Signs and Symptoms of Imminent Delivery

The following signs and symptoms indicate that delivery is imminent and that preparations for childbirth should be made at the scene.

- Regular contractions lasting 45-60 seconds at 1-2 minute intervals. Intervals are measured from the beginning of one contraction to the beginning of the next. If contractions are more than 5 minutes apart, there is generally time to transport the mother to a receiving hospital.
- The mother has an urge to bear down or has a sensation of a bowel movement.
- There is a large amount of bloody show.
- Crowning occurs.
- The mother believes delivery is imminent. If any of these signs and symptoms are present, the EMS crew should prepare for delivery. Delay or restraint of delivery should never be attempted in any fashion. If complications are anticipated or an abnormal delivery occurs, medical control may recommend expedited transport of the patient to a medical facility.

Preparing for Delivery

When preparing for delivery in the prehospital setting, the paramedic should attempt to provide an area of privacy. The mother should be positioned on a bed, stretcher, or table that has a surface long enough to project beyond the mother's vagina. The delivery area should be as clean as possible and covered with absorbent material to guard against staining and contamination by blood and fecal material. The mother should be placed on her back with her knees flexed and widely separated (or in another position preferred by the mother), and the vaginal area should be draped appropriately. If delivery occurs in an automobile, the mother should be instructed to lie on her back across the seat with one leg flexed on the seat and the other leg resting on the floorboard. If available, a pillow or blanket should be placed beneath the mother's buttocks to facilitate delivery of the infant's head. The mother's vital signs should be evaluated for baseline measurements, and fetal heart rate should be monitored for signs of fetal distress. Per local protocol and medical control, the paramedic should consider maternal oxygen administration.
The paramedic should coach the mother to bear down and push during contractions and to rest between contractions to conserve strength. If the mother finds it difficult to refrain from pushing, she should be encouraged to breathe deeply or "pant" through her mouth between contractions to prevent glottic closure. Deep breathing and panting help decrease the force in bearing down and promote rest.

Reference: Section 5, p.153

Premature Labour and Delivery

Management

As for the **Emergency Delivery Standard**, with the following specifics:

1. Prepare for a precipitous delivery and possible breech presentation.
2. Prepare for full neonatal resuscitation (CPR).
3. Attempt to deliver the head in a very slow, controlled fashion.
4. Handle the infant with extreme care and gentleness.
5. Initiate immediate warming (blanket, plastic wrap, silver blanket) and resuscitation.

Guidelines

Infants born between 20 –25 weeks of gestation may be stillborn or die quickly. Initiate immediate resuscitation and rapid transport. Attempt to contact the receiving or base hospital physician as soon as possible for further direction. Reassure the mother that everything possible is being done for the baby, but do not give false hope.

If the infant is obviously dead –e.g. foul body odor, skin blistered, skin/tissue Deteriorated/discoloured, head soft- do not resuscitate. Advise the mother as gently as possible. Allow her to see the infant if she so desires. Provide emotional support.

Reference: Section5, p.166

APGAR Score

The Apgar score is an objective method of evaluating the newborn's condition. It is generally performed at 1 minute and again at 5 minutes of age. However, assessment of the infant should begin immediately at birth. If the infant requires interventions based on assessment of respirations, heart rate, or colour, they should be instituted promptly. Such interventions must not be delayed for an Apgar score. A delay could be of critical importance, particularly in the severely asphyxiated infant.

While the Apgar score is not useful as a basis for decision-making at the beginning of resuscitation, it may be helpful for assessing the infant's condition and effectiveness of the resuscitative effort. Thus, an Apgar score should be assigned at 1 and 5 minutes of age when possible. If the 5 minute Apgar score is less than 7, additional scores should be obtained every 5 minutes for up to 20 minutes or until two successive scores are 8 of greater.

Reference: Appendix 41

APGAR Scoring Chart

Assessment Parameters	0	1	2
A: Appearance	Blue or Pale	Body Pink, extremities blue	Entirely pink
P: Pulse	Absent	< 100	>100
G: Grimace (reflex irritability)	Absent	Grimace	Cough, cry or sneeze
A: Activity (muscle tone)	Limp	Some extremity flexion	Active motion
R: Respiration	Absent	Weak cry, hypoventilation	Strong Cry

TOTAL SCORE: 0-10 (the lower the score, the more depressed the infant)

- 7 - 10 = OK;
- 4 – 6 = moderately depressed;
- 0 – 3 = severely depressed.

