Electroconvulsive Therapy (ECT); Mental Health, Post-Anesthesia Care Unit (PACU) and ECT Suite

Site Applicability

St. Paul's Hospital (SPH) and Mount Saint Joseph Hospital (MSJ) Inpatient and Outpatient Care Areas, SPH PACU and MSJ ECT Suite

Practice Level:

Basic: *RN/RPN*: Pre-procedure care, admission to Surgical Day Care (SDC) at SPH and 1 South at MSJ

Specialized: *Critical Care RNs* provide care in the Post-Anesthesia Care Unit (PACU), *RN/RPN:* oriented to and working in the MSJ ECT Suite

Requirements

1. Consent

Written Consent to Treatment must be obtained from the patient or substitute decision maker by the Psychiatrist prior to Electroconvulsive Therapy (ECT):

Acute Care	Maintenance Treatment
Consent is obtained for: • A series of up to **15 treatments**	Consent is renewed: • **Every 6 months or every 15 treatments**, whichever comes first
For voluntary consent or SDM/TSDM, complete the Consent to Treatment form. For involuntary patients certified under MHA in acute care or on extended leave in community, check the patient's involuntary admission status: either *Form 4.1 and Form 4.2* or *Form 6*. In many cases the Consent to Treatment form will also be signed by an involuntary patient or SDM. However, for involuntary patients, consent for ECT is covered under the following forms if the patient is not capable of or unwilling to complete the Consent to Treatment form: 1. Consent for Treatment (Involuntary Patient) *Form 5* and 2. Mental Health Act and Leave Authorization, *Form 20*, Mental Health Act	

2. ECG

A 12 lead ECG **must be** obtained prior to the first ECT treatment for all patients over 50 years of age. See Appendix C.

3. **Cautions/Alerts**

   Ensure that patient allergies have been updated in *Banner Bar* on *PowerChart*.

Need to Know

1. **Indication for ECT**
   - **Primary**: Treatment of major depression that is refractory to antidepressant medications. Also used in patients with psychotic depression, catatonia, severe suicidal ideation, bipolar disorder, depression with behavioral and psychological symptoms in dementia (BPSD), schizophrenia and patients who have previously shown a positive response to ECT.
   - **Secondary**: Parkinson's disease, Neuroleptic Malignant Syndrome (NMS) and delirium.
2. **Goal**
   - The goal of ECT is to achieve a therapeutic effect through of inducing a generalized cerebral seizure (tonic/clonic) under general anesthesia.
3. **Mechanism**
   - The exact mechanism of action for ECT is not known.
   - May be due to measurable changes in the release of dopamine, serotonin, and neuropeptides such as corticotrophin releasing factor.

Phase	Mechanism and Anticipated Effects
1. Initial (at time of stimulus)	• Period of parasympathetic activity • Bradycardia, with or without hypotension, and possibly atrioventricular blocks or asystole
2. Clonic	• Catecholamine surge that causes tachycardia and hypertension
3. Postictal	• Tachycardia and hypertension • Parasympathetic and sympathetic variability with possible bradycardia/asystole or prolonged hypertension • Confusion/agitation • Resolves in 10 to 20 minutes following the delivery of the stimulus
4. Final	• Return to baseline

4. **Location**
   - At St. Paul's Hospital ECT is performed in the Post Anesthetic Care Unit (PACU).
   - At Mount St. Joseph Hospital, ECT is performed in the ECT suite.

5. **Team/Roles**
   - At SPH the ECT procedure team consists of a psychiatrist, anesthetist, and critical care RN
   - At MSJ the ECT procedure team consists of a psychiatrist, anesthetist, anesthesia assistant, and an ECT treatment nurse
   - See Appendix D: Psychiatry Management
   - See Appendix E: Anesthesia Considerations and Medications

Equipment & Supplies:

1. ECT Machine and Anesthesia Cart
2. Phillips Monitor
3. Blood Pressure (BP) Cuff
4. Infusion Set
5. 500 mL bag Normal Saline (NS)
6. #22 (preferred) peripheral IV, tourniquet, Opsite/Tegaderm and tape to secure
7. Bite block
8. Ambu bag
9. Adult oxygen mask
10. ECG electrodes

Protocol

Pre & Post ECT Care - Inpatient Psychiatry (SPH and MSJ)

Night before ECT

1. Check that an Inpatient ECT PowerPlan (MH Electroconvulsive Therapy ECT (Multiphase) has been ordered. See Appendix F.
2. Check that an ECG has been performed prior to ECT course on current admission. See Appendix C
3. Initiate the Pre-Procedure Phase (located in Orders tab) for corresponding session of the ECT treatment. See Appendix F.

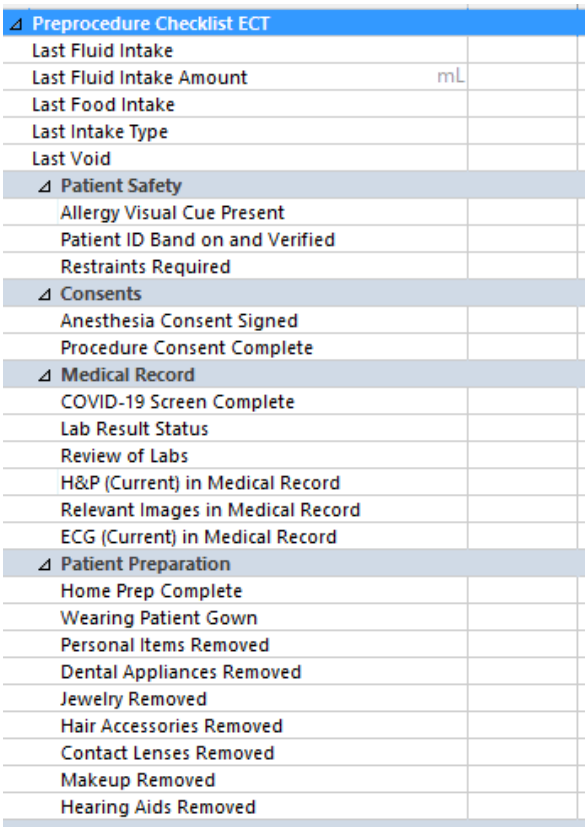
***Note: This will initiate the physician's ECT orders specific to the treatment number**

4. Ensure patient is NPO starting at midnight.
5. Hold medications as necessary, ensuring that order comments in the MAR are checked
6. Ensure the physician has documented consent and the form is signed in patient's *Chartlet*.

