Public Health Nursing:
Newborn Nursing Care Pathway

2019

Provincial Standards For Prenatal,
Postpartum And Early Childhood:
Province of Manitoba

Manitoba

Table of Contents

Introduction

About the Newborn Care Pathway

The Newborn Nursing Care Pathway identifies the needs for care of newborns and is the foundation for the Newborn Assessment. To ensure all of the assessment criteria are captured, they have been organized into four main sections:

- growth and nutrition
- physiology
- general health
- lifestyle, safety, injury prevention

While the newborn criteria are presented as discrete topics it is not intended that they be viewed as separate from one another. For example, newborn physiological changes affect feeding and behaviour. To assist with this, cross referencing is used throughout (seen as "Refer to…"). This will also be evident with the cross referencing to the Postpartum Nursing Care Pathway.

Newborn Assessment

In this document, assessments are entered into specific periods; from immediately after birth to 7 days postpartum and beyond. These are guidelines used to ensure that all assessment criteria have been captured. The original pathway[1] was developed by Perinatal Services British Columbia (BC), and has been adapted for use in Manitoba. In absence of research evidence, the consensus opinions of experts were used, which have been retained in this document. The client family (supports) are present at the assessment and included in the planning, and implementation of the newborn's care. In the intervention sections it is referred to as Nursing Assessment.

Once the newborn and parent are in their own surroundings, details of physical assessments will be performed based on individual nursing judgment in consultation with the client.

Item	Description
Client Surname	- The surname of the client
Given Name	- The given (first) name of the client
DOB (Date of birth)	- Client's date of birth (MONTH/DD/YYYY)
PHIN (personal health identification number), Nunavut Number	- Client's nine digit Manitoba personal health identification number (PHIN) or Nunavut Health Care Plan number
MFRN (Manitoba Family Registration Number)	- Client's six digit family registration number
Gestational Age	- Infant gestational age indicated on postpartum assessment form
Weight	- Document infant weight at birth and discharge from hospital

Contact Date and Time

Indicate date(s) and time of contact as Month, DD, YYYY for example Jul 31, 2018, @ 11:15 am.

Contact Type

Indicate if contact type is direct or indirect.

Initials	Name	Description
DC	Direct contact	In person meeting that may occur at any variety of locations
IC	Indirect contact	Communication with the client that is not in-person - may be via phone, social media, etc.

General Guidelines

The first 12 hours are considered to be the period of transition where the normal newborn adapts to extra-uterine life. The time from birth is typically calculated in hours, however for the purposes of public health nursing, it is reflected in days from birth.

Item	Description
Age in days postpartum	- Postpartum Day 1 = 0 (birth) to 24 hours - Postpartum Day 2 = 24 to 48 hours - Postpartum Day 3 = 48 to 72 hours - Postpartum Day 4 = 72 to 96 hours - Postpartum Day 5 = 96 to 120 hours etc

Documentation will be completed on the assessment forms using a charting by exception process. The Prenatal, Newborn and Postpartum Care Pathways contain information on normal, normal variations, variances, interventions, education, and anticipatory guidance. PHNs will indicate their assessment as follows:

Spaces are not left blank. Documentation is completed using:

Item	Description
PHN initials	Indicates PHN assessment is consistent with normal expectations contained in the care pathway
V (Variance)	Indicates a key assessment finding that requires further explanation in the progress note
/ (Not Assessed)	PHN has not assessed that area

Note: Bracketing and initialing sections is acceptable.

Growth & Nutrition

Breastfeeding

Infant Feeding Assessment	0 – 12 hours Period of Stability (POS)	Day 1 (12-24 Hours)	Days 2-3 (24-72 hours)	Day 3 & beyond (72 hours-7 days & beyond)
BREASTFEEDING[2-14]				

Assess understanding:
- informed decision-making *(IDM)* about infant feeding *(service standard informed decision-making on infant feeding)*
 	
Assess feeding effectiveness
- Active feeding
- Positioning
- Skin-to-skin
- Deep latch
- Hydration
- Frequency
- Duration
- Sucking
- Swallowing
 	
Assess parental ability to initiate & complete feeds:
- Observe:
  - Feeding
  - Responsive cue-based feeding
 	
Refer to:
- Elimination
- Weight
- Skin
- Behaviour
- Postpartum Nursing Care Pathway: Breasts and breastfeeding
 	
Assess understanding of:
- Breastfeeding
- Need for vitamin D supplement
 	
Assess parent's capacity to identify variances that may require further assessments and/ or intervention
	Norm and Normal Variations
	- Skin-to-skin immediately after birth and remains interrupted for at least 1 hour, until completion of first feed, regardless of method of delivery, unless there is a medical contraindication
	- Offer breast when he/she shows signs of readiness *(usually with in first 1 – 2 hours)*
	- Baby latchs and begins to suck
	- Ongoing responsive cue-based feeding
	- Actively feeds
	- Tolerates feeds
	- After initial feed baby may not be interested in further feeding during this period.
	- May have small emesis of mucous or undigested milk following feeds *(10 mls or less)*
	
	Parent Education/Anticipatory Guidance
	- The importance of skin-to-skin during the establishment of breastfeeding
	- Refer to >12 – 24 hr
	- Importance of exclusive breastfeeding for the first 6 months
	  - Review position, deep latch and active feeding
	  - Client comfortable-cradle, modified cradle or football hold, laid back nursing, bring infant to the breast, use of pillows, and position of hands
	  - Encourage skin-to-skin, tummy to tummy
	  - Baby's body is aligned close to and facing parent
	  - Hand holds and supports the upper back and shoulders, cradling the neck/base of the skull
	  - If breast large, support breast *(fingers from back of areola)*
	  - Touch baby's lips with nipple, wait until mouth open wide
	  - Aim nipple towards the roof of infant's mouth-the bottom lip/jaw touching the lower areolar under breast more areola above the baby's top lip than below, mouth open wide, lower lip turned out, and chin touching breast
	  - The baby takes slow deep sucks
	  - You can see or hear the baby swallowing
	  - The baby's cheeks are full and not drawn inward during a feed
	  - The baby finishes the feed and releases the breast and looks contented
	  - The nipples not distorted after feeding
	  - Breastfeeding Your Baby, Healthy Child Manitoba
	  - Breastfeeding Committee for Canada, The BFI 10 Steps and WHO Code, 2017Outcome Indicators for Hospitals and Community Health Services: breastfeedingcanada.ca/BFI.aspx
		Norm and Normal Variations
		- Feeds 6 or more times in first 24 hours and may cluster feed
		- Variable frequency and duration – different for each dyad
		- Wakes to complete feeds
		
		Parent Education/ Anticipatory Guidance
		- Refer to POS
		- Assist parent to watch/ look for feeding cues:
		  - Wiggling arms and legs
		  - Hands to mouth
		  - Rooting
		  - Mouthing
		- Crying is a late feeding cue
		- Infants aroused from deep sleep will not feed
		- Support early & frequent breast feeding *(provides antibodies)*
		- Normal newborns eat 15±11gms over the first 24 hours:
		  - Stomach capacity is size of a dime
		- Duration varies for each feeding *(may last ~20 – 50 min)*
		- Discuss that a satiated infant is relaxed, sleepy & disengages from breast
		- Burping positions
		- Elimination and hydration status should be components of the feeding assessment
		- Hand expression and cup/spoon feed as appropriate
		- Nutrition for Healthy Term Infants: www.canada.ca/en/health-canada/services/food-nutrition/healthy-eating/infant-feeding/nutrition-healthy-term-infants-recommendations-birth-six-months.html
			Norm and Normal Variations
			- Feeds 8 or more times/24 hours and frequently during the night initially
			- Shows signs of adequate hydration
			- Contented and satiated after feeding
			
			Parent Education/ Anticipatory Guidance
			- Refer to >12 – 24 hr
			- Amount eaten at each individual feeding increases as milk supply increases
			- Aware that frequent feedings assists in milk production
			- Breastfeeding throughout night – stimulates milk production, relieves breast fullness discomfort, helps prevent engorgement
			- Signs of effective feeding:
			  - 8 or more feedings after the first 24 hours
			  - Hear a "ca" sound during feeding
			  - Coordinated suck and swallow
			  - Refer to elimination re: numbers of wet diapers and bowel movements
			  - Breastfeeding Your Baby, Healthy Child Manitoba
			  - Returns to birthweight by about two weeks
			  - Evidence of milk transfer
				Norm and Normal Variations
				- Refer to > 24 – 72 hours
				- Frequency of feeds may decrease once milk supply established
				- Baby gaining weight regularly
				- Content after most feedings
				- Pattern of breast usage may change *(e.g. one or both breasts per feed)*
				- Changes in feeding patterns where infants feeds more frequently for several days *(commonly called growth spurts)*
				
				Parent Education/ Anticipatory Guidance
				- Refer to >12 – 24 hr
				- Resources
				- PHN
				- Community Health Services
				- Support Groups
				- Exclusive breast feeding for the first six months
				- Introduction of complementary solids recommended at or around six months with continued breastfeeding for up to two years and beyond

Breastfeeding

Infant Feeding Assessment	0 – 12 hours Period of Stability (POS)	Day 1 (12-24 Hours)	Days 2-3 (24-72 hours)	Day 3 & beyond (72 hours-7 days & beyond)
BREASTFEEDING				

(Continued)	**Parent Education/Anticipatory Guidance**
	- Frequency and duration
	- Newborns who are breastfed or receiving breastmilk should receive a daily vitamin D supplement:
	  - www.manitoba.ca/health/bfm/care.html
	  - Infant feeding: Vitamin D: www.wrha.mb.ca/prog/nutrition/stages-infant-VitD-Breastfeeding.php
	- Hydration
	- Show all parents how to hand express *(especially if newborn is LGA, SGA or risk for hypoglycemia – infants of diabetic clients)*
	  - Video – Hand Expression of Breastmilk: med.stanford.edu/newborns/professional-education/breastfeeding/hand-expressing-milk.html
	- Vitamin D supplementation: Recommendations for Canadian mothers and infants: www.cps.ca/en/documents/position/vitamin-d
	
	Variance
	- Infant shows no signs of interest in feeding
	- Parent not responsive or knowledgeable regarding breastfeeding, cue-based feeding, or hydration
	- Poor/absent latch
	- Does not latch: prior to initial latch may lick, nuzzle or root for nipple
	- Poor feeding position
	- Uncoordinated suck/swallow/breathing pattern
	- Coughing, choking
	- Respiratory distress with feeding
	- Does not settle following feeds
	- Congenital anomalies *(e.g. tongue tie, cleft palate)*
	- Parent chooses to provide additional milk when no medical indications for supplementation
	- WHO Breastfeeding policy brief: apps.who.int/iris/bitstream/handle/10665/149022/WHO_NMH_NHD_14.7_eng.pdf;jsessionid=110F87C988618776D28DC28AC0C46FF6?sequence=1
		Variance
		- Refer to POS
		- Dimpling of cheeks
		- Smacking sounds while feeding
		- Not feeding effectively
		
		Parent Education/
		Anticipatory Guidance
		- Encourage skin to skin
		- Baby led latching
		- Ways to know infant is positioned well and latching deeply
		- Feeding 8 or more time in 24 hours
		- Responsive cue-based feeding
		- Evidence of milk transfer
		- Hand express and/or pump to establish milk supply
		- Consider cup or spoon feeding
		- Newborns who are breastfed or receiving breastmilk should receive a daily vitamin D supplement
			Variance
			- Refer to 0 – 24 hr
			
			Intervention
			- Refer to 0 – 24 hr
			
			Parent Education/ Anticipatory Guidance
			- Vitamin D Supplement: Norm and Normal Variations:
			  - Cases of Vitamin D deficiency still occur in Canada among infants who do not receive supplements
			  - Vitamin D is an essential nutrient that helps the body use calcium and phosphorous to build and maintain strong bones and teeth
			  - Nutrition for Healthy Term Infants: Recommendations from Birth to 6 months: www.canada.ca/en/health-canada/services/food-nutrition/healthy-eating/infant-feeding.html
			  - Newborns who are not given any breastmilk and are receiving commercial formula need a vitamin D supplement
				Parent Education/ Anticipatory Guidance
				- Nutrition for healthy term infants, birth to 6 months: 6 months - 24 months www.canada.ca/en/health-canada/services/food-nutrition/healthy-eating/infant-feeding.html
				- Manitoba Parentzone: Eating: www.manitobaparentzone.ca/parent-or-caregiver/newborns/eating.html
				
				Variance
				- Refer to 0 – 72 hr
				
				Intervention
				- Refer to 0 – 72 hr

Active Feeding – Breast – several bursts of sustained sucking at both breasts each feeding including effective positioning, latch and evidence of milk transfer

Positioning – chest to chest, skin-to-skin, nipple to nose

Effective Latch – Chest to chest, nose to nipple, wide open mouth, flanged lips, no dimpling of cheeks, may hear audible swallow, rhythmic sucking, baby doesn't easily slide off the breast, no nipple damage or distortion after feed

Adequate hydration – moist mucous membranes, elastic and responsive skin turgor

Evidence of milk transfer – audible swallowing, rhythmical sucking, adequate output *(refer to Elimination)* appropriate weight loss for age *(refer to Weight)*

Breastfeeding

Infant Feeding Assessment	0 – 12 hours Period of Stability (POS)	Day 1 (12-24 Hours)	Days 2-3 (24-72 hours)	Day 3 & beyond (72 hours-7 days & beyond)
BREASTFEEDING				

(Continued)	**Intervention**
	- Assess reason for variance
	- Assess feeding to reassure parent that infant's needs are met by breastfeeding
	- Ensure that concerns about feeding are addressed
	- Provide sufficient information to ensure that the parent is aware of the effects of unnecessary supplementation
	- Provide teaching as needed and follow-up
	- Discuss Informed Decision Making on Infant Feeding
	- Discuss importance of breastfeeding for baby, parent and family
	- Discuss health consequences of not breastfeeding, risks and costs of human milk substitutes
	- Discuss the difficulty of reversing the decision once breastfeeding is stopped
	- Discuss risks of supplementing with human milk substitutes on milk supply
	- Discuss impact and risks of artificial nipples or pacifiers on breastfeeding
	- Ensure nipple shields are not routinely offered
	- Encourage skin to skin
	- Hand expression
	- Cup/spoon feed as appropriate
	- *(Refer to RHA guideline for Breastfeeding the Healthy Full Term Infant)*
	- Refer to appropriate PCP prn
		Intervention
		- Refer to POS/Parent Education/ Anticipatory Guidance >12 – 24 hr
		- Nursing Assessment to include:
		  - Position and Latch
		  - Encourage skin-to-skin
		  - Support the upper back and shoulders, cradling the neck/base of the skull, no pressure on baby's head
		  - Skin-to-skin or light clothing – baby is not wrapped
		  - Tummy to tummy with baby's bottom tucked close to parent
		  - If breast large, support breast *(fingers well back from areola)*
		  - Touch baby's lips with nipple
		  - Wait until mouth open wide
		  - Aim nipple towards the roof of infant's mouth – the bottom lip is well back from the base of the nipple
		- Breastfeeding your baby: www.manitoba.ca/healthychild/healthybaby/hb_breastfeedingyourbaby.pdf
		- Waking/latching techniques: www.manitoba.ca/health/bfm/latch.html
		- Breast stimulation:
		  - Refer to Postpartum Nursing Care Pathway
		- Refer to appropriate PCP
			Variance
			- Refer to 0 – 24 hr
			
