



<p>Team Name: Regional Obstetrical Team</p> <p>Team Lead: Regional Director – Acute Care</p> <p>Approved by: Executive Director – Acute &amp; Chief Nursing Officer</p>	<p>Reference Number: CLI.5810.PL.009</p> <p>Program Area: Obstetrics</p> <p>Policy Section: General</p>
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**POLICY SUBJECT:**

Pain Management in Labour.

**PURPOSE:**

The purpose of this policy is to:

- Decrease obstetrical interventions, increase breastfeeding rates and improve maternal satisfaction by using appropriate pain management methods
- Aid the nurse in identifying non-pharmacological and pharmacological pain relief options.
- Aid the nurse in providing appropriate pain relief options to the patient, including discussion on the risks and benefits of each, based on the situation.
- Decrease suffering in labouring women.

**BOARD POLICY REFERENCE:**

Executive Limitations (EL-01) Global Executive Restraint & Risk Management  
 Executive Limitations (EL-02) Treatment of Clients

**POLICY:**

- Pain in childbirth is very common and women who experience suffering in labour can have long lasting effects such as Post Traumatic Stress Disorder (PTSD).
- All health care providers should have a good understanding of the physiological and psychological management of labour pain.
- In educating staff and patients on both non-pharmacological and pharmacological pain relief methods we can decrease the need for obstetrical interventions and promote a positive childbirth experience and provide excellent, compassionate care to the patient and her family.

## **DEFINITIONS:**

**Acute pain:** The normal, predictable appropriate response to a noxious stimulus or disease process that threatens or produces tissue injury, and that abates following remission of the stimulus or healing of the injury.

**Adverse effect:** Can be termed as “side effect” when judged to be secondary to a main or therapeutic effect but also refers to an unpleasant symptom or event that is due to or associated with a medication such as impairment or decline in the individual’s mental or physical condition, and/or functional or psychosocial status.

**Central Nervous System Control (CNSC):** Methods used to distract the patient and modify the perception of pain. Examples include relaxation and breathing techniques, hypnosis, music, support people.

**Diffuse Noxious Inhibitory Control (DNIC):** Painful stimuli anywhere on the body during a contraction. Examples include sterile water injections, acupuncture.

**Gate Control Theory:** Creating pleasant sensations in the painful area between or during contractions. Examples include massage, ambulation, stretching, stroking, water etc...

**Labour Dystocia:** Abnormally slow progression of labour.

**Nociceptive Pain:** Arises from stimulation of pain receptors within tissue. May be divided into:

- Somatic pain – generally well localized pain that results from the activation of peripheral nociceptors without injury to the peripheral nerve or central nervous system, characterized by sharp, hot or stinging pain which is usually localized to the area of injury.
- Visceral Pain – results from the activation of nociceptors of the thoracic, pelvic or abdominal viscera. It is felt as a poorly localized aching or cramping sensation and is often referred to cutaneous sites.

**Non-pharmacological methods:** Includes such techniques as heat/cold, massage, relaxation, pressure, vibration or therapeutic communication. These techniques are aimed at preventing suffering, not the elimination of pain.

## **Nursing Care –**

**1:1 Nursing care** - where one nurse assumes responsibility for all of the care provided to one patient for the duration of their shift or as long as the patient’s condition requires one to one care. 1:1 care indicates the patient is requiring more intensive care but does not indicate that the nurse must be in continuous presence of the patient.

**Continuous 1:1 Nursing Care** – where one nurse assumes responsibility for all of the care provided to one patient for the duration of their shift and is in continuous presence of the patient or as long as the patient’s condition requires one to one care. Care of the patient

must be assumed by another nurse when the primary nurse goes on break or is required to leave the patient.

**Opioids:** Class of drugs derived from the opium poppy that are generally prescribed to manage pain. Morphine and Fentanyl are the primary opioids used in labour. Opioids seldom eliminate labour pain but can decrease or 'blunt' it and allows for relaxation between contractions.

