

Patient Controlled Epidural Analgesia: Care and Assessments in Labour

Site Applicability

St Paul's Hospital, Maternity Centre

Practice Level - Specialized

Perinatal Registered Nurses (RN), Registered Midwives (RM), Physicians (MD) (Anesthesiology, Obstetrics, Family Practice)

Requirements

The anesthesiologist is responsible for the insertion and supervision of patient controlled epidural analgesia (PCEA) in consultation/collaboration with the maternity care provider(s): MD/RM/RN.

The anesthesiologist obtains and documents informed consent from the patient for the procedure; when possible, this consent should be obtained on the appropriate written consent form.

Continuous bedside RN attendance is required to monitor maternal and fetal well-being at regular intervals, and PRN. If complications arise, the obstetric and anesthesia teams should be notified. In some cases, the epidural infusion may be required to be discontinued.

Programming of epidural pump and initiation of the epidural maintenance infusion requires an independent double check by two RNs, or an RN plus an MD (i.e. anesthesiologist).

No other opioids or central nervous system (CNS) depressants are to be given, except as ordered or approved by the anesthesiologist.

Need to Know

Epidural anesthesia/analgesia for labouring patient involves:

- Preservative-free opioid (usually fentanyl), combined with a local anesthetic (bupivacaine), administered into the epidural space. This combination of medications diffuses across the dura mater into the cerebrospinal space where they ultimately act to block the transmission of pain impulses.
- Continuous infusion of analgesic medications via an epidural catheter using an infusion pump. The patient can supplement this infusion by administering additional doses via a patient-controlled epidural analgesia (PCEA) bolus, as prescribed by the anesthesiologist.
- Mobilization with an epidural depending on the medication dosage, maternal and fetal condition, and patient mobility assessment (i.e. degree of sensory and motor block)

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- The patient should only consume a clear fluid diet while receiving epidural analgesia
 - When an operative intervention is planned, the patient should then be NPO

Advantages:

- Excellent labour pain relief
- Pump is programmed to infuse at a precise rate; infusion rate can be increased or decreased to meet patient needs
- Smaller opioid dose than parenteral mode with less fetal effect
- Patient is able to supplement the programmed infusion they receive with PCEA
- Increased patient autonomy and satisfaction in determining level of pain relief
- Reduced motor block decreasing need for catheterization; increased possibility for ambulation.

Roles and Responsibilities:***Primary Care Provider (PCP):***

- Performs and documents initial and on-going assessments and interventions
- Enters order for blood work and epidural analgesia
- Communicates with the anesthesiologist to request for labour epidural placement, or delegates to the primary RN or Charge Nurse to do so.

Anesthesiologist:

- Explains procedure to patient, and obtains informed consent
- Inserts and secures epidural catheter, connects delivery system to patient
- Enters labour epidural orders
- Administers any further epidural medication and dressing changes as needed
- Performs and documents initial assessments and any on-going interventions pertaining to the functioning of the epidural
- Responds to side effects that may occur

RN:

- Prepares epidural infusion pump
- Provides support to patient during insertion procedure
- Performs and documents initial and on-going assessments and interventions pertaining to nursing management of the epidural
- Reports any changes and concerns to anesthesiologist, primary care provider, and/or designate as required
- Provides 1:1 bedside nursing care, including assessment, support, and documentation of patient mobility

Equipment and Supplies

Epidural Supplies	Monitoring Equipment	Emergency Supplies
Epidural infusion pump & tubing Disposable epidural tray IV (18 gauge) with tubing & NS Sterile & non-sterile gloves Latex free dressing & tape Prep Solution Medications	Automatic BP machine (Dynamap) Sphygmomanometer with stethoscope (if required) Fetal Doptone Electronic fetal monitor with appropriate attachments Ice	Oxygen source with flow meter Oxygen face mask Airway & intubation equipment Ambu bag Suction source with tubing Yankauer suction (adult)