			Intervention
			- Refer to 0 – 24 hr
			- May require feeding alternatives *(by parent's informed decision)* if there is evidence that the baby needs more milk *(e.g. by spoon, cup, dropper, bottle)*
			- Feeding plan in place, such as:
			  - Improve latch & position
			  - Increase frequency of feeding
			  - Encourage Skin to skin
			  - Stimulate baby
			  - Hand express after feeding
			  - Express/pump q 2 – 3 hr
			  - Express and top up
			- Refer to appropriate PCP
			
			Variance – Ineffective feeding
			- Baby not getting enough milk based on clinical assessment
			
			Intervention – Ineffective feeding
			- Nursing Assessment
			- Assist with latch
			- Hand expression with breast compression
			- Assess for jaundice
			- Techniques for waking sleepy baby *(stimulating baby – skin-to-skin, not over dressing)*
			- Provide EBM if infant unable to effectively transfer milk
			- Medically indicated supplementation: use EBM, donor milk or formula *(start with small amounts)*
			- Refer to PCP prn
			- Medically indicated supplementation: *(Link to Breastfeeding Committee for Canada, Medical Indications for supplementing found in the BFI 10 Steps and WHO Code)*: breastfeedingcanada.ca/BFI.aspx
				Variance
				- Refer to 0 – 72 hr
				
				Intervention
				- Refer to 0 – 72 hr

Human Milk Substitute

Infant Feeding Assessment	0 – 12 hours Period of Stability (POS)	Day 1 (12-24 Hours)	Days 2-3 (24-72 hours)	Day 3 & beyond (72 hours-7 days & beyond)
HUMAN MILK SUBSTITUTE FEEDING (FORMULA)[7,13-15]				

- Provide information as necessary for informed decision making and understanding the difficulty of reversing the decision to formula feed
- Refer to service standard on Informed decision-making on infant feeding
- Explore feeding options-address parent's specific concerns about infant feeding
 	
Assess:
- Coordinated suck and swallow *(active feeding)*
- Hydration
- Frequency
- Duration
- Able to consume appropriate volume for age/weight
	Norm and Normal Variations
	- Skin-to-skin for all babies regardless of feeding method
	- Tolerates feed
	
	Parent Education/ Anticipatory Guidance
	- Information about the importance of breast milk and breastfeeding for infants and parents
	- Address parental specific concerns regarding feeding issues
	- Refer to >12 – 24 hr
		Norm and Normal Variations
		- Every 2 – 4 hr
		- Cue based feeding
		- Signs of fullness
		
		Parent Education/Anticipatory Guidance – Formula Fed Infants
		- Choice of formula *(ready-to-feed and concentrated are sterile until opened; powdered formula is not sterile)*
		- Equipment:
		  - Equipment needed
		  - Cleaning of equipment
		- Preparation, storage and warming formula *(refer to Formula Feeding Resources at* www.manitobaparentzone.ca/parent-or-caregiver/newborns/eating.html*)*
		- Safety at room temperature
		- HCM Formula Feeding your Baby
		- Help the parent choose what is acceptable, feasible, affordable, sustainable, and safe *(AFASS)* in their circumstances
		- Positioning and responsive feeding:
		  - Hold baby close during feeding
		  - Have baby's head higher than body, supporting baby's head
		  - Hold bottle so most of the artificial nipple is in baby's mouth and formula fills the nipple
		  - Never prop the bottle
		  - Half the nipple and hold the bottle horizontal
		- Encourage parent to observe baby to recognize early feeding cues:
		  - Infant wriggling and moving arms and legs
		  - Fingers or hand to mouth
		  - Rooting
		  - Mouthing
		- Crying is a late feeding cue
		- Infants aroused from deep sleep will not feed
		- Follow baby's cues re amount to give – newborns may drink small amounts at one feeding, as little as 30 ml
		- Burping positions
		- Stop feeding when baby shows signs of fullness – closing mouth, turning away, pushing away, falling asleep
		- Pace the feed and avoid forcing baby to finish
		
		Resources:
		- Manitoba Parent Zone: Eating: www.manitobaparentzone.ca/parent-or-caregiver/newborns/eating.html Formula Feeding, Infant Formula Information, Preparation & Use of Infant Formula, Standard Infant Formula Choices
		- Paced Feeding: www.peelregion.ca/health/family-health/breastfeeding/pdf/paced-bottle-feeding.pdf
			Norm and Normal Variations
			- Refer to >12 – 24 hr
			
			Parent Education/ Anticipatory Guidance
			* If no variances
			- Refer to >12 – 24 hrs
			- For lactation suppression – Refer to Postpartum Nursing Care Pathway: Breasts
				Norm and Normal Variations
				- Baby is content between feedings
				- Formula prepared safely
				
				Parent Education/ Anticipatory Guidance
				- Formula feeding your baby
				- Formula Feeding: www.manitobaparentzone.ca/parent-or-caregiver/newborns/eating.html
				- Refer to >12 – 24 hrs
				- Cue based feeding
				- Signs of fullness
				  - Introduction of complementary solids at about 6 months
				- 6 months - 24 months: www.manitobaparentzone.ca/parent-or-caregiver/newborns/eating.html

Human Milk Substitute

Infant Feeding Assessment	0 – 12 hours Period of Stability (POS)	Day 1 (12-24 Hours)	Days 2-3 (24-72 hours)	Day 3 & beyond (72 hours-7 days & beyond)
HUMAN MILK SUBSTITUTE FEEDING (FORMULA)				

(Continued)
 	
Assess:
- Awareness of the importance of breast milk and breast feeding
- Understanding of normal newborn feeding
- Knowledge of:
  - Appropriate formula that is acceptable, feasible, affordable, sustainable, and safe *(AFASS)* in their circumstances
  - Safe formula preparation and storage
  - Potential health concerns with formula
- Ability to initiate & complete feeds
- Observe:
  - Paced Newborn feeding
  - Responsive cue-based feeds
 	
Refer to:
- Elimination
- Weight
- Skin
- Behaviour
- Postpartum Nursing Care Pathway: Infant Feeding
	Variance
	- Babies at high risk for allergies
	
	Intervention
	- Correct hypo-allergenic formula *(e.g. protein hydrolysate)*
	
	Variance
	- Babies of vegan parents
	
	Intervention
	- Refer to dietitian/PCP
	- Overall, soy based infant formula is recommended for vegan infants *(and for the other cases listed)*. There is not enough research demonstrating harm for healthy term infants.
	- Refer to CPS Position Statement on Soy-based formula: www.cps.ca/en/documents/position/use-soy-based-formulas
	- CPS position statement, endorsed by Health Canada and Dietitians of Canada; written in 2009 and reaffirmed in 2016.
	- According to WRHA Public Health Dietitians:
	  - 1) Soy formula is recommended in the following cases for healthy term infants:
	  - infants who cannot consume dairy-based products for health reasons *(e.g. lactose intolerance)*. The carbohydrate source is corn syrup solids; thus, it is lactose free;
	  - infants who, for cultural or religious reasons, are prohibited from consuming dairy-based products;
	  - infants whose families are vegan; or
	  - infants who have been diagnosed with galactosemia *(in which case powdered soy formula should be used, as liquid soy formula contains carrageenan, which is composed of approximately 27% galactose)*.
	  - 2) Soy formula contains phytoestrogens; however, there is insufficient evidence to suggest that this formula has a negative impact on endocrine development or reproductive function in infants.
	  - 3) The vitamin D added to soy formula is derived from an animal source; it is important that this information be shared with vegan families.
		Variance
		- Inappropriate formula preparation or type
		- Formula Feeding Resources at www.manitobaparentzone.ca/parent-or-caregiver/newborns/eating.html
		- Vomiting or frequent large regurgitation:
		  - Fussy
		  - Irritable, crying
		  - Arching
		  - Gassy
		  - Loose stools
		
		Intervention
		- Nursing assessment
		- Assessing feeding and burping techniques
		- Assessing hunger cues vs satiated cues to avoid overfeeding
		- Inquire food intolerance/allergies in family
		- Refer to dietitian/PCP/other resources prn
			Variance
			- Refer to >0 – 24 hr
			
			Intervention
			- Refer to >0 – 24 hr
			
			Newborns receiving only commercial formula may have a recommendation for a vitamin D supplement of 400 international units
			- www.wrha.mb.ca/prog/nutrition/stages-infant-VitD.php
				Variance
				- Refer to 0 – 24 hr
				- Inappropriate formula
				- Incorrect preparation and storage
				- Overfeeding
				
				Intervention
				- Refer to 0 – 24 hr

Weight

Physiological Assessment	0 – 12 hours Period of Stability (POS)	Day 1 (12-24 Hours)	Days 2-3 (24-72 hours)	Day 3 & beyond (72 hours-7 days & beyond)
WEIGHT[14-16]				

Assess:
- Weight gain/loss for appropriate age
- Signs of adequate intake
 	
Assess understanding of newborn physiology and capacity to identify variances that may require further assessments
 	
Refer to:
- Vital Signs
- Feeding
- Behaviour
- Elimination
- Skin
- Postpartum Nursing Care Pathway: Breasts
	Norm and Normal Variations
	- Refer to >72 hours – 7 days and beyond
	- Normal birth weight for term infants is 2500 – 4000 gm
	- Weighing of newborn after completion of initial feeding or skin-to-skin *(may be up to 2 hours)*
	
	Parent Education/ Anticipatory Guidance
	- Refer to >12 – 24 hr
	
	Variance
	- Refer to >12 – 24 hr
	
	Intervention
	- Refer to >12 – 24 hr
		Norm and Normal Variations
		- Refer to >72 hr – 7 days and beyond
		
		Parent Education/ Anticipatory Guidance
		- Weight is only one component of a newborn's wellbeing and the feeding assessment
		- Parent aware that hydration & elimination affect weight *(intake and output)*
		- Feeding indicators of adequate hydration
		- Normal expected weight loss to day 3 – 4 *(especially with exclusive breastfeeding)*
		- Normal expected weight gain after day 3 – 4 *(especially with exclusive breastfeeding)*
		- Discharge weight prn
		
		Variance
		- Newborn conditions that may require daily weight
		- Gestational age <37weeks
		- SGA
		- Receiving phototherapy
		
		Intervention
		- Nursing assessment
		- Ongoing feeding assessment
		- Teaching and support
		- Refer to PCP prn
			Norm and Normal Variations
			- Refer to >72 hr – 7 days and beyond
			
			Parent Education/ Anticipatory Guidance
			- Refer to >12 – 24 hr
			
			Variance
			- Refer to >12 – 24 hr
			- For definition of excessive weight loss refer to Regional breastfeeding guidelines for the healthy term infant
			- Excessive weight loss may be due to:
			  - poor feeding *(inadequate milk transfer)*, poor latch, poor suck, infrequent feeds
			  - low milk production
			  - illness
			
			Intervention
			- Refer to postpartum pathway
			- Refer to >12 – 24 hr
				Norm and Normal Variations
				- Evidenced-base expected weight loss and when weight should start to be regained are not yet established
				- Consensus that return to birth weight by about 2 weeks
				- When milk is in about day 3 – 4 expect wt gain of 20 – 30 gms/day *(about an ounce)*
				- Consistent weight gain of about gm/wk *(about 4 – 7 ounces)* per week for the first 4 months
				- Manitoba Health Breastfeeding your baby.
				- Nutrition for Health Term Infants: Recommendations from Birth to Six Months: www.canada.ca/en/health-canada/services/food-nutrition/healthy-eating/infant-feeding/nutrition-healthy-term-infants-recommendations-birth-six-months.html
				
				Parent Education/Anticipatory Guidance
				- Refer to >12 – 24 hr
				- Signs of adequate hydration
				- Timing and number of postnatal contacts
				- Complete an initial assessment within 48 hours of discharge to identify strengths and risks to determine the need and timing of PHN follow-up. Complete an in person PHN assessment within one week of initial assessment with priority follow-up for disadvantaged clients.
				- WHO recommendations on Newborn Health, 2017: apps.who.int/iris/bitstream/10665/259269/1/WHO-MCA-17.07-eng.pdf?ua=1
				
				Variance
				- Refer to >24 – 72 hr
				- Weight loss that continues after day 3 – 4 warrants close assessment of the feeding situation
				- No weight gain by day 5
				- Has not returned to birth weight by about 2 weeks
				
				Intervention
				- Refer to >24 – 72 hr
				- Assess feeding and develop a feeding plan with parents
				- Develop a follow-up plan with client. *Note:* this may be based collaborative and team models of care
				- Depending on the variance, may need to initiate breast expression/pumping q 3 – 4 hours and/or supplemental feedings
				- A combination of hand expression, followed by pumping with breast compression while pumping supports the production of milk
				- Refer to appropriate PCP prn
				- Refer to regional breastfeeding guideline

Physiological Health

Head

Physiological Assessment	0 – 12 hours Period of Stability (POS)	Day 1 (12-24 Hours)	Days 2-3 (24-72 hours)	Day 3 & beyond (72 hours-7 days & beyond)
HEAD[16-18]				
Assess: - Shape - Size - Fontanelles - Circumference prn **Assess understanding of newborn physiology and capacity to identify variances that may require further assessments** **Refer to:** - Behaviour - Postpartum Nursing Care Pathway: Bonding & Attachment	**Norm and Normal Variations** - Head round, symmetrical - May have moulding, some overlapping of sutures - Anterior & posterior fontanelles flat and soft - Neck short and thick - Full range of motion **Parent Education/ Anticipatory Guidance** - Place baby skin-to-skin - Discuss variances and when they should resolve *(caput succedaneum, cephalohematoma etc.)* – refer to variance >12 – 24 hr - Care when handling infant's head - Refer to >12 – 24 hr **Variance** - Caput succedaneum crosses suture lines *(edema caused by sustained pressure of occiput against cervix)* - Cephalohematoma – collection of blood between skull bone & periosteum caused by pressure against pelvis or forceps – does not cross suture lines - Bruising, excoriation, lacerations - Bulging or sunken fontanelles - Neck webbing, limited range of motion - Masses - Hydrocephaly - Microcephaly **Intervention** - Nursing assessment - Refer to appropriate PCP prn	**Norm and Normal Variations** - Refer to POS **Parent Education/ Anticipatory Guidance** - Anterior fontanel: 2 – 4 cm long, diamond shape, closes at 12 – 28 months - Posterior fontanel: smaller than anterior, triangular shape - Supine (back) sleep position - Carry baby and alternate head positions *(to avoid flattened head)* - Prevention of SIDS - Preventing flat heads in babies who sleep on their backs **Variance** - Refer to POS - Caput succedaneum – disappears spontaneously within 3 – 4 days17 - Infants who birth with assistance of vacuum extraction may have caput and bruising - Cephalohematoma – increases first 3 – 4 days, disappears in 2 – 3 wks and may affect the bilirubin screen - Risk of jaundice if head trauma and/or bruising **Intervention** - Refer to POS	**Norm and Normal Variations** - Refer to POS **Parent Education/ Anticipatory Guidance** - Refer to >12 – 24 hr Variance - Refer to 0 – 24 hr Intervention - Refer to 0 – 24 hr	**Norm and Normal Variations** - Refer to POS - Moulding resolves ~ 3 days - Average head circumference 33 – 35 cm once moulding disappears *(ensure consistent way of measuring)* **Parent Education/ Anticipatory Guidance** - Refer to >12 – 24 hr - Prevent plagiocephaly *(flat spots on head)* and strengthen neck muscles by placing baby on abdomen when awake *(tummy time)* for several short periods each day - Carrying infant in arms *(vs. in infant seat)* assists with prevention of flat head: - And promotes bonding **Variance – Cradle cap** **Intervention – Cradle Cap** - Apply a small amount of non-perfumed oil to the scalp, and then wash off. (Baby's Best Chance, p133 (2017) www.health.gov.bc.ca/library/publications/year/2017/BabysBestChance-Sept2017.pdf) **Variance – Plagiocephaly *(flattening of 1 side of the skull)*** **Intervention – Plagiocephaly** - Carrying and the use of an upright ring type carrier: www.caringforkids.cps.ca/handouts/preventing_flat_heads - Supervised tummy time when awake: www.manitoba.ca/healthychild/healthybaby/kits/tummy_time.pdf - www.cps.ca/en/documents/position/positional-plagiocephaly - Children's Hospital: Tummy Time and More March 2018 www.dropbox.com/s/ch2nlyd6rgdfqs4/Tummy%20Time%20and%20More%20-%20revised-2018-03-15-FINAL.ppt?dl=0 **Variance – Enlarged fontanelles** - Remarkably enlarged fontanelles/ splayed suture lines - Head appears abnormally large & looks 'heavy'- signs of hydrocephalus **Intervention – Enlarged fontanelles** - Nursing assessment - Refer to PCP prn