**Pharmacological methods:** Medication(s) used to reduce or eliminate pain.

**Stages of Labour:**

- First stage is the onset of regular contractions to fully dilated - 10 centimetres (cm). It may have two stages:
  - Latent Phase: The presence of uterine activity resulting in progressive effacement and dilation of the cervix. It is complete when a nulliparous (nullipara) woman reaches 3-4cm dilation and a parous woman reaches 4-5cm. Cervical length should be less than 1cm.
  - Active Phase: The presence of a pattern of contractions leading to a cervical effacement and dilatation after 3-4cm dilatation in a nulliparous (nullipara) woman or 4-5cm dilatation in a parous woman.
  - Transition Phase:
- Second stage is full dilation until fetus is delivered.
- Third stage is from delivery of fetus to delivery of placenta.
- Fourth stage is recovery from delivery of placenta to two hours postpartum.

**Suffering:** Is severe distress associated with events that threaten the person's perception of wholeness, is identified within the spiritual dimensions of quality of life but transcends all dimensions, often occurring when pain is not controlled. A person may have pain and not suffer and suffering may occur without pain. Suffering occurs when a woman is unable to activate her own mechanisms for coping, or they are insufficient for the pain she is feeling.

**IMPORTANT POINTS TO CONSIDER:**

- Pain control in labour is aimed at preventing suffering not the elimination of pain. Pain has a physiologic role in childbirth and supporting the coping mechanisms of the patient is extremely important and requires 1:1 nursing when the patient is in active labour. Working with the pain releases endogenous analgesic substances which decreases the perception of pain and increases maternal confidence and satisfaction.
- *ALL women in labour require non-pharmacological methods of pain management.*
- Discussion with the patient regarding pain control options in labour is done prior to labour, or in early labour, whenever possible and establish a plan of care regarding pain management with the patient as early in labour as possible.
- First stage labour pain is caused by the stretching of the uterine and cervical mechanoreceptors and from the ischemia of these tissues. This pain may be referred to the thighs, back, iliac crests, abdominal wall and gluteal areas. Pain is transmitted

through the T10, T11, T12 and L1 nerves. Transition has a greater nociceptive input as somatic pain from vaginal distention also starts to occur.

- Second stage labour pain is somatic pain caused by the stretching of the vaginal canal, perineum and pelvic floor and ligaments. Pain is transmitted through the pudendal nerve.
- Adverse effects of labour pain may include:
  - Hyperventilation – leading to dizziness, light-headedness, hypoxemia and decreased level of consciousness. Hyperventilation also lessens the amount of oxygen the fetus receives.
  - Neurohumoral effects – may lead to decreased placental perfusion as catecholamine levels increase. May cause a labour dystocia to occur.
  - Psychological effects – unrelieved, severe pain may lead to suffering and may increase the risk of postpartum depression and post-traumatic stress disorder.
- Pain assessment is done on admission and on a regular ongoing basis, dependent on the condition of the patient, stage of labour etc. and documented on the labour record or integrated progress notes. The pain scale from 0 – 10 is used. Assess the following pain parameters with any report of pain:
  - Location.
  - Onset, duration, timing.
  - Quality and pattern.
  - Aggravating/alleviating factors.
- The cause of any unexpected pain is investigated immediately (i.e. chest pain).
- Pain is reassessed after 15-30 minutes of non-pharmacological techniques or parenteral opioids; one hour after oral/intramuscular/subcutaneous pain medication.

### **Benefits of non-pharmacological and pharmacological techniques:**

- May improve comfort in labour by reducing pain or the perception of pain.
- May allow the patient to relax and rest between contractions.
- May help the patient to better cope with labour contractions.
- May help prevent suffering and thereby decreasing the risk of postpartum depression and posttraumatic stress disorder.

### **PROCEDURE:**

**1. NON-PHARMACOLOGICAL TECHNIQUES:** supports natural labour and helps control anxiety/distress. Allows patients to maintain a sense of personal control and to cope better thereby reducing suffering.

