



**HIV AND
PREGNANCY**
A Guide to Care

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Introduction

The rate of individuals testing positive for human immunodeficiency virus (HIV) in Saskatchewan is more than double the Canadian average. In 2018, Saskatchewan's rate of new HIV infections was 14.1 cases per 100,000 population, compared to the national rate of 6.9 cases per 100,000 population (Government of Canada, 2019; Saskatchewan Ministry of Health, Population Health Branch, 2019). Of the 168 new cases of HIV diagnosed in 2018 in Saskatchewan, 71 were in females (Saskatchewan Ministry of Health, Population Health Branch, 2019). The majority of the female cases (83%) were identified in those of childbearing age (15-45 years), highlighting the importance of efforts to reduce the risk of vertical (mother-to-child) transmission of HIV.

With appropriate care and treatment, including the use of combination antiretroviral treatment (cART), the risk of vertical transmission is less than 1%. As a result, more women¹ living with HIV are making the choice to have children. Women who are living with HIV may be faced with extra challenges when they discover they are pregnant, are pregnant and discover they are living with HIV, or are considering having a baby while living with HIV. Some women will face stigma and discrimination because of their choices.

These facts underscore the importance of:

- prevention information
- accurate information for women living with HIV and for professionals working with pregnant women
- knowledgeable, non-judgemental, and unbiased prenatal care

In addition to increasing knowledge, education may reduce the stigma and discrimination faced by women with HIV. This, in turn, may increase women's willingness to seek appropriate care and treatment for their HIV in order to further reduce the risk of vertical transmission of HIV. Without effective education, prevention, and treatment efforts, HIV infection rates will likely continue to rise in Saskatchewan.

This resource aims to serve as a guide for healthcare providers working with women living with HIV who are pregnant or considering becoming pregnant. Information about preventing transmission of HIV from mother to infants during pregnancy, labour, delivery, and feeding is provided.

¹ While the term 'women' is predominantly used in this document, it is important to acknowledge that individuals have diverse needs and identities that do not always align with traditional biological models. Patient-centred and trauma-informed approaches advise against making assumptions and recommend that healthcare providers consult with their patients to determine their preferred pronouns, anatomical names, gender identity, and other terms identified by their patients, and then use those terms as best as possible in their practices.



**HIV/AIDS IN
SASKATCHEWAN**

HIV/AIDS 101

HIV (Human Immunodeficiency Virus)

HIV is an acronym for human immunodeficiency virus. This name highlights the fact that HIV can only be transmitted from one human to another human, and that it is a virus that causes a deficiency in the immune system. More specifically, HIV infects the CD4 positive T cells, which are the key components of the human cellular immune system. CD4 cells are a type of lymphocyte or white blood cell. These cells are responsible for signaling other immune system cells to fight infections in the body. When HIV enters these cells, it impairs or destroys them, resulting in a deterioration of the immune system. HIV is a progressive disease that continually causes changes and damage to an individual's immune system. The immune system is considered deficient when it is no longer able to fight off infections and diseases.

AIDS (Acquired Immunodeficiency Syndrome)

If HIV is not treated, it can progress to AIDS (acquired immunodeficiency syndrome). People are diagnosed with AIDS when their CD4 cells drop below 200,000 cells per mL of blood (i.e., their CD4 count is less than 200²) and they contract one or more opportunistic infections. Opportunistic infections are those that individuals with HIV are particularly susceptible to because of the damage to their immune system. There are a wide range of opportunistic infections that include, but are not limited to, fungal infections, respiratory infections, and various forms of cancer. These infections are those that are rare among people with a healthy immune system.

According to the Centers for Disease Control and Prevention (2019), life expectancy without treatment is about three years following a diagnosis with AIDS. With proper treatment, CD4 cell counts may increase, and the person's health may begin to improve. Once a person receives a diagnosis of AIDS, however, the diagnosis is not removed regardless of subsequent changes in health status.