Nares

Physiological Assessment	0 – 12 hours Period of Stability (POS)	Day 1 (12-24 Hours)	Days 2-3 (24-72 hours)	Day 3 & beyond (72 hours-7 days & beyond)
NARES				
Assess: - Symmetry - Air entry both nares - Assess understanding of newborn physiology and capacity to identify variances that may require further assessments **Refer to:** - Vital signs	**Norm and Normal Variations** - Nose breathers - Symmetrical, no nasal flaring - Thin, clear nasal discharge, sneezing common - After mucous and amniotic fluids are cleared from nasal passages, infant differentiates pleasant from unpleasant odors - Nares patent - Milia present on nose **Parent Education/Anticipatory Guidance** - Sneezing common **Variance** - Nasal congestion **Intervention** - Nursing assessment - Refer to PCP prn	**Norm and Normal Variations** - Refer to POS **Parent Education/ Anticipatory Guidance** - Refer to POS **Variance** - Refer to POS **Intervention** - Refer to POS	**Norm and Normal Variations** - Refer to POS **Parent Education/ Anticipatory Guidance** - Refer to POS **Variance** - Refer to POS **Intervention** - Refer to POS	**Norm and Normal Variations** - Refer to POS **Parent Education/ Anticipatory Guidance** - Refer to POS **Variance** - Refer to POS **Intervention** - Refer to POS

Eyes

Physiological Assessment	0 – 12 hours Period of Stability (POS)	Day 1 (12-24 Hours)	Days 2-3 (24-72 hours)	Day 3 & beyond (72 hours-7 days & beyond)
EYES[18-21]				

Assess:
- Symmetry
- Placement
- Clarity
- Risks for eye/vision problems *(family history)*
 	
Assess understanding of newborn physiology and capacity to identify variances that may require further assessments
 	
Refer to:
- Skin
	Norm and Normal Variations
	- Outer canthus aligned with upper ear
	- Dark or slate blue color
	- Blink reflex present
	- Edematous lids
	- Sclera clear
	- No tears
	- Pupils equal and reactive to light
	- May see subconjunctival hemorrhage
	- Administer eye prophylaxis *(after completion of initial feeding or by 1 hour after birth)*:
	  - promotes initiation of feeding and parent/infant eye contact
	- Uncoordinated movement
	- May see chemical conjunctivitis due to eye ointment
	
	Parent Education/ Anticipatory Guidance
	- Eye prophylaxis – prevention of ophthalmia neonatorum
	- Refer to >12-24 hr
	
	Variance
	- Hazy, dull cornea
	- Pupils unequal, dilated constricted
	
	Intervention
	- Nursing Assessment
	- Refer to appropriate PCP prn
		Norm and Normal Variations
		- Refer to POS
		
		Parent Education/ Anticipatory Guidance
		- Eye care:
		  - Clean from inner canthus to outer edge with warm water when bathing
		- Newborn's vision:
		  - Nearsighted – see most clearly when objects 8-10 inches from face
		  - Attracted to human face
		  - Display visual abilities most consistently in quiet alert state
		
		Variance
		- Refer to POS
		
		Intervention
		- Refer to POS
			Norm and Normal Variations
			- Refer to POS
			- Resolving or decreasing edema of eyelids and chemical conjunctivitis
			- May have slight jaundice of sclera
			
			Parent Education/ Anticipatory Guidance
			- Refer to 12 – 24 hr
			- Jaundice progression/ treatment
			
			Variance
			- Refer to POS
			- Conjunctivitis
			
			Intervention
			- Teach eye care
			- Refer to appropriate health care provider prn
				Norm and Normal Variations
				- Refer to POS and >24 – 72 hr
				- May have transient strabismus or nystagmus until 3 – 4 months
				
				Parent Education/ Anticipatory Guidance
				- Parent Education
				- Refer to >12 – 72 hr
				- No tears - tear ducts patent ~5 – 7 months
				
				Vision screening in infants, children and youth: www.cps.ca/en/documents/position/children-vision-screening www.optometrist.mb.ca/patients/children's-vision/babys-eyes-first-exam
				
				Vision in the first year: www.aboutkidshealth.ca/En/ResourceCentres/PregnancyBabies/Babies/PhysicalDevelopmentofBabies/Pages/Vision-in-the-First-Year.aspx
				
				Variance
				- Refer to POS and >24 – 72 hr
				
				Intervention
				- Refer to POS and >24 – 72 hr
				
				Variance – Blocked tear duct
				
				Intervention – Blocked tear duct
				- Watch and wait
				- May want to use a warm compress
				- Ensure there is no infection
				- If unsure refer to PCP
				
				Variance – Obvious strabismus or nystagmus >3 – 4 months
				
				Intervention – Obvious strabismus or nystagmus >3 – 4 months
				- Refer to PCP may need referral to Pediatric Ophthalmology

Ears

Physiological Assessment	0 – 12 hours Period of Stability (POS)	Day 1 (12-24 Hours)	Days 2-3 (24-72 hours)	Day 3 & beyond (72 hours-7 days & beyond)
EARS[22-24]				

Assess:
- For well-formed cartilage
- Ears level with the eyes
 	
Assess understanding of newborn physiology and capacity to identify variances that may require further assessments
	Norm and Normal Variations
	- Well formed cartilage
	- Ears level with eyes – top of pinna on horizontal plane with outer canthus of eye
	- May have temporary asymmetry from unequal intrauterine pressure on the sides of the of head
	- Startles/reacts to loud noises
	- Ear canal may contain vernix *(short external auditory ear canal)*
	
	Parent Education/ Anticipatory Guidance
	- Refer to >12-24 hr
	
	Variance
	- Unresponsive to noise
	- Ear tags, ear pits – could indicate a brachial cleft duct or cyst *(risk for infection and may need surgical intervention)*
	- Low set ears
	- Drainage present
	- Family history of childhood sensory hearing loss
	- Cranial facial anomalies of pinna or ear canal
	
	Intervention
	- Nursing Assessment
	- Refer to appropriate PCP prn
		Norm and Normal Variations
		- Refer to POS
		
		Parent Education/ Anticipatory Guidance
		- Cleaning of ears e.g. do not use a cotton tipped swab
		- Higher-pitched sounds generally gain the infant's attention rather than lower pitched sounds
		- Provincial Hearing Screening Program: www.manitoba.ca/health/unhs/quickstats.html
		- Universal Hearing Screening – Information for Healthcare Professionals: www.manitoba.ca/health/unhs/hp.html
		- www.cps.ca/en/endocuments/position/universal-hearing-screening-newborns
		
		Variance
		- Refer to POS
		
		Intervention
		- Refer to POS
			Norm and Normal Variations
			- Refer to POS
			
			Parent Education/ Anticipatory Guidance
			- Refer to >12 – 24 hr
			
			Variance
			- Refer to POS
			
			Intervention
			- Refer to POS
				Norm and Normal Variations
				- Refer to POS
				
				Parent Education/ Anticipatory Guidance
				- Refer to >12 – 24 hr
				- Able to distinguish parent's voice within 2 weeks and responds with distinct reaction pattern to each
				- Monitor for normal hearing and speech patterns
				- Exposure to second hand smoke increases risk of ear infection
				- Review factors associated with increased risk of hearing loss such as:
				  - Family history
				  - Low birth weight
				  - Jaundice – requiring transfusion
				  - Infections
				- Caring for kids: Ear infections: www.caringforkids.cps.ca/handouts/ear_infections
				
				Variance
				- Refer to POS
				- Exposure to ototoxic medications especially aminoglycosides, such as:
				  - Gentamycin
				  - Kanamycin
				  - Neomycin
				  - Streptomycin
				  - Tobramycin
				- Bacteria meningitis
				
				Intervention
				- Nursing Assessment
				- Refer to PCP prn

Mouth

Physiological Assessment	0 – 12 hours Period of Stability (POS)	Day 1 (12-24 Hours)	Days 2-3 (24-72 hours)	Day 3 & beyond (72 hours-7 days & beyond)
MOUTH[18, 25]				

Assess:
- Lips for colour
- Tongue midline
- Frenulum
- Palate
- Reflexes
- Oral health and care
 	
Assess understanding of newborn physiology and capacity to identify variances that may require further assessments
 	
Refer to:
- Feeding
	Norm and Normal Variations
	- Mucosa moist smooth and pink
	- May have epithelial pearls
	- Tongue midline and can extend out to edge of lower lip
	- May have noticeable sublingual frenulum
	- Intact lips
	- Jaw symmetrical
	- Intact palate *(soft, hard)*
	- Reflexes:
	  - Rooting
	  - Sucking
	
	Parent Education/ Anticipatory Guidance
	- Refer to >12 – 24 hr
	
	Variance
	- Tight frenulum *(tongue tie)* or heart shaped tongue
	- Cleft lip/palate
	- Short or protruding tongue-large tongue *(macroglossia)*
	- Small receding chin *(micrognathia)*
	- Dry mucosa *(may be dry after crying)*
	- Mouth drooping or opens asymmetrically *(may be facial palsy)*
	
	Intervention
	- Assess baby's ability to latch without causing pain and damage to nipple
	- Refer to Latch R score
	- Feeding variations to cope with variances
	- Dry mucosa, assess hydration status
	- Refer to appropriate PCP prn
		Norm and Normal Variations
		- Refer to POS
		
		Parent Education/ Anticipatory Guidance
		- Getting help with breastfeeding www.manitoba.ca/health/bfm/help.html
		
		Variance
		- Refer to POS
		
		Intervention
		- Refer to POS
			Norm and Normal Variations
			- Refer to POS
			- May have sucking blister on lips
			- Tongue may be coated white from feeding
			
			Parent Education/ Anticipatory Guidance
			- Refer to >12 – 24 hr
			
			Variance
			- Refer to POS
			
			Intervention
			- Refer to POS
			- If latching difficulty persists due to tight frenulum or tongue tie refer to PCP
				Norm and Normal Variations
				- Refer to POS
				
				Parent Education/ Anticipatory Guidance
				- Refer to >12 – 24 hr
				- Oral hygiene
				- Look into baby's mouth regularly:
				  - Wipe gums with soft, clean damp cloth daily prior to the eruption of the first teeth
				  - Prevention of tooth decay
				- www.manitoba.ca/health/publichealth/environmentalhealth/dental.html
				
				Variance
				- Refer to POS
				
				Intervention
				- Refer to POS and >24 – 72 hr
				
				Variance – Thrush Candida *(fungus)*
				- White, cheesy patches on the tongue, gums or mucous membranes – won't rub off
				- Diaper area – red rash
				- Thrush:
				  - CPS: www.caringforkids.cps.ca/handouts/thrush
				  - Canadian Breastfeeding Foundation: www.canadianbreastfeedingfoundation.org/basics/candida_thrush.shtml
				
				Intervention – Thrush Candida *(fungus)*
				- Discuss signs, symptoms & treatment
				- Assess nipples for thrush *(red, itchy, persistent sore nipples, burning, shooting pain)*
				- Both parent and baby need treatment
				- May affect baby's feeding
				- Refer to Postpartum Guidelines *(Breasts)*
				- Refer to PCP for antifungal treatment

Chest

Physiological Assessment	0 – 12 hours Period of Stability (POS)	Day 1 (12-24 Hours)	Days 2-3 (24-72 hours)	Day 3 & beyond (72 hours-7 days & beyond)
CHEST[18]				

Assess:
- Symmetry
- Shape
- Respirations
- Heart rate
- Cardiovascular function
 	
Assess understanding of newborn physiology and capacity to identify variances that may require further assessments
	Norm and Normal Variations
	- Circumference about 1cm < head circumference
	- Round, symmetrical; protruding xiphoid process
	- Clavicle intact
	- Chest sounds clear
	- Hiccoughs and sneezing common
	- Breasts may be swollen with clear/milky nipple discharge
	- Mucous:
	  - More common in Cesarean births
	  - Dark brown mucous – potential swallowing of mucous/blood during birth
	
	Parent Education/Anticipatory Guidance
	- Refer to >12 – 24 hr
	
	Variance
	- Mucousy/noisy respirations
	- Signs of respiratory distress:
	  - Retractions
	  - Grunting
	  - Nasal flaring
	  - Tachypnea
	- Deviation in chest shape
	- Fractured clavicle
	- Asymmetrical movement
	- Breasts inflamed
	- Supernumerary nipples
	- Coughing
	
	Intervention
	- Nursing assessment
	- Refer to appropriate PCP prn
		Norm and Normal Variations
		- Refer to POS
		
		Parent Education/ Anticipatory Guidance
		- Normal newborn breathing
		- Hiccoughs resolve on own
		- Occasional sneezing is infant's mechanism to clear nasal passages
		- Do not squeeze swollen breasts – they are due to hormones
		
		Variance
		- Refer to POS
		
		Intervention
		- Refer to POS
			Norm and Normal Variations
			- Refer to POS
			
			Parent Education/ Anticipatory Guidance
			- Refer to >12 – 24 hr
			
			Variance
			- Refer to POS
			
			Intervention
			- Refer to POS
				Norm and Normal Variations
				- Refer to POS
				- Breast enlargement usually resolves by the second week of life
				
				Parent Education/ Anticipatory Guidance
				- Refer to >12 – 24 hr
				
				Variance
				- Refer to POS
				
				Intervention
				- Refer to POS

Abdomen/Umbilicus

Physiological Assessment	0 – 12 hours Period of Stability (POS)	Day 1 (12-24 Hours)	Days 2-3 (24-72 hours)	Day 3 & beyond (72 hours-7 days & beyond)
ABDOMEN/UMBILICUS[18]				

Assess:
- Symmetry
- Bowel sounds
- Cord
- Umbilical area
 	
Assess understanding of newborn physiology and capacity to identify variances that may require further assessments
	Norm and Normal Variations
	- Abdomen:
	  - Slightly rounded, soft and symmetric
	  - Bowel sounds present
	  - Skin: pink, smooth, opaque
	  - A few large blood vessels may be visible
	- Cord:
	  - Two arteries and one vein
	  - Cord clamp secure
	
	Parent Education/ Anticipatory Guidance
	- Refer to >12 – 24 hr
	
	Variance
	- One artery
	- Umbilical hernia
	- Masses
	- Bleeding
	- Drainage
	- Absent bowel sounds
	- Sensitive with palpation
	- Green emesis &/or feeding intolerance
	- Bright blood emesis
	
	Intervention
	- Nursing assessment
	- Refer to PCP prn
		Norm and Normal Variations
		- Cord
		  - Clean and dry or slightly moist
		  - Cord clamp secure if present
		