Procedure

Assessment

Indications:	Absolute Contraindications:	Relative Contraindications:
Patient's choice Labour dystocia* Twins* Planned vaginal breech delivery* Preeclampsia* Other medical conditions* as warranted (e.g. high risk for operative delivery, modulation of sympathetic response in moderate/high risk cardiac patients, etc.) *Medical/obstetrical conditions wherein an epidural is recommended; PCP should discuss with patient	Patient refusal Coagulopathy – abnormal PTT, INR, low platelets (less than 70,000), current anticoagulant use Sepsis or localized infection at epidural site Uncorrected maternal hypovolemia History of allergy to local anesthetic agents typically used in epidural analgesia Increased intracranial pressure (e.g. supratentorial space occupying lesion) Lack of resuscitation equipment	History of active neurological disease Minor coagulation abnormalities Ongoing significant hemorrhage NOTE: see OB Cardiology recommendations for patient with cardiac conditions NOTE: Presence of tattoos is not a contraindication for epidural catheter insertion.

Intervention (Emergency Procedures)

Emergent Complications	Urgent Complications
Severe, sudden hypotension Local Anesthetic Systemic toxicity (LAST) Total spinal block	Hypotension Profound, prolonged fetal heart rate deceleration Accidental dural puncture Spinal hematoma Neurological injury Infection

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- **Call a Code Blue** if the patient:
 - Shows signs of respiratory distress, apnea, cyanosis, hemodynamic instability
 - Loses consciousness
 - Has a seizure
 - Deteriorates rapidly
- If a complication develops, the RN will initiate emergency procedures: (see also [Appendix F](#))
 - Call for help; page anesthesiologist on-call, OB on-call, and patient's primary maternity care provider (if other than OB)
 - Ensure the patient has a patent airway, administer oxygen by simple mask (min 6 LPM)
 - Place the patient in full lateral position with head of bed flat
 - Open the intravenous (IV) wide to give a bolus of 250 to 500 mL IV bolus unless medically contraindicated (e.g. cardiac, severe pre-eclampsia)
 - Discontinue or decrease epidural infusion if:
 - Level of analgesia is at T4 or higher, and symptomatic
 - Difficulty breathing, inability to cough, talk or swallow
 - Dizziness, tingling tongue/metallic taste, tinnitus, numbness of hands
 - Blood pressure falls more than 30 mmHg (millimetres mercury) below resting systolic or to less than 90 mm Hg systolic and patient is symptomatic
 - Monitor:
 - Maternal Vital Signs every minute, or as ordered (BP, HR, RR, O₂sat)
 - Continuous electronic fetal monitoring (EFM) until the patient is stable and the fetal heart rate is normal (may require internal FHR monitoring [FECG])
 - Provide comfort and support to patient and family

Steps

1. Preparation Prior to Epidural Insertion

- Check orders for appropriate blood work, intravenous infusion rate, and epidural medications
- Explain the procedure to the patient, and answer any questions
- Encourage the patient to void prior to epidural insertion
- Gather equipment
- Obtain baseline Maternal vital signs (BP on the dependent arm, HR, RR, O₂ sat, T)
- Assess fetal health surveillance as per FHS Intrapartum Guideline
- Assess progress of labour
- Initiate intravenous (IV) 0.9% NaCl via an 18G IV catheter at the prescriber rate
 - Do not administer an IV fluid bolus unless prescribed by the anesthesiologist
 - Fluid bolus is contraindicated by some maternal medical conditions (e.g. cardiac disease, hypertension, etc.)

2. Epidural Catheter Insertion

- Provide care and support for the patient during the insertion of the epidural catheter
- Assist the patient with positioning, either in the lateral or sitting position
- Continue to monitor the fetal heart rate (FHR) as per guideline:

- If IA – continue to monitor as per FHS Intrapartum Guideline
- If EFM – consider recommendations below
- Assist with dressing and taping of epidural site and tubing as needed

Normal FHR Pattern	Atypical FHR Pattern	Abnormal FHR Pattern
Auscultate every 15 to 30 minutes without interrupting the insertion Monitor contractions by palpation	Prior to insertion discuss with PCP/OB MRP how to monitor the fetus during epidural insertion	Continuous fetal monitoring is necessary. (<i>Internal EFM (via FECG) may be indicated.</i>) Prior to insertion, discuss all options with care provider and anesthesiologist.
	<i>Lateral position may allow for improved monitoring when using EFM.</i>	

