed procedure or course of treatment (include side of body or site and brief explanation if medical term not clear)
COURSE OF BILATERAL/UNILATERAL ELCTROCONVULSIVE THERAPY UP TO A MAXIMUM OF 12 TREATMENTS

I have explained the procedure. In particular I have explained:
PREPARATION FOR ANAESTHESIA AND TREATMENT INCLUDING FASTING, CHANGES TO MEDICATION AND VENEPUNCTURE ANAESTHESIA TREATMENT, MONITORING AND RECOVERY

The intended benefits IMPROVEMENT OF DEPRESSION

Serious or frequently occurring risks…MEMORY LOSS (POSSIBLY PERMANENT) POST-TREATMENT CONFUSION, HEADACHE, MUSCLE, ACHES, NAUSEA, FATIGUE

Possible additional procedures which may become necessary during the procedure.

Blood transfusion other procedure (please specify)…TREATMENT OF PROLONGED SEIZURE

The procedure will involve general and/or regional anaesthesia/local anaesthesia

**I have also discussed what the procedure is likely to involve, the benefits and risks of any available alternative treatments (including no treatment), any samples that may be taken any particular concerns of the individual.**

The following leaflet/tape has been provided WHSCT ECT INFORMATION LEAFLET

Signed……
Date……
Name
**(Print)**……
JobTitle……
……

Contact details (if patient wishes to discuss options later)……

## APPENDIX 2 STIMULUS DOSING SCHEDULE FOR SPECTRUM 5000

Bilateral Placement

| **Pulse Width Settings** (On Main Menu) **MAX in mS** | **LEVEL** | **TITRATION DOSE IN mC** | **TREATMENT DOSE (IF TITRATION SEIZURE >=20SECS)** | **TREATMENT DOSE (IF TITRATION SEIZURE 6-19SECS)** |
|---|---|---|---|---|
| **1.0** | **1** | **57.4** | **69.1** | **80.5** |
| **1.0** | **2** | **103.8** | **126.5** | **195.8** |
| **1.0** | **3** | **207.3** | **230.4** | **299.9** |
| **1.0** | **4** | **299.9** | **368.4** | **426.4** |
| **1.0** | **5** | **448.9** | **529.7** | **599.9** |
| **1.0** | **6** | **599.7** | **760.5** | **829.3** |
| **0.7** | **7** | **-------** | **760.4** | **760.4** |
| **0.7** | **8** | | | |

Unilateral Placement

| **Pulse Width Settings** (On Main Menu) **MAX in mS** | **LEVEL** | **TITRATION DOSE IN mC** | **TREATMENT DOSE (IF TITRATION SEIZURE >=20SECS)** | **TREATMENT DOSE (IF TITRATION SEIZURE 6-19SECS)** |
|---|---|---|---|---|
| **1.0** | **1** | **22.9** | **103.8** | **126.5** |
| **1.0** | **2** | **57.4** | **172.4** | **276** |
| **1.0** | **3** | **103.8** | **380** | **448.9** |
| **1.0** | **4** | **207.3** | **760.5** | **1032** |
| **0.7** | **5** | **-------** | **610.6** | **610.6** |
| **0.7** | **6** | **-------** | **760.4** | **760.4** |
| **0.7** | **7** | **80.6** | **460.8** | |

**APPENDIX 3 Emergency ECT BILATERAL PLACEMENT ONLY**

| Age | Level | Male | Female |
|---|---|---|---|
| Under 30 | 1 | 57.4 | 57.4 |
| | 2 | 207.3 | 149.5 |
| | 3 | 299.9 | 230.4 |
| 30 to 60 | 1 | 57.4 | 57.4 |
| | 2 | 253.0 | 207.3 |
| | 3 | 380.6 | 299.9 |
| Over 60 | 1 | 57.4 | 57.4 |
| | 2 | 299.9 | 253.0 |
| | 3 | 448.9 | 380.6 |

## APPENDIX 4 RECOMMENDED PREPARATION AND INVESTIGATIONS PRIOR TO ECT TREATMENT

### Significant Medical Conditions

Medical staff must use their knowledge when evaluating any patient with respect to a potential anaesthetic consultation (pre-treatment) such as:

- Drug allergies
- Previous adverse reaction to anaesthesia
- Hypertension
- Diabetes mellitus (especially Insulin-dependent diabetes)
- Angina, recent myocardial infarction (particularly if arrhythmic, thrombic or Myocardial / septal weakness has been suggested by previous investigations)
- Stroke (specify whether haemorrhagic or ischaemic)
- Hiatus hernia – consider Lansoprazole
- Abnormal body weight (obesity or anorexia)
- Renal impairment
- Osteoporosis/arthritis
- Raised Intracranial Pressure
- Significant dental work / abnormalities / loose teeth

### History and Physical Examination

A good medical history and full physical is required prior to ECT, this should include checking for any evidence of

- Cachexia
- Heart failure
- Significant valvular disease
- Unstable dysrrhythmias
- Uncontrolled hypertension
- Significant infection
- Pulmonary disease
- Glaucoma
- Arthritis
- Osteoporosis
- Raised intracranial pressure
- Dental problems
- Any significant metabolic or endocrine disorders
- Coagulation or bleeding disorders
- Use of anticoagulant medication

Be wary of scars or masses on the thorax indicating implanted pacemakers / cardioverters –these should be discussed with the anaesthetist and cardiologist if necessary.

Always document cigarette, alcohol and illicit drug use

**Necessary Investigations**

- Weight and BMI calculation (notify anaesthetist if extreme deviation from norm)
- A Full Blood Picture including Haemoglobin
- Serum urea and electrolytes. Particularly important for patients on diuretics, lithium, or other vaso-active/ cardiac drugs, and those with diuretics or with known renal disease.
- LFT's – particularly important in cachexic states, drug or alcohol misuse, confusional states (acute or chronic), recent overdoses (intentional or otherwise).