		Parent Education/Anticipatory Guidance
		- Wash hands with soap & water before and after contact with umbilical area
		- Review cord care during bath:
		  - Clean cord with water & air dry
		  - Clean around the base of the cord after bathing and at diaper changes
		  - Fold diaper below the cord to prevent irritation and to keep it dry and exposed to air
		  - Avoid buttons, coins, bandages or binders over navel
		  - Encourage skin-to-skin – to promote colonization with non pathogenic bacteria from parent's skin flora
		- S & S infection – redness or swelling >5mm from umbilicus, fever, lethargy, and/or poor feeding
		- CPS Caring for the umbilical cord: www.caringforkids.cps.ca/handouts/your-babys-skin
		
		Variance
		- Refer to POS
		- Cord – Foul odor, redness or swelling >5 mm from umbilicus
		- S & S of systemic infection – fever, lethargy, and/or poor feeding
		
		Intervention
		- Refer to POS
		- Urgent care if S & S of systemic infection
			Norm and Normal Variations
			- Refer to >0 – 24 hr
			- When infant discharged with cord clamp on, follow RHA policy/ procedures
			
			Parent Education/ Anticipatory Guidance
			- Refer to >12 – 24 hr
			
			Variance
			- Refer to >0 – 24 hr
			
			Intervention
			- Refer to >0 – 24 hr
				Norm and Normal Variations
				- Refer to 0 – 24 hr
				- Cord separates within 1 – 3 weeks
				- Slight bleeding may occur with separation
				
				Parent Education/ Anticipatory Guidance
				- Refer to >12 – 24 hr
				- Normal cord separation
				
				Variance
				- Refer to 0 – 24 hr
				
				Intervention
				- Refer to >0 – 24 hr

Skeletal/Extremities

Physiological Assessment	0 – 12 hours Period of Stability (POS)	Day 1 (12-24 Hours)	Days 2-3 (24-72 hours)	Day 3 & beyond (72 hours-7 days & beyond)
SKELETAL/EXTREMITIES[18]				
Assess: - Symmetry - Intact and straight spine - Full range of motion **Assess understanding of newborn physiology and capacity to identify variances that may require further assessments**	**Norm and Normal Variations** - Symmetrical in size, shape, movement & flexion - Intact, straight spine - Full range of motion - Clavicles intact - Bow-legged, flat-footed - Equal gluteal folds - Equal leg length **Parent Education/ Anticipatory Guidance** - Refer to >12 – 24 hr **Variance** - Asymmetrical extremities - Curvature of spine - Non-intact spine - Tufts of hair along an intact spine – may require ultrasound to rule out spina bifida - Coccygeal dimple - Fractures - Poor range of motion - Hypertonia/ contractures of extremities - Skeletal abnormalities - Talipes equinovarus *(club foot)* - Congenital hip dislocation *(Ortali's)* **Intervention** - Nursing Assessment - Refer to appropriate PCP prn	**Norm and Normal Variations** - Refer to POS **Parent Education/ Anticipatory Guidance** - Developmental dysplasia of the hip: Up to Date - Swaddling safely **Variance** - Refer to POS **Intervention** - Refer to POS	**Norm and Normal Variations** - Refer to POS **Parent Education/ Anticipatory Guidance** - Refer >12 – 24 hr **Variance** - Refer to POS **Intervention** - Refer to POS	**Norm and Normal Variations** - Refer to POS **Parent Education/ Anticipatory Guidance** - Refer to >12 – 24 hr **Variance** - Refer to POS **Intervention** - Refer to POS

Skin / Jaundice

Physiological Assessment	0 – 12 hours Period of Stability (POS)	Day 1 (12-24 Hours)	Days 2-3 (24-72 hours)	Day 3 & beyond (72 hours-7 days & beyond)
SKIN[27-29]				

Assess in natural light:
- Skin color
- Turgor
- Integrity
- Factors that increase newborn risk for jaundice
 	
Assess understanding of newborn physiology and her capacity to identify variances that may require further assessments
 	
Refer to:
- Feeding
	Norm and Normal Variations
	- May have *(acrocyanosis)* peripheral cyanosis
	- Skin intact – may be dry with some peeling; lanugo on back; vernix in the creases
	- May have erythema toxicum *(newborn rash)* milia, mongolian spots, capillary hemangiomas, harlequin sign
	- Skin pinch immediately returns to original state
	- Skin is sensitive to touch
	
	Parent Education/ Anticipatory Guidance
	- Skin-to-skin
	- Need for tactile stimulation
	- Encourage regardless of feeding type
	
	Variance
	- Pallor *(may be genetic)*
	- Generalized cyanosis or increased cyanosis with activity
	- Unexplained skin rashes/ lacerations/ breaks in skin
	- Hemangiomas
	- Petechia
	- Bruising *(ecchymosis)*
	
	Intervention
	- Nursing Assessment
	- Refer to PCP prn
	
	Variance – Jaundice
	- Any jaundice in first 24 hours
	
	Intervention – Jaundice
	- Nursing Assessment
	- Refer to PCP prn
		Norm and Normal Variations
		- Refer to POS
		- Acrocyanosis resolved
		
		Parent Education/ Anticipatory Guidance
		- Refer to POS
		- Skin variations:
		  - Milia
		  - Cracks
		  - Peeling
		  - Hemangiomas
		  - Mongolian spots – frequently in darkly pigmented infants such as Asian, First Nation, African-American
		  > Most often found in the lumbosacral region, but can be found anywhere on the body
		- Skin care – avoidance of perfumed products
		- Delay first bath until baby stable and completed transition period
		- Parents encouraged to do the first bath with nursing support
		- Bathing:
		  - Refer to vital signs re stability
		  - Not required every day
		  - Immersion preferable to sponge bath *(less chance for heat loss)*
		  - Amount of water, lukewarm temperature, soap can be irritating, use unscented lotions/oils
		- CPS - Your baby's skin: www.caringforkids.cps.ca/handouts/your-babys-skin
		
		Variance
		- Refer to POS
		
		Intervention
		- Refer to POS
		
		Variance – Jaundice
		- Refer to POS
		
		Intervention – Jaundice
		- Assess level of jaundice including skin color, hydration
		- Assess feeding effectiveness including output & weight
		- Contact PCP
		- Jaundice and Hyperbilirubinemia in the Newborn: Assessment and Management
		- Refer to regional policy
			Norm and Normal Variations
			- Refer to 0 – 24h
			- About 60 percent of all infants have some jaundice, it generally clears up without any medical treatment
			- (21) CPS: Guidelines for detection, management and prevention of hyperbilirubinemia in term and late preterm newborn infants: www.cps.ca/en/documents/position/hyperbilirubinemia-newborn
			
			Parent Education/ Anticipatory Guidance
			- Refer to 0 – 24 hr
			- Relationship between poor feeding, hydration & jaundice and the need to monitor
			- Management of jaundice – feeding, waking sleepy baby, monitoring output
			- Refer to regional policy/ procedure
			- CPS: jaundice in Newborn: www.caringforkids.cps.ca/handouts/jaundice_in_newborns
			
			Variance
			- Refer to POS
			
			Intervention
			- Refer to POS
			
			Variance – Jaundice
			- Risk factors present for evidence of jaundice *(such as family history of jaundice, LBW, preterm, bruising)*
			- Infant difficult to rouse
			- Feeding poorly
			- Parent does not demonstrate ability to monitor feeding, output, behaviour and colour
			
			Intervention – Jaundice
			- Nursing assessment
			- Bilirubin level as per RHA guide or PCP orders
			- Care plan to support and educate parents in monitoring for newborn jaundice
			- Assess feeding effectiveness
			- Refer to PCP prn
				Norm and Normal Variations
				- Jaundice usually peaks by day 3 – 4, resolves in one – two weeks
				- Refer to 0 – 72 hr
				
				Parent Education/ Anticipatory Guidance
				- Refer to 0 – 72 hr
				
				Variance
				- Refer to POS
				- New, unresolved or unexplained rashes
				
				Intervention
				- Refer to POS
				
				Variance – Jaundice
				- Severe or increasing level of jaundice
				- Refer to >24 – 72 hr
				
				Intervention – Jaundice
				- Refer to >24 – 72 hr

Neuromuscular

Physiological Assessment	0 – 12 hours Period of Stability (POS)	Day 1 (12-24 Hours)	Days 2-3 (24-72 hours)	Day 3 & beyond (72 hours-7 days & beyond)
NEUROMUSCULAR[30-34]				

Assess:
- Muscle tone and movement
- Reflexes are present and appropriate for developmental
 	
Assess understanding of newborn physiology and capacity to identify variances that may require further assessments
	Norm and Normal Variations
	- Extremities symmetrical, full range of motion *(ROM)*, flexed, good muscle tone
	- Infant reflexes present:
	  - Babinski
	  - Grasping
	  - Moro
	  - Palmar
	  - Planter
	  - Rooting
	  - Stepping
	  - Sucking
	- APGAR scores between 7 and 10 at 5 minutes
	
	Parent Education/Anticipatory Guidance
	- Refer to >12 – 24 hr
	
	Variance
	- Asymmetrical facial/limb movement
	- Abnormal foot posture
	- Facial palsy
	- Brachial palsy
	- Limbs not flexed
	- Lack of muscle tone/resistance (hypotonicity)
	- Seizure activity
	- Jitteriness – rule out low blood sugar *(<2.6mmol/L)*
	- Abnormal or absent reflexes
	- Arching
	
	Intervention
	- Nursing assessment *(including parental medication/drug use)*
	- Jitteriness differentiated between hypoglycemia and seizure activity
	- Refer to PCP prn
	- Management of Infants born to Parents who have used Opioids during Pregnancy: www.cps.ca/en/documents/position/opioids-during-pregnancy
	- If parent on SSRIs/SNRIs, ensure a follow-up appointment is booked for with primary care provider:
	  - CPS: Selective serotonin reuptake inhibitors in pregnancy and infant outcomes: www.cps.ca/en/documents/position/SSRI-infant-outcomes
	  - Infants with antenatal exposure to SSRIs and SNRIs: www.uptodate.com/contents/infants-with-antenatal-exposure-to-selective-serotonin-reuptake-inhibitors-ssris-and-serotonin-norepinephrine-reuptake-inhibitors-snris
	  - Note:
	  SSRI = Selective Serotonin Reuptake Inhibitors
	  SNRI = Serotonin and Norepinephrine Reuptake inhibitors
		Norm and Normal Variations
		- Refer to POS
		
		Parent Education/ Anticipatory Guidance
		- Encourage skin-to-skin and breastfeeding – if concerned about risk for low blood sugar
		- Baby's alertness and readiness to feed
		- Positioning, movement, reflexes, muscle tone
		- Jitteriness vs seizure activity – jittery movements stop when infant is held
		
		Variance
		- Refer to POS
		
		Intervention
		- Refer to POS
			Norm and Normal Variations
			- Refer to POS
			
			Parent Education/ Anticipatory Guidance
			- Refer to >12 24 hr
			- Motherisk Helpline 1-877-327-4636: www.motherisk.org/prof/index.jsp
			- Portico Pregnancy Fact sheet: www.porticonetwork.ca/en/home www.porticonetwork.ca/documents/77404/381531/5200c-Pregnancy_Factsheet_2016.pdf/4148bcc5-c477-4c02-9890-5b6cc746eca5
			
			Variance
			- Refer to POS
			
			Intervention
			- Refer to POS
				Norm and Normal Variations
				- Refer to POS
				
				Parent Education/ Anticipatory Guidance
				- Refer to >12 – 24 hr
				
				Variance
				- Refer to POS
				
				Intervention
				- Refer to POS

Genitalia

Physiological Assessment	0 – 12 hours Period of Stability (POS)	Day 1 (12-24 Hours)	Days 2-3 (24-72 hours)	Day 3 & beyond (72 hours-7 days & beyond)
GENITALIA[35, 36]				

Assess:
- Genitalia
 	
Assess understanding **of newborn physiology and capacity to identify variances that may require further assessments**
 	
Refer to:
- Elimination
	Norm and Normal Variations
	- Anus patent
	- Females:
	  - Labia swollen
	  - Labia majora to midline
	  - Urethral open behind clitoris – in front of vaginal opening
	  - Clitoris maybe enlarged
	  - Hymenal tag is normally present
	  - Vernix caseosa present between labia
	  - Whitish mucoid or pseudomensus
	- Males:
	  - Scrotum swollen – rugae present
	  - Testes descended palpable bilaterally
	  - Central urethral opening
	  - Foreskin not retractable
	  - Epithelial pearls may be present on penile shaft
	  - Smegma may be found on foreskin
	  - Erections common
	
	Parent Education/ Anticipatory Guidance
	- Refer to >12 – 24 hr
	
	Variance
	- Undifferentiated
	- Female:
	  - Fusion of labia
	- Male:
	  - Urethral opening below/above tip of penis *(hypospadius)*
	  - Unequal scrotal size
	  - Testes palpable in inguinal canal or not palpable
	  - Hydrocele
	
	Intervention
	- Nursing Assessment
	- Refer to PCP prn
		Norm and Normal Variations
		- Refer to POS
		
		Parent Education/ Anticipatory Guidance
		- Keep baby clean & dry
		- Females:
		  - Do not remove vernix
		  - Clean from front to back
		- Males:
		  - Do not retract foreskin
		  - Provide information to support informed decision making re circumcision prn
		  - Circumcision not covered under Medical plan
		  - Circumcision of baby boys – Information for parents: www.caringforkids.cps.ca/handouts/circumcision
		
		Variance
		- Refer to POS
		
		Intervention
		- CPA Position Statement Newborn Male Circumcision: www.cps.ca/en/documents/position/circumcision
		- Refer to POS
			Variance
			- Refer to POS
			
			Intervention
			- Refer to POS
				Norm and Normal Variations
				- Refer to POS
				- Swelling of labia and scrotum resolves about day 3 – 4
				- Whitish mucoid or pseudomenses subsides by end of first week
				
				Parent Education/ Anticipatory Guidance
				- Refer to >12 – 24 hr
				- If circumcised teach care and S & S of complications:
				  - Bleeding
				  - Infection
				  - Edema
				- For diaper rash:
				  - Frequent diaper changing
				  - Keep clean and dry *(Refer to Skin)*
				  - Exposure to air
				  - Use of barrier cream prn
				
				Variance
				- Refer to POS
				- Rash that does not clear after several days
				
				Intervention
				- Nursing Assessment
				- May refer to PCP

Elimination

Urine

Physiological Assessment	0 – 12 hours Period of Stability (POS)	Day 1 (12-24 Hours)	Days 2-3 (24-72 hours)	Day 3 & beyond (72 hours-7 days & beyond)
URINE[5,18]				
Assess: - Bladder output and color of urine is normal for baby's age. - Adequate hydration/ elimination *(refer to breastfeeding)* **Assess understanding of newborn physiology and capacity to identify variances that may require further assessments** **Refer to:** - Feeding - Weight	**Norm and Normal Variations** - One clear void with possible uric acid crystals *(orange/ brownish color)* - Urine pale yellow and odorless **Parent Education/ Anticipatory Guidance** - Refer to >12 – 24 hr **Variance** - Refer to >12 – 24 hr **Intervention** - Refer to >12 – 24 hr	**Norm and Normal Variations** - Voids within 24 hr - ≥ 1 wet, clear, pale yellow diaper(s) - Uric acid crystals in the first 24 hr **Parent Education/ Anticipatory Guidance** - Relationship between feeding and output – elimination is a component of feeding assessment *(normal voiding for the first 72 hours)* - Assessing for adequate - hydration - Encourage use of elimination record prn **Variance** - No voiding in 24 hrs - Urine concentrated **Intervention** - Ensure effective feeding - Nursing Assessment - Reassess within 24 hr - Refer to PCP prn	**Norm and Normal Variations** - 24 – 48 hr: 1 – 2 wet, clear, pale yellow diapers/day - 48 – 72 hr: 2 - 3 wet clear pale yellow diapers/day **Parent Education/ Anticipatory Guidance** - Refer to >12 – 24 hr **Variance** - Less than 1 – 2 wet diapers/day - Urine concentrated - Inadequate hydration/ elimination *(poor skin turgor, fontanelles, dry mucous membranes, lethargy, irritability)* - Yellowing of the skin **Intervention** - Refer to >12 – 24 hr	**Norm and Normal Variations** - Day 3 – 5: 3 – 5 wet, clear, pale yellow diapers/day - Day 5 – 7: 5 – 6 wet, clear, pale yellow diapers/day - Day 7 – 28: 6+ heavy wet diapers daily and pale yellow - Healthy Child Manitoba: Breastfeeding your baby: www.manitoba.ca/healthychild/healthybaby/hb_breastfeedingyourbaby.pdf **Parent Education/ Anticipatory Guidance** - Refer to >12 – 24 hr **Variance** - Refer to >24 – 72 hr - Uric acid crystals may indicate dehydration after 72 hours - Urine concentrated - < 5 wet diapers/day **Intervention** - Refer to >12 – 24 hr