Symptoms of HIV

Most people with HIV do not show symptoms for several years after infection. This means that they may not know that they have been infected. Some people do develop acute retroviral syndrome at the time of seroconversion (i.e., the time at which the body develops antibodies to HIV). Seroconversion usually takes place between 1 and 6 weeks after HIV infection. People experiencing acute retroviral syndrome typically have symptoms similar to other viral infections, including fever, headache, fatigue, rash, joint and muscle pain, and enlarged lymph nodes. Acute retroviral syndrome is also known as primary HIV infection.

Remember, even people with HIV who are not symptomatic are highly infectious, particularly at the time of seroconversion. This means that they can still transmit the virus to others.

² The lower limit of 'normal' is a CD4 count of 500.

Modes of Transmission of HIV

Unless people are participating in behaviours that could result in an exchange of bodily fluids, every day casual contact is not a risk for transmitting HIV. The five fluids capable of transmitting HIV are: 1. blood; 2. semen and pre-cum; 3. vaginal fluid; 4. anal fluid; and 5. breast milk. HIV can only be passed when one of these fluids from a person living with HIV gets into the bloodstream of another person.

Common activities involved in transmission include unprotected vaginal and anal sex, sharing needles and other drug equipment, and tattooing with used needles. This is called horizontal transmission. HIV can also be passed from a mother to a baby during pregnancy, during delivery, and through breastfeeding. This is called vertical transmission.

Vertical Transmission

Transmission of HIV from mother to baby can take place in utero (through the placenta), during delivery, and postpartum through breastfeeding.

Factors That Increase Risk of Vertical Transmission

Without treatment, a woman living with HIV has approximately 15% to 40% chance of transmitting HIV to her baby. Factors that increase the risk of vertical transmission include intrapartum and obstetric events and maternal factors.

Intrapartum and obstetric events that increase risk of vertical transmission	Maternal factors that increase risk of vertical transmission
<ul style="list-style-type: none"> • Becoming infected with HIV in pregnancy (viral load is especially high during seroconversion, the time immediately after becoming infected with HIV) • Fetal exposure to maternal blood from: <ul style="list-style-type: none"> ○ placental abruption ○ use of fetal scalp electrodes ○ episiotomy ○ laceration • Longer duration between the rupture of membranes and delivery • Presence of bacterial infection in the membranes around the fetus and the amniotic fluid • Use of forceps • Vaginal delivery if maternal viral load is more than 1,000 copies/mL at time of delivery 	<ul style="list-style-type: none"> • Decreased CD4 cell count • High maternal viral load • Lack of HIV treatment (cART) • Presence of genital infections • Use of drugs, alcohol, and cigarettes • Poor nutrition • Poor self-care

Factors That Decrease Risk of Vertical Transmission

With treatment and care, a woman living with HIV has less than a 1% chance of passing HIV to her baby. Combination antiretroviral therapy (cART) is vital to preventing vertical transmission. If a woman is pregnant and HIV positive, it is recommended that she takes cART throughout her entire pregnancy.

Factors that decrease risk of vertical transmission

The following factors decrease the risk of vertical transmission:

- Universal HIV testing in the antepartum period
- Treatment with cART
- Caesarean section birth if maternal viral load is more than 1,000 copies/mL at time of delivery
- Behaviours that support a healthy immune system:
 - proper sleep and nutrition
 - lower levels of stress
 - regular contact with healthcare provider and care team
 - stopping or reducing use of cigarettes, alcohol, and other substances
- Formula feeding

The potential for decreasing vertical transmission rates is reflected in the Canadian and Saskatchewan data. Although the number of infants who are perinatally exposed to HIV has increased over time, the proportion of those confirmed to be infected with HIV has decreased. In Saskatchewan between 2016 and 2018, 127 infants were perinatally exposed to HIV and none were infected (Saskatchewan Ministry of Health, Population Health Branch, 2019).

