# Unanticipated Birth Outside the Birthing Unit

Guidelines for Labour Assessment, Imminent Birth, Immediate Newborn Care and Transfer



Revised: May 2025

The information in this resource is up to date as of the time of publication. RCP aims to review posted resources at a minimum every five years, unless new evidence to support practice changes in opposition of this information would require immediate removal and revision. Please feel free to contact us with any questions or concerns about information found in an RCP resource. (902)470-6798.

This is a clinical practice guideline only, intended for use by regulated health professionals. Practices may differ across facilities and practice environments, depending on available resources and prescriber preference. All policies and procedures must be approved by the appropriate processes within each facility / Nova Scotia Health (e.g., Maternal/Child or Perinatal Committee, Medical Advisory Committee, etc.).

The information in this guideline is intended to be inclusive of all childbearing persons including those who do not identify as a woman or female. Some of the content may include gendered language to reflect the populations studied and reported by researchers. However, RCP continually strives to shift the culture and improve our use of language in perinatal health to better reflect all persons and childbearing families, and we encourage all perinatal health professionals to do the same.

The Reproductive Care Program gratefully acknowledges the representatives from IWK Health and Nova Scotia Health who contributed to this resource.

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# Introduction

Most births in Nova Scotia (NS) occur in a hospital with an active obstetrical service. Occasionally, pregnant persons arrive in active labour in the Emergency or Outpatient area of a facility where an obstetrical service is unavailable. Health care professionals must be able to accurately assess these situations to determine the safest and most effective way to care for labouring persons. In some cases, the assessment may indicate that there is enough time for transfer to the nearest facility with an active obstetrical service. When it is likely that birth will occur, transfer may not be appropriate. Local clinicians must have the basic knowledge and skills required to support labour and birth to optimize healthy outcomes for both the parent and newborn. **Transfer should not be attempted if it is suspected that birth may occur on route.** 

This document has been developed to support health care professionals who do not deliver babies as part of their usual practice. It is intended to provide guidance and support to safely and effectively assess and care for labouring/birthing persons. Included are guidelines for:

- ✓ Obstetrical and fetal assessment
- ✓ Indications for transfer and the transfer process, including a provincial directory of all facilities offering an obstetrical service and details regarding EHS LifeFlight
- Care and documentation during labour and birth when transfer is not possible
- ✓ Basic neonatal resuscitation (NRP) skills
- ✓ Postpartum/postnatal assessment and care
- ✓ Equipment
- ✓ Stock Medications for obstetrical emergencies and routine birth
- ✓ Laboratory tests

# **Roles of the Emergency Team**

The value of multidisciplinary assessment and care by the emergency department team should never be underestimated. It is, however, the physician's responsibility to make a final decision regarding the laboring person's care. Where time and circumstances permit, it is always advisable to seek support and advice from a referral centre or from the transport team/EHS LifeFlight Medical Control Physician (MCP).

# Emergency Health Services NS – EHS LifeFlight – 1-800-743-1334

Physicians transferring pregnant persons via regular EHS ground transport (i.e. not LifeFlight ambulances) retain and assume clinical responsibility until they reach a facility with an active obstetrical service. Pregnant persons who are clinically unstable and not suitable for transport without the support and expertise of the obstetrical or neonatal LifeFlight team, should remain onsite until the LifeFlight team is available and able to assume care.

Clinicians in ambulatory care or outpatient/emergency settings should be able to recognize labour and perform basic assessments of maternal, fetal, and newborn well-being. To complete a comprehensive assessment and provide reassurance to the pregnant person, and their partners and family.

#### The following skills are required:

- ✓ Assessing frequency, strength, and duration of contractions
- Helping pregnant persons in early labour with decision-making (e.g.to consider the potential need for travel or transfer to the most appropriate facility for labour and birth)
- ✓ Auscultating the fetal heart rate with a doppler or stethoscope

- ✓ Recognizing a normal (or abnormal) fetal heart rate
- ✓ Providing initial stabilization in consultation with referral centre colleagues until care is transferred
- ✓ Recognizing signs of rapidly progressing labour and birth
- Assisting and supporting pregnant persons during labour and birth
- Providing appropriate postpartum and newborn assessment and care, including:
  - first steps of newborn resuscitation (providing warmth and establishing effective ventilation if necessary)
  - o supporting skin to skin and the initiation of breastfeeding

# **Assessment of Well-Being**

The pregnant person is the best source of information about their obstetrical and medical history and presenting concerns. Some pregnant persons, particularly after 36 weeks' gestation, will carry a copy of their Nova Scotia Prenatal Record (PNR) with them; this will provide valuable information about the pregnancy. In addition to the information gained from the PNR, a discussion and description of personal health history can be obtained with key questions.

When **birth is imminent** and there is little time to do a comprehensive assessment, it is most important to assess:

- the **GA** of the newborn (determines the urgency of the transfer process, and the most appropriate referral centre for transfer)
- the presentation of the newborn (i.e. is the newborn coming out headfirst or breech – buttocks or feet. Cesarean birth is recommended for some breech presentations.)
- whether or not the amniotic membranes have ruptured. It is best not to artificially rupture the membranes unless 1) instructed to do so by an obstetrician at the referral centre; or 2) the newborn is born.

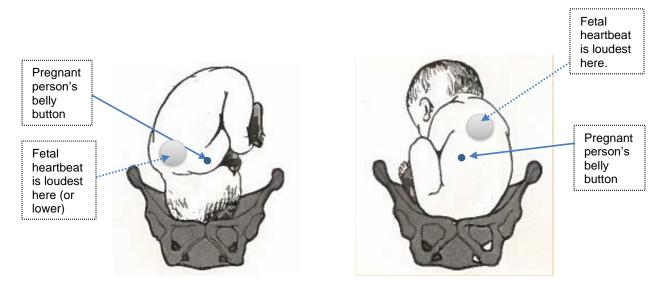
# Key Questions to Assess Well-Being

Questions about the Pregnant Patients Current Status	Consideration
✓ Are you pregnant?	Confirm pregnancy and that viability has been achieved (> 20 weeks)
✓ When is your due date?  OR	< 37 weeks = preterm
<ul><li>✓ How many weeks pregnant are you?</li><li>OR</li><li>✓ When is your newborn due?</li></ul>	Neonatal transport should be arranged as soon as possible if birth is imminent and in-utero transport is not an option.
✓ Is this your first newborn?	If NO, have they experienced vaginal birth before, or cesarean birth?  Previous vaginal birth: expect a faster labour and delivery than experienced before.  Previous cesarean birth: discuss with LifeFlight MD (MCP).
<ul> <li>✓ Do you have any health concerns?</li> <li>OR</li> <li>✓ Do you have any medical conditions?</li> </ul>	Some pre-existing health conditions (e.g. diabetes, hypertension, obesity) may increase risk for adverse perinatal outcomes.
✓ Have there been any concerns with this pregnancy?	Conditions which have resulted in increased fetal or maternal surveillance (multiple gestations or breech presentation) should be discussed with a referral centre.

Questions about Fetal Status	Consideration
✓ Have there been any concerns with the newborn's health during this pregnancy?	The LifeFlight MCP will collaborate with the referring physician regarding decisions about transfer.
<ul><li>✓ Has your baby been less active today?</li><li>AND</li></ul>	Further assessment is indicated to confirm fetal wellbeing (i.e. confirmation of a fetal heartbeat via auscultation or POC ultrasound)
✓ When did you last feel your baby move?	If a compromised newborn is anticipated and birth is imminent, arrange neonatal transport immediately.  If birth is not imminent, arrange transport.
Questions About Labour	Consideration
<ul><li>✓ Describe what you are feeling now.</li><li>✓ When did this start?</li></ul>	Consider how the symptoms have changed over time and what made them decide to come to hospital.
<ul> <li>✓ Can you describe the pain?</li> <li>○ Frequency</li> <li>○ Duration</li> <li>○ Strength or intensity</li> <li>○ Constant or intermittent</li> <li>○ Location</li> </ul>	<ul> <li>Frequency = time from beginning of one contraction to beginning of next</li> <li>Duration = how long does the contraction last from beginning to end?</li> <li>Strength = How firm is the uterus with contractions?</li> <li>How does pain rate on a scale of 1 to 10?</li> </ul>
✓ Do you have any pelvic or vaginal pressure?	Pelvic or vaginal pressure may indicate imminent birth or less urgent conditions. Further assessment is required (e.g. urge to push vs urinary frequency)
<ul> <li>✓ Has your water broken?</li> <li>○ If so, when?</li> <li>○ Is it clear in colour?</li> <li>○ Is there a foul odour?</li> </ul>	May be felt as a gush, trickle, or wetness Inspect leaking fluid for presence of blood or meconium (newborn's first stool: green, yellow, brown or black)
<ul><li>✓ Is there any vaginal bleeding?</li><li>✓ When did this start?</li></ul>	Note: amount, colour (bright vs dark), consistency

#### **Auscultation of Fetal Heart Rate**

The fetal heart rate (FHR) is most easily heard through the fetal back, with the pregnant person in a semi-recumbent or lateral lying position. When unsure of the fetal position, you may consider asking the pregnant person on which side they most frequently feel their baby kicking. Assuming this to be the location of the fetal limbs, you would auscultate on the opposite side of the abdomen, midway between the umbilicus and symphysis pubis. The FHR will be heard lower in the abdomen as the fetus moves down into the pelvis as labour progresses.



Listen to the FHR for a full minute, following a contraction. The rhythm should be regular, and the normal range is between 110 – 160 bpm. It is common to hear a deceleration that quickly recovers, so reposition the pregnant person (e.g. to opposite side-lying) and listen again following the next contraction.

# Signs and Symptoms of Labour

- Regular contractions and/or back pain not relieved with rest or other comfort measures.
- Pelvic or vaginal pressure.
- Increased vaginal discharge, including but not limited to bloody show.
- Ruptured membranes with or without contractions (this may be indicated by slow leaking of fluid, wetness, 'popping' sensation accompanied by fluid, or a larger gush of fluid).
- Cervical change (someone who is skilled at cervical assessment may perform a pelvic exam only after careful assessment, consideration, and consultation regarding GA and membrane status; or if birth is imminent).