Elimination

Stool

Physiological Assessment	0 – 12 hours Period of Stability (POS)	Day 1 (12-24 Hours)	Days 2-3 (24-72 hours)	Day 3 & beyond (72 hours-7 days & beyond)
STOOL[18, 37-39]				

Assess:
- Normal stooling for baby's age
 	
Assess understanding of newborn physiology and capacity to identify variances that may require further assessments
 	
Refer to:
- Feeding
- Weight
	Norm and Normal Variations
	- Active bowel sounds
	
	Parent Education/ Anticipatory Guidance
	- Refer to >12 – 72 hr
	
	Variance
	- Abdominal distension
	- Absence of bowel sounds
	
	Intervention
	- Check if meconium passed at birth
	- Nursing Assessment
	- Refer to PCP prn
		Norm and Normal Variations
		- >1 meconium passed within 24 hours
		
		Parent Education/ Anticipatory Guidance
		- Assess feeding/oral intake
		- Relationship between feeding and output-elimination is a component of feeding assessment
		- Encourage:
		  - Breastfeeding
		  - Skin-to-skin
		  - Hand expression of colostrum
		- Expected stool pattern – colour, consistency, amount, changes
		- Encourage intake of colostrum – acts like a laxative
		- Formula Fed:
		  - As above except for information directly related to breastfeeding
		
		Variance
		- No stools passed within 24 hours
		
		Intervention
		- Nursing Assessment
		- Reassess within 24 hrs if no stool passed
		- Refer to PCP prn
			Norm and Normal Variations
			- Meconium & transitional stools
			- Day 2 – 3 >1 meconium or greenish brown
			
			Parent Education/ Anticipatory Guidance
			- Refer to >12 – 24 hr
			- Changes in bowel pattern
			- Frequent effective feeding
			
			Variance
			- ≤ 1 stools passed within 48 hr
			- Diarrhea
			- Green, foul smelling, mucousy stool
			
			Intervention
			- Nursing Assessment
			- Assess feeding and assist family in developing plan to monitor output, report ongoing variance
			- Refer to PCP prn
				Norm and Normal Variations
				- Breastfed:
				  - Day 3 – 5: 3 – 4 loose, yellow transitional stools
				  - Day 5 – 7: 3 – 6 yellow or golden
				  - Day 7 – 28: 5 – 10+ yellow
				  - Stools colours vary – may be yellow/mustard or brown with mustard seed consistency or occasionally green *(may reflect parent's diet)*
				  - Around 3 – 4 weeks of age individual bowel pattern *(may go several days without a soft/loose bowel movement)*
				  - Watery, mustard color:
				  - Mild odour
				  - May pass stool with each feed
				- Formula fed:
				  - Formed
				  - Pale yellow to light brown
				  - Strong odour
				  - May be dark green with iron fortified formula
				  - Often 1 – 2 daily for first weeks
				  - Around 3 – 4 weeks baby may have a bowel movement every 1 – 2 days
				
				Parent Education/Anticipatory Guidance
				- Abnormal-looking Stool: www.aboutkidshealth.ca/En/HealthAZ/ConditionsandDiseases/DigestiveSystemDisorders/Pages/Abnormal-Looking-Stool.aspx
				- Refer to >12 – 72 hr
				
				Variance
				- < 3 stools on day 4 in combination without obvious breast filling
				- Does not have 2 or more stools per day after 4 – 5 days of age
				- Displaying signs of jaundice lasting longer than two weeks *(yellowing of the baby's skin or eyes)*, with pale yellow, chalk white, or clay coloured stools
				- A jaundiced baby tends to have increased frequency of stools may be loose, greenish in colour and sometimes explosive
				- Diarrhea *(very loose, foul smelling)*
				- Constipation – rare in exclusively breastfed infants *(stools dry, hard difficulty in passing)*
				- Bloody stool
				- CPS Managing functional constipation in Children: www.cps.ca/en/documents/position/functional-constipation
				
				Biliary Atresia
				- Occurs in 1/10,000 to 20,000 live births
				- Jaundice is the initial sign
				- Assess understanding of the Infant Stool Colour and capacity to identify variances in stool colour: www.perinatalservicesbc.ca/Documents/Screening/BiliaryAtresia/StoolColourCard_English.pdf
				- See BC perinatal services for color chart reference
				
				Intervention
				- Refer to >24 – 72 hr

Vital Signs

Physiological Assessment	0 – 12 hours Period of Stability (POS)	Day 1 (12-24 Hours)	Days 2-3 (24-72 hours)	Day 3 & beyond (72 hours-7 days & beyond)
VITAL SIGNS[33,34,40,41]				

Assess:
- Vital signs and include – history and risks
- Frequency of assessment following organization's policy
 	
Suggested frequency for vital signs:
- Within 15 minutes in the first hour of life and
- At 1 and 2 hours
- following the first vital signs and if stable
- At hour 6
- Once per shift until hospital discharge including:
  - Temperature
  - Respirations:
  - Rate
  - Respiratory effort
  - Circulation:
  - Heart rate
  - Heart sounds
  - Include:
  - Colour
  - Tone
  - SpO_2 if required
- Then as required by nursing judgement and hospital policy
	Norm and Normal Variations
	- General
	- Centrally pink and good tone
	- Temperature:
	  - Axilla 36.5 – 37.4°C
	  - Skin-to-skin care
	- Circulation:
	  - Heart rate: 100 – 160
	  - SpO_2: ≤ 1 h ≥88%
	- Respirations:
	  - Effortless 30 – 60/min
	  - Clear sounds
	  - May be irregular
	  - Some mucus
	  - Easy respirations when mouth closed
	  - Sneezing common *(<3 – 4 times/interval)*
	  - May have slightly wet sounding lungs for the first 15 – 30 min and is improving and there is good colour, tone and normal heart rate
	
	Parent Education/ Anticipatory Guidance
	- Nursing – hands on physical assessment with parent(s) in attendance
	- Initial bath after baby has completed a stable transition period *(universal precautions until bath)*
	- Use of toque/head covering indoors not required after infant stabilization
	- Refer to >12 – 24 hr
		Norm and Normal Variations
		- Presents with normal newborn examination and no major CNS concerns – is one of the criteria to indicate the infant is ready to move to care by parent
		- Refer to POS
		- Fever and temperature taking: www.caringforkids.cps.ca/handouts/fever_and_temperature_taking
		
		Parent Education/ Anticipatory Guidance
		- How *(including normal values)* and when to assess temperature, respirations
		- How to clear mucous:
		  - Prone, head lowered, and stroke back
		  - Avoiding the use of mechanical aids in nose E.g. cotton tipped applicators & bulb aspirators
		- Heat control in infants:
		  - Skin-to-skin with blanket over infant and parent
		  - Loosely wrap baby with hands free – avoid swaddling
		  - Extremities may feel cooler, when core temperature is normal
		- Bathing:
		  - Including information such as hygiene, mouth care, bonding and engagement, reflexes, behaviours and feeding cues and physiological changes *(sight, hearing)*
		- Identifying changes in newborn vital signs if utero exposure to psychotropic drug exposure *(Opioids, benzodiazepines, SSRIs, SNRIs)*. S & S of disorganized infant, such as:
		  - Metabolic/vasomotor/respiratory *(T, HR, RR, weight, sneezing)*
		  - CNS *(cry, tremors, muscle tone, sucking, swallowing)*
		  - GI *(feeding, vomiting, stooling, excoriation)*
		- Although codeine no longer recommended, if exposure to codeine in breast milk:
		  - CNS depression – exhibited as not feeding well, not waking up to be fed, not gaining weight gain, limpness
		  - Baby should be examined by PCP if parent shows symptoms of CNS depression
		- When newborn ready for discharge perform global *(physical and feeding)* assessment with parent
		- When to seek help from PCP:
		  - See variances POS
		  - Fever
			Norm and Normal Variations
			- Refer to >12 – 24 hr
			
			Parent Education/ Anticipatory Guidance
			- Refer to >12 – 24 hr
			- "If [client] on SSRIs/ SNRIs, follow-up with HCP recommended at 3-5 days post discharge
			- The Canadian Paediatric Society makes the following recommendations:
			  - Babies with late-trimester SSRI exposure should be observed in hospital for neurobehavioural or respiratory symptoms for a minimum of 48 h. Families should receive anticipatory guidance on the possible effects of SSRIs on their infant, including the need for observation after birth *(Grade A recommendation)*. Postpartum use of SSRIs is not a contraindication to breastfeeding, and [clients] who choose to breastfeed should be supported *(Grade B recommendation)"*. www.cps.ca/en/documents/position/SSRI-infant-outcomes
				Norm and Normal Variations
				- Refer to >12 – 24 hr
				
				Parent Education/ Anticipatory Guidance
				- Refer to Baby's Best Chance. It states: "If you suspect that your baby has a fever, you can check by taking a temperature under his armpit. Use a rectal thermometer only if your health care provider has showed you how and you are comfortable doing so."
				- Refer to >12 – 24 hr

Vital Signs

Physiological Assessment	0 – 12 hours Period of Stability (POS)	Day 1 (12-24 Hours)	Days 2-3 (24-72 hours)	Day 3 & beyond (72 hours-7 days & beyond)
VITAL SIGNS				

(Continued)
 	
Review:
- Pregnancy and labour & birth history for:
  - Use of SSRIs/SNRIs in late pregnancy
  - Group B Strep or ROM >18 hours – vital signs q4h
  - Fever during labour & birth
- Parental use of codeine postpartum
 	
Assess understanding of newborn physiology and capacity to identify variances that may require further assessments
 	
Refer to:
- Chest
- Skin *(jaundice)*
	Variance
	- Temperature instability
	- Heart murmur
	- Persistent tachycardia >160 or bradychardia ≤ 100 bpm
	- Weak/absent femoral or brachial pulses
	- Mucousy/noisy respirations that are not improving
	- Signs of respiratory distress:
	  - Indrawing
	  - Grunting
	  - Nasal flaring
	- Apneic episodes >15 sec
	- Bradypnea <25 per minute
	- Tachypnea >60 per minute
	- Diaphoresis
	- Mottling
	- Poor colour:
	  - Dusky
	  - Jaundice
	- Poor feeding
	- Decreased activity
	- For infants exposed to SSRIs/SNRIs during pregnancy, monitor SpO_2:
	  - at one hour of life
	  - every 4 hours x 24 hours
	  - at discharge
	
	Intervention
	- Nursing Assessment
	- Refer to PCP prn
		Variance
		- Refer to POS
		
		Intervention
		- Refer to POS
			Variance
			- Refer to POS
			
			Intervention
			- Refer to POS
				Variance
				- Refer to POS
				
				Intervention
				- Refer to POS

Newborn Physiological Stability	Norm
Respiratory rate	40-60/ min
Axillary temperature	36.5- to 37.4 C
Heart Rate	100-160 bpm
Suckling/rooting	Readiness to feed
Physical examination	No congenital anomalies
Sepsis	No evidence of sepsis
Jaundice	No jaundice developing <24 hrs

General Health

Behaviour

Behavioural Assessment	0 – 12 hours Period of Stability (POS)	Day 1 (12-24 Hours)	Days 2-3 (24-72 hours)	Day 3 & beyond (72 hours-7 days & beyond)
BEHAVIOUR[2,3,18,31,40,41]				

Assess Infant's:
- Behaviour states
- Behaviour cues
- Response to consoling
 	
Assess:
- Understanding of normal newborn behaviour
- Response to newborn cues/needs
- Capacity to identify variances that may require further assessments
 	
Refer to:
- Vital Signs
- Crying
- Elimination
- Feeding
- Head
	Norm and Normal Variations
	- Alert for the 1st 1 – 2 hours after birth
	- Sleeps much of the remaining POS *(transition to extrauterine life)*
	- May be sleepy or unsettled due to delivery
	- Responds to consoling efforts
	- Cry – strong and robust
	
	Parent Education/ Anticipatory Guidance
	- Expect baby to become more
	- wakeful after POS
	- Feeding cues-refer to Norm and Normal Variations >12 – 24 hr
	- "Back to Sleep"
	- Responds to consoling
	- Encourage skin-to-skin for all infants
	
	Variance
	- Weak or irritable high pitched cry
	- Does not respond to consoling efforts
	- In utero exposure to SSRIs/ SNRIs
	- Exposure to codeine in breastmilk
	- Exposure to substances
	
	Intervention
	- Complete a full newborn assessment
	- Refer to appropriate HCP prn
	- Parent/caregiver education re effect on newborn and follow-up care
		Norm and Normal Variations
		- Demonstrates
		  - Early feeding cues: infant wiggling, moving arms and legs, mouthing, rooting, fingers or hands to mouth
		  - Later feeding cues: fussing, squeaky noises, restlessness, progressing to soft intermittent crying
		  - Organized state movement from quiet alert to crying
		  - Minimal crying but is strong and robust *(if occurs)*
		  - Responds to consoling efforts
		
		Parent Education/Anticipatory Guidance
		- Refer to POS
		- Review/discuss:
		  - Behaviour states:
		  - Deep sleep – if aroused will not feed
		  - Quiet sleep
		  - Drowsy
		  - Quiet alert: optimal state for feeding and infant-parent interactions
		  - Active alert: time for feeding
		  - Crying: late feeding cue
		- Behavioural feeding cues indicating readiness to feed *(refer to Norm and Normal Variations >12 – 24 hr, above):*
		  - Satiety Cues:
		  - Sucking ceases
		  - Muscles relax
		  - Infant sleeps/removes self from breast
		- Review/discuss infant attachment behaviour – any behaviour infant uses to seek and maintain contact with and elicit a response from parent/caregiver
		
		Variance
		- Refer to POS
		- Arching
		
		Intervention
		- Refer to POS
		- Refer to Parent Education/Anticipatory Guidance
		- Assess factors which may influence behaviours:
		  - Environmental stimuli
		  - Correct sleeping position
		  - Gestational age
		  - Medicated labor
		  - Pregnancy substance use
		- Refer to appropriate PCP
			Norm and Normal Variations
			- Refer to >12 – 24 hr
			- Wakes 8 or more times in 24 hours for feeding
			
			Parent Education/ Anticipatory Guidance
			- Refer to >12 – 24 hr
			
			Variance
			- Refer to 0 - 24 hr
			
			Intervention
			- Refer to 0 - 24 hr
				Norm and Normal Variations
				- Refer to >24 – 72 hr
				