#### **1.1 Labour support (CNSC technique):**

- One on one nursing labour support once the patient is in active labour. This includes emotional and physical support/encouragement, provision of information and patient advocacy. One non hospital personal of the patient's choosing is encouraged to stay with the patient at all times. Greater benefit is derived if this support commences in early labour.

## 1.2 Movement (CNSC technique):

- Movement in labour can help decrease the perception of pain and help with labour progression. Encourage walking, birthing ball, frequent position changes (standing, hands and knees, squatting, side to side, sitting, pelvic rocking etc.).

## 1.3 Relaxation/breathing techniques (CNSC technique):

- There are many rhythmic breathing techniques such as slow deep breaths or shallow rapid breathing. The patient should use whatever breathing technique works for her during that stage of labour. Breathing works by distracting the patient and promoting relaxation. Breathing works best when practiced prior to labour. If the patient experiences hyperventilation with breathing, the nurse may need to help guide her breathing to prevent this from occurring. Patients shall be encouraged to vocalize as they feel the need to.

## 1.4 Sterile water injections (DNIC method):

- Safe and simple technique used to help relieve pain, especially back labour.
- Four subcutaneous injections placed in the patient's lower back.
- Releases endorphins to decrease to perception of pain.

### Requirements:

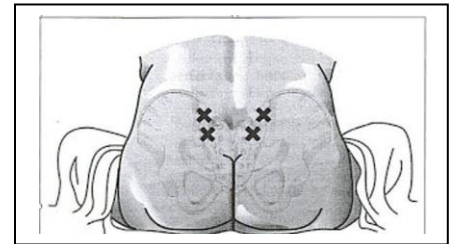
- Staff trained in the procedure.

### Contraindications:

- Infection at the injection site.

### Risks and Side Effects:

- Patients often experience an intense burning sensation during the procedure.
- Redness at injection sites.
- Infection of injection sites.



### Procedure:

- Obtain verbal consent after discussing with the patient the rational/side effects.
- Draw up four syringes of 0.1mL of sterile water each in a tuberculin or 1mL syringe.
- Use a 27 or 30 gauge needle for injection.
- Cleanse the area with 70% alcohol.
- Inject to form small blebs (intradermally) – two over the posterior iliac spines and two 3cms below/1cm medial to the top two sites.  
(The posterior iliac spines are two bony prominences just lateral to the sacrum, below the iliac crest).

**Note:** exact location is not critical to the success of the technique

- It is helpful to have two nurses inject the sterile water rapidly at the same time to decrease the burning sensation. Injecting during a contraction may help decrease the sensation of pain from the injection.
- Avoid rubbing or massaging the area after the injections.
- Relief is usually felt within two minutes and can last 45 minutes - two hours.
- May be repeated PRN q1-2 hours.

### **1.5 Hydrotherapy – warm tub or shower (CNSC technique):**

- Water births are not supported by the region unless done by a primary care provider with training in water births. Patients actively or involuntarily pushing shall exit the tub unless having a planned water birth.
- Patient must be willing to exit the tub if the Fetal Heart Rate (FHR) is abnormal upon auscultation or any other concerns arise.
- Ruptured membranes and/or Group B Strep positive are not contraindications to labour in the tub or shower.
- A patient is never left alone in the tub – a support person or staff must be with her at all times.
- A patient should be in active labour upon entry to the tub to avoid the risk of labour dystocia.

#### **Contraindications:**

- Inadequate level of consciousness (unable to stay awake, unresponsive, unable to follow commands, unsteady walking),
- If the patient has received Morphine within the last two hours the patient is not allowed in the tub and caution should be used when getting into the shower.
- If the patient has received FentaNYL within the last hour the patient is not allowed in the tub. The patient must be off SPO2 monitoring prior to entering the shower.
- Regional anesthesia in situ,
- Atypical/Abnormal FHR,
- Meconium stained fluid,
- Any condition requiring continuous electronic fetal monitoring,
- Rupture of membranes greater than 24 hours,
- Maternal fever,
- Open lesions,
- Infections – HIV, active genital herpes, active hepatitis (B or C),
- Preterm (less than 37 weeks) and/or
- Full dilation (unless having a planned water birth).