3. After Administration of Initial Dose of Epidural Anesthetic (including subsequent top-ups and clinician boluses)

- Assist patient into a comfortable position, and reposition as necessary to ensure equal distribution of the local anesthetic (e.g. semi-fowlers, or alternating lateral positions [left lateral and then right lateral 15 minutes each])
 - The patient must remain in bed and rest for a minimum of 30 minutes after the initial dose of analgesic and following all top-ups administered by the anesthesiologist
- Assess, monitor and document the following:
 - BP, pulse, respiration & oxygen saturation –
 - Every 5 minutes for 10 minutes, then every 10 minutes for 20 minutes
 - FHR every 5 minutes for 30 minutes
 - Epidural anesthesia is not an independent indication for EFM
 - Mode of FHR monitoring as per FHS Intrapartum guideline
 - Motorsensory Assessments, sedation, and pain scale (see [Appendices A, B, C, & D](#))
 - Every 5 minutes for 10 minutes, then every 10 minutes for 20 minutes
- Set-up epidural pump as per policy, and ensure Independent Double Check is complete
- Initiate continuous infusion as per orders, and provide patient education on use of PCEA function

4. Maintenance of Epidural

- Assess, monitor and document the following:
 - BP, pulse, respiration and oxygen saturation every hour and PRN
Temperature as per orders and PRN
 - FHR as per FHS Intrapartum guideline
 - Sensory levels, lower motor levels, sedation, and pain scale every hour and PRN
 - Progression of labour, as indicated
 - Epidural site monitored hourly for signs of bleeding, redness and inflammation, pain or purulent drainage. (These should be reported immediately to the Anesthesiologist.)

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- Assess for allergic and/or any other untoward responses
 - Fluid balance
- Assess the patient for ambulation criteria (see [Step 6](#))
 - If the patient does not wish to ambulate, reposition frequently (at least every 60 minutes) to maximize labour progress
- Bladder Assessment:
 - Palpate bladder hourly to assess for fullness/distension
 - Encourage the patient to ambulate with assistance to the bathroom to void within 2 hours of epidural insertion (once initial 30 minutes of bedrest has passed), and every 2 to 3 hours thereafter (see [Step 3](#) & [Step 6](#))
 - If the patient is unable to ambulate, patient should attempt to void in a bedpan. If unsuccessful and patient has symptoms of urinary retention insert an in and out catheter. A prescriber's order is required for an indwelling Foley catheter.

5. After Epidural PCEA Dose by Patient or RN

- No additional vital signs or levels are required
- Monitor more frequently if clinically indicated

6. Nursing Assessment for Patient Ambulation with an Epidural (see [Appendix E](#))

- Contradictions to ambulation:
 - Abnormal FHR
 - Hemodynamic instability
 - Moderate/severe gestation hypertension
 - Significant vaginal bleeding
 - Unstable fetal lie
- The patient may mobilize when all of the below listed conditions are met:
 - Supine and sitting blood pressure readings are within 10% of each other
 - There is no dizziness when the patient moves from the sitting to standing position
 - Sensation in the feet is described by the patient as normal or near normal
 - Patient has been successfully assessed as described in [Appendix E](#)
- Nursing must be available to assist with mobility/ambulation AT ALL TIMES
- If the patient has successfully completed mobility assessments, encourage them to:
 - Use the commode or bathroom facilities (with assistance)
 - Sit in a chair
 - Ambulate in their room (with assistance at all times)
- Safety Checks must be repeated when a patient has returned to bed or has been sitting in a chair for greater than 60 minutes

7. Epidural Care – Immediate Postpartum

- Assess return to sensation (see [Appendix A](#))
 - Check dermatome levels prior to first ambulation and/or with the 2 hour postpartum check
- Assess lower motor function (see [Appendix B](#))
 - Complete mobility screen (Appendix E) as above before initial mobilization
 - Assist with initial ambulation and PRN
- Assess bladder function
 - Palpate bladder; patient may not be aware of full bladder
 - When able to ambulate, patient should get up to bathroom with assistance to void
 - If unable to ambulate, void on bedpan
 - Instruct patient to void at least every 2 to 3 hours to prevent uterine atony
- Remove epidural catheter when the patient is stable (see [step 8](#))
- Ensure that 'Dynamic Group' for epidural is inactivated in Cerner PowerChart Interactive View and I&O and orders discontinued once removed

8. Discontinuing the Epidural Infusion and Epidural Catheter Removal

- Ensure patient condition is stable
- See B-00-12-10014 – [Epidural Catheters: Removal](#)

CAUTION:

If the patient has received anti-coagulant therapy, do not remove the epidural catheter without a specific order as the epidural catheter removal may be delayed.