Do not perform a pelvic exam if the pregnancy is less than 36 weeks' gestation or if you are unaware of placental location, unless birth appears imminent, or you have consulted with a physician from a regional or tertiary hospital.

# Signs and Symptoms of Imminent Birth

- Birthing person exclaims, "The baby is coming!"
- Uncontrollable urge to push (they may express a need to defecate)
- Separation of the labia, bulging perineum and rectum
- Bloody show
- Uncontrollable passage of stool
- Difficulty maintaining calm, or expression of panic
- Sudden nausea and vomiting
- Crowning of the fetal presenting part (typically the head)

# **Planning for Care**

The presence or absence of labour, other concerns for the birthing person or fetus, or other safety factors such as time, distance and travel conditions will influence your decision to:

- Discharge home.
- Transfer to a referral centre or facility with an active obstetrical service.
- Provide care in your facility.

If the pregnant person is in labor, transfer should take place as soon as possible if birth is not imminent. Every effort must be made to avoid birth during transport.

# Guidelines for discharge home:

If the pregnant person is not considered to be in labour, their symptoms are not concerning, or if they are in the early/latent stage of labour, reassure and offer these options:

- return home, OR
- travel to the hospital where birth was intended, considering distance and travel conditions. You may seek the recommendations of the birth hospital (e.g. if there is suspected or confirmed rupture of membranes).

Discuss the signs of labour as well as supportive care/comfort measures. Encourage them to return if they can't get to a facility with an active obstetrical service.

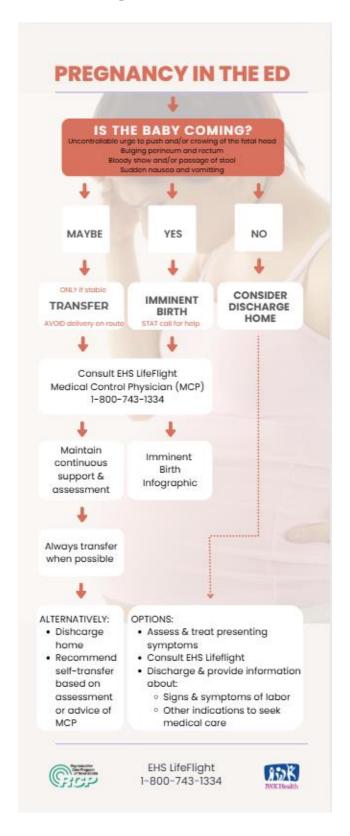
#### Guidelines for transfer to a referral centre:

- Consult with physician on call at the appropriate referral center or call LifeFlight to consult with the Medical Control Physician (MCP).
- Maintain continuous support and assessment.
- Consider safety of conditions for transfer (time before birth, weather).
- Ensure appropriate care providers are available to attend during transfer. If the pregnant person is to be transferred unattended, the transferring physician maintains responsibility until the pregnant person arrives at the intended destination and is taken into care.
- Reassess labour progress prior to transfer.
- If birth is imminent and the newborn is preterm (< 37 weeks) or if the newborn is anticipated to be compromised, contact LifeFlight to mobilize the neonatal team.

# Guidelines for providing care in your facility:

- If unable to safely transfer due to imminent delivery or poor travel conditions, support the birth in your department and call for additional help as needed.
- All Emergency Department staff must be familiar with the location and use of equipment required to care for a labouring or birthing person.
- Provide a safe, comfortable, private environment with continuous support.

# Labour/Birth Assessment: A Quick Reference



# **When Birth is Imminent**

Birth is a natural process, and most of the time is uncomplicated, particularly when the pregnancy is at term (> 37 weeks). It is quite possible that most people who give birth in an emergency room will have had previous vaginal deliveries, hence the precipitous nature of the labour and inability to get to a facility with an active obstetrical service. A successful vaginal birth history gives a very good indication that this birth will go smoothly.

It is important to remain calm and provide both emotional and physical support to the labouring person, their partner and/or family. The goals of care are to prevent or minimize trauma by supporting the normal processes and movements of birth, and to create a positive lasting memory of the birth for the birthing person, partner, and family. **Healthcare professionals should:** 

- Always remain with the labouring person.
- Ensure help is available to prepare for birth.
- Provide support and care to the pregnant person, partner, and family.
- > Provide care for the newborn.

Ideally, a separate room should be available for the birth. All equipment should be kept in an area known to all staff and readily available for an imminent delivery.

Keep the newborn's body temperature between 36.5° and 37.5° C

It is **very important** to keep the newborn's body temperature in the normal range (normothermia: between 36.5° and 37.5° C), and to avoid both hypothermia

(<36.5° C) and hyperthermia (>38° C). The environment should be warm to minimize potential heat loss for the newborn. Additional ways to maintain normothermia include:

- immediate skin-to-skin contact of either parent with the newborn,
- using warmed towels or blankets when drying or covering newborn,
- closing windows and keeping the newborn away from windows, outside walls, or any other potential sources of cold or drafts (e.g. vents), &
- If the newborn is placed in a warmer or incubator, it must be servocontrolled with a temperature sensor to ensure newborn's temperature is maintained in the normal range.

Standard provincial documentation forms for labour and birth will help prompt your care; samples of these are in Appendix C and can be requested from the RCP office or via the RCP online order form.

# Assisting with Birth: Step by Step... Call for Assistance There are at least two persons requiring assessment and care at each birth – the birthing person, and the newborn. Both require a care provider. Sound Confident and Reassuring Close up eye contact Make a physical connection e.g. touch their shoulder or arm. Speak in a quiet confident voice. Call them by name used and use gender-inclusive language. Minimize distraction and noise in the room Provide privacy

<sup>1</sup> Boulton, J. E., Coughlin, K., O'Flaherty, D., & Solimano, A. (2021). ACORN, acute care of at-risk newborns: A resource and learning tool for health care professionals. The Canadian Pediatric Society (2nd ed.). Oxford University Press. 2 Society of Obstetricians and Gynecologists of Canada (2024). ALARM Course manual. Advances in labour and risk management (31st ed. 2024-2025).

### **Labor & Pushing Techniques**



- Support the birthing person into a position that is comfortable and allows visibility of the perineum.
- ✓ Encourage bearing down/pushing according to the patient's own preference (spontaneous with natural urges or directed with Valsalva Maneuver (i.e. holding breath and counting). Spontaneous pushing is recognized as best clinical practice. Spontaneous pushing follows natural urges, which is often 3-5 pushes per contraction.
- There may be times when directed pushing (i.e. holding breath and counting) is required. For example, in times of fetal distress and ineffective spontaneous pushing.
- ✓ Wash hands and wear gloves.
- ✓ Get equipment ready



Scan to view RCP's simulation of an uncomplicated vaginal birth

#### Birth of the Head



- ✓ If the amniotic membranes have not yet ruptured and are bulging through the vagina, consider breaking them with your fingers, or leave them intact. Note the color, quantity, and odour of the fluid.
- ✓ Hold a towel or sponge between the vagina and the anus and apply gentle pressure to support the perineum.
- ✓ Apply light pressure with the opposite hand on the back of the fetal head to maintain flexion.
- ✓ Delivery of the fetal head is advised at the end or between contractions by light panting and gentle, short pushes to prevent perineal trauma.
- ✓ Do not pull on the fetal head.

#### **Check for the Cord**



- ✓ Once the head is born the birthing person will feel some relief and often will naturally pause before continuing to push.
- ✓ Feel for the umbilical cord around the fetal neck.
- ✓ If you feel cord:
  - try to gently loosen the cord and bring it out over the fetal head.
     Sweep again in case it is looped twice and repeat this step if needed.
- If you cannot loosen the cord, DO NOT CUT THE CORD until after the fetal shoulders are delivered, and:
  - gently push the cord back over the fetal shoulder allowing the shoulder to slip under it as the fetus delivers.
     OR
  - keep the fetal head close to the perineum allowing the remainder of

the body to deliver or "somersault out". After birth remove the cord from the newborn's neck and body as required.

#### Restitution





- ✓ Allow the fetal head to spontaneously turn (restitute) to face left or right.
- ✓ Let the uterine contractions do the work of turning the fetus through the pelvis once the head is born.
- ✓ As the fetus restitutes (i.e. turns to one side or the other), the shoulders are lining up to move through the pelvic bones.
- ✓ If needed, a helper on each side can support both of the birthing person's legs to flex the hips while they bear down with the next contraction.

#### Support the Head and Guide the Body





- ✓ Place a hand on either side of the fetal head for support.
- ✓ The 'pushing power' comes from the birthing person and their uterine contractions, not from the birth attendant pulling.
- Move hands downward with the fetal head as you guide the upper (anterior) shoulder under the pubic arch.
- ✓ Use a gentle downward motion; never pull.
- Once the upper shoulder is delivered, gently guide the fetal body up (do not pull) in an upward direction over, not through, the perineum.
- ✓ The contraction will assist the birthing person to push the fetus down and out
- ✓ To avoid forceful expulsion and perineal injury, encourage panting or easy grunting.

#### Newborn's Born!



- ✓ Lift the newborn onto the birthing person's abdomen or chest where they can see and hold their newborn.
- ✓ Keep the newborn warm by placing them 'skin-to-skin' with the birthing person:
  - page 27 for newborn assessment and care
  - page 31 for neonatal resuscitation
- ✓ As you gently dry the newborn with warm towels/blankets, they should begin to cry vigorously.
- ✓ Do not suction a vigorous newborn.
- ✓ Secretions are often present in a newborn's mouth and nose, and the newborn can usually clear these independently (e.g. 'spitting up' or sneezing) or these may be wiped away with a soft cloth.
- ✓ Cover both the birthing person and the newborn with warm, dry blankets. Replace wet blankets with dry warm ones.
- ✓ Give oxytocin 10 units IM to the birthing person.
- ✓ Remember to record the time of birth!

# **Congratulations!**

✓ Congratulate all and praise the birthing person's efforts!

#### Clamping the Umbilical Cord and Collecting Cord Bloods

Preterm (<37 weeks) singletons: Deferred (delayed) umbilical cord clamping (DCC) is recommended for 60 to 120 seconds.

**Term singletons:** DCC is recommended for 60 seconds. DCC beyond 60 seconds increases the risk of hyperbilirubinemia requiring phototherapy.