Note: Any resuscitative effort should be based on HR(pulse), respiratory activity and colour, rather than the entire APGAR score.
If the initial score is <7, record every 5 minutes for a total of 20 minutes.

Many women often experience "false labor" before "true labor" actually begins. False contractions may begin as early as three or four weeks before the termination pregnancy. Contractions, show, the cervix, and fetal movement all are vital in distinguishing between true and false labor (see Table 2-1).

FACTOR	TRUE LABOR	FALSE LABOR
Contractions	Produce progressive dilation and effacement of the cervix. Occur regularly and increase in frequency, duration, and intensity.	Do not produce progressive dilatation and effacement. Are irregular and do not increase in frequency, duration, and intensity.
Show	Is present.	Not present. May have brownish discharge that may be from vaginal exam if within the last 48 hours.
Cervix	Becomes effaced and dilates progressively.	Usually uneffaced and closed.
Fetal Movement	No significant change, even though fetus continues to move.	May intensify for a short period or it may remain the same.

a. Contractions.

(1) True labor. The contractions of true labor produce progressive dilatation and enfacement of the cervix. These contractions occur regularly and increase in frequency, duration, and intensity. The discomfort of true labor contractions usually starts in the back and radiates around to the abdomen and is not relieved by walking.

(2) False labor. False labor contractions are referred to as Braxton Hicks contractions. They do not produce progressive cervical effacement and dilatation. They are irregular and do not increase in frequency, duration, and intensity. Discomfort is located chiefly in the lower abdomen and groin area. Walking often offers relief.

b. Show. This is another sign of impending labor. After the discharge of the mucous plug that has filled the cervical canal during pregnancy, the pressure of the descending presenting part of the fetus causes the minute capillaries in the cervix to rupture. This blood is mixed with mucus and therefore has a pink tinge.

(1) True labor. Show is usually present in true labor. There will be pinkish mucus or a bloody discharge. This mucus or discharge may also be from the mucous plug from the cervix.

(2) False labor. Show is not present in false labor. However, the mother may have an old, brownish discharge especially if she had a vaginal exam within the last 48 hours.

c. Cervix.

(1) True labor. In true labor, the cervix becomes effaced and dilates progressively. This change can be identified within an hour or two.

(2) False labor. In false labor, the cervix is usually un-effaced and closed. There is no change identified if the cervix is rechecked in an hour or two.

d. Fetal Movement.

(1) True labor. There is no significant change in fetal movement even though the fetal continues to move.

(2) False labor. Fetal movement may intensify for a short period or it may remain the same.

2-3. OVERVIEW OF THE LABOR PROCESS-FOUR STAGES

a. First Stage of Labor. The first stage of labor is referred to as the "dilating" stage. It is the period from the first true labor contractions to complete dilatation of the cervix (10cm) (see figure 2-2). The forces involved are uterine contractions. The first stage of labor is divided into three phases:

(1) Latent (early) or prodromal.

(2) Active or accelerated.

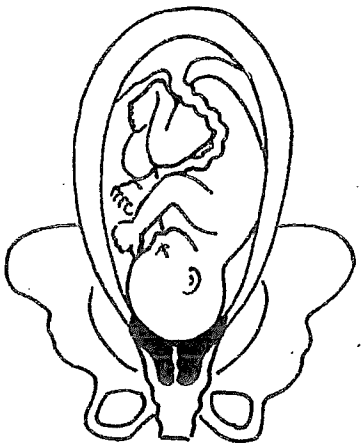
(3) Transient or transitional.

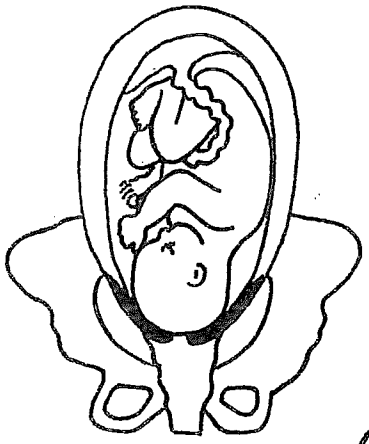
b. Second Stage of Labor. The second stage of labor is referred to as the "delivery or expulsive" stage. This is the period from complete dilatation of the cervix to birth of the baby. The forces involved are uterine contractions plus intra-abdominal pressure.