**Special Investigations**

- INR and Coagulation Screen - patients with clotting disorders or anti-coagulant therapy
- Blood sugar levels must be assessed immediately before each treatment - For those suffering from diabetes
- Chest x-ray in all relevant high-risk groups (not uncomplicated asthma). This includes patients who have suffered recent falls and/or physical restraint.
- ECG – in all patients with cardiovascular, respiratory, renal disease, irregular pulse, heart murmur, hypertension, diabetics aged > 40, all males > 60 years, all females > 65 years.
- Hepatitis B and C in all high risk groups
- Echo cardiogram – not routinely used but may be requested by anaesthetist
- Sickle-cell test for all Afro-Caribbean, Middle Eastern, Asian and Eastern Mediterranean patients, unless previously investigated/known.

- Pregnancy testing of females within the appropriate age range, according to Trust policy

## Concurrent Medications That May Complicate ECT / ECT Anaesthesia

In principle, any medication which impacts on heart rate, blood pressure, seizure threshold, respiratory status or interacts with the commonly used anaesthetic agents (Propofol, Etomidate or, rarely, barbiturates) and paralysing agents (usually, but not exclusively, Suxamethonium) should be considered. The British National Formulary which has a comprehensive ‘interactions’ section to allow these to be identified.

With regard to interactions, one should also consider that Atropine and a beta-blocker, calcium channel blocker or Lignocaine may be used in the acute context (see below). Psychotropics which are of particular relevance to ECT anaesthesia would include anti-convulsant mood stabilisers, Lithium, MAOIs (mono-amine oxidase inhibitors), Benzodiazepines and SNRIs (e.g. Venlafaxine, which may cause hypertension) and Clozapine. These should where possible be omitted prior to ECT.

## APPENDIX 5 ANAESTHETICS AND ECT

### The Role of the Anaesthetist

The Anaesthetist is central to safe ECT practice and Consultant Anaesthetist input is essential.

The Anaesthetist's duties include to:

- Safely anaesthetise patients for ECT
- Advice regarding drugs required to manage medical complications pre, during and post ECT.
- Advice regarding monitoring equipment
- Advice regarding staffing and the environment within the ECT suite.

The Anaesthetist is ultimately responsible, not only for determining the dose of induction agent and muscle relaxant, but also the dosage of any necessary pre-medication for existing medical conditions and if required medications administered to the patient prior to/during the ECT treatment.

### Role of the anaesthetic nurse assistant

The anaesthetic nurse will assist the anaesthetist in safe administration during ECT and will be part of the ECT team. They will assist in:-

- Delivery of the anaesthetic;
- Setting up and checking of anaesthetic and monitoring equipment;
- Preparation of drugs required for the anaesthetic;
- Placement of the cannula;
- Monitoring the patient with ECG, pulse oximeter and blood pressure throughout the treatment and into recovery.

### Anaesthetic procedure for ECT

- If the client is deemed fit, then they will be deemed fit for that series of treatments unless there is an obvious intervening medical event e.g. URTI or LRTI.
- The anaesthetist needs to see the client before the first treatment
- Consent for treatment will be obtained by the psychiatric team, however anaesthetists need to be aware that, in some patients, it will be declared that the treatment is in the patient's best interest whether they want it or not. These patients will be identified to the anaesthetist and this treatment should take place, however, distressing.
- Once a series of ECT has started then everyone should endeavour to continue to administer the treatments twice weekly.
- The drugs used for induction of anaesthesia will be either Propofol (1.0-1.5mgs/kg) or Etomidate (150 – 300mcgs/kg) – see below. If another drug is being used or if the induction agent is changed from treatment to treatment the psychiatrist needs to be informed.

- The muscle relaxant of choice will be Suxamethonium (0.3-0.6mgs/kg). Other agents to be used need to be discussed beforehand.
- The procedure should be: Client brought to the to the day-procedure theatre at Tyrone County Hospital or DPU in Altnagelvin Hospital introduce yourself, WHO check-list done before starting, IV access, pre-oxyganation, IV induction agent, depolarising MR, short period of hyperventilation, insert mouth gag, treatment, hand ventilation until spontaneous ventilation returns, turn on side, proceed to recovery.
- If the response to stimulation is not sufficient then the psychiatrist may wish to re-stimulate. This may require a further bolus of Propofol and may require another bolus of Suxamethonium if spontaneous ventilation has returned. If Suxamethonium is repeated then it should be preceded by Atropine 0.6mgs.
- Re-stimulation may be required up to a total of 3 stimulations. The psychiatric team will appreciate that further doses of Propofol and Suxamethonium expose the client to untoward risk. Therefore while re-stimulation may be necessary it needs to be carried out within the short window that this anaesthetic is designed for. If the anaesthetist refuses to give more and more anaesthetic agents then this is in the best interest of the patient.
- In TCH: Once in recovery the client will be managed by the recovery staff and discharged back to the Day procedure ward when they are awake and stable in Tyrone County. In Altnagelvin Hospital the patient will remain in the Recovery Area and be discharged back to the inpatient wards on the Gransha site.
- Following ECT the patient should not have anything to eat or drink for a minimum of one hour after entering First Stage recovery. Recovery would normally take a total of two hours from starting First Stage recovery to being ready to leave the ECT area.
- Records of the anaesthetic will be written into the ECT ICP Anaesthetic Sheets. Any untoward events relating to the anaesthetic will also be recorded here.

**Induction agents and muscle relaxant for ECT**

Propofol (0.75 – 1.5 mg/kg) and etomidate (0.15 – 0.3 mg/kg) are routinely used as induction agents. The selection of this will be at the discretion of the anaesthetist. Whenever induction agent is chosen, it is probably unwise to alter that choice in the middle of a course of treatment without full consultation between the members of the ECT team.

Muscle relaxants are used to ameliorate the convulsive muscle activity during stimulation and the subsequent seizure and reduce the risk of injury. In most cases it is not desirable to ablate all visible signs of muscular activity since this is a useful indicator of seizure induction. Muscle relaxation is usually achieved with Suxamethonium (0.3 – 0.6 mg/kg), but if this is contraindicated a short-acting non-depolarising agent (such as Atracurium or Mivacurium) can be used. In such cases neuromuscular nerve stimulator is used to ascertain both the adequacy of the block and its subsequent safe reversal.

## APPENDIX 6 PHYSIOLOGICAL MONITORING DURING ECT

### Specific Physiological Considerations Pertaining to ECT Treatment / Anaesthesia

Before proceeding to outline specific medical and iatrogenic potential complications of ECT anaesthesia, some basic physiological parameters associated with ECT administration need taking into consideration.