HIV and Breastfeeding

If a mother living with HIV breastfeeds her baby, there is a 25% to 50% chance that her baby will be infected with HIV. Therefore, in Canada, it is recommended that mothers living with HIV do not breastfeed. Breastfeeding is not recommended even for women with low or undetectable viral loads. This is because breast milk has large numbers of immune cells, and HIV can “hide” in these immune cells. If HIV is hiding in the immune cells, it cannot be killed by HIV treatment. If the immune cells infected with HIV are used to fight an infection in the mother or in the gut of an infant, the cells can start to produce large numbers of HIV.

Some factors that increase the risk of transmitting HIV via breast milk include:

- a higher viral load
- a low CD4 count
- an inflammation of the breast
- longer breastfeeding duration
- mixed feeding (i.e., mixing breastfeeding and formula feeding)

It is important that healthcare providers are aware of this information and share it when counselling and supporting women living with HIV during pregnancy planning and infant feeding.

As mothers who are unable to breastfeed may experience engorgement, which can be painful, they should be provided with comfort measures (e.g., pain relievers, cold compresses). There are also medications that can be prescribed to suppress lactation and reduce engorgement, but it is important that drug interactions with cART medications are ruled out before these medications are prescribed.

Cultural and family pressure related to breastfeeding has been found to contribute to a mother's difficulty abstaining from breastfeeding. Risk of disclosure of their HIV status associated with not breastfeeding is another challenge for some women (Bitnun et al, 2014). Not being able to breastfeed has also been found to impact a woman's sense of being a woman and a good mother, with some women reporting feelings of guilt, loss, and shame, as well as concerns about stigma and disclosure. Therefore, women need to be supported and provided with advice about how to explain their choice to bottle-feed without disclosing their HIV status. Ideally, healthcare providers should work with women to create a plan around what to say to family and friends (Money et al., 2013). According to the Canadian Paediatric and Perinatal AIDS Research Group, "counselling on this issue is essential and best initiated before delivery" (p. 77; Bitnun et al., 2014).



HIV TESTING AND TREATMENT

HIV Testing

Regular HIV testing is extremely important as it allows people who test positive to access treatment, care, and support services as early as possible. The Saskatchewan Ministry of Health recommends voluntary confidential HIV testing and counselling be considered for all patients aged 13 to 70 receiving primary or emergency health care who do not know their HIV status, at least once every five years. More frequent testing is recommended for people who are at higher risk for HIV infection. For more information on routine testing in Saskatchewan, please visit: <https://skhiv.ca/hiv-testing-in-saskatchewan/#sk-routine-hiv-testing-policy>.

Prenatal HIV Testing

It is recommended that all pregnant women be offered HIV testing as part of the routine panel of prenatal screening tests. The earlier this testing takes place, the sooner the woman can access HIV treatment and care, if needed. For pregnant women, women contemplating pregnancy, or women having unprotected sex, knowing their HIV status can help them to prevent passing HIV to their partners and unborn children.

HIV testing can be voluntarily requested or can be offered by a healthcare provider. If an HIV test is being offered, there are two approaches:

- Opt-in means the pregnant woman is offered the HIV test and needs to formally consent to have the test performed.
- Opt-out means that the HIV test is a part of routine testing and the pregnant woman being offered the test has the option to decline. With the opt-out strategy, healthcare providers should make sure that the purpose, risks, and benefits of the test are explained so the woman understands her right to refuse the test.

There are many reasons that a woman may decline a prenatal HIV test, including fear of the disease, lack of perceived risk, fear of partner violence, or potential stigma or discrimination if a positive result arises. In order to alleviate concerns and provide appropriate supports and referrals, it is important for healthcare professionals to sensitively discuss these concerns as well as the benefits of taking the test. Principles of voluntarism, confidentiality, and informed consent are fundamental for HIV testing.