There are 2 time periods that are at highest risk of spinal epidural hematoma:

1. After needle insertion
2. After catheter removal

This generates 4 time points that should be considered:

1. Before needle insertion:
 - Do not give LMWH at least 12 hours before needle insertion
2. After needle insertion:
 - Do not give LMWH for at least 12 hours after needle insertion
3. Before catheter removal:
 - Do not give LMWH for at least 12 hours
4. After catheter removal
 - Do not give LMWH for at least 4 hours

- ❖ Use caution if considering concurrent use of NSAIDs and LMWH while epidural catheter remains insitu

Documentation

- Cerner PowerChart →
 - Interactive View and I&O → Intake and Output →
 - Continuous Infusions
 - Oral
 - Output
 - Interactive View and I&O → Labour and Delivery Band →
 - FHR Monitoring
 - Contraction Information
 - Comfort Measures
 - VITAL SIGNS
 - Vaginal Exam
 - Membrane Status Information
 - Pain Assessment
 - Specialty Gas Management
 - Anesthesia, OB
 - Pain Modalities → create Dynamic Group under 'Other Routes of Infusion'
 - Ensure Dynamic Group is inactivated upon discontinuation of epidural
 - Sedation Scales
 - Urinary Catheter or Intermittent Urinary Catheter → create Dynamic Group
 - Interactive View and I&O → Peripheral IV → create Dynamic Group
 - Interactive View and I&O → OB Education Band →
 - Antepartum/L&D Education
 - Medication Administration Wizard and MAR
 - Orders
 - Ensure that Intrapartum epidural orders are discontinued once epidural is discontinued
- Procedure Consent: Form Fast → Search for "Consent Procedure"
- Patient Safety Learning System (PSLS) – in the event of a complication

Patient and Family Education

- Provide patient and family with information and instruction on the use of PCEA using language they can understand. Use interpreter if needed (virtual/ or in person).
- Inform patient of the importance of maintaining consistent level of pain relief.
- GH.350.Ep43 - Epidural Analgesia During Labour (Patient Health Education Materials)

Related Documents

- [B-00-12-10014](#) – Epidural Catheters: Removal
- [B-00-07-10011](#) – Falls Injury Prevention
- [B-00-07-10041](#) – Falls Prevention – Maternity Centre

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- [B-00-07-10048](#) – Fetal Health Surveillance (FHS) – Intrapartum
- [B-00-12-10001](#) – CADD Solis Infusion Pump: Set up and Operation
- [B-00-13-10108](#) – Local Anesthetic Systemic Toxicity: Care and Management of the Patient
- [B-00-13-10121](#) – Urinary Catheters: Management for the Prevention of UTI
- [BD-00-07-40034](#) – Independent Double Check and Double Check of Medication

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11. VCH & PHC Professional Practice (April 2018) Pain management: Acute mild to moderate (Adult 17 years and older) [BD-00-04-40074].
12. PHC Professional Practice (Jan 2019) Pain: Acute postoperative – Patient Care [B-00-13-10010].