- Vagal CVS Effects

The ECT stimulus gives rise to a bradycardia and on occasion transient asystole which reduces blood flow, therefore, in hypo-dynamic circulatory states; this is a potentially dangerous period of treatment, but is usually temporary.
Seizure activity corresponds to a rise in intracranial and systemic blood pressure in association with an increase in heart rate. This effect is a consequence both of direct stimulation of brain stem areas and endocrine effects consequent upon seizure induction.

- Potential Problems

In the pre-seizure stage, a prolonged asystole of over thirty seconds can occur, particularly in patients with pre-existing bradycardia and in patients who are recipients of sub-threshold stimuli (i.e. those who do not demonstrate seizure activity). Clearly repeating the administration of the electrical stimulus may further compound the vagal stimulation which leads to the bradycardic state.
NOTE: Anaesthetic agents can also contribute to bradycardic states, as can Suxamethonium, on repeated administration.

With re-stimulation and dosage titration is practiced, the potential for multiple sub-convulsive stimuli is obviously high and the risk of problems increased.
Pre-treatment with beta-blockers can further compound the situation. Atropine 0.6mg is often helpful in eradicating this problem in vulnerable individuals, but is not routinely given as it may theoretically increase post-ECT confusion. A good alternative is Glycopyrrolate, given in increments of 0.2mg, because it does not cross the blood brain barrier. In situations where pre-treatment with beta-blockers is desired, some authorities do strongly recommend co-administration of Atropine.

- Implanted Cardioverters

One should seek an opinion, from a specialist (e.g. the Cardiologist caring for the patient), as to the risks associated to the electrical stimulus of ECT and/or the physiological response to the stimulus, in relation to the device. For patients from the Tyrone and Fermanagh consideration should be given to the most appropriate place to administer ECT for this group.

- Acute Hypertensive States

In patients vulnerable either to hypertension or conditions that could be worsened by hypertension (e.g. aneurysms, cerebral space-occupying lesions) then intravenous pre-

treatment beta-blockade is usually employed although, in some centres, sublingual GTN or sublingual Nifedipine (calcium channel blocker) have been successfully employed.

- Raised Intra-Cranial Pressure

Clearly any intra-cranial lesions, particularly those that are still evolving and/or rapidly expanding raise particular issues and individual cases should be discussed with anaesthetist and physician if required. In less acute situations, the main potential physiological problem is an increase in peri-lesion oedema (e.g. tumours, subdural haemorrhages) which can, to some degree, be countered by steroid administration. This is clearly a decision that should be made ahead of the acute treatment situation.

Although there is much consternation about ECT post - CVA, in established ischaemic CVA's there is no literature to suggest adverse effects and some (animal) studies indicating good response to ECT. Theoretically, the increase in blood flow and oxygen up-take immediately post - ECT (particularly early in the course) could – hypothetically – confer benefit in ischaemic lesions (although this is not a suggestion to use it for this purpose!).

The decision to offer ECT post-CVA should be carefully considered and discussed with the anaesthetist.

- Intra-Ocular Pressure

There is inconsistency in findings pertaining to this, but in severe glaucoma, discussion with an ophthalmologist is advisable, pre-treatment with Atropine can cause outlet obstruction.

- Tachyarrhythmias

Most commonly ventricular premature contractions (VPC) can occur late in the seizure or in the immediate post - ictal. Isolated ones are of no relevance but an increased frequency or multi-focal origins of the VPC's are a cause for concern (if they coincide with the apex of the t-wave, then they may precipitate VT or even VF.)

If greater than 5 VPC per minute, notify anaesthetist.
Lignocaine is the cardio-protective agent commonly employed although this can impact on the seizure, causing premature termination (and potential loss of therapeutic effect). Another option may be to use beta-blockers, which have less impact on the seizure duration.

NOTE: Decisions on treatment of the above complications/potential complications are ultimately taken by the anaesthetist.

- Malignant Hyperthermia

The management of this condition is highlighted within each of the clinics treatment rooms as described by the Royal College of Anaesthetists. If there is any family history to this condition then the anaesthetist must be informed.

Temperature should be checked 2 hourly for 12 hours following the procedure to monitor for this.

- Ictal Effects of ECT in Epilepsy

Perhaps paradoxically, ECT may confer a protective effect on idiopathic epilepsy (and historically was used as a treatment of penultimate resource, ahead of brain surgery, in intractable epilepsy).
Patients requiring anti-convulsant therapy should be maintained on this and due consideration given when determining the dosage and laterality of ECT administration. There is no indication for routinely instituting anti-convulsant treatment in patients with a history of epilepsy who are not currently on anti-convulsant.

- Physiological Effects of ECT in Pregnancy

The induction of a generalised seizure is associated with an acute elevation of oxytocin which, obviously, can induce uterine contractions. Consultation with an obstetrician would be advisable and the anaesthetist will usually wish to perform the ECT in a facility which allows safe delivery (i.e. with respect to both equipment and personnel!) in the event of induction of early labour!
The risks of reflux always need to be weighed against the possibility of laryngeal/tracheal sympathetic reflexes, when intubating, inducing tachycardia or pressor responses.

- Dental Considerations

Patients' dentition must be assessed pre-ECT. Problems include the following;
Damaged / chipped / cracked teeth- risk of damage
Veneers / Caps / Crowns / Bridges – risk of damage
Loose teeth- usually due to periodontal disease
- risk of loss
- risk of aspiration into respiratory tract during general anaesthesia
The patient should be warned of potential damage / loss of abnormal teeth during ECT, and that this might occur despite all efforts to protect dentition. The Psychiatrist should attempt to highlight and document the risks that have been discussed with the patient where practicable.

The Anaesthetist is ultimately responsible for the patient's airway during Anaesthesia. If a patient is found to have extremely loose teeth which endanger the airway it may be necessary to obtain a dental opinion first. Should a non- capacitant patient be found to have significantly loose teeth, the Anaesthetist may have to weigh up the risks/benefits of extraction at time of Anaesthesia in order to preserve patient safety. All clinical management relating to dentition must be documented in the medical notes, and explained to the patient.