- When cord clamping cannot be deferred as recommended, then DCC for at least 30 seconds is superior to immediate clamping<sup>3</sup>.
- DCC should be performed with the infant at or below the level of the introitus.
- Disrupted utero-placental circulation is a contraindication for DCC.
- ✓ Clamping the Umbilical Cord:

To clamp the umbilical cord, place 2 metal clamps on the umbilical cord and cut in between.



<sup>3</sup> McDonald, S. D., Narvey, M., Ehman, W., Jain, V., Cassell, K., Obstetricians and Gynecologists of Canada, & Fetus and Newborn Committee. (2022, March 15). *Umbilical cord management in preterm and term infants*. Position Statement. <a href="https://cps.ca/documents/position/umbilical-cord-management-in-preterm-and-term-infants">https://cps.ca/documents/position/umbilical-cord-management-in-preterm-and-term-infants</a>

- ✓ If possible, obtain Cord Blood Gases: (Note: the larger vessel in the cord is the umbilical vein, the two smaller vessels are the umbilical arteries). With the umbilical cord still clamped, first draw an arterial and then a venous cord gas specimen into two labeled pre-heparinized syringes; cord blood samples are most accurate and stable at room temperature for 60 minutes. If not analyzed within 60 minutes, store the samples at 4-8 °C and document the time of analysis. A clamped blood-filled 20 cm segment of cord may alternatively be collected for analysis within 60 minutes.
- ✓ <u>Cord Blood</u>: From the cord that is still attached to the placenta, release the clamp slowly to allow the flow of approximately 10 mL of cord blood into a medicine cup or a lavender topped EDTA collection tube. Ensure the clamp is closed securely around the umbilical cord.
- ✓ Remember to label the blood collection tube accordingly.
- ✓ <u>Placing an Umbilical Cord Clamp</u>: After the cord has been cut, the metal clamp that is attached to the newborn can be replaced with a plastic umbilical cord clamp. Leave 3-5cm length of cord between newborn and the plastic cord clamp. Ensure that the plastic clamp is tightly secured before removing the metal clamp.

#### Waiting for the Placenta





- ✓ Ideally, one member of the care team is observing and caring for the newborn during skin-to-skin time, while another care provider assesses the birthing person's vaginal bleeding while awaiting placental delivery. The placenta should come within 20-30 minutes.
- ✓ It is normal to see a <u>small</u> trickle of bright blood from the vagina after the newborn is born but before the placenta is delivered.
- ✓ You may see small tears in the skin or vaginal tissue; not all will need repair.
- ✓ DO NOT massage the fundus (top of the uterus) or apply pressure to 'assist' the delivery of the placenta.
- ✓ Signs of placental separation include:
  - ✓ Lengthening cord
  - ✓ Gush of blood
  - ✓ Rising of the uterus in the abdomen
  - ✓ Uterus becoming firmer.
  - ✓ Feeling of cramping
  - √ Feeling vaginal/rectal pressure
- ✓ **AFTER** signs of placental separation gentle traction can be applied to the cord with the other hand supporting the uterus just above the pubic bone.
- ✓ Gentle traction using ring forceps, or maternal coughing can be used to

- ensure all amniotic membranes are delivered.
- ✓ Massage the fundus immediately after the placenta is delivered; it should be firm and palpable around the level of the umbilicus.
- Examine the placenta to note that it is intact, with no apparent sections missing. Retained placental parts lead to postpartum hemorrhage.

# **Assessment and Care of Birthing Person Following Birth**

**At a minimum,** check vital signs, including pain, bleeding, fundal height and tone, bladder fullness, and perineum, for all postpartum person's:

- · every 20 minutes for the first hour after birth,
- every hour for the next four hours, and then (if not transferred),
- every 12 hours until discharge.

# Checks may be more frequent if indicated.

# Bleeding

- Lochia will be red (rubra) and moderate to heavy within the first hour after delivery. Bleeding should not exceed the saturation of a pad within the first hour. You may have to check for pooling under the postpartum person's buttocks/back and weigh sanitary pads to fully appreciate the degree of blood loss.
- If the birthing person has any known risk factors for postpartum hemorrhage (e.g., previous history, precipitous birth, etc.) consider initiating a large bore IV (18 gauge) as soon as possible, ideally prior to the

birth. After the delivery of the placenta, consider starting a prophylactic oxytocin infusion by adding 20-40 units of oxytocin to 1000mL of 0.9 NaCl or Ringers lactate and infuse at a rate of 150mL/hr.



RCP Simulated Photo

- If the bleeding is excessive, treatment of postpartum hemorrhage is required. Massage the uterine fundus and start an oxytocin infusion; add 20-40 units of oxytocin to 1000mL of 0.9% NaCl or Ringers Lactate and infuse rapidly via IV infusion pump for 4+ minutes until a firm uterine tone is achieved<sup>4</sup>. The IV infusion rate should then be adjusted as outlined in the medication table for treatment of postpartum hemorrhage.
- If a continuous infusion or bolus of oxytocin IV and fundal massage do not control vaginal bleeding, start a second IV of NaCl (infuse wide open) and consider giving an alternate uterotonic and antifibrinolytic such as:
  - Ergonovine maleate (Ergot)
  - o Carboprost tromethamine (Hemabate)
  - Misoprostol (Cytotec)
  - Tranexamic acid (TXA) (Cyklokapron)

See Medication Table (pages 38-41) for recommended dosages and routes.

Consult with a physician at your referral centre for advice with management of excessive bleeding.

<sup>4</sup> Robinson, D., Basso, M., Chan, C., Duckitt, K., & Lett, R. (2022). Guideline no. 431: Postpartum hemorrhage and hemorrhagic shock. Journal of Obstetrics and Gynaecology Canada, 44(12). https://doi.org/10.1016/j.jogc.2022.10.002

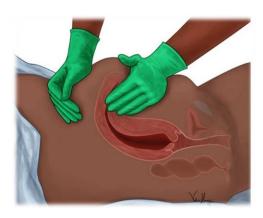
#### **Vital Signs:**

- BP
- Pulse
- Respirations
- Temperature
- Pain

#### **Fundal Height and Tone**

- The fundus should be firm and palpated at the level of the umbilicus and in the midline of the abdomen.
- The flat of the hand should be used to palpate the fundus, while supporting the lower portion of the uterus with the other hand.

Postpartum Uterine Massage



- If the fundus is higher than at the level of the umbilicus and/or is not midline, prompt intervention is required. This can be caused by a full bladder or clots forming in the uterus, both of which are common causes of postpartum hemorrhage.
- Ensure visualization of the perineum during fundal assessment. The amount and color of the blood (bright red, dark red) is important to assess.

#### Bladder

- The bladder should not be palpable.
- A distended bladder can interfere with uterine contractility leading to uterine atony and increased postpartum bleeding.
- If the bladder is distended encourage the postpartum person to void. If they are unable to void on their own, it is appropriate to recommend catheterization to prevent or control postpartum bleeding.

#### **Perineum**

- Perineal lacerations causing excessive bleeding should be repaired; small, minimal tears generally heal well.
- An ice pack is recommended to provide comfort and prevent or reduce swelling.

# **Assessment and Care of Newborn**

#### **First Impressions**

- After birth the newborn should be placed directly on the birthing person's abdomen or chest for skin-to-skin care.
- Rapidly evaluate the newborn:
  - o Is the newborn term?
  - o Does the newborn have good muscle tone?
  - o Is the newborn breathing and/or crying?
- If the answer is "No" to any of these questions the newborn should have the cord clamped and cut and be brought to a radiant warmer (if available) or a surface that resuscitation could be initiated. The 5 initial steps of newborn care should be completed immediately once placed on the resuscitation surface available.
- Otherwise, the newborn can remain skin-to-skin for the initial steps newborn care:
  - o Provide warmth
  - Dry and stimulate
  - Position the head and neck to promote optimal airway position
  - Remove secretions from the airway needed (wipe mouth with dry towel or blanket)
- Healthy term newborns seldom require more than a clear airway and adequate warmth.
- Routine suctioning is not recommended. If the newborn has excessive secretions, it may be necessary to remove them by wiping the mouth and nose with a towel or by suctioning with a bulb syringe (\*remember to depress the bulb before placing it in the mouth). Alternatively, you may consider using a large-bore (10-12 F) catheter to suction secretions from the mouth, then nose, if required. Suction pressure should be set at a maximum of 80-100 mmHg. Be careful not to suction vigorously or deeply

as this can produce a vagal response. Brief, gentle suctioning with a bulb syringe is usually adequate to remove secretions.

# Apgar scores are assigned at 1, 5, and 10 minutes:

Assessment	0	1	2	1	5	10
				min	min	min
Heart Rate	Absent	Below	Above			
		100	100			
Respiratory Effort	Absent	Slow	Good			
		irregular	crying			
Muscle Tone	Limp	Some	Active			
		flexion	motion			
Reflex Irritability	None	Grimace	Cough			
		Giiriace	sneeze			
Colour	Blue Pale	Body Pink				
		with blue	All Pink			
		raie	extremities			
Total :						

# Newborn Assessment for Apgar Scoring:

**Heart Rate (HR):** absent/not detected  $\rightarrow$  less than 100 bpm  $\rightarrow$  greater than 100 bpm.

- Auscultate HR or feel pulse at base of cord.
- SPO2 monitor could applied on the right hand or wrist for assistance in assessing HR.
- ECG (if you have access) may be helpful to identify HR, especially if it is low or difficult to palpate.

**Respiratory Effort:** none → slow/irregular → vigorous crying

• Stimulate if respirations are absent or gasping.

**Muscle Tone:** limp  $\rightarrow$  some flexion of limbs  $\rightarrow$  active motion

**Reflex Irritability:** no response  $\rightarrow$  facial grimace  $\rightarrow$  coughing or sneezing

#### Colour: blue to pink

- The newborns central areas lips, tongue and trunk- should turn pink shortly after birth, while hands and feet may remain pale or bluish for up to 24 hours. Be prepared to differentiate cyanosis from bruising.
- If the newborn is breathing but appears blue, be prepared to provide supplemental oxygen based on targeted preductal SpO<sub>2</sub> saturation levels.
   Avoid over- or under- oxygenation, as both can be harmful.
- Place an SpO<sub>2</sub> monitor on the newborn's right hand or wrist. If their SpO<sub>2</sub> is low and not improving, deliver just enough supplemental oxygen to reach the target for their age. This can be done by using your hand as a mask over the newborn's nose and mouth, holding the oxygen tubing between your fingers.