Appendices

Appendix A : Sensory Level Testing Appendix B : Motor Level Testing Appendix C : Sedation Scale Appendix D : Pain Scale	Appendix E : Assessing for Ambulation Appendix F : Potential Complications, Assessment, and Management
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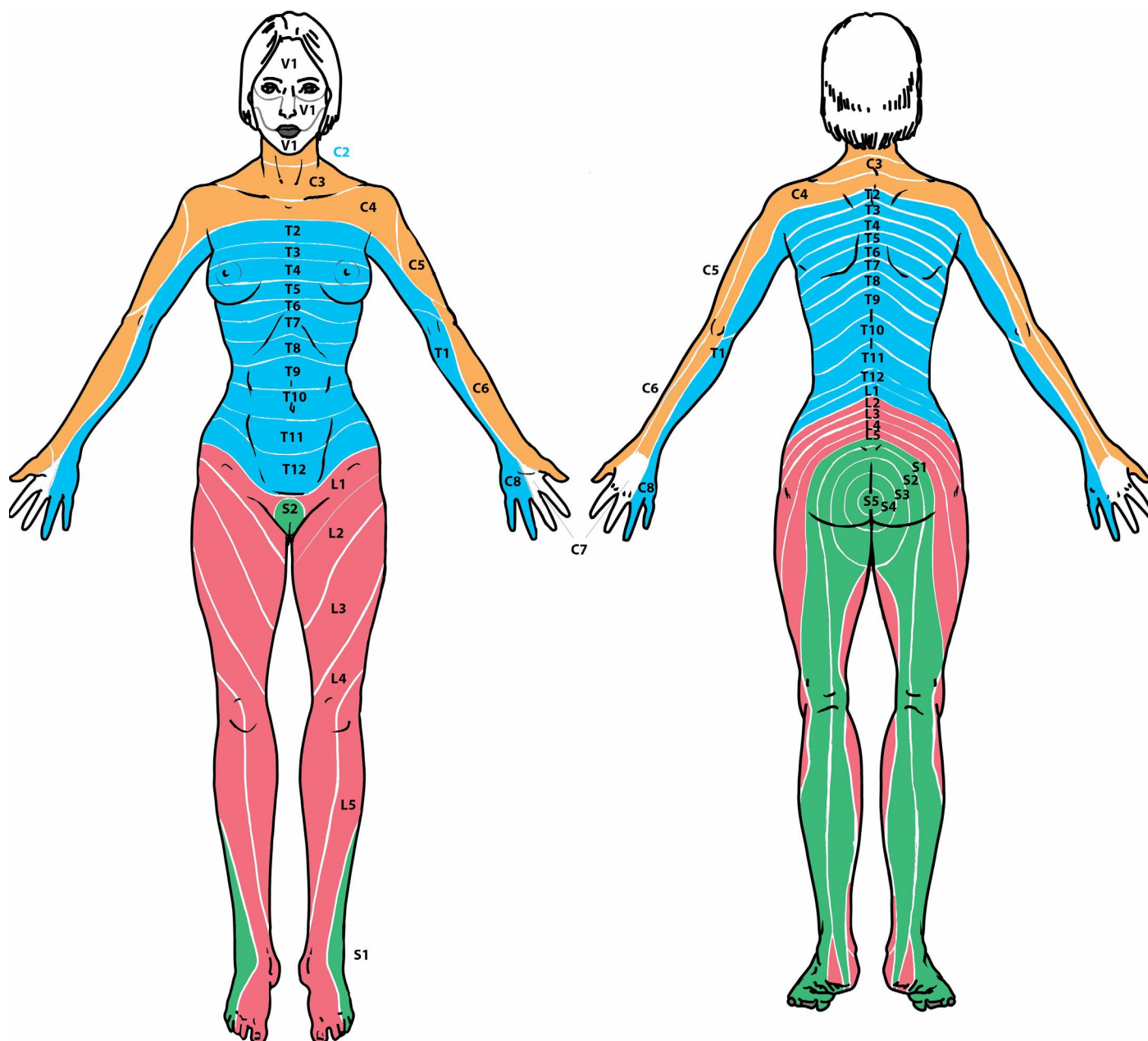
Appendix A: Sensory Level Testing

- Apply ice briefly (5 to 10 seconds) at a level you would expect to have normal sensation (e.g. patient's cheek). This will assess for lack of sensory block; the patient should be able to describe this as "cold."
- Assessment is then done bilaterally one side at a time - starting on the outer thigh.
 - Slowly make your way up 3 to 4cm at a time.
 - The level below the sensation of "cold" is the upper level of the sensory block.

Note: Pain in the first stage of labour is transmitted by sympathetic fibres entering the neuroaxis from T10 and L1. In late first stage and the second stage of labour, pain from the perineum is transmitted by the pudendal nerve and enters the neuroaxis at S2, S3 and S4.