#### **Relative Contraindications:**

- Obesity – consider fall risk. Patient must be able to safely climb in and out of the tub.
- Mobility issues – consider fall risk. Patient must be able to safely climb in and out of the tub.

#### **Risks and Side effects:**

- Unintentional water delivery by non-trained personnel with all the potential risks associated with a water birth (infant aspiration, emboli).
- Prolonged baths greater than two hours can slow labour by decreasing natural oxytocin production. The patient shall exit the bath for 15 minutes every two hours while in labour.

#### **Procedure:**

- Keep water temperature slightly above body temperature (36<sup>0</sup> Celsius (C) - 38<sup>0</sup>C) as an increase in maternal body temperature can have a negative impact on the fetal

heart rate by raising the baseline rate and causing the fetus to use up oxygen reserves. Maternal temperature is checked every hour. If above 37.5°C the patient shall leave the tub until her temperature comes down to 37°C or below.

- Fill the tub to the breast level or above on the patient.
- Take maternal vital signs hourly and fetal heart rate & uterine activity as per Fetal Health Surveillance in Labour guideline CLI.5810.SG.002.
- Maintain adequate maternal hydration – this will help keep maternal temperature from rising.
- Encourage the patient to leave the tub at regular intervals to void.
- Ensure the water remains as clean as possible, removing any debris as soon as possible. If stool is passed the patient must exit the tub which must be drained and cleaned. If eligibility criteria are still met the patient may re-enter the tub once it has been cleaned.
- Ensure the area around the tub is kept dry (fall prevention).

#### **Emergency delivery in the tub:**

- Drain the tub as quickly as possible, if there is time to do so.
- If there is not time to drain the tub completely, allow delivery of the head and restitution to occur completely underwater. Air, temperature change and aggressive handling under water may stimulate breathing and lead to aspiration.
- Check for nuchal cord. If a loose cord, slip it over the head or shoulders prior to delivery of the body. If the nuchal cord is tight, try to somersault the infant out. If unable, assist the patient to a standing position so the cord may be clamped and cut.
- Deliver the infant completely underwater then gently bring the infant to the surface, place skin to skin with mom. Maintain the infant's head above the water line.
- Maintain infant normothermia – dry with warm blankets if the infant is above the water line.
- Clamp and cut the cord after it stops pulsating if the infant is vigorous; if the infant is not vigorous, clamp and cut the cord immediately and proceed with neonatal resuscitation.
- Assist the patient out of the tub for delivery of the placenta. This will help accurately assess blood loss and prevent water embolism (rare/theoretical complication).

#### **1.6 Counter pressure or Massage:**

- Patients with back labour may benefit from counter pressure on their sacrum. The pressure is applied at the beginning of the contraction and increase/decrease in strength as the contraction increases/decreases in strength. Pressure is constant during the contraction and removed between contractions. This method helps as touch fibers transmit faster than pain fibers and can help block the transmission of pain. It also helps keep the sacrum in line when the fetal head is pushing it out of line during the contraction.
- Massage of the shoulders, back feet and hands may also be helpful.

### **1.7 Heat/Cold:**

- Depends on patient preference, cold cloths during the pushing stage are often comforting to the patient.
- Hot packs/clothes may be used on the patient's abdomen, back, thighs, shoulders/neck etc. to help alleviate the sensation of pain. Care must be taken with hot packs not to burn the patient.

### **1.8 Distraction:**

- Music, conversation may be used as a coping mechanism and help distract the patient. Some patients will prefer complete quiet while others will like loud music or conversation.

### **1.9 Environment:**

- Maintain a comfortable, private place to labour paying attention to appropriate temperature and noise level.