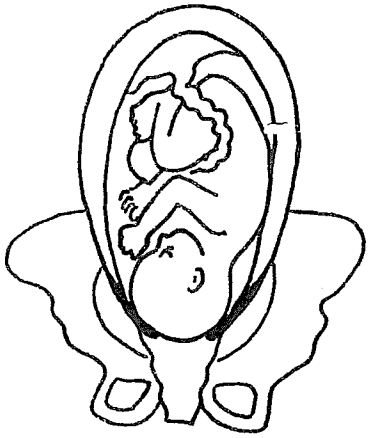
c. Third Stage of Labor. The third stage of labor is referred to as the "placental" stage. This is the period from birth of the baby until delivery of the placenta. The forces involved are uterine contractions and intra-abdominal pressure.

d. Fourth Stage of Labor. The fourth stage of labor is referred to as the "recovery or stabilization" stage. This period begins with the delivery of the placenta and ends when the uterus no longer tends to relax. The forces involved are uterine contractions

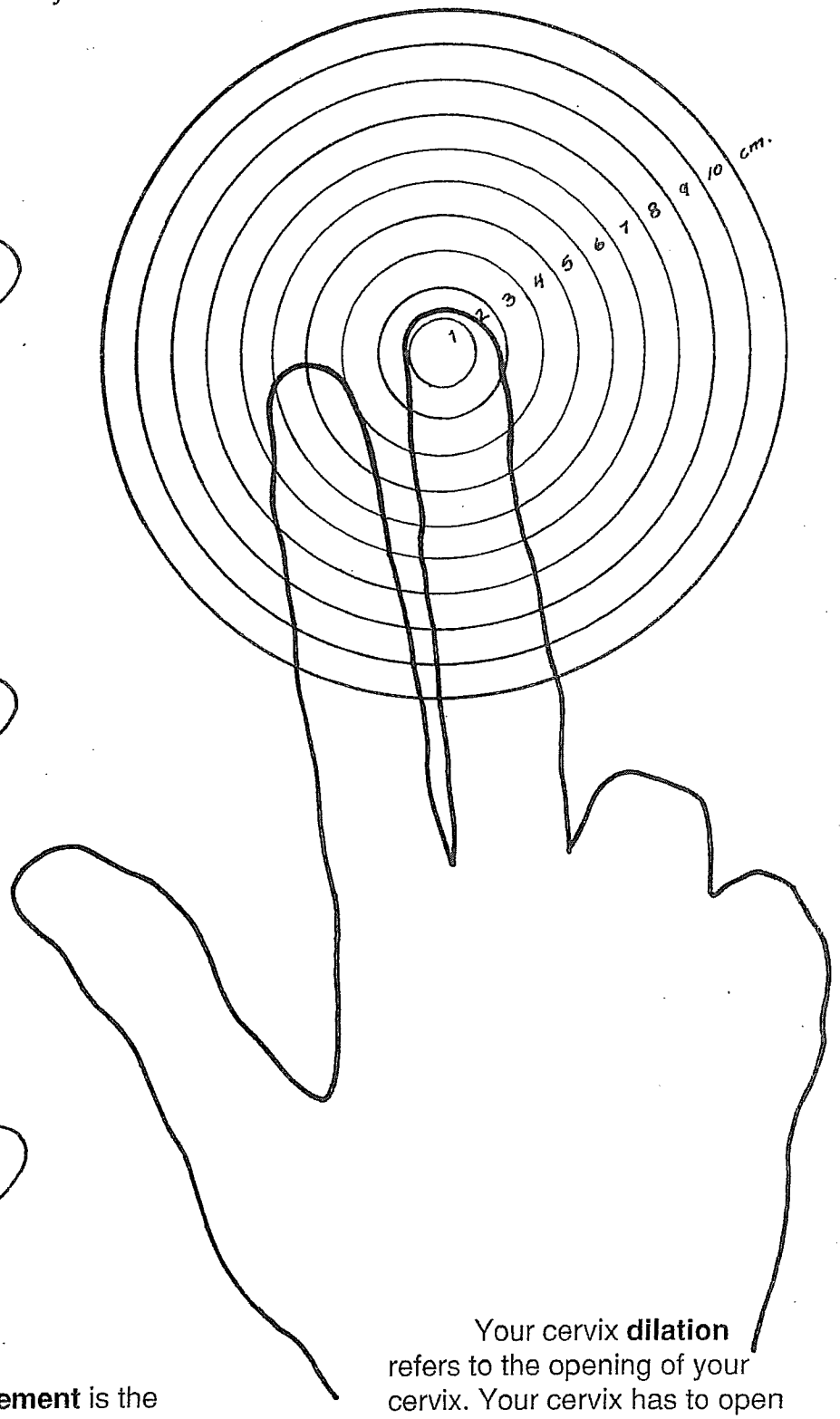
Here are some drawings to show you what is happening to you and your baby.