Targeted Preductal SpO₂ After Birth			
1 min	60% - 65%		
2 min	65% - 70%		
3 min	70% - 75%		
4 min	75% - 80%		
5 min	80% - 85%		
10 min	85% - 95%		

(AAP/CPS 2021)

#### Resuscitation

See page 31 for an overview of Neonatal Resuscitation, or Appendix A for the complete NRP Flow diagram and equipment list.

#### **Medications**

Universal screening for gonorrhea and chlamydia is recommended in pregnancy. In an emergency it's unlikely the birthing person's screening results will be known, and so erythromycin eye ointment is recommended<sup>5</sup>.

**Vitamin K** Img IM (thigh) is recommended to administered to all newborns within the first 6 hours after birth. A dose of 0.5mg is appropriate for newborns weighing less than 1500g°. Skin-to-skin contact or breast(chest) feeding during administration is known to reduce the newborns pain experience.

# **Keeping the Newborn Warm**

Maintaining the newborn's body temperature may become a major challenge because you are unlikely to have a radiant warmer readily available. It is essential for caregivers to provide warmth to newborns, as hypothermia and cold stress place a newborn at increased risk for morbidity and mortality. Overheating a newborn is also harmful but is less likely to happen. Aim to maintain a newborn (axillary) body temperature of  $36.5^{\circ}$  –  $37.5^{\circ}$  Celsius.

# Means to promote newborn normothermia (all babies):

- Direct skin to skin care with a parent.
- Change wet blankets/towels and replace with dry blankets/towels that have been (ideally) warmed.
- Maintain room temperature at 23°C to 25°C.
- Check newborn's temperature (per axilla) every 30 minutes for the first two hours.
- Keep newborn away from sources of drafts (e.g. vents).

<sup>5</sup> Moore, D. L., MacDonald, N. E., Canadian Pediatric Society, & Infectious Diseases and Immunization Committee (2024). *Preventing Ophthalmia Neonatorum*. Canadian Paediatric Society. <a href="https://cps.ca/documents/position/ophthalmia-neonatorum">https://cps.ca/documents/position/ophthalmia-neonatorum</a>

<sup>6</sup> Ng, E., & Loewy, A. D., & Fetus and Newborn Committee (2024). *Guidelines for vitamin K prophylaxis in newborns*. Canadian Paediatric Society. <a href="https://cps.ca/documents/position/vitamin-k-prophylaxis-in-newborns">https://cps.ca/documents/position/vitamin-k-prophylaxis-in-newborns</a>

- Do not place newborn on, in or near cold equipment, or near walls or windows.
- If a hat is not available, a cap fashioned out of stockinette may be used.

**Smaller or preterm newborns** have more difficulty maintaining a normal body temperature, and it may be necessary to employ these supports **in addition to the above**:

- Clean food-grade plastic wrap or a bag may be used to prevent heat loss through evaporation if the newborn is less than 32 weeks gestational age (GA).
- Portable gel warming mattress.

Do not use outdated radiant warmers due to the risk of injury from improper or faulty operation. Alternatively, use gel warming mattresses, wrapped in a blanket or towel, to safely manage temperature regulation in at-risk newborns. Never microwave IV bags for newborn warming.

# Neonatal Resuscitation – An overview

# **Rapid Evaluation**

- ✓ Term gestation?
- ✓ Breathing or crying?
- ✓ Good tone?

If 'yes' to all, newborn may remain skin to skin

If '**no**' to any of these questions the cord must be clamped and cut, and the newborn must be moved to a safe place to begin neonatal resuscitation. Newborns require a different approach to resuscitation than adults. When a newborn requires resuscitation, it is usually caused by ineffective respirations, leading to respiratory acidosis due to inadequate gas exchange.

#### The focus of neonatal resuscitation is effective ventilation!

#### Effective PPV =

- Chest rise
- HR increasing to >100 bpm
- Improving tone and colour ("pinking up")

# A - Airway (30 seconds)

- Provide warmth.
- Dry with towel or blanket (discard/replace when wet), and stimulate (gently rub the newborn's back, truck, or extremities)
- Position the head and neck to open the airway (neutral or slightly extended position)
- Clear secretions if needed (e.g. use a blanket or towel to gently wipe inside the newborns mouth. If suction is required, use a bulb suction, suction mouth FIRST, then each of the nares)

# **B - Breathing** (30 seconds)

- Evaluate respirations and heart rate.
- If apneic, gasping, or HR < 100 bpm:
  - start PPV at a rate of 40-60 bpm via bag and mask or neo puff (site dependent)
  - $\circ \;\;$  the goal is to start PPV before 1 minutes of life.
    - at an FiO<sub>2</sub> of 21% (room air) if the newborn is term.
    - at an FiO<sub>2</sub> of 30%, if the newborn is preterm (less than 37 weeks).
  - place an SpO<sub>2</sub> monitor on the newborn's right hand or wrist. Adjust
     FiO<sub>2</sub> to reach the target SpO<sub>2</sub> for their minutes of age.

- o reassess HR after 15 seconds of PPV
- o if there is no increase in HR and there is no chest rise with PPV begin corrective steps (MR. SOPA):
  - M: Mask adjustment
  - R: Reposition head and neck
    - Give 5 breathes, if not chest movement
  - S: Suction mouth then nose
  - O: Open mouth
    - Give 5 breathes, if not chest movement
  - P: Pressure increase
    - 5-10 cm increments to a max of 40cm for term and 30 cm for preterm
    - Give 5 breathes, if not chest movement
  - A: Alternate Airway
    - LMA
    - ETT (if trained to do so)
- Increasing HR is the number one indicator of effective ventilation.
- If the HR begins to rise and is >60 bpm but <100 bpm continue with PPV until the newborn begins to effectively breathe on their own.
- If the newborns HR is < 60 bpm after **30 seconds of effective PPV**, start chest compressions and provide 100% oxygen.

#### C - Circulation

- Ensure you have given at least 30 seconds of effective PPV before you consider beginning chest compressions.
- Coordinate effective PPV and chest compressions (ratio is 3 compressions:
   1 breath).
- Continue to assess pre-ductal oxygenation status via the SpO<sub>2</sub> monitor on the newborn's right hand or wrist.
- Titrate oxygen to achieve target SpO2 levels.

Targeted Preductal			
SpO₂ After Birth			
1 min	60% - 65%		
2 min	65% - 70%		
3 min	70% - 75%		
4 min	75% - 80%		
5 min	80% - 85%		
10 min	85% - 95%		

(AAP/CPS 2021)

 Discontinue chest compressions when HR > 60 bpm; discontinue PPV and transition to free-flow oxygen when HR > 100 bpm and newborn is breathing spontaneously.

Additional resuscitative measures are described in the NRP algorithm (Appendix A).

Consult the MRP for neonates through EHS LifeFlight 1-800-743-1334

# **Transfer**

When possible, it is ideal to transfer the labouring person to a facility with an active obstetrical service. Furthermore, it is beneficial to transfer a fetus in utero, especially when the need for special care is anticipated. **Transfer should not be attempted if it is suspected that birth may occur on route.** 

Consult with an obstetrician at your regional centre or directly through LifeFlight regarding management and/or transfer. If the newborn is expected to need special care and prenatal transfer is not an option, the neonatal transport team (through contact with LifeFlight) should be notified to facilitate their presence at the birth or as soon as possible thereafter to care for the newborn.

If it is necessary to transfer the newborn after birth, parents will need information about transfer, parent rooms or courtesy rooms in the referral hospital. Staff should check with the receiving centre to ensure the availability of a room, as space is sometimes limited. If a parent room is not available, staff in referring hospitals should provide information about alternate accommodations for parents.

Regardless of where postpartum/postnatal care is provided, when they are both stable the newborn should always remain with the birthing parent.

## **Active Obstetrical Service Directory**

## Emergency Health Services – EHS LifeFlight – 1-800-743-1334 (For Prenatal/Postpartum and Newborn Transfer)

#### **Tertiary Centres:**

**Halifax:** IWK Health, Birth Unit 902-470-6670

**Sydney:** Cape Breton Regional Health Care Complex 902-567-7834

Labour and Delivery Unit

## **Regional Centres:**

Amherst: Cumberland Regional Health Care Centre 902-667-5400 Ext.6144

**Antigonish:** St. Martha's Regional Hospital 902-867-4200

Children's and Women's Health Unit

**Bridgewater:** South Shore Regional Hospital 902-527-5214

**Kentville:** Valley Regional Hospital 902-678-7381 Ext. 3050

New Glasgow: Aberdeen Hospital 902-752-7600 Ext. 2530

**Truro:** Colchester East Hants Health Centre 902-898-2918

**Yarmouth:** Yarmouth Regional Hospital 902-742-3541 Ext. 130

## **Equipment**

Ideally, a warm separate area or private room should be available for labour and birth

- Keep all equipment in a designated area, where it is readily available for an imminent birth.
- A copy of standard provincial documentation for labour and birth will help prompt your assessments (see appendix B).

Stei	rile emergency delivery tray contents:
./	4 clamps (it is useful to have at least one pair of Kochers or an Allis
	clamp to rupture membranes if needed)
✓	1 pair curved scissors
✓	1 pair suture scissors
1	Blood Bank collection tube and stopper to indicate clotted
	specimen
✓	1 umbilical cord clamp
✓	1 small bowl
✓	1 towel
✓	1 drape
✓	1 large pad suitable to place under the birthing person's buttocks
✓	Sponges
✓	Gloves

<sup>\*</sup> Disposable emergency delivery trays are available. These are often more practical in a community hospital that does not provide obstetric services.