Sensory Level Testing:		
Action	Dermatome Level	Anatomical Landmark
Notify the anesthesiologist	Above T4	Nipple Level
None - Optimum Level	T6	Xiphisternum
	T8	Subcoastal
Assess pain level Notify anesthesiologist as necessary	T10	Umbilicus
	T12	Suprapubic level
	L2	Anterior Thigh

Dermatome Map



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Appendix B: Lower Motor Assessment

- Motor level testing is used in order to monitor the effects of the medication, and:
 - Assess motor function and ability to mobilize (e.g. move around in bed without deficit)
 - Assess strength and ability to ambulate (e.g. walk to bathroom or chair)
 - Prevent pressure areas
 - Detect onset of complications (e.g. epidural hematoma)
- Patient is able to demonstrate symmetrical gross motor movement to lower limbs within their normal range (e.g. consideration to be given to previous injuries and/or movement limitations)
 - It is important to perform and compare bilateral assessments to identify deficits or asymmetry
- Any prolonged motor deficit is communicated to the anesthesiologist immediately

Score	Motor Assessment
0	No Residual Motor Block; free movement of legs & feet, can straight leg raise against gravity
1	Partial Block Remains; just able to flex knees with free movement of feet
2	Almost Complete Block; only able to move feet; unable to flex knees
3	Complete Motor Block; unable to move legs or feet

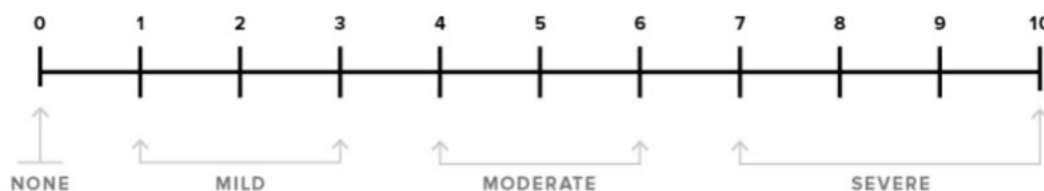
Appendix C: Sedation Scale

Pasero Opioid-Induced Sedation Scale (POSS)		
Score	Meaning of Score	Action
5	Sleep, easy to rouse;	Acceptable; no action necessary Do NOT use this score in the first 24 hours post insertion; patient should be easily roused, once roused use score 1-4 to denote the patient's sedation score
1	Awake and alert; (e.g. patient is awake when you enter, or wakes before you speak)	Acceptable; no action necessary
2	Slightly drowsy, easily roused; (e.g. patient wakes when you speak and is able to answer your question)	Acceptable; no action necessary
3	Frequently drowsy, rousable, drifts off to sleep during conversation; (e.g. patient falls asleep mid-sentence or falls asleep while you are talking to them)	Unacceptable; <ul style="list-style-type: none"> Notify anesthesiology and primary care provider Remove PCEA button if in use; stop any on-going opioid infusion Monitor vital Signs and administer oxygen only if hypoxic (i.e. O₂Sat less than 95%) Monitor respiratory status and sedation level closely until sedation level is stable and less than 3 and respiratory status is satisfactory
4	Somnolent, minimal or no response to verbal and physical stimulation (**use trapezius muscle squeeze for physical stimulation – do NOT use sternal rub**)	Unacceptable; <ul style="list-style-type: none"> Notify anesthesiology and obstetrics IMMEDIATELY; notify primary care provider Call a Code Blue if necessary Remove PCEA button if in use; stop any on-going opioid infusion Administer naloxone as ordered Monitor vital Signs and administer oxygen only if hypoxic (i.e. O₂Sat less than 95%) Provide airway and breathing support as needed Monitor respiratory status and sedation level closely until sedation level is stable and less than 3 and respiratory status is satisfactory