Your cervix **effacement** is the thinning out of the cervix so the baby can come out more easily.



Your cervix **dilation** refers to the opening of your cervix. Your cervix has to open 10 centimetres before your baby can come out.

Health Canada
Santé Canada

Sioux Lookout Zone
Nursing Station: _____

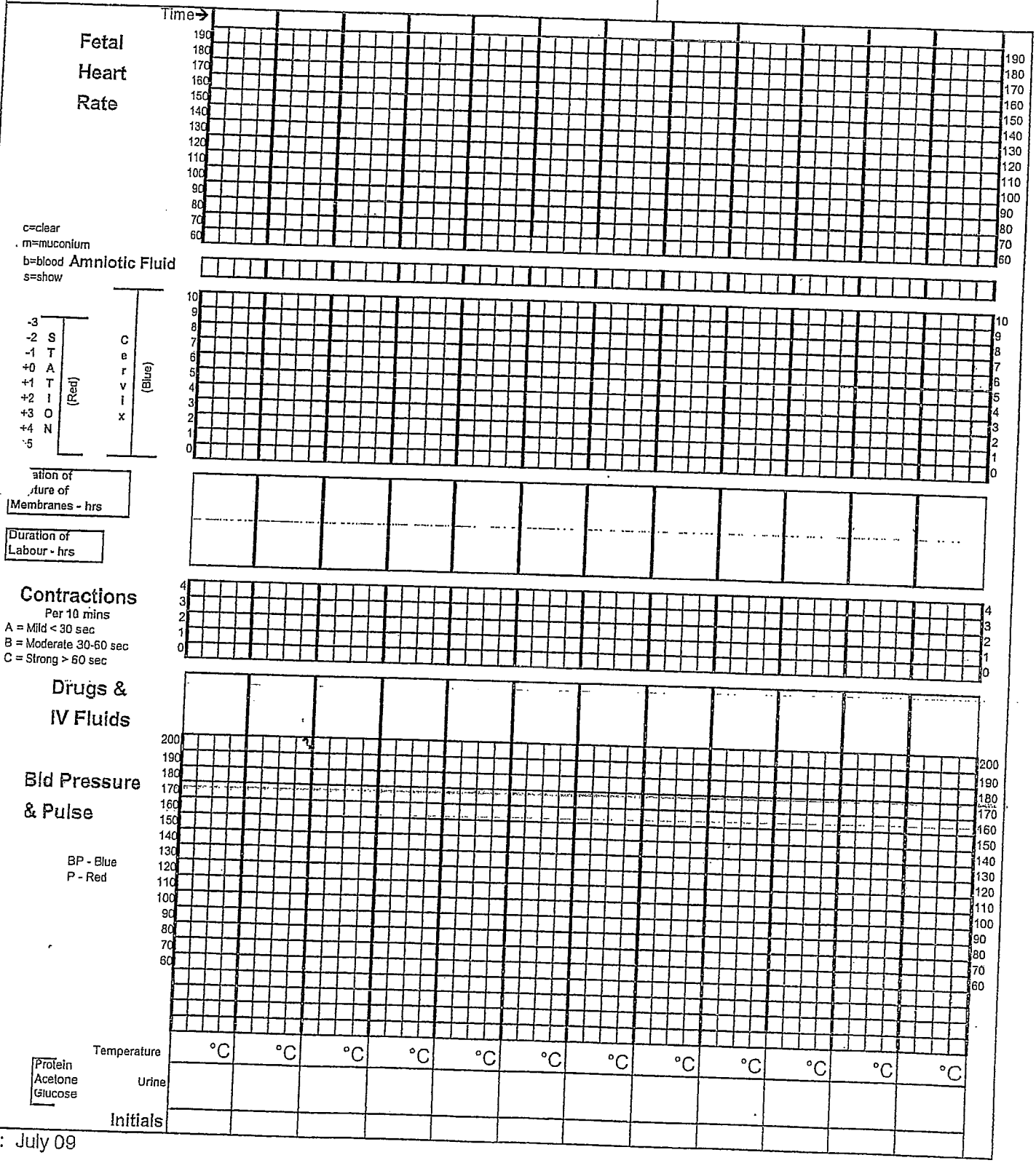
PROGRESS OF LABOUR

ATE	EDC	PARITY

SET LABOUR
H D M

Membranes Ruptured
H D M

ALLERGIES



Sioux Lookout Zone Nursing Office, Health Canada - First Nations Inuit Health

SUMMARY OF LABOUR & DELIVERY

SUMMARY OF MEDICATIONS (ANALGESICS, ANAESTHETICS, OXYTOCICS)

ADDRESSOGRAPH

Presented at:	Date		Time		**Dr. Consulted**	Name						Time		
Duration of Labour	**I**	Hours	Mins		**II**	Hours	Mins	**III**	Hours	Mins	**Total**	Hours	Mins	
Membranes	☐ Ruptured for ____ hrs				☐ Spontaneous		Time	☐ A.R.M. in Labour					Time	
Amniotic Fluid	☐ Clear				☐ Meconium									
Oxytocin Injection	☐ 10 u IM or ☐ 5 u IV push				Site			Time			Initials			
Oxytocin Infusion	Circle 10 u / 20 u in 1 L Ringers				Rate____ml/hr			Time Started			Initials			

SUMMARY OF FIRST STAGE (INERTIA, DISPROPORTION, STIMULATION, TRIAL, FEOTAL DISTRESS, ABX FOR GROUP B STREP, MED ANALGESIC)

SECOND STAGE (PRESENTATION, CORD COMPLICATIONS, ROTATION, EPISIOTOMY, TEARS)

Time of Delivery	Hour	Day	Month	Year	Spontaneous	☐	Episiotomy	☐	Tear	☐

PLANENTAL ABNORMALITIES (CORD, VESSELS, MEMBRANES IN TWINS)