				Parent Education/ Anticipatory Guidance
				- Refer to >12 – 24 hr
				
				Variance
				- Refer to 0 - 24 hr
				
				Intervention
				- Refer to 0 - 24 hr

Crying

Behavioural Assessment	0 – 12 hours Period of Stability (POS)	Day 1 (12-24 Hours)	Days 2-3 (24-72 hours)	Day 3 & beyond (72 hours-7 days & beyond)
CRYING[42-44]				

Assess:
- Crying patterns
- Quality
- Duration
- Fussy periods
- Parental
- Interpretation of crying
- Coping strategies
 	
Assess understanding of normal newborn crying and parent's capacity to:
- Use consoling techniques
- Identify variances that require further assessments
 	
Refer to:
- Behaviour
- Feeding
- Postpartum Nursing Care Pathway: Bonding & Attachment
	Norm and Normal Variations
	- Minimal crying but is strong, robust
	- Responds to consoling – includes feeding
	
	Parent Education/ Anticipatory Guidance
	- Refer to >12 – 24 hr
	
	Variance
	- Infant does not respond to consoling techniques
	- Unusual, high-pitched crying *(neurological)*
	- Weak irritable cry
	- No cry *(along with other symptoms may reflect illness, e.g. sepsis)*
	- Inappropriate parental/ caregiver response to baby's crying:
	  - Not responding to infant crying
	  - Making negative comments about infant's behaviour
	
	Intervention
	- Refer to Parent Education/ Anticipatory Guidance >12 – 24 hr
	- Nursing Assessment
	- Refer to appropriate PCP prn
		Norm and Normal Variations
		- Refer to POS
		
		Parent Education/ Anticipatory Guidance
		- Review infant behaviour states
		- Breastfeeding/skin-to-skin during painful procedures
		- Crying:
		  - Is a late feeding cue
		  - Assist parents in developing soothing techniques
		- Soothing and consoling techniques to establish trust/ bonding:
		  - Skin-to-skin
		  - Feeding
		  - Showing parent's face
		  - Talking in a steady, soft voice
		  - Holding arms close to body
		  - Holding/carrying
		  - Movement: swaying, rocking, walking
		- Discuss:
		  - That infants cry
		  - Importance of responding to infant crying, but that infant may continue to cry despite soothing efforts
		- Review signs that indicate that baby may be ill:
		  - Fever
		  - Vomiting
		  - Lethargy
		  - Irritability
		  - Reference Canadian Pediatric Society
		
		Variance
		- Refer to POS
		
		Intervention
		- Refer to POS
			Norm and Normal Variations
			- Refer to POS
			
			Parent Education/ Anticipatory Guidance
			- Refer to >12 – 24 hr
			
			Variance
			- Refer to POS
			
			Intervention
			- Refer to POS
				Norm and Normal Variations
				- Refer to POS
				
				Parent Education/ Anticipatory Guidance
				- Refer to >12 – 24 hr
				- Crying is a late signal from infant
				- Family strategies to respond to crying
				- Review & discuss amount of crying:
				  - CPS: Colic and crying: www.caringforkids.cps.ca/handouts/colic_and_crying
				  - Manitoba Parentzone: Crying: manitobaparentzone.ca/parent-or-caregiver/newborns/crying.html
				- Discuss normal feeling of frustration and potential anger when infant inconsolable
				- If consoling techniques do not work and parents feel frustrated ensure baby is in a safe environment and leave the room
				- Infant may continue to cry despite soothing efforts *(is not related to parenting capability)*
				- Healthy infants can look like they are in pain when crying – even when they are not
				- Care for the caregivers:
				  - Breaks
				  - Support system(s)
				  - Exercise
				
				Variance
				- Inconsolable constant crying
				- Refer to POS
				
				Intervention
				- Refer to POS
				- Rule out medical concerns – ensure baby is thriving, i.e. not crying due to hunger, medical concern
				- Discuss potential scenarios related to difficulty in consoling infant
				- Discuss choosing appropriate support people
				
				Variance – Baby at risk for harm
				- Shaking an infant
				- CPS: Never Shake a Baby: www.caringforkids.cps.ca/handouts/never_shake_a_baby
				
				Intervention – Baby at risk for harm
				- Nursing Assessment
				- Refer to appropriate PCP prn
				- Encourage use of family/support network for support
				- Consider consulting social services/ child protection services

Immunization and Communicable Diseases

Health Follow-Up Assessment	0 – 12 hours Period of Stability (POS)	Day 1 (12-24 Hours)	Days 2-3 (24-72 hours)	Day 3 & beyond (72 hours-7 days & beyond)
IMMUNIZATION AND COMMUNICABLE DISEASES[45-55]				

Assess understanding of communicable diseases and prenatal exposure including:
- Immunization (including informed consent)
- Hepatitis B protocols prn
- Hepatitis C protocols prn
- HIV protocols prn
- Varicella fetal/infant exposure
- Tuberculosis (TB) protocols prn
- Chlamydia, Gonorrhea prn
- Syphillis protocols prn
 	
Assess parent's capacity to identify variances that may require further assessments
 	
Refer to:
- Postpartum Nursing Care Pathway: Communicable Diseases
	Norm and Normal Variations
	- Refer to >12 – 24 hr
	- No exposure to Hepatitis B, Hepatitis C or HIV
	
	Parent Education/ Anticipatory Guidance
	- Refer to >12 – 24 hr
	
	Variance
	- CPS: Maternal infectious diseases, antimicrobial therapy or immunizations
	- Refer to >72 hr – 7 days and beyond
	
	Intervention
	- Refer to >72 hr – 7 days and beyond
	
	Variance – Hep B Exposure
	- Fetal exposure:
	  - Birth parent is HBsAg *(Hepatitis B Surface Antigen)* positive
	  - Birth parent has risk factors for Hepatitis infection *(IV drug user, sex worker/status unknown)*
	  - Primary care giver or household contact acute or chronic Hepatitis B infection
	  - Primary care giver has risk factors for Hepatitis B infection *(such as IV drug user, sex worker, men who have sex with men)* and infectious state unknown
	  - Household member(s) from an area where Hepatitis is endemic
	
	Intervention – Hep B Exposure
	- Administer Hep B immunization and HBIG as per protocol
		Norm and Normal Variations
		- Aware of appropriate immunizations and schedules
		
		Parent Education/ Anticipatory Guidance
		- Review:
		  - Benefits of immunization: www.caringforkids.cps.ca/handouts/immunizations-index
		  - Diseases for which immunizations available
		  - Schedule
		  - Side effects
		  - Where to access immunizations
		  - Manitoba Routine immunization schedule: www.manitoba.ca/health/publichealth/cdc/div/schedules.html
		- Hepatitis B:
		  - www.manitoba.ca/health/publichealth/diseases/hepatitisb.html
		  - www.phac-aspc.gc.ca/hcai-iamss/bbp-pts/hepatitis/hep_b-eng.php
			Norm and Normal Variations
			- Refer to >12 – 24 hr
			
			Parent Education/ Anticipatory Guidance
			- Refer to >12 – 24 hr
			
			Variance
			- Refer to POS and >72 hr – 7 days and beyond
			
			Intervention
			- Refer to POS and >72 hr – 7 days and beyond
				Norm and Normal Variations
				- Refer to >12 – 24 hr
				
				Parent Education/ Anticipatory Guidance
				- Refer to >12 – 24 hr
				
				Variance
				- Refer to 0 – 24 hr
				
				Intervention
				- Refer to 0 – 24 hr
				
				Variance – No immunizations
				- Does not plan to have baby immunized
				
				Intervention – No immunizations
				- Explore reasons
				- Provide information prn
				- Refer to appropriate PCP prn

Immunization and Communicable Diseases

Health Follow-Up Assessment	0 – 12 hours Period of Stability (POS)	Day 1 (12-24 Hours)	Days 2-3 (24-72 hours)	Day 3 & beyond (72 hours-7 days & beyond)
IMMUNIZATION AND COMMUNICABLE DISEASES				
(Continued)	**Variance – Hep C Exposure** - Fetal exposure to Hepatitis C **Intervention – Hep C Exposure** - Support breastfeeding (breastfeeding not contraindicated - If nipples are cracked or bleeding - discard breast milk during this time as HCV is transmitted through blood - HCV is a blood borne pathogen and is not transmitted by urine or stools **Variance – HIV Exposure** - Fetal exposure to HIV **Intervention – HIV Exposure** - Breastfeeding contraindicated - Follow HIV Protocol: refer to >12 – 24 hr Parent Education/Anticipatory Guidance **Variance – Varicella** - Fetal exposure to Varicella - Newborn exposure to Varicella **Intervention** - Follow Varicella Protocol – refer to > 12 – 24 hr Parent Education/ Anticipatory Guidance **Variance – Tuberculosis Exposure** - fetal exposure to TB - BCG vaccine **Variance - Chlamydia exposure** - fetal exposure to chlamydia - Neonatal infection Perinatal infections may result in conjunctivitis and pneumonia in newborns. Conjunctivitis normally develops five to 12 days after birth, and is usually mild and self-limited. Onset of pneumonia occurs at one to three months of age. Symptoms include nasal obstruction and/or discharge, tachypnea and cough. **Variance - Gonorrhea exposure** - fetal exposure to gonorrhea - Neonatal Gonococcal infection usually involves the eyes and manifests two to five days after birth. Other manifestations include rhinitis, vaginitis, urethritis, and infection at sites of fetal monitoring (e.g., scalp). The most severe manifestations are ophthalmia neonatorum and sepsis, which can include arthritis, meningitis, and blindness. **Variance - Syphilis exposure** - fetal exposure to Syphilis	**Parent Education/ Anticipatory Guidance** - Hepatitis C: - Recommend: Blood test at 12-18 months of age, based on the provincial protocol. - "HCV RNA testing might be considered after two months of age, in consultation with an appropriate specialist and in select circumstances (e.g., significant parental anxiety, concern that the infant will be lost to follow-up care) (10). However, as false negatives may be observed with HCV RNA testing, a negative HCV RNA test should be confirmed by performing anti-HCV Ab testing at or after 18 months of age" (page 5). - Recommend: infant to have a blood test *(for PCR/ RNA)* at 6 weeks and, unless initial test positive, antibody test at 12 months. - www.manitoba.ca/health/publichealth/diseases/hepatitisc.html - CPS Vertical transmission of the hepatitis C virus: Current knowledge and issues: www.cps.ca/en/documents/position/vertical-transmission-of-hepatitis-C - HIV: - www.manitoba.ca/health/publichealth/diseases/hiv.html - Management of HIV exposed and HIV infected children: www.cps.ca/en/documents/position/HIV-exposed-and-HIV-infected-children - Varicella: - www.manitoba.ca/health/publichealth/diseases/varicella.html - CPS: Chickenpox - "BCG vaccine protects against serious forms of TB disease and in Manitoba is administered to infants who reside in most First Nations communities (62 out of 64 communities). BCG is also recommended for infants born in Canada who will be moving to and staying for extended periods of time in a country with a high TB incidence where BCG vaccination is still standard practice..." - Refer to Manitoba TB Communicable Disease protocol: www.gov.mb.ca/health/publichealth/cdc/protocol/tb.pdf#page=13 - Infants testing positive must be treated. Consult Pediatrician/ primary care - Refer to Manitoba Chlamydia protocol: www.gov.mb.ca/health/publichealth/cdc/protocol/chlamydia.pdf - Neonates born to infected mothers must be tested and treated for gonorrhea. Refer to Manitoba Communicable Disease Protocol for Gonorrhea: www.gov.mb.ca/health/publichealth/cdc/protocol/gonorrhea.pdf - Pregnant women can pass on the infection to their unborn baby during pregnancy or childbirth. This may lead to birth defects or stillbirth www.gov.mb.ca/health/publichealth/diseases/syphilis.html - Congenital Syphilis - CDC Fact Sheet: www.cdc.gov/std/syphilis/stdfact-congenital-syphilis.htm		

Health Follow-Up

Health Follow-Up Assessment	0 – 12 hours Period of Stability (POS)	Day 1 (12-24 Hours)	Days 2-3 (24-72 hours)	Day 3 & beyond (72 hours-7 days & beyond)
HEALTH FOLLOW-UP[18,41,56,57]				

Baby to receive Vitamin K
 	
Assess:
- Understanding of appropriate health care follow-up
- Capacity to:
  - Identify variances that may require further assessments
  - Access Health Care
 	
Identification of high risk clients using Families First/Parent Survey Screening Tool
	Norm and Normal Variations
	- Vitamin K given IM based on birth weight
	- Administer after completion of initial feeding *(within 6 hr of birth)* while skin-to-skin
	
	Parent Education/ Anticipatory Guidance
	- Vitamin K administration – prevention of hemorrhagic disease of the newborn
	
	Variance
	- Parents refuse IM injection
	
	Intervention
	- Oral dose Vitamin K is 2 mg at time of first feeding, repeated at 2 – 4 weeks and at 6 – 8 weeks
	
	Variance
	- Refer to >12 – 24 hr Intervention
	- Refer to >12 – 24 hr
		Norm and Normal Variations
		- Parents/caregiver have a plan for follow-up with PCP
		- Newborn ready to move to be cared for by parent *(caregiver)*:
		  - Normal newborn exam
		  - Newborn assessment
		  - Caregiver recognition of normal newborn changes and informs
		  - PCP of abnormal findings
		  - Newborn feedings are successfully initiated and completed
		  - Parent/caregiver response to newborn cues and needs
		  - Support system in place
		
		Parent Education/Anticipatory Guidance
		- Parents/caregiver aware when discharged <48 hr after birth: arrangements made for evaluation
		- Complete an initial assessment within 48 hours of discharge to identify strengths and risks to determine the need and timing of public health nursing follow-up
		- Complete an in-person public health nursing assessment within one week of initial assessment, with priority follow-up for disadvantaged clients: www.manitoba.ca/health/publichealth/phnursingstandards/index.html
		- Provide public health nursing case management for disadvantaged families
		- Case management standards and competencies: www.ncmn.ca
		- Refer acute clinical issues to appropriate health care professionals *(ex: primary care, acute care, mental health)*
		
		Variance
		- Parents do not have a PCP or a plan for follow-up with PCP
		- Parents do not have knowledge or capacity to identify variances in newborn
		
		Intervention
		- Nursing assessment
		- Identify barriers and support family with solutions
		- Alternative medical/health care follow-up
		- Consult social workers/services
		- Collaborate with health and social service providers *(ex: midwifery, physicians, child and family services, income security)*, to support ongoing case management of disadvantaged families: www.manitoba.ca/health/publichealth/phnursingstandards/docs/nursing_standards.pdf
		- Facilitate access and referrals to community based groups/programs *(ex: breastfeeding, postpartum depression, Healthy Baby)*
			Norm and Normal Variations
			- Refer to 0 – 24 hr
			
			Parent Education/ Anticipatory Guidance
			- Aware of and have plan for newborn follow-up care
			- Complete an initial assessment within 48 hours of discharge to identify strengths and risks to determine the need and timing of public health nursing follow-up
			- Complete an in-person public health nursing assessment within one week of initial assessment, with priority follow-up for disadvantaged clients.
			- Provide public health nursing case management for disadvantaged families
			- Complete an initial assessment within 48 hours of discharge to identify strengths and risks to determine the need and timing of public health nursing follow-up
			- apps.who.int/iris/bitstream/handle/10665/259269/WHO-MCA-17.07-eng.pdf
			
			Variance
			- Refer to 0 – 24 hr
			
			Intervention
			- Refer to 0 – 24 hr
				Norm and Normal Variations
				- Refer to 0 – 24 hr
				