Day of ECT

Inpatient MH RN/RPN is responsible for completing the *pre ECT checklist.*

1. Toilet patient if necessary, making sure NPO status is maintained.
2. Change patient into a hospital gown. Hospital pants may stay on.
3. Check for pre-ECT medication orders, including all order comments for medication instructions pre-ECT, and administer any medications as necessary.
4. Complete vital signs and document in IView.
5. Complete Pre-procedure checklist in IView.



Preprocedure Checklist ECT	
Last Fluid Intake	
Last Fluid Intake Amount	mL
Last Food Intake	
Last Intake Type	
Last Void	
Patient Safety	
Allergy Visual Cue Present	
Patient ID Band on and Verified	
Restraints Required	
Consents	
Anesthesia Consent Signed	
Procedure Consent Complete	
Medical Record	
COVID-19 Screen Complete	
Lab Result Status	
Review of Labs	
H&P (Current) in Medical Record	
Relevant Images in Medical Record	
ECG (Current) in Medical Record	
Patient Preparation	
Home Prep Complete	
Wearing Patient Gown	
Personal Items Removed	
Dental Appliances Removed	
Jewelry Removed	
Hair Accessories Removed	
Contact Lenses Removed	
Makeup Removed	
Hearing Aids Removed	

MSJ ONLY:

6. Insert peripheral IV (**two attempts maximum**) and document. If unsuccessful, notify the ECT clinic.
7. Place 3 ECG electrodes on the patient, (1 on each side of the chest below the midline of each clavicle, and 1 on the left inner forearm below the brachial artery)
8. Have patient on a stretcher and ready by 0700.

9. If there are any questions or concerns, **call 1S staff (78159)** for guidance or **78142 between 0700 to 1300** for the ECT outpatient clinic.

Transfer to ECT Procedure Area

- SPH: Patients are transferred to PACU
- MSJ: Patients are transferred to the ECT suite
- Ensure patient is transferred to ECT clinic/PACU with chartlet, blood pressure (BP) cuff on left arm, identification band, and allergy band if applicable.
- To facilitate transfer, nurses should complete the following steps:
    - Initiate transfer via PM Conversation see: Appendix G
    - Complete and print **Transport ticket**
    - Notify PACU/ECT suite if patient has any contact or airborne precautions.

SPH

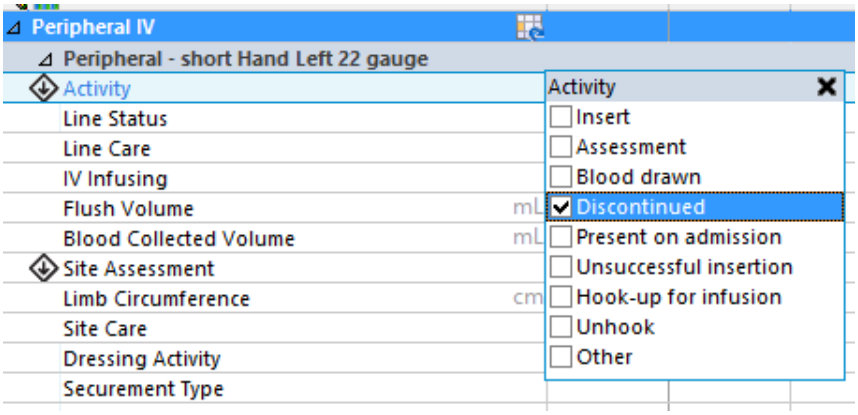
- Patients should arrive at PACU by 0700hrs.
- A unit ward aide can transfer patients, unless clinical status warrants nursing and/or security accompaniment. Transfer decisions are made by the interdisciplinary team.

MSJ

- Patients should be ready on a stretcher by 0700.
- There is no need to call a porter. The ECT porter will know to bring the patients up to the ECT suite. If there are any questions or concerns after 0700, call the ECT clinic (78142)

Post-ECT

1. When patient returns from the ECT suite, the nurse or Clinical Support Clerk transfers the patient back to the unit via **PM conversation** in Cerner**. The recovery room nurse should call the inpatient unit and give a brief report before sending the patient back.**
2. Upon return to the inpatient unit, the RN/RPN will document post- ECT assessment and care: Vital Signs, Head to Toe Assessment, Sedation Scale, and Mental Status Exam.
3. If not already discontinued and documented by PACU nurse, RN/RPNs discontinue IV saline lock and document removal in **Adult Lines- Devices** if it is no longer clinically necessary**.**



4. Administer held or rescheduled medications per MAR and offer fluids and breakfast.
5. Patients may be weak or unsteady post-ECT as they undergo general anesthesia during the procedure so monitor the patient closely for postural hypotension or falls.
6. Unaccompanied passes are held for the day for post-ECT patients. Patients may have an accompanied pass specifically ordered by the most responsible physician.

Pre & Post ECT Care – Outpatient ECT Clinic (SPH)

Outpatients are booked at SPH after a referral from a Community Psychiatrist.

- ECT Intake Nurse completes intake assessment. If appropriate, the patient is booked with the lead ECT Psychiatrist for a consult. This happens on the 2nd floor of the Burrard Building (Psychiatry Outpatient Department).
- The lead ECT Psychiatrist will then order an Anesthesia Consult and send an order for the ECT Intake Nurse to coordinate appointments for ECT Treatments.
- The ECT Intake Nurse will request time on the OR Slate for the patient.

Surgical Day Care (SDC)/Post Anesthetic Care Unit (PACU) is located on the 3rd floor of the Burrard Building at SPH.

SDC Clinical Support Clerk (CSC) to:

1. Perform initial check-in:
   - Admit patient into Cerner
   - Complete current Surgical Day Care Admission screening process for COVID-19 and other contact/airborne precautions
   - Document “person responsible for pick-up” on the Patient Face Sheet
2. CSC or porter to instruct patient to change into gown and store belongings in SDC lockers.
3. Instruct patient to void and wait in SDC waiting area.