#### You will also need:

- 1. Several warm flannel blankets/towels to dry the newborn. The newborn should be placed skin-to-skin with the birthing parent (abdomen or chest), and both covered with clean, dry, warm linens. The newborn should always be dried immediately; this can be done while skin-to-skin. Alternatively, the newborn can be held skin-to-skin with the partner or other support people. If skin to skin is not possible you may also bundle the newborn in 2 or 3 warm blankets/towels.
- 2. Warm, sterile water (to wash the perineum following birth)
- 3. Suction catheters (#6,8,10)
- 4. Sanitary pads
- 5. Ice pack for perineum (provides comfort and prevents swelling; can be made and stored ahead by soaking a sanitary pad in water and placing it in the freezer. They must be wrapped in a light cloth to protect the perineum from the direct contact with ice).
- 6. Plastic bags for placenta (2)
- 7. Identification bracelets: 1 for birthing parent, 1 for newborn
- 8. Folder with RCP chart form package & necessary hospital laboratory requisitions
- 9. Newborn resuscitation equipment (Appendix A) and a neonatal resuscitation record (Appendix D)

			Prevention of PPH	<sup>7</sup> ,8		
Drug Name / Level of Care	Agent/Class	Indications	Contraindications	Dosage	Storage	Potential Adverse Effects
Oxytocin (All hospitals)	UTEROTONIC AGENT  CLASS: OXYTOCICS	Active Third Stage Management:  Prevention: of PPH is always Oxytocin	Hypersensitivity to Oxytocin	It is a second to the anterior of the anterior shoulder or immediately after the newborn is delivered,  OR  20-40IU in 1000mL of Ringer's Lactate or NaCl at 150 mL/hr.  *Individuals at high risk of PPH may receive both an initial bolus of dose of 10IU IM or 3IU IV after the newborn is delivered AND a prophylactic infusion after delivery of the placenta.	Room temperature	-Hypotension -Tachycardia -Water intoxication -ECG changes have been observed following the administration of concentrated solutions.
Tranexamic Acid (TXA) (Cyklokapron) (All hospitals)	ANTIFIBRINOLYTIC	Prevention of PPH in VERY HIGH-RISK births.	Hypersensitivity to TXA or any component of the formulation.  Injection: active intravascular clotting; subarachnoid hemorrhage	1 g IV over 30 - 60 seconds.      Within 10 min after birth.      May repeat x 1 in 30 min.  *Provincial drug manuals guide care providers to administer TXA IV over 10 min.	Room temperature	-N&V -Diarrhea -Dizziness -Hypotension -Visual color disturbances -Thrombo- Embolic event

<sup>7</sup> IWK Drug Information Resource. (n.d.). <a href="https://www.dir.iwk.nshealth.ca/">https://www.dir.iwk.nshealth.ca/</a>
8 LibGuides at Nova Scotia Health. (n.d.). <a href="https://library.nshealth.ca/Nurses/PharmacyResources">https://library.nshealth.ca/Nurses/PharmacyResources</a>

Med	ications for V	aginal Birth and Obs	tetrical Emergend	ncies: Recommended for Stock in the ED				
			Treatment of PPH	1				
Drug Name / Level of Care	Agent/Class	Indications	Contraindications	Dose	age	Storage	Potential Adverse Effects	
Oxytocin (All hospitals)	UTEROTONIC AGENT CLASS: OXYTOCICS	Treatment of PPH  *if required after placental delivery for uterine atony.	Hypersensitivity to Oxytocin	mL of R or NaC - Rap ove • Then ru	-40 IU to 1000 inger's Lactate I. sid infusion r 4 min un at a MAX n of 15IU/hr.	Room temperature	-Hypotension -Tachycardia -Water intoxication -ECG changes have been observed following the	
				IU of Oxytocin per Liter of IV Fluid 20 30 40	Infusion rate to delivery 15 IU/hr. 750 500 375		administration of concentrated solutions.	
Carboprost (Hemabate) (Regional & Tertiary hospitals)	UTEROTONIC AGENT CLASS: PROSTAGLANDIN	Treatment of PPH  *if required after placental delivery for uterine atony.	-Cardiovascular, pulmonary, renal or hepatic disease -Known hypersensitivity to the preparation.	<ul> <li>250 mcg IM or IMM         (intra-myometrial)</li> <li>*May repeat every 15         min, maximum 8         doses (2 grams)</li> </ul>		Refrigerate at 2 to 8° C	-N&V -Diarrhea -Hypertension -Pyrexia -Headache -Flushing -Diaphoresis -Restlessness	
Ergonovine maleate (Ergometrine)  (All hospitals)	UTERONTONIC AGENT CLASS: ERGOT ALKALOID	Treatment of PPH  *if required after placental delivery for uterine atony.	Should not be used with any of the HDP: -Chronic HTN -Gestational HTN -Preeclampsia -Eclampsia	0.25 mg     May rephours  *(slow IV injections saving circumst)	peat every 2 on ONLY in life-	Refrigerate at 2 to 8° C; Stable 60 days without refrigeration	-Peripheral vasospasm -Hypertension -Nausea -Vomiting	

Medications for Vaginal Birth and Obstetrical Emergencies: Recommended for Stock in the ED									
			Treatment of	of PPH					
Drug Name / Level of Care	Agent/Class	Indications	Contraindications	Dosage	Storage	Potential Adverse Effects			
Misoprostol (Cytotec) (All hospitals)	UTEROTONIC AGENT CLASS: PROSTAGLANDIN	*if required after placental delivery for uterine atony.	Use caution with history of cardiovascular disease	400 mcg sublingual or oral  *There is no evidence for a second misoprostol dose	Room temperature	-Nausea -Vomiting -Diarrhea -Shivering -Pyrexia			
Tranexamic Acid (TXA) (Cyklokapron) (All hospitals)	ANTIFIBRINOLYTIC	*if required after placental delivery with increased fibrinolysis (>500 mL blood loss after vaginal birth, or blood loss causing hemodynamic instability).	Hypersensitivity to TXA or any component of the formulation.  Injection: active intravascular clotting;	1 g 1 g IV over 30 - 60 seconds.      Initiated as soon as possible after the diagnosis of PPH.      May repeat x 1 in 30 min      If IV access is not established, IM TXA may be reasonable.      No benefit when given >3 hours from onset of PPH  *Provincial drug manuals guide care providers to administer TXA IV over 10 min.	Room temperature	-Nausea -Vomiting -Diarrhea -Dizziness -Hypotension -Visual color disturbances -Thrombo- Embolic event			
Fibrinogen (All hospitals)	CLASS: BLOOD COAGULATION FACTOR	Treat or prevent severe PPH due to hypo- fibrinogenemia	-Active thromboembolism	START with 4 g IV (60mg/kg)	Refrigerate at 2 to 8° C; follow blood bank policy	-Allergic reaction -Fever/Chills -Headache			

#### **Laboratory Tests**

**TIP:** Keep corresponding requisitions with the emergency delivery equipment and chart forms.

#### Cord Blood (collect if possible):

- ABO, Rh type and DAT (Direct Antiglobulin Test)
  - Following birth, collect at least 1 mL into a 10 mL lavender topped
     EDTA tube.
- Carefully label and refrigerate.
- Forward to Laboratory with the appropriate requisition as soon as possible.

#### **PRN Bloodwork:**

- Consider obtaining CBC, ABO/Rh and type and crossmatch if any identified risk factors for postpartum haemorrhage exist.
- Consider Rubella or Varicella Titre if immunization status unknown or unsure.

## Rh Negative or Rh Unknown: 9.70

- Collect the following within 12 hours of birth:
  - o ABO, Rh type & Antibody screen into a lavender topped EDTA tube.
  - Kleihauer-Betke into a lavender topped EDTA tube (Central Zone prefers a purple top EDA tube)
- Complete appropriate requisition.

\*Note: If specimen is from a non NSH *Central Zone Hospital*; Do not accession and send directly to the IWK Haematology Lab.

<sup>9</sup> *Rh program of Nova Scotia*. Rh Program of Nova Scotia | Reproductive Care Program of Nova Scotia. https://rcp.nshealth.ca/rh

<sup>10</sup> Fung-Kee-Fung, K., Wong, K., Walsh, J., Hamel, C., & Clarke, G. (2024). Guideline no. 448: Prevention of rh D alloimmunization. Journal of Obstetrics and Gynaecology Canada, 46(4), 102449. https://doi.org/10.1016/j.jogc.2024.102449

#### **Newborn Bloodwork:**

Laboratory screening tests routinely done for full term healthy newborns include metabolic and endocrine screening (e.g. PKU screening), and a screen for bilirubin level. Blood samples are typically collected at 24-48 hours of age.

#### **Documentation**

Documenting the events of an unexpected birth in an emergency or outpatient department can be overwhelming. Even for experienced caregivers who routinely attend births it can be challenging to maintain accurate and contemporaneous documentation. Much of the documentation of the birth can be done after the birth has occurred and all are assessed to be healthy and safe in the immediate postpartum/postnatal period. Noting and remembering the time of birth is one important aspect of care and can be documented on the birth record as soon as circumstances permit.

Keeping a small stock of RCP forms for use during unexpected births can help promote the best care possible. These forms can help prompt caregivers to initiate appropriate assessments and treatments such as the timing of routine intrapartum/postpartum and neonatal assessments and the administration of medications routinely used in care. While some of the forms may not be applicable, depending on the duration of stay, the maternal assessment forms, partogram, birth record, and newborn assessment forms will be helpful and necessary to use for any birth even if a transfer is indicated shortly thereafter.

# RCP provides standard documentation forms for NS hospitals to support the documentation of perinatal care. Images of these forms are in Appendix C. Forms can be requested from the RCP office or via the RCP online order form.