If during or following the ECT, if the patient deteriorates and needs transfer to an intensive care unit (ICU), then this will require transfer to either Altnagelvin or to SWAH. The anaesthetist will liaise with the ICU co-ordinator at either hospital and organises this. This will require contact with the ambulance service and/or NICATTS. If the

anaesthetist decides to travel with the patient then this needs to be related to the anaesthetic co-ordinator and the lead anaesthetic clinician.

## Additional Reading

For a concise over-view of current issues in ECT-related anaesthesia, refer to:
ECT Handbook, published by Royal College of Psychiatrists (CR176), 2013

Electro-Convulsive Therapy – 4th edn. Abrams. Although not specifically pertaining to anaesthetic issues in ECT, this is the most thoroughly researched text available and has very detailed but lucid explanations of all aspects of ECT theory and practice, with particularly relevant sections on physiological principles of ECT and research pertaining to co-morbid medical conditions and drug treatments.

## APPENDIX 7 PLANNING ECT TREATMENT

### Electrode Placement

Bilateral placement is preferable when –

The rate of clinical improvement and completeness of response have priority.

An earlier episode of illness has not been treated adequately by unilateral ECT.

Determination of cerebral dominance is difficult

Treating mania

Unilateral placement is preferable when –

Minimising the cognitive adverse effects has priority

The rate of clinical improvement is not critical

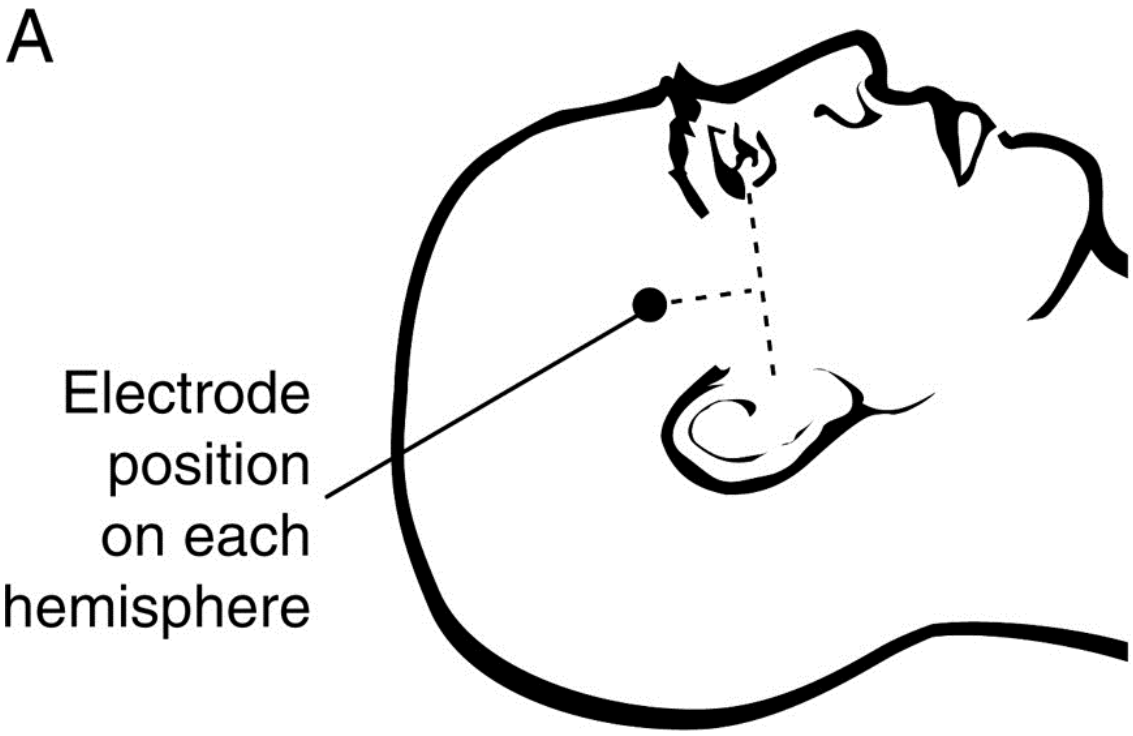
There is a history of recovery with unilateral ECT

Patient preference

Electrode placement for treatment should be part of the informed consent process. Patient preference will also be considered when making the decision with regards to electrode placement. Bilateral placement is usual practice at this time.