ECT Procedure and Assessment in PACU

Steps	Rationale
1. PACU RN to complete bedside safety check (see Appendix H), ensure ambu bag, oxygen mask, oral/nasal airways, suction/tubing, and bite block at bedside	
2. When patient arrives to unit, confirm patient’s: I. Identity (using two approved identifiers)	

Approved patient identifiers: • *First and last name* • *Medical record number (MRN)* • *Provincial health number (PHN)* • *Encounter Number* • *Date of birth* II. **Allergy status** III. Acute respiratory infection screening IV. Pre-ECT Assessment Checklist (See Appendix I)	
3. Assist patient to stretcher (if not already on stretcher), provide blankets and transfer patient location on Cerner.	
4. Connect patient to ECG monitor and complete pre ECT checklist and pre-procedure assessment as per the ECT band on the Interactive View on PowerChart. Review with patient: previous ECT treatment – side effects, any concerns, any medications given pre-ECT.	Establish a baseline assessment and analyze 5-lead ECG reading and ST analysis, as well as baseline vital signs measurements.
5. Ensure the following is noted in the patient's chart and review • Consults • Previous ECT treatment record • Previous ECG from past 12 months (see Appendix C) • Active Order for current ECT treatment – review if any medications ordered to be administered prior to ECT and initiate orders (see Appendix F)	Psychiatry and anesthesia will base their energy setting, electrode placement, and medication selection based on previous ECT results. Antiemetics may be ordered to be given before the procedure.
6. Insert saline lock	Anesthesia will use this to administer medications for the treatment. Leave IV in until patient is recovered in case emergency medications need to be given.
7. Remove patient's socks and slippers	This is necessary to determine when the patient has fasciculations and then again to determine the length of motor seizure.

8. Discuss any issues with psychiatry/anesthesia i.e. consent requiring update, ECT not completed within 12 months, etc.	
9. **PAUSE** – all services (nursing, anesthesia, and psychiatry) validate patient's name, allergies, procedure, acute respiratory infection status (if applicable), medication, and supplies.	It helps prevent errors and promotes safety. See Appendix I for documentation.
10. Psychiatry will connect EEG electrodes and ensure EEG recording paper supply is adequate.	
11. Anesthesia will pre-oxygenate the patient and administer the anesthetic followed by muscle relaxation. See Appendix E, Commonly Used Medications for ECT.	
12. If the patient is restrained, remove restraints post administration of anesthetic.	
13. As the patient loses consciousness, anesthesia will hyperventilate the patient and once fasciculation ends, will place the bite block in the patient's mouth.	Hyperventilation is performed to induce cerebral hypocapnia which will increase seizure intensity. A bite block is used to prevent dental injury and injury to the tongue.
14. Psychiatry will initiate the treatment by using stimulus control button.	The *MECTA Spectrum ECT* device is used to deliver the ECT (Company web site). If the above machine requires maintenance: • At SPH a *Thymatron™ System IV will be used to deliver ECT*. This machine requires the nurse to press the *impedance test* and *treatment button* under the direction of the psychiatrist.

15. Once the stimulus is delivered, the generalized cerebral seizure will occur. Ensure patient safety of extremities and continue monitoring by performing the following, as per frequency of PACU: Post Anesthetic Patient in Phase 1; Patient Care: • Vital Signs • Sedation Scale	
16. Once the seizure is complete obtain BP and assist anesthesia in maintaining airway. The patient will be unconscious. Repeat vital sign checks Q5min and record on ECT flow sheet. Anesthesia will support breathing until the patient is breathing independently. The nurse must stay with the patient until the patient meets discharge from 1:1 monitoring criteria.	Additional information on 1:1 monitoring criteria can be found in PACU: Post Anesthetic Patient in Phase 1; Patient Care.
17. Once the patient regains consciousness, HR, RR, O_2 Sat, BP can be recorded Q15 min and PRN. The patient will stay for a minimum of 30 minutes post ECT and until PACU discharge criteria is met. A discharge order from psychiatry is needed for all patients leave PACU. *At SPH, efforts will be made to discharge outpatients with ARO's directly from PACU, as unit flow allows.	Additional information on discharge from PACU can be found in PACU: Discharge Criteria. For PACU Post-Procedure documentation please see Appendix I. *This limits the number of bays requiring disinfection in both SDC and PACU.
18. After PACU: Discharge Criteria are met, ECT Post-Procedure Orders to be discontinued.	

Patient/Family Education:

- Post procedure, it is mandatory for patients to be accompanied home by an adult.
- Headaches, muscle aches, nausea and confusion are common side effects. See Appendix J.
- For the first 24 hours after the ECT:
    - Rest until you feel well enough to resume normal activities including eating
    - Continue taking regularly prescribed medication
    - Refrain from alcohol consumption for 24 hours after the ECT
    - Refrain from driving for 24 hours after the ECT

- Follow up in clinic with Lead ECT Psychiatrist normally happens halfway through treatment course.

Documentation:

- Use the ECT band in Interactive iView on PowerChart to record patient preparation, intra-procedure care and recovery.
- Screen patient pre-procedure as per current Infection Prevention and Control guidelines.
- Electro Convulsive Therapy (ECT) Pre-ECT Treatment Assessment. See Appendix I.

Related Documents

1. B-00-13-10018 – PACU: Post Anesthetic Patient in Phase I
2. B-00-13-10071 – PACU: Discharge Criteria
3. B-00-11-10110 - Consent to Health Care
4. B-00-07-13001 – Antibiotic Resistant Organisms Risk Screening - Acute Care

References:

