Saskatchewan Health Authority

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Provincial Maternal / Parental and Infant HIV Order Sets

Additional Information

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Provincial Maternal / Parental and Infant HIV Order Sets:

Additional Information

PURPOSE

To assist in successful utilization of the Maternal / Parental and Infant HIV Order Sets and standardize care of Mothers / Birthing Parents living with HIV and their Infants across the province.

OBJECTIVES

- Recognize key messages for successful utilization of provincial HIV Positive Individuals in Labour INITIAL Medication and Care Orders and Infants born to HIV Positive Individuals INITIAL Medication and Care Orders
- Identify the 3 categories of risk for infants and medications required for each
- Understand lab considerations for specimen collection and testing
- Identify infant feeding recommendations
- Recognize discharge requirements and follow up

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HIV Care in Saskatchewan

Saskatchewan people living with HIV are able to access care throughout the province. HIV care in the community is typically managed by General Practitioners. Mobile HIV clinics also offer services locally at rural sites.

Adult HIV specialists are involved provincially with HIV care, including Infectious Disease and Medical Internists. These specialists are generally situated in Saskatoon and Regina. Pediatric Infectious Disease specialists are based out of Saskatoon. Inpatient HIV care is directed by the Infectious Diseases team.

To learn more about HIV and pregnancy, visit

Saskatchewan Prevention Institute: HIV and Pregnancy a Guide to Care at https://saskatchewanpreventioninstitute.github.io/HIV-and-Pregnancy/.

Antiretroviral Management of Newborns with Perinatal HIV Exposure or HIV Infection at https://clinicalinfo.hiv.gov/en/guidelines/perinatal/antiretroviral-management-newborns-perinatal-hiv-exposure-or-hiv-infection?view=full

Recommendations from Maternal / Parental HIV Provider to Obstetrics and Pediatrics

The **Recommendations from Maternal / Parental HIV Provider to Obstetrics and Pediatrics** guidance document is intended to be used as a communication tool. It is completed by the Maternal / Parental HIV Provider prenatally and sent to the patient's planned delivery facility/unit and/or patient's obstetrical care provider prior to delivery.

If the guidance document is not received by the planned delivery facility/unit prior to admission for delivery or if mother / birthing parent is newly diagnosed with HIV:

- Maternal / Parental and Newborn Most Responsible Practitioner (MRP) will proceed with utilizing HIV order sets
- Determine most recent maternal / parental viral load to establish:
    - Most appropriate delivery method (vaginal vs. cesarean) in conjunction with any other perinatal risk factors or obstetrical indications for cesarean delivery.
    - Categorization for risk of transmission to the infant.

Categorize infant as high risk if:

a) maternal / parental HIV viral load greater than or equal to 400 copies/mL or unknown within 6 weeks of delivery;
b) mother / birthing parent did not receive antepartum HIV medication;
c) HIV seroconversion during pregnancy; OR
d) possible lack of HIV medication adherence since last HIV viral load

HIV Positive Individuals in Labour INITIAL Medication and Care Orders

The **HIV Positive Individuals in Labour INITIAL Medication and Care Orders** is intended to be used for patients who are known HIV+. These orders should be applied in all sites with Obstetrical Services, however, sites without cesarean section availability should consider transfer via Systems Flow Coordination (SFCC) to a site with cesarean section services. For imminent deliveries where antepartum transfer has been deemed unfeasible via SFCC, all sites with Obstetrical Services are to utilize the order set.

If HIV status of the maternal or birth parent is unknown on admission, complete HIV POCT and in-lab HIV test STAT. Ensure that informed consent and appropriate education is provided to the patient regarding the HIV test. HIV is a notifiable sexually transmitted infection and requires reporting and follow up.