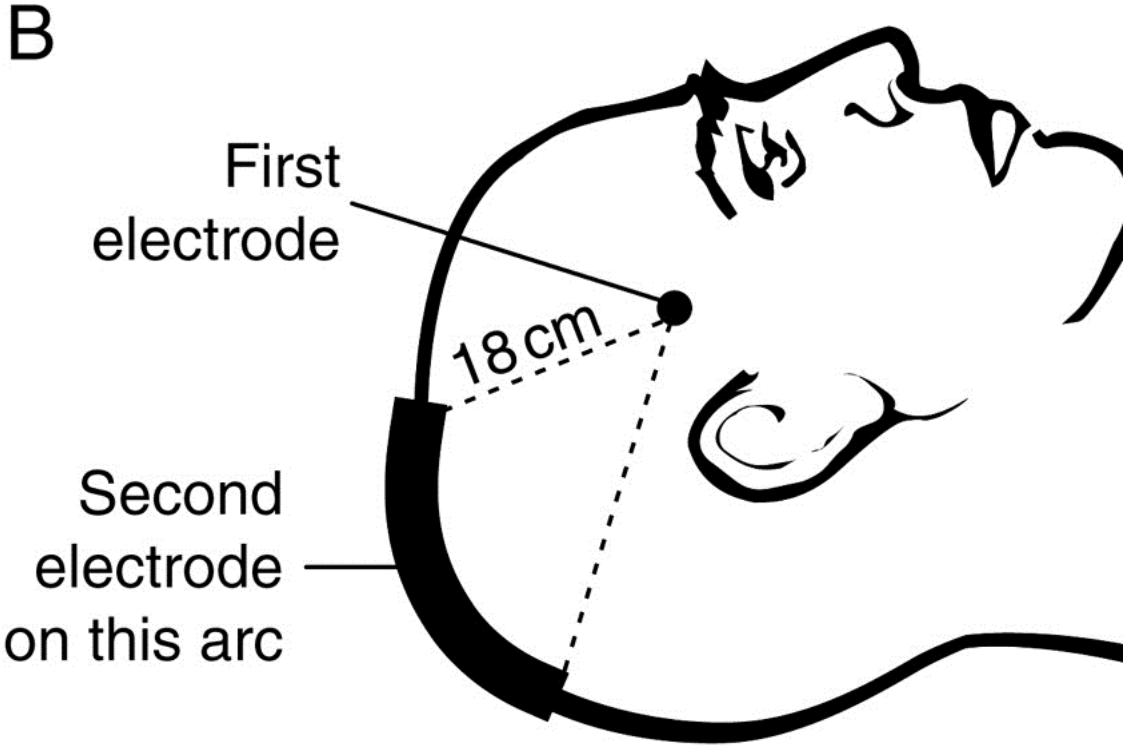
## APPENDIX 8 ECT ELECTRODE POSITIONS

Bilateral ECT




D'Elia Position for Unilateral ECT

B



## APPENDIX 9 Mini Addenbrooke's Cognitive Examination

**MINI – ADDENBROOKE'S COGNITIVE EXAMINATION**
**UK Version A (2014)**

| | |
|---|---|
| Name:<br>Date of Birth:<br>Hospital No. or Address: | Date of testing: ____/___/___<br>Tester's name:_____<br>Age at leaving full-time education:_____<br>Occupation: _____<br>Handedness: _____ |

**ATTENTION**

| ➢ Ask: What is the | Day | Date | Month | Year | **Attention** [Score 0-4] |
|---|---|---|---|---|---|
| | _____ | _____ | _____ | _____ | |

**MEMORY**

➢ Tell: "I'm going to give you a name and address and I'd like you to repeat the name and address after me. So you have a chance to learn, we'll be doing that 3 times. I'll ask you the name and address later."

Score only the third trial.

**Memory** [Score 0 – 7]

| | *1st Trial* | *2nd Trial* | *3rd Trial* |
|---|---|---|---|
| Harry Barnes | _____ _____ | _____ _____ | _____ _____ |
| 73 Orchard Close | ___ _____ _____ | ___ _____ _____ | ___ _____ _____ |
| Kingsbridge | _____ | _____ | _____ |
| Devon | _____ | _____ | _____ |

**FLUENCY – ANIMALS**

➢ **Animals**
Say: "Now can you name as many animals as possible. It can begin with any letter. You have one minute. Go ahead."

**Fluency** [Score 0 – 7]

| | |
|---|---|
| ≥ 22 | 7 |
| 17-21 | 6 |
| 14-16 | 5 |
| 11-13 | 4 |
| 9-10 | 3 |
| 7-8 | 2 |
| 5-6 | 1 |
| <5 | 0 |
| total | correct |

## APPENDIX 10 Theatre Safety Checklist (Modified for ECT)

| SIGN IN (to be read out loud) | TIME OUT (to be read out loud) | SIGN OUT (to be read out loud) |
|---|---|---|
| **On Arrival in Theatre** | **Before Induction of Anaesthesia** | **Before the Patient Leaves Theatre** |
| Has the patient confirmed their identity □ Yes<br><br>Is the consent/Part IV form checked and valid? □ Yes | □ Have all team members introduced themselves by name and role? (to be repeated if a team member changes)<br><br>□ Confirm the patients name, stimulus dose and bilateral/unilateral electrodes | □ Nurse verbally confirms the name of the procedure completed<br><br>□ Are there any equipment problems to be addressed? |
| Is the ECT machine checked and working? □ Yes<br>Are the anaesthesia machines, monitoring and medication checks complete? □ Yes | □ Baseline EEG completed | **To Psychiatrist, Anaesthetist and Nurse:**<br>□ Has the iv cannula been flushed? |
| **Does the patient have a;**<br><br>Known allergy?<br>No □ Yes □<br><br>Pregnancy Test Completed?<br>Yes □ No □ N/A □ | **Anticipated Critical Events**<br><br>**To Psychiatrist:**<br>□ Confirm threshold if any for re-stimulation and next dose to use<br>**To Anaesthetists:**<br>□ Are there any patient specific concerns?<br>□ What is the patient's ASA grade? | □ What are the key concerns for the recovery and management of this patient?<br><br>Enter details or affix label here<br>Full Name:<br>Date of Birth:<br>H+C Number: |
| Signature: | Signature: | Signature: |
| Name: | Name: | Name: |
| Date: | Date: | Date: |

## APPENDIX 11 Model Letter to Ensure Adequate Follow-Up

Western Health and Social Care Trust

**Ward name**
**Address**

**Key Worker/ Consultant**
**Team name**
**Address**

Dear Colleague,

**Re; PATIENT NAME,**
**Address,**
**H+C No.** **DOB**

Your patient has completed a course of **XX** treatments of bilateral/unilateral ECT on **DATE**.
Please could you arrange review of their Mini-ACE on **DATE +1/12**, **DATE +2/12** and **DATE +3/12**.

Their CGI review will also be due at their 3rd monthly review.

Once complete I would be grateful if the enclosed proforma be returned to the ECT Lead Nurse at the above address.

Yours sincerely,

ECT Lead Nurse

## Appendix 12 Process for arranging ECT for a Medical In-patient

| | | |
|---|---|---|
| Medically Unwell Patient Requires ECT as assessed by Consultant Psychiatrist | | |
| If in SWAH; | | If in Altnagelvin; |
| ↓ | | ↓ |
| Consultant Psychiatrist contacts ECT Lead consultant in BOTH Sectors to discuss case | | Consultant Psychiatrist contacts ECT Lead consultant in NORTHERN Sector to discuss case |
| ↓ | | ↓ |
| Referring/Prescribing team Complete any relevant mental health forms /Part IV assessments/consent forms | | |
| ↓ | | ↓ |
| Prescribing team to contact N. Sector Consultant to agree to take over review and prescribing responsibilities | | |
| Arrange transfer to appropriate ward in Altnagelvin | | |
| Arrange Anaesthetic Pre-assessment with DESU, Level 7, Altnagelvin | | |
| Inform ECT secretary Grangewood | | |
| 2nd stage Recovery will be managed by DESU staff, for each treatment session, whilst medical inpatient | | |

# Appendix 13 - Information about ECT (Electro-convulsive therapy)

Western Health and Social Care Trust

**Introduction**

This leaflet is for anyone who wants to know more about ECT (Electro-convulsive therapy). It looks at how ECT works, why it is used, its effects and side-effects, and alternative treatments.
Although a safe and effective treatment, ECT remains controversial and we have included some of the different views about it.
Where there are areas of uncertainty, we have listed other sources of information that you can use. Important concerns are the effectiveness and side-effects of ECT and how it compares with other treatments. At the time of writing, these references are available free and in full on the Internet.