1. Espinoza, R. T., & Kellner, C. H. (2022). Electroconvulsive Therapy. *The New England Journal of Medicine*, *386:* 667–672. https://doi.org/10.1056/NEJMra2034954
2. Mills, J., & Elwood, P. (2017). Electroconvulsive therapy. *Innovait, 10*(11), 667-670. doi:10.1177/1755738017726559
3. Mental Health Evaluation & Community Consultation Unit. (2002). *Electroconvulsive Therapy: Guideline for Health Authorities in British Columbia.* Retrieved January 16, 2024 from https://www.health.gov.bc.ca/library/publications/year/2002/MHA_ect_guidelines.pdf
4. Kellner CH, Obbels J, Sienaert P. When to consider electroconvulsive therapy (ECT). *Acta Psychiatr Scand 2020*; 141:304.
5. Rasmussen, K. G. (2019). *Principles and practice of electroconvulsive therapy*. American Psychiatric Association Publishing.
6. Salik, I., & Marwaha, R. (2023, January). *Electroconvulsive therapy* . National Library of Medicine. https://www.ncbi.nlm.nih.gov/books/NBK538266/
7. Suleman, R. (2020). A brief history of electroconvulsive therapy. *American Journal of Psychiatry Residents' Journal*, *16*(1), 6–6. https://doi.org/10.1176/appi.ajp-rj.2020.160103
8. Trifu, S., Sevcenco, A., Stănescu, M., Drăgoi, A., & Cristea, M. (2021). Efficacy of electroconvulsive therapy as a potential first-choice treatment in treatment-resistant depression (review). *Experimental and Therapeutic Medicine*, *22*(5). https://doi.org/10.3892/etm.2021.10716

Appendices

Appendix A Consent to Treatment

Providence HEALTH CARE

☐ Holy Family Hospital
☐ Mount Saint Joseph Hospital
☐ St. Paul's Hospital
☐ Youville Residence

St. Vincent's Hospitals
☐ Brock Fahmi
☐ Langara

CONSENT TO TREATMENT

I hereby authorize _____ M.D./D.D.S./_____ and such physicians, surgeons, anaesthetists and hospital staff whose assistance is required, to perform the following test(s), treatment(s), procedure(s) and/or operation(s):

_____

_____

The nature and possible effects, including the significant risks and alternatives to this test, treatment or operation, have been explained to me and I understand the explanation of the alternatives.

If unexpected conditions are discovered during the above test, treatment or operation, I consent to such additional or alternative tests, treatments or operations as the health care provider named above finds immediately necessary.

I also agree to receive anaesthesia and such anaesthetics as may be considered necessary.
I understand that it is my responsibility to refrain from driving a motor vehicle for 24 hours following my anaesthetic and to have a responsible adult accompany me home.

I understand that Providence Health Care participates in medical education and quality improvement and as a result I agree that:

1. supervised health practitioners in training who are in approved education programs may participate in my care;
2. tissues, bodily fluids, devices or implants removed in this procedure become the property of the hospital and may be used for such purposes, including teaching or research, as is approved by the hospital; and
3. my doctor or dentist may give information to the hospital about follow-up care in my doctor or dentist's office.

I understand that if I receive an implant/tissue from a source outside of Canada, Providence Health Care is required to provide information about me – including my name, address and the fact that I have this implant – to the provider of that implant/tissue so that I may be notified of any issues which arise about the device that could affect my health and safety. I further understand that it is possible that my personal information stored by the provider of the implant/tissue may be accessed by the government of that country without my knowledge or consent pursuant to applicable legislation. I authorize Providence Health Care to disclose my personal information to the provider of the implanted device or tissue as reasonably required.

X _____ _____
Signature of patient | Date & time of signature

_____ _____
Signature of Substitute Decision Maker (Form # PHC-MR081 must be completed) | PRINT NAME

_____ _____
Signature of M.D./D.D.S/_____ obtaining consent | PRINT NAME

_____ _____
Witness signature (when MD not present at time of signing) | PRINT NAME

Form No. PHC-MR002 (R. Dec-07) Page 1 of 2

Providence HEALTH CARE

☐ Holy Family Hospital
☐ Mount Saint Joseph Hospital
☐ St. Paul's Hospital
☐ Youville Residence

St. Vincent's Hospitals
☐ Brock Fahmi
☐ Langara

CONSENT TO TREATMENT

DECLARATION BY INTERPRETER:

I have accurately interpreted the conversation between _____(health care provider) and _____ (patient or substitute decision maker) and interpreted this document to _____ (patient or substitute decision maker), who told me that he/she understood the explanation and consents to the treatment described on the other side of this form.

X _____ _____
Signature of interpreter Date & time of signature

_____
PRINT NAME

TELEPHONE CONSENT:

I have discussed the procedure outlined on the other side of this form and the expected benefits, significant risks, side effects, alternative course of action and the likely consequences of not having the treatment(s) with _____ (substitute decision maker) who is the patient's _____ (state relationship) and he/she has given verbal consent.

X _____ _____
Signature of M.D./D.D.S./_____ Date & time of signature

_____
PRINT NAME

X _____ _____
Signature of witness PRINT NAME

CERTIFICATE OF NEED FOR URGENT/EMERGENT HEALTH CARE:

I hereby certify that it is necessary to provide the following health care: _____ without delay in order to save this patient's life, to prevent serious physical or mental harm or to alleviate severe pain, and the patient is, in my opinion, incapable of giving or refusing consent, and has not previously indicated that consent would be refused. I have been unable to consult with any available substitute decision maker within a reasonable time in the circumstances.

X _____ _____
Signature of M.D./D.D.S./____ Date & time of signature

_____
PRINT NAME

It is recommended, but not mandatory, that a second medical staff member (not a resident) of Providence Health Care signs this form.

I agree with the need for the health care set out above for this patient and with the opinion on incapability.

X _____ _____
Signature of M.D./D.D.S./____ Date & time of signature

_____
PRINT NAME

Form No. PHC-MR002 (R. Dec-07) Page 2 of 2

Appendix B

Providence HEALTH CARE

How you want to be treated.

Place Patient Label Here

FORM 5 - MENTAL HEALTH ACT
CONSENT FOR TREATMENT
(INVOLUNTARY PATIENT)

* 1 4 1 *

MENTAL HEALTH ACT FORMS

MENTAL HEALTH ACT
(Sections 8 and 31, R.S.B.C. 1996, c.288)

Note: Complete either **A** or **B**

A. I, _____ authorize the treatment described below.
first and last name of patient (please print)

B. I, _____ authorize the treatment described below
name of director or person authorized by the director (please print)

with respect to _____ at SPH St Paule Hospital
first and last name of patient *name of designated facility (please print)*

Description of treatment/course of treatment:

The nature of the condition, options for treatment, the reasons for and the likely benefits and risks of the treatment described above have been explained to me by _____.
name and position/title

Complete either **A** or **B**

A. If signed by patient

_____
patient's signature

| | | | | | | | |
date (dd / mm / yyyy) *time*

_____
witness' signature

_____
witness' first and last name (please print)

To the best of my judgment, the above-named patient was capable of understanding the nature of the above authorization at the time it was signed.