There is more available through eHealth at:
Sexually Transmitted Infection (STI) Notification Form
https://www.ehealthsask.ca/services/manuals/Documents/5-STI-Notification-Form-fillable.pdf

HIV Case Reporting Form https://www.ehealthsask.ca/services/Manuals/Documents/6-HIVCaseReportingForm.pdf

The maternal / parental order set may be completed by the maternal / parental HIV Care Provider prenatally and sent to the delivery site prior to the patient's admission. If the maternal / parental HIV order set is not received in advance, it can be completed by the MRP when the patient is admitted for delivery. Refer to Recommendations from Maternal / Parental HIV Provider to Obstetrics and Pediatrics [SHA0150] if received from maternal / parental HIV Provider.

Method of Delivery

Cesarean Delivery (Scheduled Recommended)

- Cesarean delivery is recommended before onset of labour and rupture of membranes if HIV Viral Load at 34 to 36 weeks is *greater than* 1,000 copies/mL or unknown, mother / birthing parent did not receive antepartum HIV medication, or possible lack of adherence since last viral load.

- **For rupture of membranes greater than 4 hours *OR* Viral load at 34 to 36 weeks is *less than* 1,000 copies/mL:** Use standard obstetrical indications for cesarean delivery.

> If the mother / birthing parent has had rupture of membranes for ***greater than 4 hours*** they can proceed to deliver vaginally, even if a scheduled cesarean section was recommended due to viral load greater than 1,000 copies/mL. Use standard obstetrical indications for cesarean delivery.

Medication

Zidovudine IV

- Weight based dosing.
- Refer to Saskatchewan Parenteral Manual – ADULT zidovudine.
- Infuse loading dose over one hour, then decrease rate per dosing calculation for continuous infusion.
- Infusion to be discontinued once umbilical cord is clamped.
- Continue pre-admission HIV medications as ordered on Pre-Admission Medication List (PIP), **do NOT** discontinue/hold HIV medications when IV zidovudine is infusing.
- In the order set, pre-checked boxes (☒) are initiated automatically. To delete orders, draw one line through the item and initial. The practitioner can choose to individualize care based on the clinical situation.

Consults

Call the Infectious Disease (ID) Physician On-Call number for your area provided on the order set immediately if urgent questions, otherwise during daytime hours to inform of birth. It is ok to leave a message to let them know the patient has delivered. Provide the delivery site contact information so that they can call back.

Call appropriate HIV care program at delivery:

- The HIV care program will initiate the process for SK Formula Program, so it is important to call with adequate time to set up resources in community prior to discharge from hospital. It is ok to leave a message to ensure they are aware the patient has delivered. Provide the delivery site contact information so that they can call back.
- The HIV care program will ensure proper HIV follow up appointments.

Lab Investigations

- Obtain maternal /parental HIV Viral Load if previous viral load greater than 1,000 copies/mL or unknown, mother / birthing parent did not receive antepartum HIV medication, HIV seroconversion during pregnancy, or possible lack of adherence since last viral load.

Send sample to Roy Romanow Provincial Lab (RRPL) ***STAT***.

- Lab will need to arrange stat shipping to RRPL according to local process. When shipping, ensure sample is at top of delivery and visibly labeled as a STAT sample. Call RRPL Microbiologist on call to inform them that a STAT HIV Viral Load is being sent from your site, so that they are aware the STAT sample is en route and will need to be processed as soon as possible.

Discharge Medication

Patients should continue taking their pre-admission HIV Medications unless changes are specifically ordered by their HIV Care Provider.