RCP/01: Preadmission Maternity Assessment

RCP/02: Maternal Assessment

RCP/03: Labour Partogram

RCP/04: Birth Record

RCP/07: Maternal & Newborn Progress Notes

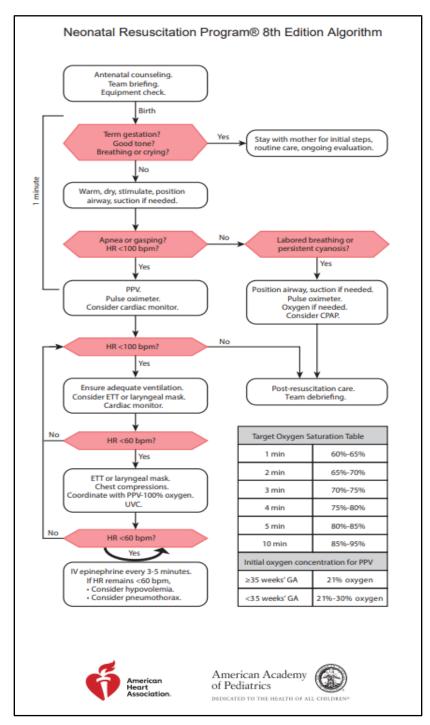
RCP/08: Newborn Admission/Discharge

RCP/09: Newborn Nursing Assessment

RCP/10: Newborn TPR

## **Appendix A**

## Flow Diagram for NRP"



<sup>11</sup> Textbook of Neonatal Resuscitation, 8th Ed. By American Academy of Pediatrics and American Heart Association. Edited by Gary M. Weiner and Jeanette Zaichkin (2021)

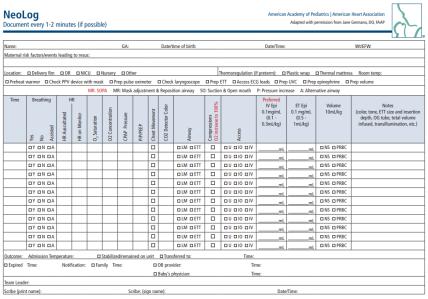
**Equipment for Neonatal Resuscitation** 

Item	<b>Community Site</b>	Regional Site
Newborn warmer		<b>√</b>
Means to keep newborn warm in lieu of skin-to-skin contact (e.g. gel warming mattress, cap, warm blankets/towels)	<b>✓</b>	✓
Oxygen supply	✓	✓
Appropriate size masks for term/preterm babies	✓	<b>√</b>
Self-inflating neonatal resuscitation bag and tubing to connect to an oxygen source	<b>✓</b>	<b>√</b>
O <sub>2</sub> blender (or means to blend air with O <sub>2</sub> ; e.g. Y-connector)	<b>✓</b>	<b>√</b>
Manometer	✓	<b>√</b>
Endotracheal tubes (sizes 2.5 to 4)	✓	✓
Tape and scissors	✓	<b>√</b>
Laryngoscope (0 and 1 sized blades) with extra bulbs and batteries  (*Requires specific training to achieve and maintain competency. Not to be used otherwise)	~	<b>√</b>
T-piece resuscitator (e.g. Neopuff™ Infant Resuscitator)		<b>√</b>
CO <sub>2</sub> detector	<b>√</b>	<b>√</b>
Laryngeal Mask Airway (LMA) size 1  (*Requires specific training to achieve and maintain competency. Not to be used otherwise.)	✓	<b>√</b>
Bulb syringe	✓	<b>√</b>
Regulated mechanical suction	✓	<b>√</b>
Suction catheters (6F, 8F, 10F, 12F)	✓	✓
Suction tubing and canister	✓	✓
Feeding tube (8F catheter)	✓	✓
Syringe, catheter tipped, 20 mL	<b>√</b>	<b>√</b>
Meconium aspirator		<b>√</b>
IV catheters (22 g)		<b>√</b>
Tape and sterile dressing material	✓	<b>✓</b>

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Item	<b>Community Site</b>	Regional Site
D10W	<b>✓</b>	✓
Isotonic saline solution	<b>/</b>	<b>√</b>
Syringes, assorted (1-20 mL)	<b>✓</b>	<b>√</b>
Epinephrine (0.1 mg/mL)	<b>✓</b>	<b>√</b>
Umbilical catheters (3.5F, 5F)		<b>√</b>
Chest tube (10F catheter)		<b>√</b>
20 g IV catheter with 3-way stopcock (in lieu of chest tube)	<b>✓</b>	✓
Sterile procedure trays (e.g., scalpels, hemostats, forceps)	✓ ·	<b>√</b>

## Canadian Pediatric Society's Neonatal Resuscitation Record<sup>12</sup>



Key: EFW = estimated fetal weight Epi = epinephrine ETT = endotracheal tube GA = gestational age IO = intraosseous IV = peripheral IV LM = laryngeal mask NS = Normal Saline PIP/PEEP = positive inspiratory pressure/positive end expiratory pressure PRBC = packed red blood cells. U = umbilical venous catheter

Page 1 of \_\_\_\_\_ (more recording space on next page)

Rev. 3/2

#### NeoLog Continued Document every 1-2 minutes (if possible)

lame:				MR. SO	DA M	D. March	a di cata		Danasi	ni	· Continu	& Open mouth	P: Pressure incre	A. Altan		
				MK. 50	PA M	K: Mask	adjustn	ient 8	керозг	tion airway St	: Suction	& Open mouth		ease A: Alterr	native airway	
Time	Yes No Assisted	HR Auscultated	HR on Monitor	O <sub>2</sub> Saturation	02 Concentration	CPAP Pressure	PIP/PEEP	Chest Movement	CO2 Detector Color	Ainvay	Compressions 02 increase to 100%	Access	Preferred IV Epi 0.1mg/mL (0.1 - 0.3mL/kg)	ET Epi 0.1 mg/mL (0.5 - 1mL/kg)	Volume 10mL/kg	Notes (color, tone, ETT size and insertior depth, OG tube, total volume infused, transillumination, etc.)
	OY ON OA									OLM OETT		0 0 0 0 N	mL	mL	□NS □ PRBC	
	OY ON OA									DLM DETT		0 0 0 0 0 N	mL	mL	□NS □PRBC	
	OY ON OA									DLM DETT		□U □IO □IV	mL	mL	□NS □PRBC	
	OY ON OA									□LM □ETT		□U □IO □IV	mL	mL	□NS □PRBC	
	OY ON OA									DLM DETT		□U □IO □IV	mL	mL	□NS □PRBC	
	OY ON OA									OLM OETT		0 0 0 0 0 N	mL	mL	□NS □PRBC	
	OY ON OA									DLM DETT		□U □IO □IV	mL	mL	□NS □PRBC	
	OY ON OA									DLM DETT		□U □IO □IV	mL	mL	□NS □PRBC	
	OY ON OA									DLM DETT		□U □IO □IV	mL	mL	□NS □PRBC	
	OY ON OA									□LM □ETT		0 0 0 0 0 IV	mL	mL	□NS □ PRBC	
	OY ON OA									OLM DETT		00 010 01V	mL	mL	□NS □PRBC	
	OY ON OA									DLM DETT		□U □IO □IV	mL	mL	□NS □PRBC	
	OY ON OA									DLM DETT		□U □IO □IV	mL	mL	□NS □PRBC	
	OY ON OA									DLM DETT		0 0 0 0 0 N	mL	mL	□NS □PRBC	
	DY DN DA									DLM DETT		□U □IO □IV	mL	mL	□NS □PRBC	
	OY ON OA									□LM □ETT		□U □IO □IV	mL	mL	□NS □PRBC	
	DY DN DA									OLM DETT		□U □IO □IV	mL	mL	□NS □ PRBC	
	OY ON OA									OLM DETT		□U □IO □IV	mL	mL	□NS □PRBC	
	OY ON OA									□LM □ETT		□U □IO □IV	mL	mL	□NS □PRBC	
	DY DN DA									OLM DETT		□U □IO □IV	mL	mL	□NS □PRBC	
cribe (prin	t name):															
ribe: (sia	name):							Date	Time:							

Key: EFW = estimated fetal weight: Epi = epinephrine ETT = endotracheal tube: GA = gestational age: IO = intraosseous IV = peripheral IV: LM = laryngeal mas

NS = Normal Saline - PIP/PFFP = positive inspiratory pressure logalizatory pressure PRRC = packed red blood cells: LI = umbilical weapus cathoter

page \_\_\_\_ of \_\_\_

## **Appendix B:**

## Infographics for Birth, Postpartum and the Newborn







#### After Birth:

 Administer 10 IU
 Oxytocin IM to the birthing person



The placenta may take up to 30 minutes to deliver

Watch for Signs of Placental Separation:

- · Gush of blood
- Lengthening of the cord

#### Did the placenta deliver?



- Massage the top of the uterus (fundus) immediately after placental delivery.
- Encourage emptying of the bladder



- Do not massage the fundus
- Do not pull on the cord
- Assess vaginal bleeding
- Assess maternal vital signs



EHS LifeFlight 1-800-743-1334







- Place baby skin-to-skin
- Provide warmth
- Position the head and neck to maximize the airway
- · Suction secretions from mouth then nose if needed



Is baby breathing and/or crying?



- Keep baby warm
   Place skin-to-skin
- · Delay cord clamping: Preterm (<37 weeks):

60-120 seconds

Term (≥37 weeks): 60 seconds

 Clamp and cut the cord after delayed clamping



- Clamp & Cut the cord
- · Call for help
- · Keep baby Warm
- Ventilate



Ventilation Rate 40-60 BPM

"1 AND 2 AND 3 AND BREATHE"



EHS LifeFlight 1-800-743-1334



## **Appendix C**

## Samples of Standard Documentation for Labour and Birth

Images of the RCP chart forms are listed in order of their chart form number:

RCP/01: Preadmission Maternity Assessment

RCP/02: Maternal Assessment

RCP/03: Labour Partogram

RCP/04: Birth Record

RCP/07: Maternal & Newborn Progress Notes

RCP/08: Newborn Admission/Discharge

RCP/09: Newborn Nursing Assessment

RCP/10: Newborn TPR





#### PREADMISSION MATERNITY ASSESSMENT

To be used only for labour assessment prior to or upon admission to labour/delivery area, provided the prenatal record is present on the chart and record has been reviewed. Otherwise the regular Medical History and Physical format should be used.

