1.0 GUIDELINE STATEMENT

This document provides guidance on best practice in the assessment and management of induction or augmentation of labour by Oxytocin infusion to effect uterine activity that is sufficient to produce cervical change and fetal descent while avoiding excessive uterine activity and fetal compromise.

*Induction of labour* is indicated when the risk of continuing pregnancy exceeds the risk associated with induction of labour. Reasons for induction of labour must be compelling, convincing, consented and documented.

*Augmentation of labour* is indicated in the event of dystocia due to inadequate contractions, despite strategies such as the appropriate use of analgesia, hydration, rest and amniotomy.

2.0 INDICATIONS AND CONTRAINDICATIONS

2.1 Indications

2.1.1 High Priority Indications

- severe pre-eclampsia, eclampsia
- significant maternal disease not responding to treatment
- significant, but stable antepartum hemorrhage (APH)
- chorioamnionitis
- suspected fetal compromise
- term prelabour rupture of membranes (PROM) with maternal group B streptococcus (GBS) colonization (culture positive)

2.1.2 Other Indications

- post dates pregnancy of 41 weeks or greater
- twin pregnancy of 38 weeks or greater
- diabetes mellitus (the quality of glucose control may dictate urgency)
- pre-eclampsia
- autoimmune disease at term or near term
- intrauterine growth restriction (IUGR)
- premature rupture of membranes at or near term (GBS culture negative)
- intrauterine fetal death in current pregnancy
- logistical problems (e.g. rapid labour, distance to hospital)

### 2.1.3 Unacceptable Indications
- suspected fetal macrosomia
- absence of fetal or maternal indication
- caregiver or patient convenience

### 2.2 Contraindications

#### 2.2.1 Any contraindication to labour including
- placenta previa, vasa previa or cord presentation
- abnormal fetal lie or presentation (e.g. transverse or footling breech)
- prior classical or inverted T uterine incision
- significant previous uterine surgery (full thickness myometrium)
- active genital herpes
- pelvis structural deformities (e.g. history of pelvis fractures)
- invasive cervical carcinoma
- previous uterine rupture

### 3.0 Adverse Effects of Oxytocin

#### 3.1 Fetal compromise due to excessive uterine activity

#### 3.2 Uterine rupture due to excessive uterine activity

#### 3.3 Water intoxication due to antidiuretic effect with Oxytocin doses greater than 40 milliunits per minute

### 4.0 Prior to Procedure

#### 4.1 The Primary Healthcare Provider

##### 4.1.1 Complete a thorough clinical evaluation of the mother and fetus including:
- Confirmation of gestational age
- Presentation of fetus
- Bishop score
- Assessment of fetal wellbeing

##### 4.1.2 Explain the procedure to the patient and obtain an informed consent as per AHS/Covenant Health Consent Policy Treatment/Procedure(s) PRR-01
- Induction of Labour – written consent required (AHS/Covenant Health Consent to Treatment form #09741)
- Augmentation of labour – verbal consent required

##### 4.1.3 May consider an obstetrical consult when the gestational age is less than 37 weeks or when the expected date of confinement is in question.

##### 4.1.4 Consider availability of caesarean section resources should it be required.
4.1.5 Oxytocin infusion should not be administered:
- Within 6 hours of prostaglandin administration
- Within 30 minutes of the removal of Cervidil
- Within 4 hours of a misoprostol dose (fetal demise)

4.1.6 Provide an order in initiate Oxytocin therapy per guideline.

4.1.7 Must be readily available during the induction or augmentation.

4.2 The Registered Nurse

4.2.1 Review the maternal history (gestational age, fetal presentation, Bishop score, current and past obstetrical history). Complete maternal and fetal assessment including:
- Maternal vital signs
- Fetal heart rate (FHR)
- Uterine activity

4.2.2 Obtain and classify and electronic fetal monitor tracing (minimum of 20 minutes) prior to the initiation of the oxytocin infusion. Continuous electronic fetal monitoring (EFM) is required during procedure. (Refer to Fetal Health Surveillance policy).

4.2.3 Establish and intravenous (IV) of normal saline or ordered solution with #18 gauge angiocatheter.

4.2.4 Provide initial and ongoing patient teaching.

5.0 PROCEDURE

5.1 Complete an independent double check when preparing 20 units of Oxytocin in 1000ml normal saline or ordered solution to result in a concentration of 1.0 milliunits per ml.

5.2 Oxytocin is delivered by a constant infusion pump through a secondary IV piggy-backed to the main IV line as close to the venipuncture site as possible using a needleless connector.

5.3 Complete an independent double check when setting the infusion pump medication program calculator.

5.4 Start the Oxytocin infusion at 1-2 milliunits per minute. (low dose)

5.5 Increase Oxytocin infusion by 1-2 milliunits every thirty (30) minutes, until adequate uterine response is obtained to achieve active labour, to a maximum rate of 20 milliunits per minute.

Administration of greater than 20 milliunits requires primary care provider reassessment and obstetrical consult. High dose protocols of greater than 2 milliunits increments should be guided by obstetrical consult and with extreme caution.