Diagnostic HIV Tests

HIV testing usually consists of a standard laboratory blood test. Test results may take up to two weeks to return and will be sent to the healthcare provider requesting the test. In Saskatchewan, Geenius HIV-1/2 Confirmatory Assay test is used to see whether the blood contains HIV antibodies. These antibodies develop after a person becomes infected. If the Geenius HIV-1/2 Confirmatory Assay is positive, a follow-up appointment should be scheduled where the patient is informed of the test result, provided HIV care referral information, instructed on how HIV is transmitted, and counselled on risk reduction (including methods of reducing vertical transmission). Pregnant women should be informed that breastfeeding is contraindicated (not medically recommended).

HIV Point of Care (POC) testing provides preliminary results of HIV testing in a few minutes. POC testing is currently being used in Saskatchewan in some of the province's obstetric settings. If the results from this screening test are reactive (positive), follow-up includes Geenius HIV-1/2 Confirmatory Assay test for confirmation. With the use of POC testing in Saskatchewan, which provides a negative or preliminary positive result in minutes, issues related to the inability and/or unwillingness to return for test results may become less problematic. For more information, visit: <https://skhiv.ca/hiv-testing-in-saskatchewan/#point-of-care-testing>.

Repeat Prenatal HIV Testing

It is important for a woman who has tested negative during a past pregnancy to be aware of the necessity of having current HIV testing. For a woman who tests negative early in pregnancy but who continues to engage in behaviours that pose a risk of HIV exposure, it is recommended that repeat testing be offered each trimester and at term. Risk behaviours include:

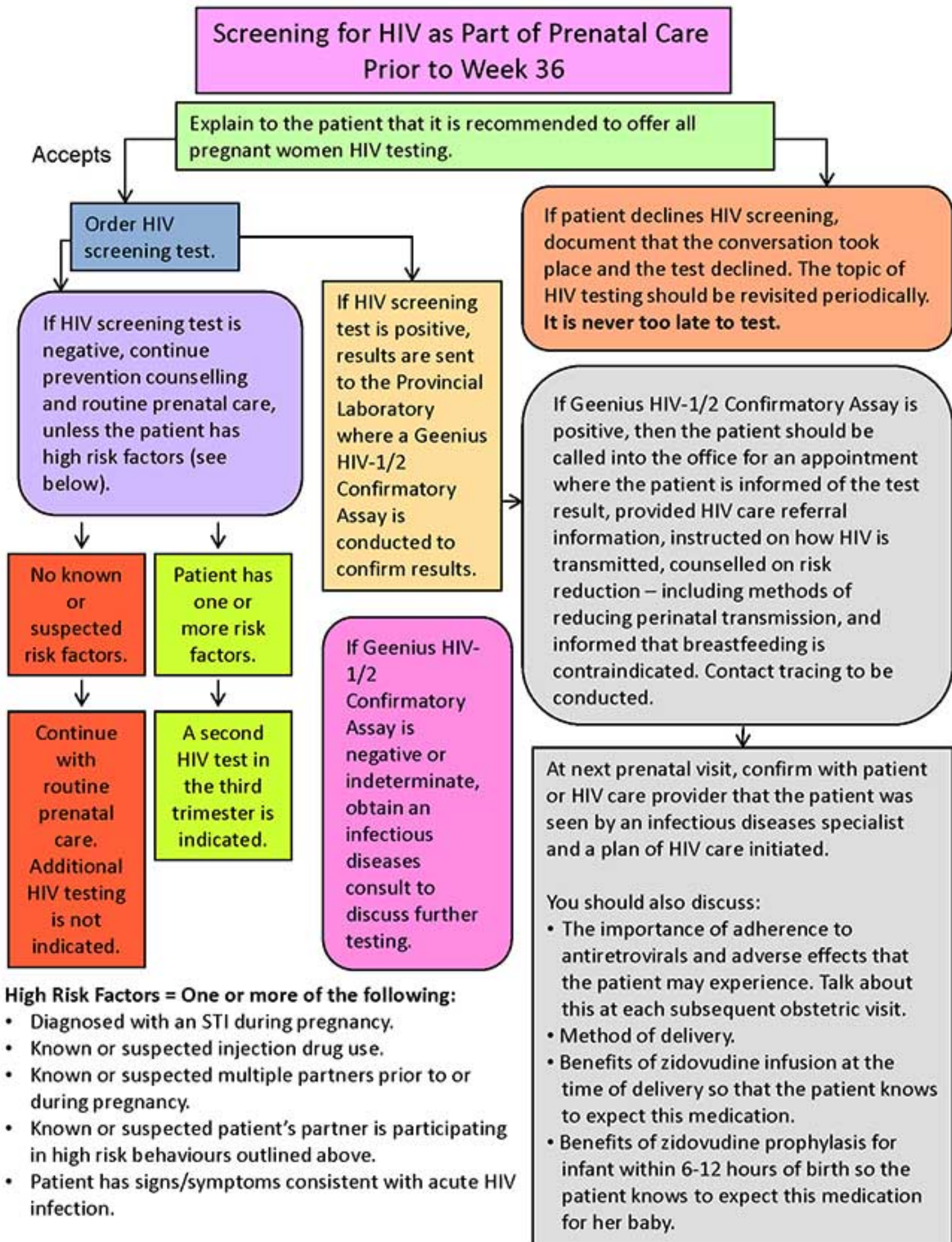
- diagnosed with a sexually transmitted infection (STI) during pregnancy
- known or suspected injected drug use
- known or suspected multiple partners prior to or during pregnancy
- known or suspected unprotected sex during pregnancy
- known or suspected high-risk behaviours by patient's partner
- signs/symptoms consistent with acute HIV infection (e.g., fever, fatigue, swollen lymph glands, sore throat, feeling achy, nausea, vomiting, diarrhea, and night sweats)