				Parent Education/ Anticipatory Guidance
				- Refer to 0 – 72 hr
				
				Variance
				- Refer to 0 – 24 hr
				
				Intervention
				- Refer to 0 – 24 hr

Lifestyle, Safety and Injury Prevention

Health Follow-Up Assessment	0 – 12 hours Period of Stability (POS)	Day 1 (12-24 Hours)	Days 2-3 (24-72 hours)	Day 3 & beyond (72 hours-7 days & beyond)
SAFETY AND INJURY PREVENTION[18,56-67]				
Assess knowledge of common safety risks and ability to access support when needed **Refer to:** - Postpartum Nursing Care Pathway: Lifestyle – Drug, Tobacco, and Substance	**Norm and Normal Variations** - Newborn identified as per organization's policy - Refer to >12 – 24 hr **Parent Education/ Anticipatory Guidance** - Refer to >12 – 24 hr **Variance** - Refer to >12 – 24 hr **Intervention** - Refer to >12 – 24 hr	**Norm and Normal Variations** - Parents able to provide a safe environment for newborn **Parent Education/ Anticipatory Guidance** - SIDS prevention/Safe Sleep environment: - Supine *(back lying)* position for sleep - Safe sleeping environment: sleep surfaces, well fitting, firm mattress, bottom sheet firmly tucked in, blanket tucked in at the bottom, avoid pillow, toys, soft objects, bumper pads in crib: - Safe sleep brochure - Smoke free environment – second hand and third hand *(parent/caregiver/ other persons handling infant with smoke on clothing and skin after smoking, smoke lingering in a car)* - Sleeping in close proximity in the same room *(on a separate safe sleep surface)* for the first six months - Community resources	**Norm and Normal Variations** - Refer to >12 – 24 hr **Parent Education/ Anticipatory Guidance** - Refer to >12 – 24 hr **Variance** - Refer to >12 – 24 hr Intervention - Refer to >12 – 24 hr - For parent information on multiple issues refer to: - CPS: Keeping kids safe: - At play - In the home - On the move - Whatever the weather - Manitoba Parent Zone: Newborns: - About - Brain Development - Social & Emotional Development - Motor Skills & Physical Development - Sleeping - Crying - Eating Discipline Common Illnesses & Conditions - Health Canada: Infant care: - Bottles, pacifiers and teething necklaces - Strollers and carriages - Infant formula - Baby slings and carriers - Infant nutrition - Playpens - Hot liquid burns: - Keep hot adult beverages away from infant - Adjust hot water temperature to prevent scalds during bathing – below 49°C - Shaken Baby Syndrome: - Caring for kids (CPS) Never shake a baby: www.caringforkids.cps.ca/handouts/never_shake_a_baby	**Norm and Normal Variations** - Refer to >12 – 24 hr **Parent Education/ Anticipatory Guidance** - Refer to >12 – 24 hr - Need to reassess safety risks as infant's development changes *(e.g. change table)* - Encourage to read safety labels and warranties - Refer to Baby's Best Chance Toddler's First Steps: www.health.gov.bc.ca/library/publications/year/2017/ToddlersFirstSteps-Sept2017.pdf - Manitoba Parent Zone: www.manitobaparentzone.ca/parent-or-caregiver/newborns/safety/indoor-safety.html - CPS Caring for kids Injury Prevention - Rourke Baby record 1-2 weeks: www.rourkebabyrecord.ca/pdf/Brochure 2017 1-2 wks 171016.pdf - Manitoba First Nations and Metis Parenting Booklets - Growing up Healthy - Family Connections - Parents as First Teachers - Fatherhood is Forever: www.manitoba.ca/healthychild/publications/firstnationsmetis-parentresources/index.html - Triple P: The Positive Parenting Program: www.manitobatriplep.ca/tips/ Parents, guardians or caregivers can call the Triple P Parent line at 204-945-4777 or toll free 1-877-945-4777 to discuss parenting concerns **Variance** - Refer to >12 – 24 hr **Intervention** - Refer to >12 – 24 hr For Health Providers See Summary of current evidence: www.rourkebabyrecord.ca/evidence

Health Follow-Up Assessment	0 – 12 hours Period of Stability (POS)	Day 1 (12-24 Hours)	Days 2-3 (24-72 hours)	Day 3 & beyond (72 hours-7 days & beyond)
SAFETY AND INJURY PREVENTION				

(Continued)		**Variance**
		- Parents unable to provide a safe environment for newborn
		
		Intervention
		- Nursing assessment
		- Identify barriers and support family with solutions:
		  - Refer to Safer infant sleep information
		  - Alternative medical/health care follow-up
		  - Consult social workers/services
		  - Refer to Child and Family Services
		  - How can we help you?: www.manitoba.ca/fs/childfam/
		  - If you think a child is being harmed or neglected,contact CFS at 1-866-345-9241
		  - Healthy Child Manitoba Programs, Supports and strategies: www.manitoba.ca/healthychild/programs/index.html
			- Supporting head and neck
			- Pets, siblings
			- Safety of baby products such as:
			  - Car seat, crib, stroller, change table, soothers (www.cps.ca/en/documents/position/pacifiers), powders, wipes:
			  - Child Passenger Safety/Car Seat Safety
			  - MPI - Child Car Seats: www.mpi.mb.ca/en/Rd-Safety/Car-Seats/Pages/ChildCarSeat.aspx
			  - Choking and suffocation:
			  - CPS Preventing choking and suffocation in children: www.cps.ca/en/documents/position/preventing-choking-suffocation-children
			  - Carbon monoxide/smoke detectors: www.rourkebabyrecord.ca/walk1 Refer to Rourke	

Screening

Newborn Screening

Screening Assessment	0 – 12 hours Period of Stability (POS)	Day 1 (12-24 Hours)	Days 2-3 (24-72 hours)	Day 3 & beyond (72 hours-7 days & beyond)
NEWBORN BLOOD SPOT SCREENING[70]				
Assess understanding of normal newborn screening and capacity to followup on variances that require further assessments Newborn Screening in Manitoba: www.manitoba.ca/health/publichealth/cpl/baby.html	**Norm and Normal Variations** - Refer to >12 – 24 hr **Parent Education/ Anticipatory Guidance** - Refer to >12 – 24 hr **Variance** - Refer to >12 – 24 hr **Intervention** - Refer to >12 – 24 hr	**Norm and Normal Variations** - Newborns screened between 24 and 48 or prior to hospital discharge. If not completed during this timeframe, collection should be done no later than 7 days - Some Health Authorities have early home follow-up programs in place where staff can collect blood spot specimen in the home setting - For home births Registered Midwives will collect the specimens **Parent Education/Anticipatory Guidance** - Parent adequately informed - Newborn Screening in Manitoba: www.manitoba.ca/health/publichealth/cpl/docs/pyb.pdf **Variance – Discharge before 24 hours of age** - Advise of comfort measures such as skin-to-skin and breastfeeding - Discharge less than 24 hours or transfer to another health care facility before 24 hours of age **Intervention – Discharge before 24 hours of age** - Specimen collected prior to discharge. Cadham Laboratory will request a need for a repeat sample to be collected by 2 weeks *(14 days)* of age: - Rationale: The first blood screen will identify over 80% of disorders and will help prevent life threatening events. The second screen optimizes detection of PKU, CF and Hcy which are time sensitive and cannot be reliably detected until ≥ 24 hours after birth **Variance – Refusal/Deferral** - Parental informed refusal or request for deferral **Intervention – Refusal/Deferral** - Discuss & address questions	**Norm and Normal Variations** - Refer to >12 – 24h **Parent Education/ Anticipatory Guidance** - Refer to >12 – 24h **Variance** - Refer to >12 – 24h **Intervention** - Refer to >12 – 24h	**Norm and Normal Variations** - Refer to >12 – 24h **Parent Education/ Anticipatory Guidance** - Refer to >12 – 24h **Variance** - Refer to >12 – 24h **Intervention** - Refer to >12 – 24h

Hearing Screening

Screening Assessment	0 – 12 hours Period of Stability (POS)	Day 1 (12-24 Hours)	Days 2-3 (24-72 hours)	Day 3 & beyond (72 hours-7 days & beyond)
HEARING SCREENING[22]				
The Universal Newborn Hearing Screening Act stipulates the parent or legal guardian of an infant must be offered the opportunity to have their infant screened for hearing loss. If the parent or guardian wishes to have the infant screened, the infant should be screened before discharge from the hospital or arrangements must be made to screen at an outpatient facility: www.manitoba.ca/health/unhs/quickstats.html **Assess understanding of universal newborn screening and capacity to followup on variances that require further assessments** Manitoba Newborn Hearing Screening: www.manitoba.ca/health/unhs/ Universal Newborn Hearing Screening: A Parent's Guide: www.manitoba.ca/health/unhs/docs/brochure1.pdf	**Norm and Normal Variations** - Refer to >12 – 24 hr **Parent Education/ Anticipatory Guidance** - Refer to >12 – 24 hr **Variance** - Refer to >12 – 24 hr **Intervention** - Refer to >12 – 24 hr	**Norm and Normal Variations** - Newborn Hearing Screening completed **Parent Education/ Anticipatory Guidance** - Your baby passed the hearing screening: www.manitoba.ca/health/unhs/docs/brochure2.pdf - Your baby has referred for another Hearing Screening or Diagnostic Hearing Test: www.manitoba.ca/health/unhs/docs/brochure3.pdf **Variance – Refusal/Deferral** - Parental informed refusal or request for deferral **Intervention – Refusal/Deferral** - Discuss & address questions Information for health professionals: www.manitoba.ca/health/unhs/hp.html	**Norm and Normal Variations** - Refer to >12 – 24 hr **Parent Education/ Anticipatory Guidance** - Refer to >12 – 24 hr **Variance** - Refer to >12 – 24 hr **Intervention** - Refer to >12 – 24 hr	**Norm and Normal Variations** - Refer to >12 – 24 hr **Parent Education/ Anticipatory Guidance** - Refer to >12 – 24 hr **Variance** - Refer to >12 – 24 hr **Intervention** - Refer to >12 – 24 hr

References

1. Perinatal Services BC. Newborn nursing care pathway. Perinatal services BC newborn guideline [Internet]. 2015; 2017(May 22). Available from: www.perinatalservicesbc.ca/Documents/Guidelines-Standards/Newborn/NewbornNursingCarePathway.pdf.

2. Government of Manitoba. Getting help with breastfeeding Winnipeg, MB: Health, Seniors and Active Living; n.d. Available from: www.manitoba.ca/health/bfm/help.html.

3. Government of Manitoba. Healthy Child Manitoba Winnipeg, MB: Healthy Child Manitoba; n.d. Information for Moms-to-be and Parents [Available from: www.manitoba.ca/healthychild/healthybaby/useful_info.html]

4. Breastfeeding Committee for Canada. The BFI 10 steps and WHO code outcome indicators for hospitals and community health services Geneva: Breastfeeding Committee for Canada; 2017. Available from: breastfeedingcanada.ca/BFI.aspx.

5. Healthy Child Manitoba. Breastfeeding your baby Winnipeg, MB: Healthy Child Manitoba; 2017. Available from: www.manitoba.ca/healthychild/healthybaby/hb_breastfeedingyourbaby.pdf.

6. World Health Organization, UNICEF. Breastfeeding policy brief Geneva: World Health Organization; 2014. Available from: apps.who.int/iris/bitstream/handle/10665/149022/WHO_NMH_NHD_14.7_eng.pdf;jsessionid=110F87C988618776D28DC28AC0C46FF6?sequence=1.

7. Government of Manitoba. Vitamin D supplement Winnipeg: Health, Seniors and Active Living; n.d. Available from: www.manitoba.ca/health/bfm/care.html.

8. Stanford University. Hand expression of breastmilk Stanford: Stanford Medicine, Newborn Nursery at Lucile Packard Children's Hospital; 2017 [video]. Available from: med.stanford.edu/newborns/professional-education/breastfeeding/hand-expressing-milk.html.

9. Godel JC, Canadian Paediatric Society, First Nations IaMHC. Vitamin D supplementation: Recommendations for Canadian mothers and infants Ottawa, ON: Canadian Paediatric Society; 2007 [updated Jan 30 2017]. Available from: www.cps.ca/en/documents/position/vitamin-d.

10. Goldfarb Breastfeeding Clinic. Candida or thrush of the nipple and breast Montreal, Quebec: The Canadian Breastfeeding Foundation 2009 [Handout]. Available from: www.canadianbreastfeedingfoundation.org/basics/candida_thrush.shtml.

11. Canadian Paediatric Society. Thrush Ottawa, ON: Canadian Paediatric Society; 2018. [updated October 2013]. Available from: www.caringforkids.cps.ca/handouts/thrush.

12. Ponti M, Canadian Paediatric Society, Community Paediatrics Committee. Recommendations for the use of pacifiers Ottawa, ON: Canadian Paediatric Society; 2003. [updated Feb 28 2018]. Available from: www.cps.ca/en/documents/position/pacifiers.

13. Critch JN, Canadian Paediatric Society, Nutrition and Gastroenterology Committee. Nutrition for healthy term infants, birth to six months: An overview Ottawa, ON: Canadian Paediatric Society; 2013. [updated Feb 28 2018]. Available from: www.cps.ca/en/documents/position/nutrition-healthy-term-infants-overview.

14. Critch JN, Canadian Paediatric Society, Nutrition and Gastroenterology Committee. Nutrition for healthy term infants, six to 24 months: An overview Ottawa, ON: Canadian Paediatric Society; 2014. [updated Jan 30, 2017]. Available from: www.cps.ca/en/documents/position/nutrition-healthy-term-infants-6-to-24-months.

15. Healthy Child Manitoba. Making connections your first two years with baby: Formula feeding 2013 May 11, 2018. Available from: www.manitoba.ca/healthychild/healthybaby/hb_formulafeeding.pdf.

16. McKee-Garrett TM. Assessment of the newborn infant Waltham, MA: Wolters Kluwer; 2018. [updated Jul 21, 2017]. Available from: www-uptodate-com.uml.idm.oclc.org/contents/assessment-of-the-newborn-infant?search=newborn%20assessment&source=search_result&selectedTitle=1~150&usage_type=default&display_rank=1.

17. Physiotherapy Department. Preventing and treating flat heads in babies. Tummy time & more!2012. [updated March 2018]. Available from: www.dropbox.com/s/ch2nlyd6rgdfqs4/Tummy%20Time%20and%20More%20-%20revised-2018-03-15-FINAL.ppt?dl=0.

18. Canadian Pediatric Society. Caring for kids Ottawa, ON: Canadian Pediatric Society; 2018. [cited 2018 May 8]. Available from: www.caringforkids.cps.ca.

19. Amit M, Canadian Paediatric Society, Community Paediatrics Committee. Vision screening in infants, children and youth Ottawa, ON: Canadian Paediatric Society; 2009. [updated Feb 28 2018; cited 2018 May 5]. Available from: www.cps.ca/en/documents/position/children-vision-screening.

20. Manitoba Association of Optometrists. Baby's eyes & first eye exam [web page]. Winnipeg, MB: Manitoba Association of Optometrists, n.d. [updated 2018]. Available from: www.mb-opto.ca/patients/childrens-vision/babys-eyes-first-exam.

21. Sick Kids Hospital Staff. Vision in the first year [Web page]. Toronto, ON: The Hospital for Sick Children; 2018. [updated October 18, 2009]. Available from: www.aboutkidshealth.ca/Article?contentid=484&language=English.

22. Government of Manitoba. Universal newborn health screening Winnipeg, MB: Health, Seniors, and Active Living; n.d., [web page]. Available from: www.manitoba.ca/health/unhs/index.html.

23. Canadian Paediatric Society. Your baby's hearing Ottawa, ON: Canadian Paediatric Society; 2018. [updated April 2014]. Available from: www.caringforkids.cps.ca/handouts/your_babys_hearing.