HIV Positive Individuals in Labour INITIAL Medication and Care Orders		
	High Risk for Infant Transmission	**Intermediate Risk for Infant Transmission**
Criteria	Any ***one*** of the following: a) maternal /parental HIV viral load greater than 1,000 copies/mL or unknown; b) mother / birthing parent did not receive antepartum HIV medication; c) HIV seroconversion during pregnancy; OR d) suspected lack of maternal / parental HIV medication adherence since last HIV viral load	-Maternal / Parental HIV viral load less than 1,000 copies/mL -Maternal / Parental HIV medication adherence since last HIV viral load is not a concern
Delivery	Cesarean Delivery recommended -Elective or Emergent	Vaginal Delivery Standard obstetrical indications for cesarean delivery The following procedures should be avoided due to potential for increased risk of transmission: a) Fetal scalp electrodes or fetal scalp sampling (such as PH or lactate) b) Use of forceps or vacuum extractor (low force/suction may be considered) c) Early artificial rupture of membranes in women / birthing parents who have an HIV viral load greater than 50 copies
Medications	Medication Required: • zidovudine • Continue pre-admission HIV medications as ordered on Pre-Admission Medication List (PIP). If newly diagnosed, HIV medications to be prescribed prior to discharge.	Medication Required: • zidovudine • Continue pre-admission HIV medications as ordered on Pre-Admission Medication List (PIP)
Medication Duration	-Elective Cesarean Section: Initiate zidovudine 3 hours prior to procedure -Emergent Cesarean Section: Initiate zidovudine immediately until umbilical cord is clamped	-Elective Cesarean Section: Initiate zidovudine 3 hours prior to procedure -Emergent Cesarean Section: Initiate zidovudine immediately -Vaginal Delivery: Initiate at onset of labour; If labour stops and the infusion is discontinued for greater than 6 hours, repeat loading dose and resume continuous infusion once labour recommences.

Infants Born to HIV Positive Individuals INITIAL Medication and Care Orders

The **Infants Born to HIV Positive Individuals INITIAL Medication and Care Orders** is to be utilized in all sites with Obstetrical Services. If transfer is required due to gestational age or risk factors, it is important for the transferring site to ensure the infant receives the first dose of required medication(s) within 6 hours of birth.

The **Infants Born to HIV Positive Individuals INITIAL Medication and Care Orders** is intended to commence initial medication prophylaxis to prevent HIV transmission. Continued assessments, treatment and evaluation will occur in the community at follow up appointments with the Infectious Disease teams. If the infant remains in hospital for a long period of time (for example due to prematurity), medication dosing adjustments and additional lab work may need to be completed. Please call Infectious Disease (Regina & Rural South) or Pediatric Infectious Disease (Saskatoon & North) if there are any questions in managing the infant's care.

Risk Categories for Perinatal HIV Transmission:			
	High Risk	**Intermediate Risk**	**Low Risk**
Criteria	Any ***one*** of the following: a) maternal / parental HIV viral load greater than 400 copies/mL or unknown within 6 weeks of delivery; b) mother / birthing parent did not receive antepartum HIV medication; c) HIV seroconversion during pregnancy; OR d) suspected lack of maternal / parental HIV medication adherence since last HIV viral load	Maternal / Parental HIV viral load between 50 to 400 copies/mL within 6 weeks of delivery AND maternal / parental adherence is not a concern	Maternal / Parental HIV viral load less than 50 copies/mL within 6 weeks of delivery AND maternal / parental adherence is not a concern
Medications	3 Medications Required: • zidovudine • nevirapine • lamiVUDine	2 Medications Required: • zidovudine • nevirapine	1 Medication Required: • zidovudine
Medication Duration	All 3 medications for 6 weeks	-Zidovudine 6 weeks -Nevirapine only 3 doses	Zidovudine for 4 weeks

- **Initial medication dose(s) based on weight and gestational age at time of birth.**
- **Administer medications as soon as possible after birth.**
- **Provide remaining doses of zidovudine and lamiVUDine to take home upon discharge, no prescription necessary. Ensure medications are labelled appropriately for caregiver use. Nevirapine supply needs to be provided by Special Access Pharmacy (SAP). Call SAP at birth to arrange supply for discharge.**

Access to medications from pharmacy:

On-site hospital pharmacy will stock the required medications on the order sets provincially while the patient is admitted in hospital. Nevirapine for discharge is ordered through Special Access Pharmacy (SAP). Call SAP as indicated on the order set as soon as possible after delivery to ensure adequate time is available to receive medications for baby at discharge. SAP will inform you of the process to receive the neviripine for the patient, which is usually shipped to the patient's home address. Neviripine 'future use' bottles from in hospital pharmacy **cannot** be sent home with the patient, but if required pre-drawn doses in syringes can be sent with the patient until the 6 week supply is received from SAP.