Healthcare providers may consider offering repeat testing to all women. For example, a healthcare provider could ask, "You had an HIV test on (date), would you like to have your HIV test repeated? HIV can be transmitted by unprotected sex and sharing used needles. It is important to detect HIV in pregnancy because there are treatments that can reduce the chance of HIV passing from mother to baby." This type of approach allows a woman to be offered the test and say "yes" without having to name what her personal risk factors are. Asking this way can be helpful for women who have fears about disclosing risk behaviours but still want to be tested.

Giving HIV Test Results

To provide effective pre- and post-test counselling and education, it is important for healthcare professionals to sensitively provide results from HIV tests in person. Counselling and education about risk behaviours and HIV transmission can reduce the risk of HIV exposure in people who test negative [e.g., discussing condom use, importance of regular HIV testing, use of HIV Pre-exposure Prophylaxis (PreP), and use of harm reduction supplies such as sterile needles and pipes]. Counselling and education can also reduce the risk of transmission of HIV to partners and unborn children in those testing positive for HIV.

For more information on Saskatchewan's HIV Testing Policy on in-depth HIV pre- and post-test counselling, visit: <https://skhiv.ca/wp-content/uploads/2017/11/Saskatchewan-HIV-Testing-Policy-2014-In-Depth-HIV-Pre-and-Post-Test-Counselling.pdf>.



HIV Treatment

Combination antiretroviral medications (cART) work to reduce the amount of virus in the blood and other bodily fluids (i.e., lowers the viral load). The use of cART allows CD4 cells to live longer and protect the body from infections, meaning that the virus is less able to cause damage to the immune system. Because cART does not cure HIV, people with HIV need to take these medications as prescribed for the rest of their lives to keep their viral loads low. Treatment can lower the amount of HIV in the blood and other bodily fluids to undetectable levels. This is called viral suppression and means that the viral level is not significant enough to cause disease progression. Having an undetectable viral load also makes it extremely difficult to pass HIV to others during sexual activity.