**What is ECT?**

ECT is a treatment for a small number of severe mental illnesses. It was developed in the 1930s and was used widely during the 1950s and 1960s for a variety of conditions. It is now only used for fewer, more serious conditions.
An electrical current is passed through the brain to produce an epileptic fit – hence the name, electro-convulsive. On the face of it, this sounds odd. The idea developed in the days before effective medication. Doctors noticed that some people with depression or schizophrenia, who also had epilepsy, seemed to feel better after having a fit.
More recent research suggests that the effect is due to the fit rather than the electrical current.

***Q How often is it used?***
It is now used less often. Between 1985 and 2002, its use in England more than halved, possibly because of better psychological and drug treatments for depression.

***Q How does ECT work?***
No-one is certain how ECT works. We do know that it can change patterns of blood flow through the brain and change the metabolism of areas of the brain which may be affected by depression. There is evidence that severe depression is caused by problems with certain brain chemicals. It is thought that ECT causes the release of these chemicals and, probably more importantly, makes the chemicals more likely to work and so help recovery.
Recent research has also suggested that ECT can help the growth of new cells and nerve pathways in certain areas of the brain.

***Q Does ECT really work?***
It has been suggested that ECT works not because of the fit, but because of all the other things – like the extra attention, support and the anaesthetic – that happen to someone who has it.
Several studies have compared standard ECT with "sham" or placebo ECT. In placebo ECT, the patient has exactly the same things done to them – including going to the ECT rooms and having the anaesthetic and muscle relaxant – but no electrical current is passed and there is no fit. In these studies, the patients who had standard ECT were much more likely to recover, and did so more quickly than those who had the placebo treatment. Those who didn't have adequate fits did less well than those who did. Some of the patients who had "sham" treatment recovered too, even though they were very unwell; it's clear that the extra support does help. However, ECT has been shown to have an extra effect in severe depression – it seems, in the short term, to be more helpful than medication.

**Pros & Cons of ECT**

***Q Who is ECT likely to help?***

Someone who has severe depression, resistant mania or catatonia. ECT should be considered for the rapid treatment of severe depression that is life-threatening, or when other treatments have failed.
It should not be used routinely in moderate depression, although it can be helpful for someone with moderate depression if they have not responded to several different drug treatments and psychological treatment.
There is research to suggest that ECT may help some patients with Parkinson's disease or with the side-effects of some psychiatric medications.

***Q Who is ECT unlikely to help?***

ECT is unlikely to help someone with mild to moderate depression or most other psychiatric conditions. It is not routinely used in the treatment of schizophrenia, though some patients with very resistant illnesses may be helped by it, alongside medication for their condition.

***Q Why is it given when there are other treatments available?***

ECT has been shown to be the most effective treatment for severe depression. It would normally be offered if:

- several different medications have been tried, but have not helped
- the side-effects of antidepressants are too severe
- you have found ECT helpful in the past
- your life is in danger because you are not eating or drinking enough
- you are seriously considering suicide.

***Q What are the side-effects of ECT?***

ECT involves several treatments spread over a few weeks. As with any treatment, ECT can cause a number of side-effects. Some of these are mild and some are more severe.

- **Short-term**

Immediately after ECT, many people have a headache and some aching in their muscles. They may feel muzzy-headed and generally out of sorts, or even a bit sick. Some become distressed after the treatment and may be tearful or frightened during recovery. For most people, however, these effects settle within a few hours, particularly with help and support from nursing staff, simple pain killers and some light refreshment.
There may be some temporary loss of memory for the time immediately before and after the ECT.
An older person may be confused for two or three hours after a treatment. This can be reduced by changing the way the ECT is given (such as passing the current over only one side of the brain rather than across the whole brain).
ECT causes contraction of the jaw muscles. Although the ECT Team will do all they can to minimise the risks, there remains a small chance of damage to the tongue, teeth and lips. There are particular risks where the teeth are less strong: for example if you have crowns, veneers, or implants, also bridges and partial dentures. Please let the team know have had cosmetic dental work or piercings undertaken.
There is a small physical risk from having a general anaesthetic – death or serious injury occurs in about 1 in 80,000 treatments, about the same as if you have an anaesthetic for dental treatment. However, as ECT is given in a course of treatments, the risk per course of treatment will be around 1 in 10 000.

- **Long-term**

Memory problems can be a longer-term side effect. Surveys conducted by doctors and clinical staff usually find a low level of severe side-effects, maybe around 1 in 10. Patient-led surveys have found much more, maybe in half of those having ECT. Some surveys conducted by those strongly against ECT say there are severe side-effects in everyone.
Some memory problems are probably present in everyone receiving ECT. Most people feel better after the course of ECT has finished and a few weeks have passed. However, some people do complain that their memory has been permanently affected, that their memories never come back. It is not clear how much of this is due to the ECT, and how much is due to the depressive illness or other factors.
Some people have complained of more distressing experiences, such as feeling that their personalities have changed; that they have lost skills or that they are no longer the person they were before ECT. They say that they have never got over the experience and feel permanently harmed.
What seems to be generally agreed is that the more ECT someone is given, the more it is likely to affect their memory.

***Q What if ECT is not given?***

- You may take longer to recover.
- If you are very depressed and are not eating or drinking enough, you may become physically ill or die.
- There is an increased risk of suicide if your depression is severe and has not been helped by other treatments

***Q What about driving?***

Most people who are ill enough to require to ECT will be unfit to drive. After a course of ECT you should discuss with your doctor when you are well enough to resume driving. Sometimes disorientation and impaired visual functioning may go on for several months after ECT.