Note: During augmentation adequate contractions may be achieved at a lower dose of Oxytocin.

5.6 Assess maternal blood pressure and pulse with each increase in the Oxytocin infusion rate or more frequently if clinically indicated. Assess maternal temperature every 4 hours.
6.0 MANAGEMENT OF EXCESSIVE UTERINE ACTIVITY

Tachysystole* - greater than 5 contractions in a 10 minute window averaged over a 30 minute period.

* Should always be characterized with an interpretation of the FHR tracing

- Timing – doubling or tripling may occur
- Resting Tone – resting period between contractions of less than 30 seconds or the uterus does not relax between contractions
- Duration – contractions lasting more than 90 seconds

6.1 Management of tachysystole or hypertonus with abnormal FHR includes:

6.1.1 Stop the Oxytocin infusion (half life of Oxytocin is approximately 5 minutes).
6.1.2 Implement intrauterine resuscitation measures:
   • Maternal position changes
   • Oxygen
   • IV fluid bolus of 500ml Normal Saline
6.1.3 Notify the primary care provider
6.1.4 Expedite delivery should tachysystole not resolve

If these actions do not resolve the issue, nitroglycerine by sublingual spray may be administered at the discretion of the physician.

6.2 Releasing the Oxytocin Infusion

Data is limited to guide the decision about timing and dosage of subsequent IV oxytocin administration. Physiologic and pharmacologic principles may be used to determine the most appropriate dosage. The infusion rate is determined by the physician order.

7.0 DOCUMENTATION

7.1 Initiate a partogram once an Oxytocin infusion is started. Multidisciplinary notes are used to document information not recorded on the partogram.

7.2 The following is a list of recommended parameters for documentation but not limited to:

7.2.1 Maternal observations and assessments including: blood pressure, pulse, respirations, and temperature
7.2.2 Fetal heart rate, characteristics, and classification as outlined in Fetal Health Surveillance policy.
7.2.3 Maternal and fetal responses to interventions
7.2.4 Initiation of Oxytocin infusion and rate changes
7.2.5 Uterine activity – frequency, duration, contraction strength, and resting tone
7.2.6 Patient teaching
8.0 REFERENCES


AHS DTHR Medication-Preparation, Administration, Disposal Policy No. CC-VIII-90.

AHS Consent to Treatment/Procedure(s)-PRR-01.


SYNTOCINON STANDARD INFUSION FOR INDUCTION/AUGMENTATION
(Dilution: 20 units Syntocinon/1000 mL of \( \frac{2}{3} - \frac{1}{3} \). Please substitute NS if diabetic patient.)

<table>
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<th>Time start</th>
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<th>Time start</th>
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The above protocol is based on SOGC guidelines. While the \( \frac{1}{2} \) life of Syntocinon is but a few minutes, the effect on the uterus for each dose increment takes 30 minutes to occur. Therefore rate increases more frequent than q20-30 min are NOT recommended.

- Baseline NST and Vital Signs (VS).
- Electronic Fetal Monitoring (EFM) until patient is in active labour. Once labour is established, Intermittent Auscultation (IA) may be substituted, and the patient ambulated as long as monitoring is reassuring. Notify physician at end of each column with an update.
- Monitor VS q 5 min x 20 min, then q 10-15 min. If normotensive in 1st hour, BP and pulse may be hourly. If hypertensive, BP and pulse q 15 min.
- Diet: _____________________________
- Amount and frequency of rate increase: mu/min every 30 minutes. Max rate: _______________.

Doses in this range require a consult.
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<th>BASELINE PATIENT HISTORY</th>
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<tr>
<td>Gravida</td>
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<td>Reason for Induction</td>
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<td>Significant Patient History</td>
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<th>PATIENT QUESTIONS Y/N</th>
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<th>Call #2 at:</th>
<th>Call #3 at:</th>
<th>Call #4 at:</th>
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<tbody>
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<td>Are you having 5 contractions in 10 minutes?</td>
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<td>Are your contractions 2 minutes long or longer?</td>
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<td>Has your water broken?</td>
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<td>Do you have vaginal bleeding like a period?</td>
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<td>Is your baby moving more/less than usual?</td>
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<td>Are you having any nausea or vomiting?</td>
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<th>ACTION TAKEN Y/N</th>
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<tr>
<td>Patient told to return to hospital</td>
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<tr>
<td>Patient told to pull insert</td>
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<tr>
<td>Next call back time/date</td>
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</tbody>
</table>

| Nurse's Signature: |

**CONSIDERATIONS FOR REGISTERED NURSES**

- The patient is directed to call approximately every 4 hours after discharge.
- The patient should be directed to call at night only if she is awake.
- In the event that the patient doesn’t call back (except during the night), the staff should initiate a call to her after one hour has elapsed.
- If the patient answers yes to any of the above questions or her contractions are greater than (> 5/10 minutes she should be directed to pull the string to remove the insert and come directly to the hospital.
- If she says yes to any of these questions she should be told to come to the hospital.

**COMMENTS**