A woman receiving HIV treatment and care has less than a 1% chance of vertical transmission of HIV to her infant. The Society of Obstetricians and Gynecologists of Canada (SOGC) Clinical Practice Guidelines recommend that all pregnant women living with HIV take cART regardless of baseline CD4 count and viral load. If a woman with HIV is already on cART, it is recommended that she continue with her regimen if the medications are safe for use during pregnancy.

Choosing Medications

The choice of medications prescribed depends on many factors, including the medications the woman has taken in the past. cART medications can have side effects for both the mother and her fetus. Some maternal side effects include nausea, high blood sugar, low red blood cell count (anemia), and stress on the kidneys and liver. As these side effects can worsen during pregnancy, women should be monitored throughout pregnancy. Other considerations for the choice of medications include:

- the stage of pregnancy
- the current and co-morbid health status of the woman
- the woman's HIV-resistance profile
- what is currently known about the safety of specific drugs in pregnancy and the risk of teratogenicity (damage to the fetus caused by medication)
- unique pharmacokinetic considerations (what a body does to a drug and how the substance enters, moves through, and exits the body), including how medications pass into the placenta
- the woman's social status, determinants of health, and injected drug use
- the ability of the woman to cope with cART pill burden

Some cART medications may, in some circumstances, cause harm to the fetus (e.g., Efavirenz should not be prescribed in the first trimester of pregnancy). Physicians should be aware of the most recent evidence and assist a woman to balance the known risks and benefits.

It is very important that pregnant women take their medications as prescribed (adherence) to keep their viral loads low and reduce the risk of vertical transmission. HIV mutates quickly and non-adherence to treatment plans can cause resistance to medication. When HIV becomes resistant to one drug, it may also become resistant to other drugs in the same class, even if the individual has never taken those

drugs. As there are only a certain number of drug combinations available, acquiring resistance to a drug class can greatly reduce an individual's treatment options. Keeping the right levels of medications in the body at all times makes it more difficult for the virus to become resistant to the medication. Women may need support in order to adhere to their treatment plans.

For the most up-to-date information on HIV treatment, visit CATIE (Canadian AIDS Treatment Information Exchange) at www.catie.ca/en/treatment. Information for Saskatchewan physicians and nurse practitioners on objective comparisons for optimal drug therapy is available from RxFiles at <https://www.rxfiles.ca/RxFiles/loginrequired.aspx?ReturnUrl=%2fRxFiles%2fuploads%2fdocuments%2fmembers%2fCHT-HIV.pdf>.

To access the SOGC Clinical Practice Guidelines for the Care of Pregnant Women Living with HIV and Interventions to Reduce Perinatal Transmission, visit: [https://www.jogc.com/article/S1701-2163\(15\)30515-6/fulltext](https://www.jogc.com/article/S1701-2163(15)30515-6/fulltext).



**HIV AND
PREGNANCY**

HIV and Pregnancy

Due to the availability of combination antiretroviral therapy (cART), HIV is no longer seen as a death sentence, but is instead seen as a manageable chronic disease. As a result, more women living with HIV are making the choice to have children.

Planning a Pregnancy While Living With HIV

For women who do wish to become pregnant, planning their pregnancies is an important step in preventing transmission of HIV to the baby. By planning for a pregnancy, women with HIV are better able to plan for the additional measures that need to be taken to ensure the best possible outcomes for themselves and their babies. Research now shows that using cART and maintaining an undetectable HIV viral load results in no chance of sexual transmission of HIV between a person living with HIV and a non-infected partner. This prevention strategy, called U=U, means an undetectable viral load equals an untransmittable HIV virus. For women living with HIV, this information affects pregnancy planning.

There are a lot of different ways for women living with HIV to become pregnant safely.