Medication Considerations

To improve the chances that the infant will remain HIV-negative, they must:

- receive the medication(s) in the correct dose;
- not miss any doses; and
- be administered the medication(s) for the full 4 weeks (or full 6 weeks if intermediate or high risk category).

The medications are to reduce the infant's risk of acquiring HIV and serve as early treatment for infants who do acquire HIV through vertical transmission. Repeated HIV testing will be required to confirm if the infant is HIV-negative or HIV-positive prior to follow up appointments.

Before discharge from hospital, ensure parents/caregivers know the correct medication dose and how to administer the medication to their infant.

The HIV medication is in a liquid form so the infant can swallow it, but do NOT put the medication(s) into the infant's formula. If the infant does not drink all of the formula, it can mean the infant did not receive the full dose of the medication(s). The medication(s) may also cause the formula to curdle.

Give the medication(s) to the infant before or during a feeding.

- Use a syringe to draw up the medication.
- Put the syringe into the infant's mouth, just inside the cheek.
- With 4 to 5 gentle pushes on the plunger, give the medicine.
- You can also use a bottle nipple instead of the dropper.
- If the infant does not feed when the medicine is due, give the medication on its own.

If the infant spits up medication:

- If it is ***within 15 minutes*** of administration, **repeat** the dose and continue with the regular schedule.
- If it is ***more than 15 minutes*** after administration, **do not repeat** the dose and continue with the regular schedule.

If a dose is missed:

- Administer the missed dose as soon the missed dose has been noticed. The next dose will be 12 hours later – this becomes the new administration schedule.

Feeding

HIV can be passed to the infant through breast/chest milk even if the mother is taking HIV medication and has an undetectable viral load, therefore, breast/chestfeeding is ***NOT*** recommended in Canada as there is access to safe formula alternatives. Free formula is available through the Saskatchewan Formula Program or Non-Insured Health Benefits (NIHB) program. The SK Formula Program provides free formula from birth to one year of age.

Call local HIV care program at delivery for SK Formula Program (leave message if needed):
* Saskatoon: Positive Living Program 306-655-1783
* Regina: Infectious Diseases Clinic 306-766-3994
* Prince Albert: Positive Care Program 306-765-6544

MRP's can also prescribe formula by filling out a prescription.

If mother / birthing parent has interest in breast/chestfeeding or would like more information, call the Positive Living Program or Pediatric Infectious Disease office to discuss further.

- **SK Formula Program requires time to set up prior to discharge, call HIV care program as soon as possible to begin arrangements.**
- **May need to supply formula from unit for a few days until SK Formula Program supply is accessible.**

Lab Investigations

Send HIV Viral Load to Roy Romanow Provincial Lab (RRPL) ***STAT*** for infants in **high risk** category.

- Local Lab will need to arrange stat shipping to RRPL.
- When shipping, ensure sample is at top of delivery and visibly labeled as a STAT sample.
- Call RRPL Microbiologist on call to inform them that a STAT HIV viral load is being sent from your site, so that they are aware the STAT sample is on route and will need to be processed as soon as possible.

Ensure adequate blood draw retrieved as unable to be analyzed if sample amount insufficient. HIV viral load requires a minimum 3 mL of blood to get 0.5 mL of plasma in an EDTA tube.

Follow-up Appointment Information

Appointments with Infectious Disease are typically at 6 to 8 weeks old and 4 months old. A third appointment may be required if requested by the physician. For high risk patients, they will be followed up as early as 2 weeks of age, so it is important that the referral is timely.

For Regina area and Integrated Rural South, the Nursing Coordinator will follow up by phone at two weeks of age and appointments may not need to take place in person. It is important they are aware that the delivery occurred to ensure follow up can take place.