Others less common: hypnosis, acupuncture, transcutaneous electrical nerve stimulation (TENS) may also be used. Aromatherapy is not supported in our region due to the scent free policy.

**2. PHARMACOLOGICAL TECHNIQUES:** may be used in conjunction with non-pharmacological techniques.

- Patients may not be in the tub while under the effects of an opioid or using nitrous oxide
- Only an epidural has the ability to completely remove labour pain and this may not occur in all cases. Prior to administration, teach patients not to expect complete pain relief, even with an epidural.
- Opioids may also be used to provide 'therapeutic rest' to women with prodromal or early labour which is leading to maternal exhaustion.

#### **Procedure:**

1. Consider non-pharmacological techniques.
2. Discuss with the patient all the options available to help her make an informed decision. Support the patient's decision whenever able (in some circumstances the patient's decision may not be feasible – i.e. requesting an epidural as the fetal head is crowning).
3. Consider all safety concerns such as:
  - Availability of resuscitation personnel and equipment,
  - Monitoring guidelines,
  - Fetal status – do not administer if abnormal fetal heart rate, use caution and discretion with an atypical fetal heart rate and consult primary care provider prior to administration,
  - Stage of labour – a vaginal exam is required immediately (less than 30 minutes) prior to administering any opioid and
  - Allergies or contraindications to the medication/technique.
4. Obtain order from primary care provider.
5. Obtain maternal baseline vital signs (including SpO<sub>2</sub>), uterine activity, pain scale, and fetal heart rate prior to administering.



6. Obtain verbal consent after informing the patient of all benefits, risks and side effects of the medication. Document same.
7. Administer medication as per primary care provider's order. Document same.
8. Evaluate effectiveness of the medication along with any adverse effects that may have occurred. Note effect of opioid on the FHR and maternal vital signs (including SpO<sub>2</sub>).
9. Monitor maternal vital signs q1h and FHR as per Fetal Health Surveillance in Labour guideline CLI.5810.SG.002.

**Documentation:**

- The discussion with the patient regarding: pain control options; benefit/risk and side effects and patient's decision should be documented in the integrated progress notes,
- Obtain an order for pain management from primary care provider as required,
- Document on the Labour Record CLI.5810.FORM.015, the maternal vital signs, vaginal exam, pain scale, contraction pattern and fetal heart rate prior to the administration of the opioid and
- The effects of the opioid on the labour record or integrated progress notes within 15 – 30 minutes of administration.

## Pharmalogical Medications

### 2.1 Nitrous oxide – 50/50 mix of oxygen and nitrous oxide delivered through a mask or mouthpiece

- May be useful during early labour when non-pharmacological techniques have failed, rapid labours, transition, to decrease the urge to push when the patient is not fully dilated, placental removal, suturing and/or for women with needle phobias where an intravenous is required.
- Is systemic, non-cumulative and does not cause respiratory depression in the neonate.
- No effect on uterine contractions; does not slow labour.
- Start inhalation 30 seconds prior to the contraction as it takes 45-60 seconds for maximum effect. Inhalation should end once the contraction does. Continued inhalation may cause an anesthetic effect.
- Palpation of the contractions can help the patient recognize when to start inhaling.
- Use pulse oximetry if maternal oxygen saturations are below 95% or increased maternal sedation.
- The patient may be out of bed and use nitrous oxide as long as she is steady on her feet while doing so.

**Requirements:**

- A scavenger system is required,
- **Must be self-administered** as loss of consciousness can occur if inhaled too long and
- The patient must be able to take deep regular breaths. The amount of nitrous oxide that reaches the brain is directly proportional to how much is inhaled.

**Contraindications:**

- Allergy to the medication,
- Maternal respiratory depression or impaired oxygenation,
- Uncorrected hypotension or hypovolemia, ,
- Cannot hold the facemask/mouthpiece,
- Has impaired consciousness and/or
- Has pernicious anemia and/or is taking Vitamin B12 supplements for anemia.