***Q What are the alternatives?***

- If someone with severe depression refuses ECT, the doctors can try a different medication, or combination of medications
- Offer intensive psychotherapy, although this will usually have already have been tried.

Given time, some episodes of severe depression will get better on their own, although being severely depressed carries a real risk of death by suicide.

**Deciding to have (or not to have) ECT**

***Q Giving consent to having ECT***

Like any significant treatment in medicine or surgery, you will be asked to give consent, or permission for the ECT to be done.
The doctor should explain (in a way that you can understand) their reasons for suggesting ECT, the possible benefits and any side-effects. If you decide to go ahead, you then sign a consent form. It is a record that ECT has been explained to you, that you understand what is going to happen, and that you give your consent to it. However, you can withdraw your consent at any point, even before the first treatment.

***Q What if I really don't want ECT?***

If you have very strong feelings about ECT, you should tell the doctors and nurses caring for you, but also friends, family or an advocate who can speak for you.

Doctors must consider your views when deciding what to do.
If you have made it clear that you do not want to have ECT, then you should not be given it, except in special circumstances (see below). You could write an 'advance statement' to refuse ECT if you become unwell again. Alternatively, you could appoint someone to be your Health and Welfare Attorney to make decisions on your behalf when you are not able to decide for yourself.

***Q Can ECT be given to me without my permission?***
Most ECT treatments are given to people who have agreed to it. This means that they have had:

- a full discussion of what ECT involves
- why it is being considered in their case
- the advantages and disadvantages
- a discussion of side-effects.

You cannot usually be given ECT against your wishes, even if you are sectioned under the Mental Health (N.I.) Order. It is the responsibility of the doctors and nurses involved to make sure that they have discussed this with you – and to document it.
Sometimes, you can become so unwell that you can't understand the information about ECT – if you are very withdrawn or have ideas that stop you from understanding your position (e.g. you believe that your depression is a punishment you deserve).
In this situation, it may be impossible to give proper agreement or consent. When this happens, it is still possible to give ECT. The legal provisions for this differ from country to country, even within the United Kingdom.

**Mental Health (N.I.) Order 1986**

In N. Ireland, ECT can be given under Part IV of the Mental Health Order. This means that if someone lacks the capacity to give informed consent for treatment it can still proceed if in the best interests of the patient.
There must then be a second opinion from an independent specialist (Part IV doctor) who is not directly involved in the person's care. The clinical team should also speak to family and other carers, to find out what they think about ECT, but also to find out if the patient had any opinion about it.
When ECT is given under the Mental Health Order, the team must make regular assessments of the patient's ability to understand their treatment. Once the patient is able to give consent, the treatment can only continue if they do consent and must stop if they refuse.
In Scotland, England and Wales, the principles above are the same, although the laws involved are different.

**Where is ECT given?**

ECT is always given in hospital. As it is generally used in severe depression, you would usually need to stay in hospital. Some people do have ECT as a day patient, but you may need to check if your local service can do this.

**How is ECT given?**

The seizure is brought on by passing an electrical current across the brain in a carefully controlled way from a special ECT machine.

- an anaesthetic and muscle relaxant are given so that you are not conscious when the ECT is given.

- the muscle spasms that would normally be part of a fit – and which could produce serious injuries - are reduced to small, rhythmic movements in the arms, legs and body.

By adjusting the dose of electricity, the ECT team will try to produce a seizure lasting between 20 and 50 seconds.

***Q Is there any preparation?***

In the days before you start a course of ECT, your doctor will arrange for you to have some tests to make sure it is safe for you to have a general anaesthetic. These may include:

- a chest X-ray
- a tracing of your heart working (ECG)
- blood tests.

You will be asked not to have anything to eat or drink for 6 hours before the ECT. This is so that the anaesthetic can be given safely.

***Q Where is ECT done?***

ECT should always be done in a special set of rooms that are not used for any other purpose, usually called the "ECT suite". This should be a separate area where you wait, have your treatment, wake up fully from the anaesthetic and then recover properly before leaving.

There should be enough qualified staff to look after you while you are there so that they can help you through any confusion or distress.

***Q What happens during ECT?***

- You should arrive at the ECT suite with an experienced nurse who you know and who is able to explain what is happening. Many ECT suites are happy for family members to be there - you may want to check with your local team that this is possible. You should be met by a member of the ECT staff who will do routine physical checks, if they have not already been done. They will check that you are still willing to have ECT and if you have any further questions.
- When you are ready you will be accompanied into the treatment area and be helped onto a trolley.
- The ECT team will connect monitoring equipment to check your heart rate, blood pressure, oxygen levels, ECG and EEG during the fit.
- The anaesthetist will give you the anaesthetic through a needle in your hand. Once you are asleep, they will give a muscle relaxant through the same needle. While you are going off to sleep, the anaesthetist will also give you oxygen to breathe.
- Once you are asleep and fully relaxed, a doctor will give the ECT treatment. Your fit will last between around 20 to 50 seconds. The muscle relaxant wears off quickly (within a couple of minutes) and, as soon as the anaesthetist is happy that you are waking up, you will be taken through to the recovery area where an experienced nurse will monitor you until you are fully awake.
- When you wake up, you will be in the recovery room with a nurse. He or she will take your blood pressure and ask you simple questions to check on how awake you are. There will be a small monitor on your finger to measure the oxygen in your blood, and you may wake up with an oxygen mask. You will probably take a while to

wake up and may not know quite where you are at first. You may feel a bit sick. After half an hour or so, these effects should have worn off.

- Most ECT units have a “recovery” area for rest and light refreshments. You can leave when the staff are happy that your physical state is stable and you feel ready to do so. It usually takes around half an hour, from start to finish.