24. Canadian Paediatric Society. Ear infections Ottawa, ON: Canadian Paediatric Society; 2018. Available from: www.caringforkids.cps.ca/handouts/ear_infections.

25. Government of Manitoba. Dental/Oral Health Winnipeg, MB: Health, Seniors and Active Living; Dental/Oral Health [Available from: www.manitoba.ca/health/publichealth/environmentalhealth/dental.html.

26. Rosenfeld SB. Developmental dysplasia of the hip: Clinical features and diagnosis. 2017 [cited May 9, 2018]. In: UpToDate [Internet]. Waltham, MA: Wolters Kluwer Health, [cited May 9, 2018]. Available from: www-uptodate-com.uml.idm.oclc.org/contents/developmental-dysplasia-of-the-hip-clinical-features-and-diagnosis?search=hip%20dysplasia&source=search_result&selectedTitle=1~38&usage_type=default&display_rank=1#H25.

27. Winnipeg Regional Health Authority. Jaundice and hyperbilirubinemia in the newborn: Assessment and management Winnipeg, MB 2018. Available from: www.wrha.mb.ca/extranet/eipt/files/EIPT-035-024.pdf.

28. Canadian Paediatric Society. Jaundice in newborns. Caring for Kids [Internet]. 2017. Available from: www.caringforkids.cps.ca/handouts/jaundice_in_newborns.

29. Barrington K, J.,, Sankaran K, Canadian Paediatric Society, Fetus and Newborn Committee. Guidelines for detection, management and prevention of hyperbilirubinemia in term and late preterm newborn infants. Position Statement [Internet]. 2007 [updated Feb 28, 2018] May 8, 2018. Available from: www.cps.ca/en/documents/position/hyperbilirubinemia-newborn.

30. Sick Kids Hospital. Motherisk Toronto, ON: The Hospital for Sick Children; 2018. Available from: www.motherisk.org/prof/index.jsp.

31. Lacaze T, O'Flaherty; P., Canadian Paediatric Society, Fetus and Newborn Committee. Management of infants born to mothers who have used opioids during pregnancy. Position Statement [Internet]. May 5, 2018. Available from: www.cps.ca/en/documents/position/opioids-during-pregnancy.

32. Portico. Canada's mental health and addiction network Toronto, ON: CAMH; n.d. Available from: www.porticonetwork.ca/en/home.

33. Jefferies AL, Canadian Paediatric Society, Fetus and Newborn Committee. Selective serotonin reuptake inhibitors in pregnancy and infant outcomes Ottawa, ON: Canadian Paediatric Society; 2011 [updated Feb 28, 2018]. Available from: www.cps.ca/en/documents/position/SSRI-infant-outcomes.

34. Stewart D, Vigod, S.,. Infants with antenatal exposure to selective serotonin reuptake inhibitors (SSRIs) and serotonin-norepinephrine reuptake inhibitors (SNRIs) Waltham, MA: Wolters Kluwer; 2016 [updated Apr 2018]. Available from: www-uptodate-com.uml.idm.oclc.org/contents/infants-with-antenatal-exposure-to-selective-serotonin-reuptake-inhibitors-ssris-and-serotonin-norepinephrine-reuptake-inhibitors-snris?topicRef=89067&source=related_link.

35. Todd Sorokan S, Finlay JC, Jefferies AL, Canadian Paediatric Society, Fetus and Newborn Committee, Infectious Diseases and Immunization Committee. Newborn male circumcision Ottawa, ON: Canadian Paediatric Society; 2015 [updated Reaffirmed: Feb 28 2018].

36. Canadian Pediatric Society. Circumcision of baby boys: Information for parents Ottawa, ON: Canadian Pediatric Society; 2015. Available from: www.caringforkids.cps.ca/handouts/circumcision.

37. Rowan-Legg A, Canadian Paediatric Society, Community Paediatrics Committee. Managing functional constipation in children Ottawa, ON: Canadian Paediatric Society; 2011. [updated Feb 28 2018].

38. Erlichman J, Loomes KM. Biliary atresia Waltham, MA: Wolters Kluwer; 2017. [updated Apr 2018]. Available from: www-uptodate-com.uml.idm.oclc.org/contents/biliary-atresia?search=Biliary%20atresia%20newborn&source=search_result&selectedTitle=1~53&usage_type=default&display_rank=1.

39. Perinatal Services BC. BC infant stool colour card Vancouver, BC: Perinatal Services BC; 2015. Available from: www.perinatalservicesbc.ca/Documents/Screening/BiliaryAtresia/StoolColourCard_English.pdf.

40. Canadian Paediatric Society. Fever and temperature taking Ottawa, ON: Canadian Paediatric Society; 2018. [updated October 2015]. Available from: www.caringforkids.cps.ca/handouts/fever_and_temperature_taking.

41. World Health Organization. WHO recommendations on newborn health: guidelines approved by the WHO Guidelines Review Committee. Geneva: World Health Organization; 2017. [cited 2018 May 11]. Available from: apps.who.int/iris/bitstream/handle/10665/259269/WHO-MCA-17.07-eng.pdf; jsessionid=DB04E6D339D423E513113BA29025BF38?sequence=1.

42. Canadian Pediatric Society. Crying and colic Ottawa, ON: Canadian Pediatric Society; 2016. [updated July 2016]. Available from: www.caringforkids.cps.ca/handouts/colic_and_crying.

43. Canadian Paediatric Society. Never shake a baby Ottawa, ON: Canadian Paediatric Society; 2018. [updated July 2016]. Available from: www.caringforkids.cps.ca/handouts/never_shake_a_baby.

44. Manitoba Parent Zone. Crying Winnipeg, MB: Government of Manitoba; n.d. Available from: manitobaparentzone.ca/parent-or-caregiver/newborns/crying.html.

45. Government of Manitoba. Routine immunization schedules Winnipeg, MB: Health, Seniors and Active Living; n.d. Available from: www.manitoba.ca/health/publichealth/cdc/div/schedules.html.

46. Government of Canada. Hepatitis B: Get the facts. You can have it and not know it. Ottawa, ON: Public Health Agency of Canada; 2004. Available from: www.canada.ca/en/public-health/services/surveillance/blood-safety-contribution-program/bloodborne-pathogens-section/hepatitis.html#hepb.

47. Government of Manitoba. Hepatitis B (HBV) Winnipeg, MB: Health, Seniors and Active Living; n.d. Available from: www.manitoba.ca/health/publichealth/diseases/hepatitisb.html.

48. Canadian Paediatric Society. Immunization Ottawa, ON: Canadian Paediatric Society; 2018. Available from: www.caringforkids.cps.ca/handouts/immunizations-index.

49. Government of Manitoba. Hepatitis C (HCV) Winnipeg, MB: Health, Seniors and Active Living; n.d. Available from: www.manitoba.ca/health/publichealth/diseases/hepatitisc.html.

50. Robinson JL, Canadian Paediatric Society, Infectious Diseases and Immunization Committee. Vertical transmission of the hepatitis C virus: Current knowledge and issues Ottawa, ON: Canadian Paediatric Society; 2008 [updated Feb 28, 2018].

51. Government of Manitoba. Human Immunodeficiency Virus (HIV) Winnipeg, MB: Health, Seniors and Active Living; n.d. Available from: www.manitoba.ca/health/publichealth/diseases/hiv.html.

52. Robinson JL, Canadian Paediatric Society, Infectious Diseases and Immunization Committee. Management of HIV-exposed and HIV-infected children Ottawa, ON: Canadian Paediatric Society; 2010 [updated Feb 28, 2018]. Available from: www.cps.ca/en/documents/position/HIV-exposed-and-HIV-infected-children.

53. Government of Manitoba. Varicella (Chickenpox) Winnipeg, MB: Health, Seniors and Active Living; n.d. Available from: www.manitoba.ca/health/publichealth/diseases/varicella.html.

54. Canadian Paediatric Society. Chickenpox Ottawa, On: Canadian Paediatric Society; 2018 [updated 2015]. Available from: www.caringforkids.cps.ca/handouts/chickenpox.

55. MacDonald NE, Canadian Paediatric Society, Infectious Diseases and Immunization Committee. Maternal infectious diseases, antimicrobial therapy or immunizations: Very few contraindications to breastfeeding Winnipeg, MB: Canadian Paediatric Society; 2006 [updated Feb 28 2018]. Available from: www.cps.ca/en/documents/position/maternal-infectious-diseases-breastfeeding.

56. Manitoba Health. Provincial public health nursing standards: Prenatal, postpartum, and early childhood. Winnipeg, MB: Manitoba Health; 2015. Available from: www.manitoba.ca/health/publichealth/phnursingstandards/index.html.

57. National Case Management Network of Canada. Canadian standards of practice for case management & Canadian core competency profile for case management providers. Ottawa, ON: National Case Management Network of Canada; 2012. Available from: www.ncmn.ca.

58. Canadian Pediatric Society. Keeping kids safe: At play, in the home, on the move, whatever the weather Ottawa, ON: Canadian Pediatric Society; 2018. Available from: www.caringforkids.cps.ca/handouts/kidssafe-index.

59. Manitoba Parent Zone. Newborns Winnipeg, MB: Government of Manitoba; n.d. Available from: www.manitobaparentzone.ca/parent-or-caregiver/newborns/index.html.

60. Government of Canada. Infant care Ottawa, ON: Health Canada; 2015. Available from: www.canada.ca/en/health-canada/services/infant-care.html.

61. Manitoba Public Insurance. Child car seats Winnipeg, MB: Manitoba Public Insurance; 2013. Available from: www.mpi.mb.ca/en/Rd-Safety/Car-Seats/Pages/ChildCarSeat.aspx.

62. Cyr C, Canadian Paediatric Society, Injury Prevention Committee. Preventing choking and suffocation in children Ottawa, ON: Canadian Paediatric Society; 2012. Available from: www.cps.ca/en/documents/position/preventing-choking-suffocation-children.

63. Rourke L, Leduc D, Rourke J. Rourke baby record Memorial University of Newfoundland: Office of Professional Development (OPD); 2017. Available from: www.rourkebabyrecord.ca/walk1.

64. Province of British Columbia. Toddler's first steps: A best chance guide to parenting your 6- to 36-month-old child. Victoria, BC: Ministry of Health; 2017. Available from: www.healthyfamiliesbc.ca/about-us/additional-resources.

65. Rourke L, Leduc D, Rourke J. Rourke baby record well baby visit: 1-2 weeks. In: Memorial University of Newfoundland, editor. RBR Parent Resouces. St. Johns, NF: Office of Professional Development (OPD), Memorial University of Newfoundland; 2017.

66. Healthy Child Manitoba. Manitoba First Nations and Metis parenting booklets. Winnipeg, MB: Government of Manitoba; 2017. Available from: www.manitoba.ca/healthychild/publications/firstnationsmetis-parentresources/index.html.

67. Government of Manitoba. Triple P: The positive parenting program Winnipeg, MB: Healthy Child Manitoba; n.d. Available from: www.manitobatriplep.ca.

68. Government of Manitoba. Child and family services: How can we help you? Winnipeg, MB: Families; n.d. Available from: www.manitoba.ca/fs/childfam/.

69. Healthy Child Manitoba. Programs, supports and strategies Winnipeg, MB: Government of Manitoba; n.d. Available from: www.manitoba.ca/healthychild/programs/index.html.

70. Government of Manitoba. Newborn screening in Manitoba Winnipeg, MB: Health, Seniors and Active Living; n.d. Available from: www.manitoba.ca/health/publichealth/cpl/baby.html.

Acknowledgements

The development of Newborn documents has been a collaborative effort across the province.

Initial Author

Perinatal Services BC developed the original documents, through the interdisciplinary consensus, and based on best evidence. From July 2017 to June 2018, the BC documents were reviewed, piloted, and adapted for PHN practice in Manitoba. The process involved the collaboration of PHNs, nursing leaders, and Manitoba Health, Seniors, and Active Living.

PHN Pilot and Sub-Group

An initial meeting was convened in July 2017, as an orientation to promote consistency and understanding. Ongoing meetings were scheduled to support the pilot PHNs, to discuss use of the forms in practice, and to gather feedback for revisions. Initial revisions to the BC documents were completed by December 2017. From January to May, a sub-group of representatives from the pilot group met regularly by teleconference to continue to review and adapt the forms to the Manitoba context. This group consisted Breanna Harms, Chelsea Girioux, Jodi Unger, Maria MacKay, Leanne O'Keefe, Lorelei Pierce, Rita Watier, and Zippy Shivachi. The final review was completed during a face-to-face day long meeting on June 7, 2018. This work would not have been possible without the dedication and effort of the subcommittee. Thanks to the PHNs listed below who were instrumental in piloting these provincial tools and facilitating the process.

Name	Healthy Authority
Abbie Humby	*Northern Health*
Alison Campbell	*Winnipeg Regional Health Authority*
Amy Mink	*Northern Health*
Angela Bakos	*Northern Health*
April Gage	*InterLake Eastern Regional Health Authority*
April Pierre Pont	*Prairie Mountain Health*
Bonnie Watson	*Prairie Mountain Health*
Brenda Klassen	*Southern Health-Santé Sud*
Breanna Harms	*Prairie Mountain Health*
Brianne Rempel	*Southern Health-Santé Sud*
Bridigit (Erin) Murphy	*Northern Health*
Carrie McDuff	*Northern Health*
Charan Kaler	*Winnipeg Regional Health Authority*
Chelsea Giroux	*Prairie Mountain Health*
Crystal Nazarewich	*InterLake Eastern Regional Health Authority*
Heather Dowling	*Southern Health-Santé Sud*

Name	Healthy Authority
Heather Cheasley	*InterLake Eastern Regional Health Authority*
Helene Wiens	*Southern Health-Santé Sud*
Jacqueline Brandt	*Southern Health-Santé Sud*
Jeannie Marion	*Southern Health-Santé Sud*
Jenna Furkalo	*Prairie Mountain Health*
Jennifer Rank	*Prairie Mountain Health*
Jennifer Cochrane	*Prairie Mountain Health*
Jill Eggie	*Prairie Mountain Health*
Jill Klippenstein	*Southern Health-Santé Sud*
Jodi Unger	*Southern Health-Santé Sud*
Kathy Beavis	*Northern Health*
Kerry Lajambe	*Northern Health*
Kirsten Duguay	*Prairie Mountain Health*
Laurie Guilbert	*Prairie Mountain Health*
Loida Agpalza	*Northern Health*
Marcy Timchishen	*InterLake Eastern Regional Health Authority*
Maria Mackay	*Winnipeg Regional Health Authority*
Marlene Whitby	*InterLake Eastern Regional Health Authority*
M Bryant	*Prairie Mountain Health*
Melanie Foster	*Northern Health*
Michele Martel	*Southern Health-Santé Sud*
Michelle Johnson	*Prairie Mountain Health*
Monique Gauthier	*Southern Health-Santé Sud*
Lea Mutch	*Winnipeg Regional Health Authority*
Pam Noseworthy	*Northern Health*
Patricia Ladoucer	*InterLake Eastern Regional Health Authority*
Lorelei Pierce	*Winnipeg Regional Health Authority*
Ramona Doherty	*Northern Health*
Rita Watier	*Northern Health*
Ruth Unrau	*Northern Health*
Sara McNally	*Northern Health*
Sasha Conway	*Northern Health*

Name	Healthy Authority
Stacie Gardiner-Graham	*Prairie Mountain Health*
Teresa Olson	*Prairie Mountain Health*
Victoria Phillips	*Northern Health*
Zippy Shivachi	*Winnipeg Regional Health Authority*

Public Health Nursing:
Newborn Nursing Care Pathway
2019

Manitoba