**Relative contraindications:**

- Has received intravenous opioids – assess sedation level - if impaired consciousness do not administer.

**Risk and Side effects:**

- Dizziness,
- Drowsiness,
- Numbness,
- Tingling,
- Nausea/vomiting,
- Lethargy,
- Confusion,
- Throat irritation and/or dry mouth,
- Hyper/hypoventilation and/or
- Poor recollection of labour.

**Procedure:**

- As above (Pharmacological: Techniques: Procedure).
- Inform the patient she must take a deep breath to release the demand valve. A hissing noise indicated that the valve is open. Scavenge exhaled gas by exhaling into the mask/mouthpiece.
- Instruct the patient to remove the mask/mouthpiece between contractions and breathe normally.
- Patient is to remove the mask mouthpiece if she feels unduly sedated or nauseated. Side effects will quickly dissipate once inhalation of the nitrous oxide stops.

**2.2 Opioids:****Contraindications for all opioids:**

- No consent/patient refusal,
- Allergies to the medication,
- Abnormal fetal heart rate,
- Respiratory depression/compromise and/or
- Uncorrected hypotension or hypovolemia.

**Relative contraindications:**

- Preterm labour as the fetus is more susceptible to the effects of opioids and/or
- Atypical fetal heart rate.

**Risks and side effects maternal:**

- Maternal respiratory depression,
- Dizziness,
- Altered mental status,
- Nausea and vomiting,
- Pruritus,
- Delayed gastric emptying,
- Slowing of labour and/or
- Increased risk of needed additional interventions (i.e. intravenous, electronic fetal monitoring).

**Risks and side effects fetus/neonate:**

- Decrease in fetal heart rate variability and accelerations,
- Neonatal respiratory depression at birth and/or
- May cause an uncoordinated suck in the neonate and impact early breastfeeding behaviours.

**Emergency Protocol for respiratory depression:**

- If injecting a narcotic stop the injection immediately.
- Call for help.
- Call primary care provider. If patient unresponsive, responsive to pain only or not breathing call anesthesia as well.
- Stimulate/encourage the patient to deep breath.
- Ensure airway is open – chin lift or jaw thrust as needed
- Establish oxygen at 5L per nasal prongs or 5-10L per partial/non rebreath mask – titrate to oxygen saturations to maintain saturations above 94%.
- Monitor respiration and SpO<sub>2</sub> continuously, document every five minutes on the labour record until respirations are 10 or above and sedation score is two or less.
- Establish continuous electronic fetal monitoring.
- Ensure patient is not lying supine – use a wedge or turn patient laterally (left preferred).
- Administer Naloxone if respiratory rate is eight or less, or sedation score is four.

**Naloxone Dosing:**

- Using a 5mL syringe draw up 1mL Naloxone (0.4 mg/mL). Add 3mL normal saline. Final concentration is 0.1mg/mL.
- Give 0.1 mg intravenous every two minutes until respirations are 10 or above to a maximum of four doses (0.4mg).
- Have primary care provider or anesthesia assess narcotic dose

**Sedation Score:**

- 1 - None (alert and awake).
- 2 - Drowsy, easily rousable.
- 3 - Drowsy, difficult to rouse.
- 4 - Responds only to pain stimuli (call physician STAT).
- SL - Asleep, rouse patient to determine sedation score.

### 2.2.1 Morphine

- Given subcutaneous, intravenous or intramuscular in labour.
- DimenHYDRINATE (Gravol®) intravenous /oral or Metoclopramide (Maxeran®) subcutaneously is given concurrently to decrease the side effect of nausea.
- Effective in 20-40 minutes for subcutaneous injection and has 3-4 hours of effect.
- Has the potential to cause respiratory depression, especially if used in conjunction with other narcotics or multiple doses are given. Naloxone (Narcan®) and positive pressure ventilation equipment should be readily available in case of maternal respiratory depression.
- Do not give if delivery is anticipated within three hours due to the risk of neonatal respiratory depression.