DELIVERED BY

THIRD STAGE TIME SPONTANEOUS MANUAL REMOVAL ESTIMATED BLOOD LOSS_____cc

SUMMARY OF INFANT'S CONDITION AT BIRTH (RESUSCITATION, ABNORMALITIES, GESTATIONAL AGE)

SUMMARY OF POSTPARTUM COURSE (INFECTION, HAEMORRHAGE, HYPERTENSION, EPISIOTOMY, MEDICATIONS)

POSTPARTUM HB_____

Discharged to _____ Date _____ Time_____

Written by_____

Ontario

Office of the Registrar General
P.O Box 4600
189 Red River Road
Thunder Bay ON P7B 6L8

*This form is to be sent within 48 hours to the Division Registrar of births, deaths. (The *Vital Statistics Act*, Sec. 8)
*This is a permanent legal record.
*Type or print plainly in blue or black ink and complete all items.

Notice of Live Birth or Stillbirth

Form 1

Mother's Information

Health Card Number

1. Current Legal Surname (Last Name) | First and Middle Names

2. Legal Surname at Birth (maiden name) *(optional)* | 3. Age | 4. Date of Birth: Year / Month (by name) / Day | 5. Number of Previous Births: Live Births / Stillbirths

6. Permanent Address
Number, Street name | City, Town or Village | County/District

Province | Postal Code | Telephone

...'s Information

...ce of Birth

☐ Home ☐ Hospital ☐ Other, *specify:* _____

Full Name of Hospital
(If not hospital give exact Location where birth occurred)

... Date of Birth: Year / Month (by name) / Day | 9. Sex of Child | 10. Birthweight *(grams)* | 11. Gestation Period *(in complete weeks)*