For Saskatoon area, Integrated Northern Health **and infants in the high risk category**, inpatient nursing staff is to book the first appointment prior to discharge by calling the Pediatric Infectious Disease office 306-844-1159. Include the appointment information on the Discharge Instructions for Baby- HIV Prevention information sheet.

Appointments need to be booked during office hours, so if unable to speak directly with someone please leave a detailed message including patient's direct contact information to ensure follow up appointments are booked.

- Repeat HIV testing will be required to confirm if the infant is HIV-negative or HIV-positive. The clinic will call the parents/caregivers within 2 to 3 weeks of each test to let them know the results.
- The doctor/nurse will also check the infant's general health. This may include a physical exam, reviewing the infant's immunizations, and possibly ordering other tests.

Continue routine newborn follow up at discharge with family doctor and public health as per local processes.

Discharge

Complete discharge teaching and provide **Discharge Instructions for Baby – HIV Prevention** document to parents/caregivers.

Appendix A: Nursing Discharge Checklist

- ☐ Ensure infant SK Formula Program process is initiated prior to discharge.
- ☐ Complete the Discharge Instructions for Baby Document
  - ☐ Fill in the HIV medication dosing, administration times, and appropriate clinic contact information.
  - ☐ If the infant does not require nevirapine (NVP) or lamivudine (3TC), cross-out the boxes.
- ☐ Provide the remainder of the bottle (for zidovudine and lamivudine, ensure dosing on the labels are correct) from the hospital stay and ensure patient has received nevirapine from Special Access Pharmacy if required.
- ☐ Support caregiver to ensure independent administration of the HIV medication(s) to the infant for accuracy and technique prior to discharge.
- ☐ If ordered, ensure the mother / birthing parent has access to lactation suppression medication.
- ☐ Ensure follow up appointment has been booked with Peds Infectious Disease Clinic if patient lives in Saskatoon or North or is in high risk category, or Infectious Disease Clinic for Regina and Rural South.
- ☐ Review discharge instructions with the parents/caregivers.
- ☐ Follow routine processes to notify Public Health of the delivery.

Must be sent with infant:

- ☐ Remainder of zidovudine (AZT) bottle from hospital stay.
- ☐ Nevirapine pre-drawn doses in syringes if required to complete 3 dose series in intermediate category, or if needed until patient receives medication from SAP for 6 week dose in high risk category.
- ☐ Lamivudine (3TC) remainder of bottle from hospital stay if patient in high risk category.
- ☐ Adequate supply of infant if formula if not yet available from SK Formula Program.
- ☐ Any additional medications or prescriptions ordered.

Appendix B: Frequently Asked Questions

What is HIV & how is it transmitted? HIV (Human Immunodeficiency Virus) is a virus that affects the immune system. The immune system protects people from bacteria, viruses, cancers, etc. It is transmitted from a person who has the virus to another person through contact with infected body fluids (blood, semen, vaginal/anal secretions and breast/chest milk). Transmission occurs when infected body fluids have direct contact with a point of entry (such as mucous membranes or an open lesion/wound). The virus needs an entry into the body. *HIV is NOT transmitted in saliva, tears, or urine*. *HIV is not transmitted by hugging, kissing, changing diapers, sharing bathrooms or other day-to-day activities.*

Is there a cure for HIV? No, HIV is not a curable infection. However, with today's medical advancements it is now considered a *manageable illness if proper care & treatment is accessed*. The earlier, the better. If HIV is not diagnosed early and/or not managed medically, the virus can/will cause the immune system to become weak.

If a woman or birthing parent is HIV+ and pregnant, is baby guaranteed to get the virus? No. If HIV medications are taken during pregnancy, this lowers the amount of virus in the blood, which lowers the amount of virus available to pass onto the baby. With treatment, the risk of transmission to the infant is reduced to less than 1%. Without HIV treatment, there is approximately a 30% transmission risk to baby. Additional medication is also given during labour until delivery to further reduce transmission risk during the birthing process.

Why does baby receive HIV medications? Does that mean they are HIV+? Baby receives HIV medications as soon as possible after birth and for the first 4 to 6 weeks of life. This does NOT mean that baby is HIV positive. This medication is to help further reduce the chances of transmission.