Appendix D: Pain Scale

- **Severity of Pain:**
 - Mild Pain:
 - Pain that is usually described by the individual experiencing the pain as “mild” or “minimal.”
 - Usually this level of pain responds to non-pharmacological treatment and non-opioid analgesics. It may be acute, persistent, or neuropathic.
 - Moderate to Severe Pain:
 - Pain that is usually described by the individual experiencing the pain as “moderate” or “severe”.
 - Typically is not relieved solely with non-opioid medications or non-pharmacological measures.
- **Treatment Options:**
 - Non-pharmacological:
 - If possible, first remove any obvious cause of pain or negative stimuli which may decrease pain tolerance
 - Employ non-pharmacological strategies for pain relief (e.g. position change, heat/cold, message, and visualization).
 - Pharmacological:
 - CAUTION: No other opioids or central nervous system depressants are to be given except as ordered by the anesthesiologist
- **Assessment:**
 - Assess the patient’s perception of pain intensity using a scale of 1-10, 1 being the least and 10 being the most pain.
 - Numeric Pain Scale (NPS) is widely used at PHC:
 - Reliable, easy to use, and understand.
 - Measures intensity only
 - Facilitates tracking over time and effectiveness of interventions

0-10 NUMERIC PAIN RATING SCALE



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Appendix E: Assessing for Ambulation

- The patient may mobilize when all of the below listed conditions are met:
 - Supine and sitting blood pressure reading are within 10% of each other
 - There is no dizziness when the patient moves from the sitting to standing position
 - Sensation in the feet is described by the patient as normal or near normal
 - Patient has been successfully assessed as described below:

Have the patient perform each of the following (see Quick Mobility Screen (QMS), for additional details; if patient unable to complete one step, do not proceed to the next):

1. Can patient lift their knee toward their chest (one leg at a time) without assistance? (see QMS#1)
2. Can patient bridge - lift buttocks off the bed with both knees bent without assistance? (see QMS #2)
3. Can patient roll to one side with knees bent and without assistance? (see QMS #3)
4. Can patient move from lying to sitting with minimal assistance? (see QMS #4)

Move bed to lowest position so that patient's feet are flat on the floor.

5. Can patient sit without back supported and keep balance?
6. Can patient lift their foot to straighten their knee? (Test both legs, one at a time)?
7. Can patient move from sitting to standing with minimal assistance?

Pause in standing position (maintain standby assist); if patient is dizzy, return to bed

8. Can patient maintain balance? (Can the patient shift their weight side to side?)
9. Can patient march on the spot (x6 steps) with minimal standby support?
10. Can patient perform mini-squats (x3) with minimal standby support?



(Adapted from PHC Quick Mobility Screen and BCWH Modified Bromage Scoring Tool)

- If patient is unable to complete any of the activities listed above, **do NOT proceed – do NOT ambulate.**
- The ambulation assessment must be repeated each time a patient wishes to ambulate:
 - If the patient has returned to bed for greater than 60 minutes – complete full assessment.
 - If the patient has been sitting in a chair for greater than 60 minutes – start the ambulation assessment at bullet number 6.
- **Safety Considerations:**
 - Have a wheelchair readily available to assist with transferring the patient back to bed should there be a change in the patient's status or assessment
 - Offer use of a walker for additional support when ambulating

If above criteria are met, encourage the patient to:

- Use the commode or bathroom facilities (with assistance)
- Sit in a chair
- Ambulate in their room (with assistance at all times)



Quick Mobility Screen

**If patient unable to perform any step, do not proceed.
Refer to physiotherapy.**



1. Alternate Hip and Knee Flexion

Can the patient move knees (one at a time) upwards off the bed towards chest without assistance? Indication of range of movement (ROM) and strength of legs.



2. Bridging

Can the patient lift buttocks off the bed without assistance? Indication of ability to bear weight while standing (strength). Contraindicated if possible hip/pelvis/lumbar spine fracture.



3. Rolling

Can the patient bend knees up, reach across body with the uppermost arm and roll over onto one side without assistance?



4. Lying - Sitting

Can the patient move from lying to sitting without assistance? If assistance is required do not proceed to standing without obtaining assistance from another team member and/or referring to physiotherapy.



5. Static Sitting Balance

Apply transfer belt for safety. Ensure bed is in its lowest position and patient's feet are flat on the floor. When sitting without back support can the patient keep balance? Can the patient maintain this position if you gently nudge chest? Indicates safety for independent sitting. If the patient cannot maintain balance, do not proceed to standing without obtaining assistance from another team member and/or referring to physiotherapy.