12. Was Child Born Alive
☐ Yes ☐ No

13. Kind of Birth
☐ Single ☐ Twin ☐ Triplet ☐ Other

14. Order of Birth
(If multiple birth, state whether this child was born 1st, 2nd, 3rd, etc.)

...ertification *(Name of attendant and signature of attendant at this birth must be the same)*

...I certify that I was the attending
☐ Physician ☐ Midwife ☐ Other, *specify:* _____

16. Attendant Registration / Licence Number

...Name of Attending Physician, Midwife or Other *(please print)*
Surname (Last Name) | First and Middle Names

...Mailing Address
Number, Street name | City, Town or Village | County/District

...ince | Postal Code | Telephone

Signature of Attendant | Date Signed: Year / Month (by name) / Day

Pain Management in Labour and Delivery

!! *REMEMBER: HER PAIN IS REAL!*
Under-treatment of pain for those with dependence is more of a trigger than giving opiates. Ask and assess level of pain. Honour her choices.

Pain Management Options

- Support by caregivers, family, friends, doulas (professional labour support)
- Comfort measures in labour (e.g., dim lights, back massage, change of position, walking, music, ice chips, showers, etc.)
- Opioid analgesia (morphine fentanyl) - variety of routes can be used
- Epidural anaesthesia usually works well for substance-dependent women and may be preferred
- **!! Mixed agonists-antagonists are CONTRAINDICATED for acute pain management of opiate-dependent patients e.g., nalbuphine (Nubain), pentazocine (Talwin), butorphanol (Stadol)**

In Labour

- If on methadone or buprenorphine, maintain patient on regular dose
- If in withdrawal from opiates, treat appropriately (see pages 26-28)
- If analgesia required, use any option above and recognize that cross-tolerance to opiates may require increased dosing
- Many substance-using women have a lower pain threshold

- Fetal heart tones may have decreased variability with opiate, alcohol or sedative use; monitor fetus closely for other parameters of fetal well-being
- Consider consulting anaesthesia and pediatrics

Postpartum

- Treat pain with ibuprofen and/or narcotics (e.g., oxycodone, or hydromorphone – give a 3-5 day quantity); re-evaluate long-term use of analgesics
- Consider patient-controlled analgesia (PCA) or patient-controlled epidural anaesthesia (PCEA), if available, after a caesarean section

Factors That May Affect Woman's Perception of Pain

Personal	Hospital
• Past negative experience e.g., history of sexual abuse • Dysfunctional labour e.g., occiput posterior (OP) labour • Cultural perspective • Fear • Anxieties and apprehension • Tolerance • Partner issues	• Lack of support • Unwanted support • Loss of control • Hypervigilence (especially due to PTSD) • Heightened vulnerability • Lack of privacy

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National Resources

Clinical Resources

Montreal	Herzl Family Practice Centre	514 340 8253
	Centre de recherche et aide aux narcomanes (CRAN)	514 527 6939
	www.cran.qc.ca	
	Service d'appuie à la methadone (SAM)	514 284 3426
	www.info-sam.qc.ca	or 1 888 726 2343
Toronto	Toronto Centre for Substance Use in Pregnancy (T-CUP)	416 530 6860
Vancouver	Sheway Project	604 216 1681
	FIR Square Combined Care Unit	604 875 2229
	Perinatal Addiction Services, BCWH, Doctor on call 24 hours	604 875 2161(doctor)
Alberta	AADAC Opioid Dependency Program –assistance with methadone management	

Medical Education

www.addictionmedicine.ca: educational resources on teaching about substance use disorders
www.addictionpregnancy.ca: information on substance use in pregnancy

Specialized Resources

www.motherisk.org: Alcohol and Substance Use During Pregnancy and Lactation Help Line 1 877 327 4636
www.pregnets.ca: Smoking resources
www.beststart.org: Resource centre supporting service providers
www.sogc.org: Society of Obstetricians and Gynaecologists of Canada
www.hclp-bc.org: Healthy Choices in Pregnancy – FASD prevention

Fetal Alcohol Spectrum Disorders

www.ccsa.ca/fas/: Directory of fetal alcohol spectrum disorder (FASD) information and consultation service in Canada
Fetal alcohol spectrum disorder information service: Tollfree 1 800 559 4514

For further inquiries about the PRIMA group, please contact us at prima.medicine@utoronto.ca

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