_____, M. D.
signature of physician

B. If not signed by patient

_____
signature

_____
name of director or person authorized by the director (please print)

_____
position/title

| | | | | | | | |
date (dd / mm / yyyy) *time*

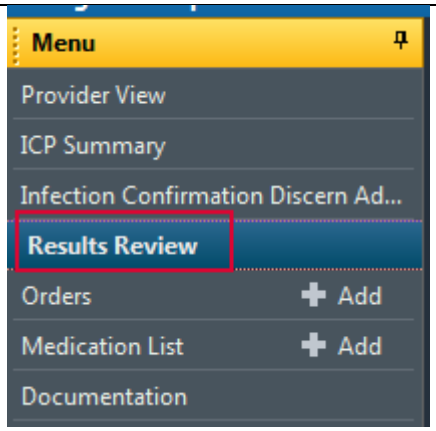
The above-named patient is an involuntary patient under section 22, 28, 29, 30, or 42 of the *Mental Health Act* and to the best of my judgment is incapable of appreciating the nature of treatment and/or his or her need for it, and is therefore incapable of giving consent.

_____, M. D.
signature of physician

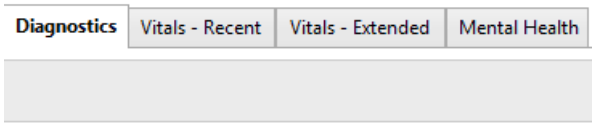
HLTH 3505

Appendix C: Locating the ECG Results

- Navigate to **Results review** in patients' chart



- Click the **Diagnostic** tab (double click to open report)



- A Final report window will open. Click on View image icon to see ECG

to see the ECG rhythm image.

Appendix D Psychiatry Management

The Psychiatrist is responsible for ensuring proper functioning of the ECT machine and equipment (i.e. sufficient ECG recording paper and EEG electrodes). The psychiatrist will also connect the EEG electrodes to the patient.

Electrode Placement

There are three typical placements for the stimulating electrodes, which are selected by the psychiatrist.

1. **Bitemporal** is the most common placement type, with one electrode being placed on each temple. This placement has the greatest antidepressant efficacy and the quickest speed of response; however, it often causes the greatest memory impairment.
2. **Right unilateral** placement involves one electrode right temporal and the second electrode in the scalp just right of the vertex. This helps avoid stimulation of the left hemisphere responsible for language functions. Right unilateral may be less effective in some individuals, however, it generally causes fewer side effects associated with memory impairment.
3. **Bifrontal** placement involves both electrodes on the forehead above the outer canthus of each eye. This method may have similar efficacy for antidepressant as bitemporal with similar cognitive impairment as right unilateral.

Seizure Duration

The minimal duration for a therapeutic ECT seizure is 15 seconds. Typically, the EEG recording of the seizure will be between 15 to 70 seconds. The recording will typically last 10 to 30 percent longer than the motor seizure. Three problems may arise in relation to seizure duration:

1. Missed seizure	No seizure secondary to electrical stimulus	• Generally, sub therapeutic • May be followed by a brief hyperventilation (approximately 20 seconds) and re-stimulation of a higher stimulus dose. • Management includes decreasing or discontinuing anticonvulsant mood stabilizers and benzodiazepines, decreasing the anesthetic dose to the minimal amount to induce unconsciousness and hyperventilating the patient before and during the seizure
2. Short seizures	Less than 15 seconds	
3. Prolonged seizures	Lasting longer than 2 to 3 minutes	• Higher cognitive impairment • May need to be terminated as soon as 2 minutes to as late as 4 minutes. • May need to be achieved by delivering a smaller dose of proPOFol or a benzodiazepine such as midazolam.

Appendix E: Anesthesia Considerations and Medications

A pre-anesthesia assessment is required prior to an ECT, in order to identify pertinent risk factors. These risk factors can be broken down into their respective categories as follows:

Central Nervous System

ECT is contraindicated in any patient with a brain tumour or space occupying lesion.

Cardiovascular

For patients over the age of 50 a pre ECT electrocardiogram is recommended and serum electrolytes in patients receiving diuretic therapy. It is recommended that patients receive their regular anti-hypertensive, nitrate or beta blocker medications the morning of ECT approximately 2 hours prior to the procedure. It is recommended to hold diuretics in the morning to help prevent patients from having episodes of urinary incontinence during the procedure.

Respiratory

Patients with a known history of pulmonary disease should have their pulmonary function optimized prior to ECT. It is important for patients who regularly use bronchodilators to receive them prior to treatment.

Gastrointestinal

Patients with a history of gastric reflux disease or regularly receive a histamine 2 inhibitor or proton pump inhibitor should receive their medication prior to ECT. This helps reduce gastric secretions and the risk of aspiration.

Renal

Patients with a history of renal failure or renal insufficiency should have their serum electrolytes reviewed prior to ECT.

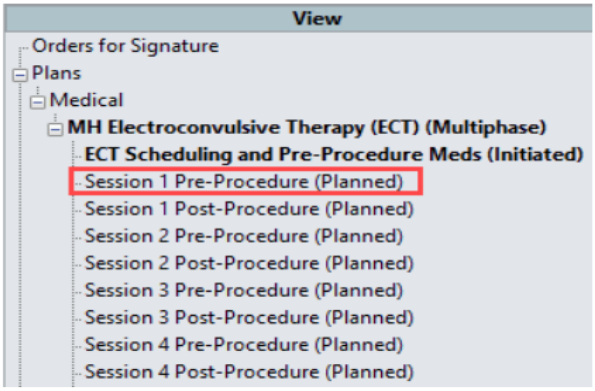
Commonly Used Medications for Electro Convulsive Therapy

Anesthesia	Neuromuscular Blocking Agent	Prophylaxis
proPOFol	succinylcholine	labetolol
methohexital	rocuronium	esmolol
etomidate	cisatracurium	ketorolac
ketamine		lidocaine