***Q. What are bilateral and unilateral ECT?***

In bilateral ECT, the electrical current is passed across the whole brain
In unilateral ECT, the current is just passed across one side. Both of them cause a seizure in the whole of the brain.
**Bilateral ECT** seems to work more quickly and effectively and it's probably the most widely used in Britain; however, there has been concern that it may cause more side-effects.
**Unilateral ECT** is now used less. It had been thought to cause less memory loss, but recent research has shown that it is necessary to use larger doses of electricity to make it as effective as bilateral ECT. If the dose of electricity is increased to make it equally effective, the risks of memory loss are as great as with bilateral ECT.
Sometimes ECT clinics will start a course of treatment with bilateral ECT and switch to unilateral if the patient experiences side-effects. Alternatively, they may start with unilateral and switch to bilateral if the person isn't getting better.
You may wish to speak to the doctor who is suggesting ECT for you to decide whether unilateral or bilateral ECT is best for you.

***Q How often and many times is ECT given?***

Most units give ECT twice per week, often on a Monday and Thursday, or Tuesday and Friday. It is impossible to predict how many treatments someone will need. However, in general, it will take 2 or 3 treatments before you see any difference, and 4 to 5 treatments for noticeable improvement.
A course will on average be 6 to 8 treatments, although as many as 12 may be needed, particularly if you have been depressed for a long time. If, after 12 treatments, you feel no better, it is unlikely that ECT is going to help and the course would usually stop. A member of the mental health team should check after each treatment to see how your are responding, and to check that you are not getting troublesome side-effects. Your consultant should see you after every two treatments. ECT should be stopped as soon as you have made a recovery, or if you say you don't want to have it any more.

***Q What happens after a course of ECT?***

Even when someone finds it effective, ECT is only a part of recovering from depression. Like antidepressants, it can help to ease problems so you are able to look at why you became unwell. Hopefully you can then take steps to continue your recovery, and perhaps find ways to make sure the situation doesn’t happen again. Psychotherapy and counselling can help and many people find their own ways to help themselves. Certainly people who have ECT, and then do not have other forms of help, are likely to quickly become unwell again.

**The ECT Controversy**

There are many areas in which people disagree over ECT, including whether it should even be done at all. People tend to have very strong feelings about ECT, often based on their own experiences. The main areas of disagreement are over whether it works, how it works and what the side-effects are.

***Q Why is ECT still being given?***

ECT is now used much less and is mostly a treatment for severe depression. This is almost certainly because modern treatments for depression are much more effective than they were in the past. These include psychotherapy (talking treatments), antidepressants and other psychological and social supports.
Even so, depression can for some people still be very severe and even life-threatening. The person may be barely able to talk, reluctant (or unable) to eat, drink or look after themselves. Occasionally a person may also develop strange ideas

(delusions) about themselves or others. If other treatments have not have worked, it may be worth considering ECT. It is a safe and effective treatment for severe depression.

***Q What do patients think of ECT?***
In 2003 researchers analysed all the work which had been done on patients' experiences of ECT. They found that the proportion of people who had had ECT and found it helpful ranged from 30% to 80%. The researchers commented that studies reporting lower satisfaction tended to have been conducted by patients, and those reporting higher satisfaction were carried out by doctors. Between 30% and 50% of patients complained of difficulties with memory after ECT.

***Q What do those in favour of ECT say?***
Many doctors and nurses will say that they have seen ECT relieve very severe depressive illnesses when other treatments have failed. Bearing in mind that 15% of people with severe depression will kill themselves, they feel that ECT has saved patients' lives, and therefore the overall benefits are greater than the risks. Some people who have had ECT will agree, and may even ask for it if they find themselves becoming depressed again.

***Q What do those against ECT say?***
There are different views and reasons why people object to ECT. Some see ECT as a treatment that belongs to the past. They say that the side-effects are severe and that psychiatrists have, either accidentally or deliberately, ignored how severe they can be. They say that ECT permanently damages both the brain and the mind, and if it does work at all, does so in a way that is ultimately harmful for the patient. Some would want to see it banned.

***Q What happens in other countries?***
At the moment, ECT is part of standard psychiatric practice in Britain and the majority of countries worldwide. Some countries (and some states in America also) have restricted its use more than in the UK, though only a few have prohibited its use.

***Q How do I know if ECT is done properly locally?***
The Royal College of Psychiatrists has set up the ECT Accreditation Service (ECTAS) to provide an independent assessment of the quality of ECT services. ECTAS sets very high standards for ECT, and visits all the ECT units who have registered with it. The visiting team involves psychiatrists, anaesthetists, and nurses. It publishes the results of its findings and also provides a forum for sharing best clinical practice. Membership of ECTAS is not compulsory, but every ECT unit should be able to tell you:

- if they have signed up to ECTAS;
- the result of their most recent report;
- who to speak to if you are concerned that your local unit has not been assessed.

A list of accredited site is available on the **Royal College of Psychiatrists' website**.

***Q Where can I get more information?***
Many ECT suites provide their own information packs. They should be able to give written information to you or your family/carers.

**Further Information**

**National Institute for Health and Clinical Excellence (NICE)**

- Electroconvulsive therapy (ECT): the clinical effectiveness and cost effectiveness of electroconvulsive therapy (ECT) for depressive illness, schizophrenia, catatonia and mania. (TA59 2003)
- Depression: the treatment and management of depression in adults (CG 90 2009)
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**Scottish ECT Accreditation Network (SEAN):** A site designed to complement the work of SEAN, by enabling communication of the latest information on ECT in Scotland.

**Electroconvulsive Therapy Accreditation Services (ECTAS):** Launched in May 2003, ECTAS aims to assure and improve the quality of the administration of ECT; awards an accreditation rating to clinics that meet essential standard.

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Efficacy and safety of electroconvulsive therapy in depressive disorders: a systematic review and meta-analysis. Lancet 361: 799-808
Department of Health Statistical survey (2007) Electro Convulsive Therapy: Survey covering the period from January 2002 to March 2002, England. DH: London.
A list of accredited facilities is available on the **Royal College of Psychiatrists' website**.

This leaflet was adapted from that produced by the Royal College of Psychiatrists' Special Committee on ECT and related treatments and Public Engagement Editorial Board. It was amended to include information relative to N. Ireland legislation by Dr Lisa Brady, WHSCT.

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This leaflet reflects the best available evidence available at the time of writing.

## 23.0 SIGNATORIES

_____ **Date:** _____
**Name**
**Title**

_____ **Date:** _____
**Name**
**Title**