6. Dynamic Sitting Balance

Ensure transfer belt is on. Ensure bed is in its lowest position and patient's feet are flat on the floor. Ask the patient to reach forward to touch your hand. Alternatively, you can ask the patient to try putting on their shoes, but this may be too difficult for some elderly patients. The patient who fails the sitting balance test will likely need 1 or 2 assist to stand up, transfer and ambulate. Do not proceed to standing without obtaining assistance from another team member and/or referring to physiotherapy.



7. Sit to Stand

Ensure transfer belt is on. Ensure bed is in its lowest position and patient's feet are flat on the floor. Place a walker or large heavy chair in front of patient to use for assisting balance if necessary. Can the patient move from sitting to standing without any assistance? Pause in standing - can the patient maintain balance? If the patient cannot maintain balance in stationary standing, do not proceed to walking.

***Mobilization is everyone's responsibility.**

Screening for mobility contributes to safe, early patient ambulation, and protects patients and staff from injury.



8. Static Standing Balance

Ensure transfer belt is on. Place a walker or large heavy chair in front of patient to use for assisting balance if necessary. Can the patient maintain balance if you gently apply pressure to the trunk? Indicates sufficient balance for walking without a walker. Do not proceed to walking if unable to do this safely.



9. Dynamic Standing Balance

Ensure transfer belt is on. Can the patient maintain balance if you ask them to reach forward with hands to touch your hand? Do not proceed to walking if unable to do this safely.



10. Walk

Ensure transfer belt is on. Can the patient march on the spot safely? If so, proceed with walking. Use a walker only if the patient reports using a walker at home - use the same type (wheeled or non-wheeled) as the patient uses at home.

Form No. PHC-PM150A (May-07)

Appendix F: Potential Complications, Assessment, and Management

Potential Complication	Assessment & Interventions
Inadequate Pain Control	<ul style="list-style-type: none"> Assess the insertion site and catheter to ensure integrity of the system. Check that equipment is functioning correctly and that all connections are intact Perform dermatome assessment to determine where epidural is effective Increase infusion rate and/or increase the Patient Controlled Epidural Analgesia (PCEA) dose as identified in the orders Administer breakthrough clinician (RN) bolus dose for pain PRN (if ordered) Include non-pharmacological interventions such as positioning, distraction and relaxation Notify Anesthesiologist once you have reached the maximum parameters allowed in the orders
Increased Sedation and/or Respiratory Depression	<ul style="list-style-type: none"> If POSS 3 and RR 8 or greater: <ul style="list-style-type: none"> Remove PCEA button, stop epidural infusion, and notify Anesthesiology If POSS 3 or greater, and RR less than 8, stop epidural infusion, remove PCEA, and <ul style="list-style-type: none"> If apneic, CALL CODE BLUE Administer O2 as necessary Give naloxone as ordered STAT Call Anesthesiologist STAT Continue to monitor
Displaced Epidural Catheter	<ul style="list-style-type: none"> Ensure occlusive dressing is intact Qshift Ensure connections are secured and taped in place Qshift
Catheter Becomes Disconnected	<ul style="list-style-type: none"> If the catheter becomes disconnected from the infusion, do NOT reconnect it. If the hub remains in-place, <ul style="list-style-type: none"> Cap it with a non-vented cap, or if apart at the catheter connector, wrap the epidural catheter in sterile gauze Call Anesthesiologist, Anticipate removal of the catheter when it is safe to do so depending on the timing of the last dose of anticoagulant. If it was a witnessed disconnection, <ul style="list-style-type: none"> Contact Anesthesiologist, Wrap the ends with sterile gauze and await direction from the Anesthesiologist. If it is possible to reconnect, <ul style="list-style-type: none"> Discard the medication set up including the tubing and set up a new system. (Do not reuse contaminated system cleaning the connectors with an antiseptic is NOT sufficient)
Dressing Becomes Non-Occlusive	<ul style="list-style-type: none"> Reinforce dressing with an occlusive dressing, Reinforce edges with Mepore tape Dressings are changed by Anesthesiologist
Infection	<ul style="list-style-type: none"> Assess epidural site Qshift <ul style="list-style-type: none"> Notify Anesthesiologist of any redness and/or purulent drainage Assess temperature Q4H and PRN <ul style="list-style-type: none"> Notify Anesthesiologist if fever

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