Appendix F: Initiating the ECT PowerPlan

Inpatients

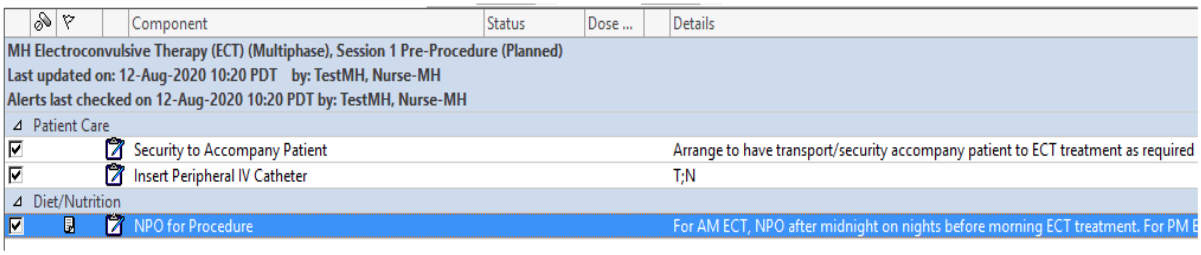
To be initiated at HS the night before ECT:



NOTE: Please be mindful to **initiate the next available phase** or **the phase that corresponds with the day of ECT treatment**. This will help to ensure the PowerPlan is organized for the care team to review and use.

Review the orders for the initiated phase.

Ensure the patient remains **NPO for Procedure.**



Give pre-procedure meds as necessary.

NOTES:

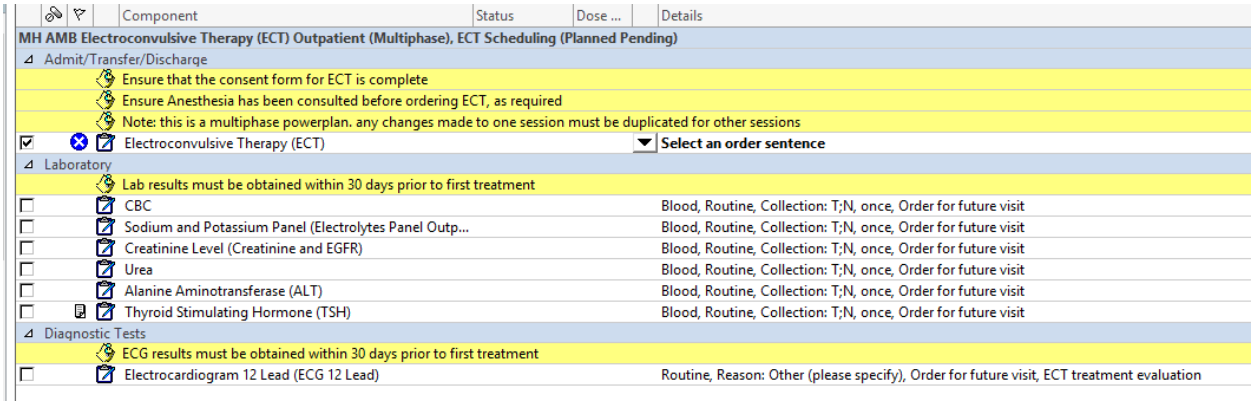
- Pre-procedure meds are typically orders as standing PRN orders
- Be sure to review PRN medications and order comments for medications specific to before ECT.

Navigate to the **Interactive View and I&O** page.

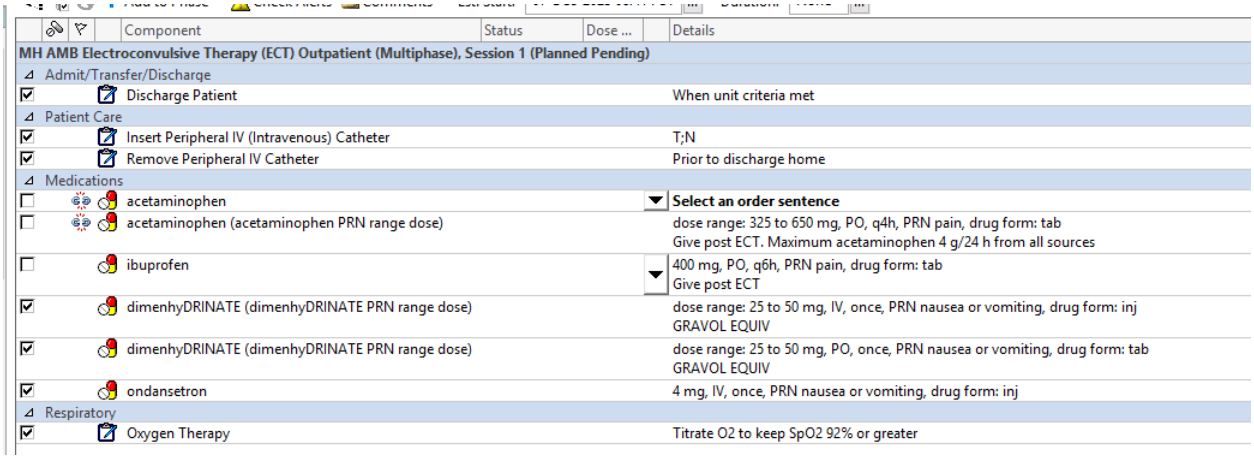
Click the **Electroconvulsive Therapy Band.**

Click the **Preprocedure Checklist ECT** section.