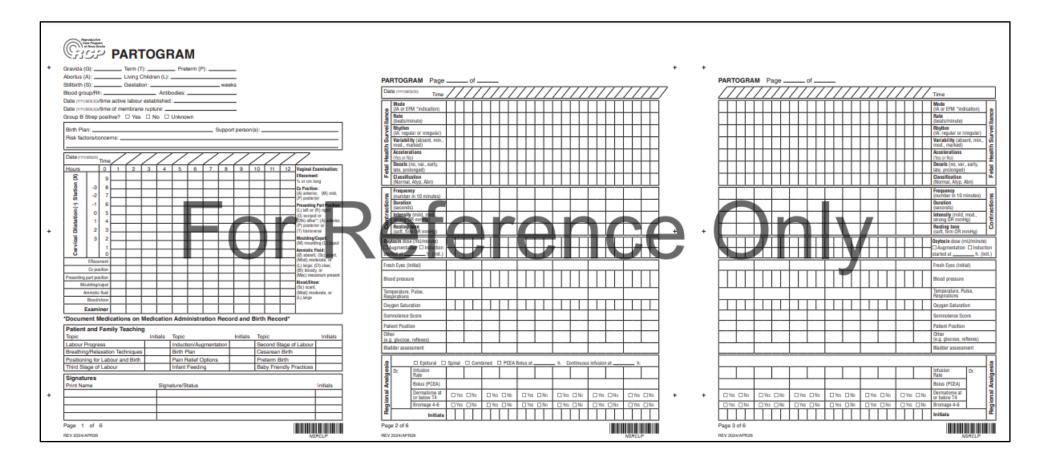
Time (HH:MM): Time (HH:MM): Time (HH:MM):	If uncert	e:weeks NT PROBLEMS  actions became e	Term (T):  timate of gestational age ARY OF SIGNIFICAL  UR ASSESSMENT te of when regular contre anes ruptured: □ Yes
Time (HH:MM): Time (HH:MM): Time (HH:MM):	n current p	ections became e	UR ASSESSMENT e of when regular contra
Time (HH:MM): Time (HH:MM): Describe:	ablished	actions became e	UR ASSESSMENT
Time (HH:MM):		□ No □ Que	e of when regular contra
Time (HH:MM):		□ No □ Que	e of when regular contra
Time (HH:MM):		□ No □ Que	e of when regular contra
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Time (HH:MM):		□ No □ Que	e of when regular contra
Time (HH:MM):		□ No □ Que	
Describe:	tionable		anes ruptured: Yes
		□ No	
		3110	um present:
			CAL ASSESSMENT
is DiMe	v status: 🚣	Cardiopulmona	ressure:
es □No	-4		height: cm
	. Ced		ed fetal weight:
			-
3 3-4 5-6	_	- 0	E EXAM
60-70 80			nent %
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	LUATION	CLINICAL EV	IONAL HISTORY OF
	LUATION		P SCORE:

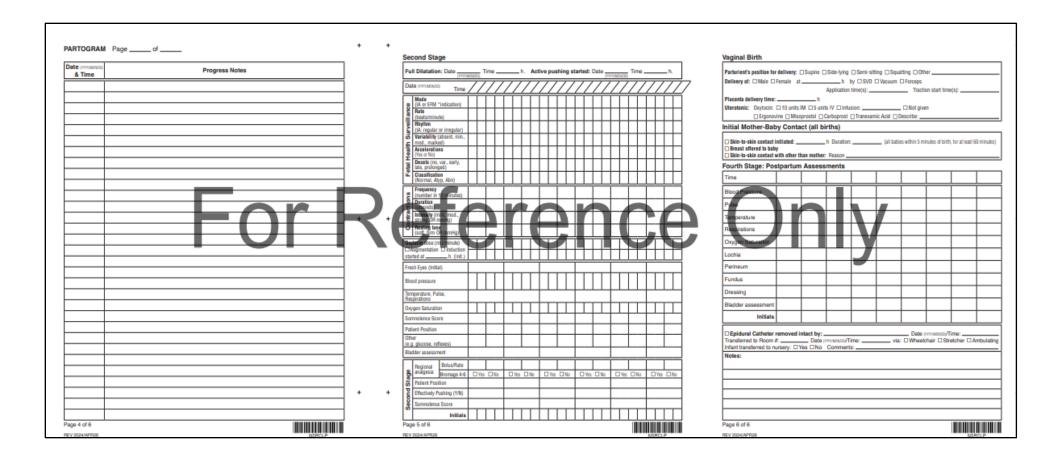


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#### MATERNAL ASSESSMENT

	7
Date Time	.
Reason for assessment	
Gravida (G) Term (T) Preterm(P)	
Abortus (A) Living Children (L) Stillbirth (S)	
Blood Group/Rh 28 wk Pho(D) inj. received □ No □ Yes	Allergies
Support Person(s)	Current Medications
Primary Care Provider	Rubella   Immune   Non-immune   Unknown
LMP □Known □Unsure	Varicella Dimmune DNon-immune DUnknown
EDD by □LMP or □U/S @ weeks	HIV ☐ Negative ☐ Positive ☐ ☐ Unknown
Gestationweeks	nepatatis 6 Li Negative Li Positive Li Li Orikilowii
	GC/Chlamydia Screening
Current Health and History	Date (most recent screen)  Gonorrhea
	Gonorrhea
Immunizations Received in Pregnancy	GBS Status Negative Positive Unknown
(e.g.; Influenza, TDap, Hepatitis B and COVID-19)	Maternal Vitals TPR/ BP
	Pre-Preg. Wt HT BMI
Previous Pregnancy/Delivery	Current Wt Weight Gain
Previous Pregnancy/Delivery	Lab Tests
	Labour ONo OYes ONA
Medical History	
	Contractions started
O to do so a Unit	Requency: # in 10 minutes.
Substance Use	IFN No Yes N/A Neg. Pos.
Smoking No Yes Amt/day	
Alcohol No Yes Amt/week	Cervix cm station % eff position
Cannabis No Yes Frequency	Examined by
Other No Yes Describe	Membranes
Initimate Partner Violence □ No □ Yes	SRM No Suspected Yes Date/time
Psychosocial Concerns	Colour and volume of fluid
Describe	Ferning No Yes Not done
Labour and Birth Plan □ Written □ Verbal	Fetal Presentation Position FH cm
Key Points	FM □ Active □ Decreased
Pain Relief Choices	FHRbpm
□ Non-Pharmacological	Classification ☐ Normal ☐ Atypical ☐ Abnormal
Pharmacological Prenatal Education	Interpretation
Classes Other	NST (if indicated) ☐ Normal ☐ Atypical ☐ Abnormal
Infant Feeding Choices	Plan of Care
□ Breast □ Antenatal Colostrum collection □ Other	BPP Score U/S
Previous BF experiences □ No □ Yes	Notes
Describe	
Plan of Care	□ For Induction
Attending Care Provider	
Admitted to room # Reason	
Date T	□ Booked C/S
☐ Transferred to Date T	Illuication
Discharged home DateT	Date
Signature/Status/Print Name	
Signature/Status/Print Name	Volley, Mayberrie Chart
HOP/UZ HEV 2024APH29 Copy Distribution White - Mother's Chart	Tellow - Newborn's Chart NSRCMA





Reproductive Care Program of Nova Scotia								
	RECORD							
	Membrane Rupture	1						
Gravida (G) Term (T)								
Preterm(P) Abortus (A)	SRM Date	1						
Living Children (L)	Suspected Time							
Stillbirth (S)	□ARM Duration							
EDD Gest wks				to mother wit				
GBS Status ☐ Neg. ☐ Pos. ☐ Unknown		Tin	ne	Drug		Dose	Ho	ute
Preg/Med complications	☐ Maternal fever > 38' in labour	-			-			
Initiation/Progress of Labour	Induction Method	$\vdash$			+	•		$\overline{}$
☐ Spontaneous onset	☐ Cervical Ripening Type			-				
Oxytocin augmentation	□ ARM				1	7		
☐ Induction Reason	Oxytocin Mechanical (catheter)	Baby	ПБ	emale DMale	· ·	labi		(g)
44 Otono Fotoblished Day		APGAR		Siliale Liman	2	1 Min	5 Min	10 Min
1st Stage Established Date	Time	Heart			Above	1 IVIIII	5 MIII	10 Min
2 <sup>nd</sup> Stage Onset Date	Time	Rate	Absent	Below 100	100			
		Resp.	Absent	Slow	Good			
Birth Date Time		Effort Muscle		irregular Some	crying Active			$\vdash$
□ Spontaneous □ C/S Reaso	on	Tone	Limp	flexion	motion			
□ Vacuum (and/or) □ Forceps R	leason	Reflex	None	Grimace	Cough			
☐Mid ☐Mid	Rotation	Irritab.	Blue	Body Pink	sneeze			$\vdash$
□Low □Low	☐ Manual or ☐ Forceps	Colour	Pale	Blue extrem	All pink			
Outlet Outlet	.101	APGAR	Score		Totals			
☐ Attempted Only ☐ Attempt		Erythron	nvcin Ev	e Ointment				
Other Intervention (e.g. Breech Ext	raction)	(If indica			gnature			
Placental Delivery Date	Time	Resus	citation				M	ax. %
☐Spontaneous ☐Assisted ☐Man	nual	(Duratio	n)	< 1 min.	1-3 mir	n. > 3 m	nin. ord	uration
Umbilical Vessels □3 □2	Cord pH done ☑ No ☐ Yes	02					_	
Abnormalities Describe		PPV					_	
Oxytocin  No Yes Type	Dose Route	ET tube	(ventilat	ion)			_	
Infusion postpartum	70	LMA					_	
PPH □No □Yes		CPAP					_	
Estimated blood loss   <500 mL   <	50 1000 ml	Chest co	ompress	ions 🗆			_	
Episiotomy Laceratio				ing 🗆 No 🗆 Y				
	☐ 3 <sup>rd*</sup> (anal sphincter)			cords No E	]Yes E	pinephri	ne 🗆 No	Yes
□None		-		Yes	Ta .			_
Midline 1 (vagi				Clamping		Milkin	g rd clam;	ning is
☐ Mediolatera ☐ 2 <sup>nd*</sup> (peri	-	□ < 30 to				ayeu co asible)	ru ciairij	Jilly is
Suture required ☐ No ☐ Yes Count	verified Sutures Sponges		in. to 3 r		□ No	,		
Analgesia/Anaesthesia		□ >3 m			☐ Yes	8		
■None ■Narcotic ■Spinal ■Epid	ural Nitrous Oxide General	D SHIII	hirth	Date/Time last	FHR			
Other				Date/Time las				
Comments								=
Signature(s) of MD/MW attending birt	h							
Signature(s) of RN attending birth		,						