#### Indications for Morphine (instead of FentaNYL):

- Patient preference
- Early active labour or when pain relief required for a longer period
- Prodromal labour or when therapeutic rest is needed
- Women wanting to avoid an intravenous

#### Procedure:

- As above (Pharmacological: Techniques: Procedure).
- Follow standard orders – Labor and Delivery CLI.5810.FORM.051 for dosing.
- Contact primary care provider if respirations are less than 10/minute or sedation score is greater than two; initiate 18 gauge intravenous if not previously in place, prepare to assist with ventilation and give Naloxone.

### 2.2.2 FentaNYL

- Is a lipid soluble synthetic opioid that is distributed into fat and skeletal muscle and then is released into the blood. It has a cumulative effect which increases the risk of maternal respiratory depression over time.
- Continuous intravenous fluids are required minimum 50mL an hour or as per primary care providers orders
- Usually given intravenous push.
- Adequate initial dosing is essential. Patients will often not get good pain relief until the second or third dose.
- Has a shorter half-life than Morphine so may be given in second stage if delivery is not expected within one hour.
- Onset of action is 3-5 minutes; duration 30-60 minutes (duration increases with subsequent dosing).
- Maximum dosing is 200micrograms (mcg)/hour.
- Naloxone (Narcan®) and positive pressure ventilation equipment is readily available in case of maternal respiratory depression.
- Re-evaluate pain control options if use is greater than six hours or if 200mcg is not effective (as per patient).
- 1:1 nursing is required from the first dose to one hour after the last dose and sedation score is two or less.

**Indications for FentaNYL (instead of Morphine):**

- Rapidly progressing labour,
- Patients requiring pain relief when an epidural is delayed (must inform the anesthesiologist if an opioid is given prior to the epidural) or
- Where pain relief is needed for a short time period (less than two hours).

**Contraindications specific to FentaNYL:**

- Monoamine oxidase inhibitor (MAOI) use within two weeks,
- Liver/kidney disease and/or
- 1:1 nursing is not available.

**Relative Contraindications specific to FentaNYL:**

- Body mass index (BMI) greater or equal to 40 (FentaNYL's high affinity to fat can lead to latent respiratory depression after delivery when it mobilizes from the fat to the blood)
- Women who have hypertensive disorder of pregnancy with organ involvement (i.e. abnormal laboratory results),
- Women who have received morphine within four hours and/or
- Women with a history of a difficult intubation.

**Procedure:**

- As above (Pharmacological: Technique: Procedure).
- Initiate 18 g intravenous (IV) or ensure current IV is patent.
- Follow standard orders – Labor and Delivery for dosing and timing.
- Establish continuous SpO<sub>2</sub> monitoring prior to dosing and continue for a minimum 30 minutes. If oxygen saturations stay equal to or above 94% on room air, then intermittent SpO<sub>2</sub> is done for five minutes every 30 minutes. If higher doses of fentaNYL are used (i.e. four or more doses) then continuous SpO<sub>2</sub> monitoring is initiated or intermittent SpO<sub>2</sub> for five minutes every 15 minutes. (BMI greater or equal to 40 and/or patients with compromised respirations must stay on continuous). Document on the labor record at minimum every 1h if continuous or every intermittent check. Set audible alarm at 94%.
- Give FentaNYL undiluted, slow intravenous push over one minute.
- Monitor closely maternal vital signs – Respirations and sedation score are continuously monitored (document every hour).
- Initiate oxygen if saturations are below 94%. Use minimum amount needed to maintain oxygen saturations at or above 94%. Nasal prongs or face mask may be used.
- Contact primary care provider if respirations are less than 10/minute or sedation score is greater than two; prepare to assist with ventilation and give Naloxone.

**2.3 Epidural (not available at all sites):**

See Epidural Analgesia: Continuous and Patient Controlled (PCEA) in Labouring Women, CLI.5810.SG.001.

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