Outpatients

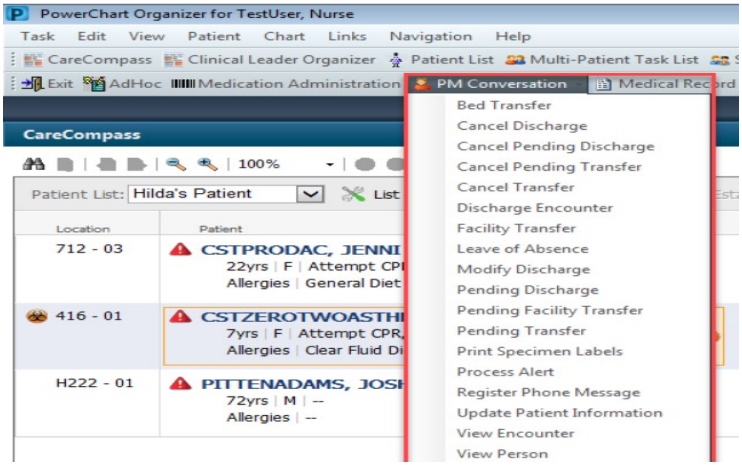


Component	Status	Dose ...	Details
MH AMB Electroconvulsive Therapy (ECT) Outpatient (Multiphase), ECT Scheduling (Planned Pending)			
Admit/Transfer/Discharge			
Ensure that the consent form for ECT is complete			
Ensure Anesthesia has been consulted before ordering ECT, as required			
Note: this is a multiphase powerplan. any changes made to one session must be duplicated for other sessions			
☑ Electroconvulsive Therapy (ECT)			**Select an order sentence**
Laboratory			
Lab results must be obtained within 30 days prior to first treatment			
☐ CBC			Blood, Routine, Collection: T;N, once, Order for future visit
☐ Sodium and Potassium Panel (Electrolytes Panel Outp...			Blood, Routine, Collection: T;N, once, Order for future visit
☐ Creatinine Level (Creatinine and EGFR)			Blood, Routine, Collection: T;N, once, Order for future visit
☐ Urea			Blood, Routine, Collection: T;N, once, Order for future visit
☐ Alanine Aminotransferase (ALT)			Blood, Routine, Collection: T;N, once, Order for future visit
☐ Thyroid Stimulating Hormone (TSH)			Blood, Routine, Collection: T;N, once, Order for future visit
Diagnostic Tests			
ECG results must be obtained within 30 days prior to first treatment			
☐ Electrocardiogram 12 Lead (ECG 12 Lead)			Routine, Reason: Other (please specify), Order for future visit, ECT treatment evaluation



Component	Status	Dose ...	Details
MH AMB Electroconvulsive Therapy (ECT) Outpatient (Multiphase), Session 1 (Planned Pending)			
Admit/Transfer/Discharge			
☑ Discharge Patient			When unit criteria met
Patient Care			
☑ Insert Peripheral IV (Intravenous) Catheter			T;N
☑ Remove Peripheral IV Catheter			Prior to discharge home
Medications			
☐ acetaminophen			**Select an order sentence**
☐ acetaminophen (acetaminophen PRN range dose)			dose range: 325 to 650 mg, PO, q4h, PRN pain, drug form: tab Give post ECT. Maximum acetaminophen 4 g/24 h from all sources
☐ ibuprofen			400 mg, PO, q6h, PRN pain, drug form: tab Give post ECT
☑ dimenhyDRINATE (dimenhyDRINATE PRN range dose)			dose range: 25 to 50 mg, IV, once, PRN nausea or vomiting, drug form: inj GRAVOL EQUIV
☑ dimenhyDRINATE (dimenhyDRINATE PRN range dose)			dose range: 25 to 50 mg, PO, once, PRN nausea or vomiting, drug form: tab GRAVOL EQUIV
☑ ondansetron			4 mg, IV, once, PRN nausea or vomiting, drug form: inj
Respiratory			
☑ Oxygen Therapy			Titrate O2 to keep SpO2 92% or greater

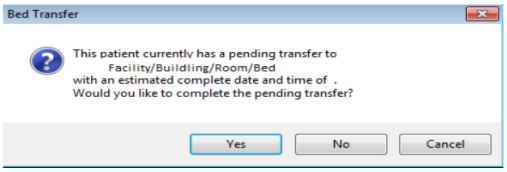
Appendix G: Form 5: Initiating Patient Transfer Via PM Conversation



Respond to the message appropriately.

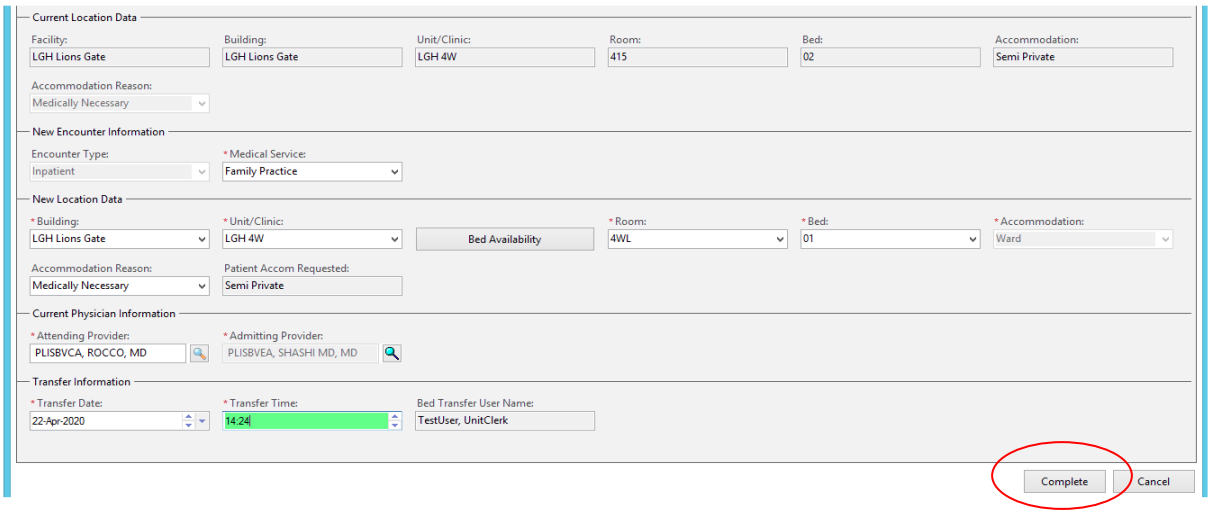
a. Click **Yes** or **No** as appropriate to continue to launch the **Bed Transfer** conversation

b. Click on **Cancel** to not launch the **Bed Transfer** conversation



When the conversation launches complete and/or verify the following fields:

- **Medical Service:** Update to new medical service if applicable
- **Unit/Clinic:** Select new unit/clinic if applicable
- **Room/Bed:** Populated from **Bed Availability** selection
  - If the room/bed selected has a status of: dirty, held, or out of service, an error message will display. Click on **Yes** to assign the bed or click on **No** to select a new available room/bed.
- **Transfer Date/Time:** Date/Time of patient's arrival to a unit/clinic. This date/time may be backdated if applicable