Information about HIV Tests for Babies:

For babies, a minimum of 2 tests are required to be certain of HIV status:

- An HIV Viral Load test - detects and measures the amount of HIV virus in the blood, if it is present. This test is very sensitive and is done when the baby is 6 to 8 weeks old and again at 4 months of age.

Infectious Disease specialists can be certain of whether or not the baby has been infected with HIV after the second test result is obtained. In some cases, more testing or appointments may be recommended.

HIV testing is not done alone. A physical exam and other assessments are completed at appointments to provide the doctor with a complete picture of the baby's health.

Immunizations:

- Baby can receive all routine vaccines.

Appendix C: Screening Tool for STBBI's (Sexually Transmittable and Blood Born Infections) in Labour and Birth

This is a GUIDE for the Health Care Professionals and should be adapted as assessment and judgement requires.

- One of the keys to obtaining an accurate assessment is to address the questions in a non-judgmental tone/manner. Ensure that the patient understands you are asking the questions to provide them and their baby with the best possible care.
- Ideally the questions would not be asked in the form of a separate "checklist", but would be integrated into the admission history and/or other important conversations and asked to the patient when they are alone. Given the unpredictable nature of circumstances on Labour and Birth, nurses will need to use their discretion, recognizing that they may not be able to achieve the "ideal".

Things to think about in determining the need for additional testing:

1. How to ask the questions?
   - Opening dialogue might begin with explaining that all the information we collect upon admission, including the questions that are of a sensitive nature, are necessary to ensure that we provide the best, safest care to both mother / birthing parent and baby.
   - Please note, the questions posed below are to be used as a guide and have been incorporated to facilitate how you would best ask the questions.

2. Has the patient been tested and treated for Sexually Transmitted Infections/Hepatitis/HIV in this pregnancy?
   - What were the results on Prenatal record? Have they had 3rd trimester testing done? Is there an infectious diseases doctor involved? Is maternal fetal medicine involved? What is the birth plan (vaginal delivery or c/s)?
   - Is their partner positive for STBBI's? *"Have any of your sexual partners during this pregnancy been diagnosed and treated for any sexually transmittable infections or blood born infections that you are aware of?"*

3. Did the patient and their partner(s) have successful treatment?
   - What is the birth plan and follow up? Is zidovudine (AZT) needed for delivery? Will the newborn need additional medication postpartum?

4. What is the patient's risk for STBBI's in this pregnancy?
   - Have they had regular prenatal care as recommended by their most responsible practitioner?
   - Did they have treatment for an STBBI in this pregnancy?
   - Current drug use? *"Have you used any drugs a doctor didn't prescribe in this pregnancy?", "Do you or your partner use injected or illicit drugs? How much and how often? When did you last use?"*
   - Is this partner the biological parent of the baby? Have they been tested since entering the relationship if the partner is not?
   - Are they someone who has recently moved to Canada? Have they traveled in this pregnancy and had surgery or received a blood transfusion while traveling?
   - Endemic countries can be classified as Sub-Saharan Africa, Caribbean, Central/South America, and Asian countries. However, in all countries there is a risk of transmission. The key is that the patient has been tested since moving or since having had treatment/surgery outside of Canada.

Important Contact Numbers

Infectious Diseases

Pediatric Infectious Disease Clinic (Saskatoon): 306-844-1159

Regina Infectious Disease Specialists (Regina): 306-766-3915

HIV Care Programs

- Saskatoon: Positive Living Program 306-655-1783
- Regina: Infectious Diseases Program 306-766-3502 (Nursing Coordinator)
- Prince Albert: Positive Care Program 306-765-6544

- **Antiretroviral Management of Newborns with Perinatal HIV Exposure or HIV Infection**

https://clinicalinfo.hiv.gov/en/guidelines/perinatal/antiretroviral-management-newborns-perinatal-hiv-exposure-or-hiv-infection?view=full

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