#### MATERNAL AND NEWBORN PROGRESS NOTES

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Rev 2024/JUN

BATE (YYYYMONDD) & TIME (HHMM)	PROGRESS NOTES	STATUS
& TIME (HHMM)		
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NSF	RCM	N		

Save Program of News Strates	NEWBORN ADMISSION/DISCHARGE
63350	NEWBORN ADMISSION/DISCHARGE
	(Including stillbirths)

Initial Assess	ment							
General Appeara	nce:							
☐ Transitioning W	ell 🗆 If i	no, describe below:						
Infant Surname, Fi	irst name (if known)		Mother's Name					
DOB	Time	Sex	Delivery: □ SVD □ Vacuum □ Forceps □ Cesarean					
Gest. Age by Asse	essment Gest	Age by Best Prenatal Estimate	Apgar: @1 @5 @10  Resuscitation					
	(weeks/days)	(weeks/days)	Admit to NICU/ Nursery (indication):					
Exam:	<37 weeks (Preterm)	≥37 weeks (Term)	☐ At risk for complications ☐ Labour induced (indication):					
Breast Tissue	□ ≤3mm	□ >3mm	GBS Status: Rx >4holurs: □ Yes □ No					
Plantar Creases	☐ Smooth, single crease	□ Cover anterior 1/3 or more	Normal Prenatal Ultrasound:					
Ear Pinna	☐ Relatively flat, pliable	☐ Stiff cartilage, deep crease	Skin-to-skin first hour(s):					
	•	at outer aspect	Breastfeed first hour(s): Yes No, why:					
Genitalia: Male	□ Testes in canal	□ Testes well within scrotum	Erythromycin eye prophytaxis:   No Yes, why:					
Female	□ Labia Minora visible	□ Labia Majora cover Minora	Vitamin K:ng, □ IM □ PO					
Comprehens	ive Physical Exam	Completed within 24h of birt	h *guide on reverse side of form					
Birth Weight (g)	Length (c	m) Head C	Circ. (cm) SGA LGA					
Skin	□ Normal Soft tissue	wasting: ☐ Moderate ☐ Severe	Describe findings other than normal:					
Head, Neck	□ Normal □ Palate	Intact						
	☐ Red reflex: LR_	☐ Unable to obtain ☐ Follow-u	prewid )					
Arms, Clavicles, Hands	□ Normal	_						
Cardiac	□ Normal □ Femora	I pulses  Murmur	•					
Respiratory	□ Normal	40						
Abdomen	□ Normal Cord: □ S	ingle UA Double UA						
	Spleen: cm							
Anus	□ Normal □ Passed	meconium	601P.6					
Genitourinary	□ Normal □ Passed	urine	CCHD Screening final results: ☐ Pass ☐ Refer Right hand ☐ Foot ☐ % Difference					
Hips, Legs, Feet	□ Normal □ Barlow/	Officiani II R	Right hand Foot % Difference					
Back	□ Normal		Age when screened: hours					
Neurologic	□ Normal □ Reflexe	S ☐ Unable to obtain reflexes	□ Declined □ Not clinically appropriate					
Date:	Time:	Print Name:	Signature/Status:					
Discharge								
☐ Discharge Phy	sical Completed Di	scharge weight: (g)	Newborn Screening:					
Comments:	sical Completed	scriarge weight(g)	□ Bilirubin: last TSB μmol/L Date: Time:					
Comments.	X		☐ To be repeated (date/time):					
			Phototherapy (describe):					
		lusive  with Supplementation	DAT: Blood type:					
□ Form			□ Newborn screening blot: Date: □ To be arranged					
Indications for sup	plementation:		Other test results:					
Feeding issues: _			☐ Refer to Additional Dictation ☐ not applicable					
Discharge/Follow	up plan:							
Primary Care Prov	ider appt:   Booked	1	Consults:					
(FP/NP/RM) □ Parent to arrange □ No provider			NSHSC Hearing Screen: OAE / AABR Pass / Refer					
☐ PHN referral indicated ☐ Fax copy (if applicable) to:			☐ Hearing screen to be arranged					
Date/Time	Print Name/Signatur		Date/Time Print Name/Signature/Status					
			NSRCPN					
RCP/08 - Revised	November/2020 Chart / YELLOW – Priman	Care Provider Office	NEWBORN EXAMINATION					

A brief examination should occur within the first few minutes of life to:

- . Assess for signs of successful transition to the extra- uterine environment
- Determine sex
- · Identify significant congenital anomalies
- · Reassure parents

In the healthy baby this examination should be undertaken while the baby maintains 'skin to skin' with the mother.

Every newborn baby should receive a comprehensive physical examination within 24h of birth. If the baby is unwell or premature, this examination may be staged as clinically indicated. If baby is pretern use the New Ballard Score for maturation assessment of gestational age. Findings should be documented and the results discussed with parents. A follow up comprehensive examination is recommended within the first 7-10 days of birth. All parents are contacted within 1-3 days of discharge to determine ongoing needs/supports required.

#### Components of the Comprehensive Newborn Physical Exam: General Appearance Chest/Cardiorespiratory Chest · Skin color Chest size sha State of Alertness Breast tissue Activity · Range and symmetry of spontaneous movement Respiratory effort with respiration Posture Chest Muscle Tone Res **Growth Status** Cardiac Skin colour - central/peripheral Peart sounds Peart rate Peart rhythm · Weight and Length Head Circumference Skin Colour Texture Pulses: brachial, femoral Integrity Anomalies Shape and symmetry Head Major organs (liver and spleen, palpable, size) Shape and symmetry Umbilious (number of vessels) Scalp Cephalohematoma · Has the baby passed urine? Anterior and posterior fontanels Inguinal hernia, Lymph nodes Genitalia: Male, female, ambiguous Sutures Male: penis, foreskin, testes Face Female: clitoris, labia, hymen Symmetry of structure, feat • Eyes Size and structure Position Position in relation to the nasal bridge · Patency - Has the baby passed meconium? Red Reflex Hips, Legs and Feet Fars Use Ortolani and Barlow's maneuvers to assess hips for Nose: Legs and feet: Position and mmetry of nares and septum Length and proportion Patency of nates bilaterally Symmetry Anomalies (e.g. club feet) Mouth · Symmetry of movement Structure and number of digits Shape and structure - lips, palate, tongue Spinal column /Ribs Scapulae and buttocks for symmetry Structure/ Lymph nodes/ Thyroid palpable · Skin (sacral dimple/sinus) Symmetry of movement Neurologic Range of movement Behavior Clavicles, Arms and Hands Posture Length Muscle tone Proportion Movements Cry Reflexes: Babinski, grasp, moro ,rooting, stepping, suck Symmetry Hand creases Structure and number of digits

NEWBORN Birth Date (YYYY-MM-DD)	NUR	SING AS Birth Time	SSESSME	Sex		Band #	7				
Birth Wt. (g)		Head Circ.	(cm)	Length (d	em)		1				
Blood Group				Breast	_	Exclusive	1				
	aby	Coombs		With Supp	ol. 🗆	Formula					
GESTATIONA	L AGE			D1		#		7 WEEKO (T.	\ 050		05
BREAST TISS	UE		n 37 WEEKS (I than or equal t				han or equa	37 WEEKS (Ter al to 3mm	mm) GES	TATIONAL A	GE
PLANTAR CRE		☐ Smooth, Single Crease			☐ Covering Ant. 1/3 or						
EAR		☐ Relati	vely Flat, Pliat	ole		Stiff Carti Outer As	ilage, Deep pect	Crease at	By As	ssessment _	w
GENITALIA		ale 🗆 Teste ale 🗅 Labia	s In Canal Minora Visible				ell within S ijora cover		11	\	
HEAD TO TOE	ASSESS	MENT						□ Erythron	cin eve oint	ment given	☐ Yes ☐
		AL ABNOR	MAL (Commer	nt on Abno	rmaliti	ies)		☐ Vitamin K Given by			
<ol> <li>GENERAL APPEARANO</li> </ol>								Newborn Scr	reening:	Discussed	d
2. SKIN		☐ Bruisi	na		□ Pe	elina				Done	
2. 01014	_	☐ Petec				undice		7	Į	□ Arranged	
			nium Stain		□ Oth			CCHD Scree			
		☐ Edem	a		□ Mo	derate 🚄	Severe	Age at initial			hours
		□ Soft ti	issue wasting			4	1	R. Hand	Foot	% Diff	Action
3. HEAD		□ Overr	iding Suture		□ Mo	Mina	-	┧┝──			P/R/F
	_	☐ Hema	-				☐ Caput				P/R/F
4. EENT			Lip/Palate		_ Oti		_ ouput	┧└──	D-Dage / D-/	Repeat / F=Fa	P/F
4. CEN1			ected Choanal	Atresia	<u>0</u>	<u> </u>		☐ Further as	sessment re		See Notes
5. RESP		☐ Grunt				reath Sou	nds	□ Not clinica		te	
		□ Nasal □ Retra			☐ Tar	chypnea her		Date (YYYY-N			me:
6. CVS		□ Murm			□ Ce	ntral Cyan	nsis	Signature			
0.010	_	□ Arrhy				sent Femo		DISCHARGE		Weight	
		□ Tach			Oth			□ Physician			
7. ABDOMEN	n.	→ □ Scap			Ott			Order for			. M
7. ADDOMEN		J Diste	,		_ 0	101		reeding:		Exclusive L	With Suppl.
	-	_			D. To	-			Formula Medically In	vdicated	
8. UMBILICAL CORD		2 Ves	nium Stain		☐ Thi			_	Well Establ		
					Oth				Problems (		
9. MUSCULO-		☐ Spine				ot abnorma	al	Follow-up P			
SKELETAL		☐ Hip al			Oth	her					
10 OFFICE	_	☐ Clavid			<u> </u>			COMMENTS			
10. GENITO- RECTAL		☐ Hydro				perforate a	nus	COMMENTS			
		☐ Hypo:	spadias scended tester		□ Oth	ner					
								-			
11. CNS		☐ ↓ Ton			⊒ ÎĦ ⊒ Jitt		Other				
Date (YYYY-MM	-DD):				Time	9:		Date (YYYY-I	MM-DD):	Ti	me:
Signature:								Signature:			
J		ary/2018						granus			SING ASSESSM