Appendix H: Bedside Safety Check

The bedside safety check is performed prior to admitting a patient into a bay or upon receiving report and assuming care for a patient (e.g. after handover). The following should be included in a bedside safety check:

- Functioning oxygen attached to ambu-bag with face mask
- Functioning suction with Yankauer attached
- Oral airways 80 mm, 90 mm, 100 mm and naso-pharyngeal airways 7.5 mm, 8 mm and 8.5 mm (with lubricant)
- Alarm limits for patient monitoring set to acceptable range and turned on
- Alarm volume on patient monitoring set to a minimum of “level 5”
- Arrhythmia monitoring set to full
- At least 2 out of 4 bedside rails in up position, or both stretcher rails in up position
- Emergency equipment set-up as appropriate (e.g. tracheostomy emergency equipment, chest tube emergency equipment, suture scissors, wire cutters, etc.)
- IV bag and tubing dated and current
- Infusions correct, dose/rate/concentration programmed correctly
- Gloves
- Alcohol wipes
- Emesis basins

*“Bedside Patient Safety Check” taken from B-00-13-10105 High Acuity Unit Admission/Post Anesthesia Care Unit Overnight Stay

Appendix I: Electro Convulsive Therapy (ECT) Pre-ECT Assessment and Treatment Record

Pre-ECT Treatment Assessment:

To be completed by Ward RN (inpatients) or PACU RN/ECT Suite Nurse (Outpatients):

Preprocedure Checklist ECT	
Last Fluid Intake	
Last Fluid Intake Amount mL	
Last Food Intake	
Last Intake Type	
Last Void	
Patient Safety	
Allergy Visual Cue Present	
Patient ID Band on and Verified	
Restraints Required	
Consents	
Anesthesia Consent Signed	
Procedure Consent Complete	
Medical Record	
COVID-19 Screen Complete	
Lab Result Status	
Review of Labs	
H&P (Current) in Medical Record	
Relevant Images in Medical Record	
ECG (Current) in Medical Record	
Patient Preparation	
Home Prep Complete	
Wearing Patient Gown	
Personal Items Removed	
Dental Appliances Removed	
Jewelry Removed	
Hair Accessories Removed	
Contact Lenses Removed	
Makeup Removed	
Hearing Aids Removed	

Pre-procedure Time Out Checklist:

To be documented by PACU RN/ECT Suite Nurse during pause prior to starting procedure.

Preprocedure Time-Out	
Procedural Sedation Indication	
Patient ID Band on and Verified	
Allergy Visual Cue Present	
Medication Doses Verified	
Procedure Verification	
Anesthesia Consent Signed	
Procedure Consent Complete	
Procedure Site Verified	
Correct Patient Position	
Procedure Comments	
Time Out All Present Participate	
Participants Present for Procedure	
Debriefing Completed	

Cardiac Rhythm Analysis Documentation: ECG strip printout placed in chartlet.

Cardiac Rhythm Analysis		
Strip Placed in Chart		
Telemetry Pack Number		
Telemetry Activity		
Cardiac Rhythm		
Ectopy Description		
Ectopic Pattern		
Monitoring Lead		
Atrial Rate	bpm	
Atrial Rhythm		
Ventricular Rate	bpm	
Ventricular Rhythm		
PR Interval	second	
QRS Duration	second	
QT Interval	second	
R to R Interval	second	
QTc Interval	ms	
ST Segment		
T Wave		
U Wave		

ECT Treatment Record:

To be documented by Psychiatrist and Anesthesiologist performing ECT procedure.

ECT Treatment Record		
Course		
ECT Treatment Number		
Device		
Stimulus Pulse Width	ms	
Stimulus Frequency	Hz	
Stimulus Duration	second	
Stimulus Current	ampere	
Stimulus Placement		
Seizure Duration Motor	second	
Seizure Duration EEG	second	
EEG Morphology Symmetry		
EEG Morphology Amplitude		
EEG Morphology Regularity		
EEG Morphology Suppression		
Stimulus Intensity Charge	mC	
Stimulus Intensity Energy	J	
Stimulus Intensity Dynamic Impedance	ohm	
Procedure Comments		
ECT Psychiatrist		
ECT Anesthesia Medication		
Induction Agent		
Paralytic Agent		
Other Medication Given		
Comments		
Anesthesiologist		

Post-Procedure Documentation:

Documented by PACU RN prior to transferring patient back to ward or to SDC.

◿ Periop Discharge Criteria	
Phase I Discharge Criteria	
Phase II Discharge Criteria	
◿ Transfer/Transport	
Patient ID Band on and Verified	
Transfer From	
Transfer To	
Patient Equipment	
Accompanied By Staff	
Accompanied By Other	
Mode of Transport	
Belongings Location When Pt Transferred	
Valuable/Belongings Details/Comments	
◿ Shift Report/Handoff	
Patient ID Band on and Verified	
Clinician Receiving Report	
Clinician Giving Report	
Patient/Family Member Participation	
Lines Traced Site to Source	
CRRT Lines Traced Site to Source	
ECLS Lines Traced Site to Source	
Devices Traced Site to Source	
Orders Reviewed	
Isolation Activity	
Patient Key Activities	

Appendix J : Common Side Effects of ECT

Post ECT, it is common for patients to develop the following:

Side Effects	Interventions
Headache	• Notify anesthesiologist • Administer analgesics like acetaminophen, if ordered
Muscle Aches	
Nausea	• Notify anesthesiologist • Administer antiemetic if ordered • Offer cool compress
Confusion	• Provide reassurance and reorientation • If patient does not settle, notify anesthesiologist

Persons/Groups Consulted:

Clinical Nurse Specialist, Acute Psychiatry, PHC

ECT Nurse, MSJ

PACU CNE, SPH

Psychiatrist, SPH

RPN, Outpatient ECT Clinic SPH

Developed by:

Nurse Educator Mental Health Program

Initial Effective Date:	28-FEB-2024
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	Professional Practice Standards Committee
Owners: *(optional)*	PHC
	Mental Health/PACU