- If partners are BOTH living with HIV and have suppressed viral loads, condomless (unprotected) sex is an option. This is only recommended if both partners have undetectable viral loads when tested twice at least a month apart AND both partners have taken HIV medications regularly for 3 to 6 months. To reduce the chance of passing the virus, or the risk of one partner being infected with a new strain of HIV if other partner is HIV positive, condomless sex can be timed with ovulation (about 2 weeks before the start of the woman's next period).
- If the male partner does not have HIV, home insemination can be conducted by collecting sperm in a clean container or a condom. The sperm is then drawn into a needleless syringe and inserted into the vagina, as close to the cervix as possible. This works best when it is timed during ovulation.
- If one partner does not have HIV but the other partner is HIV positive and does not have a suppressed viral load, it may be possible to use PrEP (pre-exposure prophylaxis).

Other options involve the use of a fertility clinic and include:

- intra-uterine insemination, where semen or washed sperm is inserted into the uterus
- in-vitro fertilization, where the egg is fertilized outside of the body and then implanted back into the body

It is important to remember that fertility clinics have costs associated with them which are not covered by the provincial health plan in Saskatchewan.

Canadian HIV Pregnancy Planning Guidelines

In January 2018, the SOGC updated the Canadian HIV Pregnancy Planning Guidelines. The Guidelines provide clinical information and recommendations for healthcare providers to assist people living with HIV with their fertility, preconception, and pregnancy planning decisions. The goals of the Guidelines are

to reduce the risk of vertical (mother-to-child) and horizontal (between partners) HIV transmission, improve pregnancy and infant outcomes for those affected by HIV, reduce the stigma of HIV and pregnancy, and increase access to pregnancy planning and fertility services for individuals living with HIV.

Thirty-six recommendations are grouped in the following topic areas:

- Ensuring a healthy pregnancy, child, and family
- Psychosocial/mental health related to HIV pregnancy planning and fertility
- Legal and ethical issues
- Combined antiretroviral therapy (cART) and other drugs in pregnancy planning
- Options for reducing risk of horizontal HIV transmission during conception
- Scenario-based recommendations for the prevention of horizontal HIV transmission
- Infertility investigations and treatment
- HIV infection control in fertility clinics

To access the complete Canadian HIV Pregnancy Planning Guidelines, please visit:

<https://www.sciencedirect.com/science/article/pii/S1701216317307016>.

Newly Pregnant and Living with HIV

There are a number of things women can do to be as healthy as possible before and during pregnancy that also help the baby to be healthy. If a woman is planning a pregnancy, it is recommended that she try to take these actions before becoming pregnant. If she is already pregnant, it is recommended that she try to do these things as soon as possible.

- Get tested for sexually transmitted infections (STIs). If a woman is found to have an STI, it is important that she is treated as soon as possible. It is also recommended that a woman's partner(s) are tested and treated.
- Get tested for hepatitis C. If a woman is living with hepatitis C, it is best for her to be treated before becoming pregnant. Hepatitis C treatment is NOT recommended during pregnancy.
- Take a prenatal vitamin with folic acid in it. This may be important to start before pregnancy.
- Confirm that any cART medications being used are safe during pregnancy. Also confirm that any other medications and drugs being used are safe during pregnancy and will not interfere with the effectiveness of cART.
- Try to quit using street drugs, cannabis, tobacco, and alcohol before becoming pregnant. If the woman cannot quit, reducing her use will help her health and the health of her baby.
- Eat as healthy as possible.
- Try to exercise and get enough rest.



**LABOUR AND
DELIVERY**

Labour and Delivery

The introduction of universal prenatal HIV testing, the use of cART, scheduled caesarean section when appropriate, and formula feeding have resulted in HIV transmission rates that are less than 1%. When vertical transmission does occur, it is mainly in women who are unaware of their HIV status at delivery or those who have not accessed treatment during their pregnancy.

Rapid Point of Care (POC) testing should be offered to any pregnant woman who presents in labour and is unaware of her HIV status or who requests an HIV test.

Delivery Options

In terms of delivery, a vaginal delivery is safe and preferable in many cases for a woman living with HIV. If the woman's viral load is less than 1,000 copies/mL (i.e., if there are less than 1,000 virus particles in a drop of blood), a caesarean section is not likely to further reduce the chances of vertical transmission.

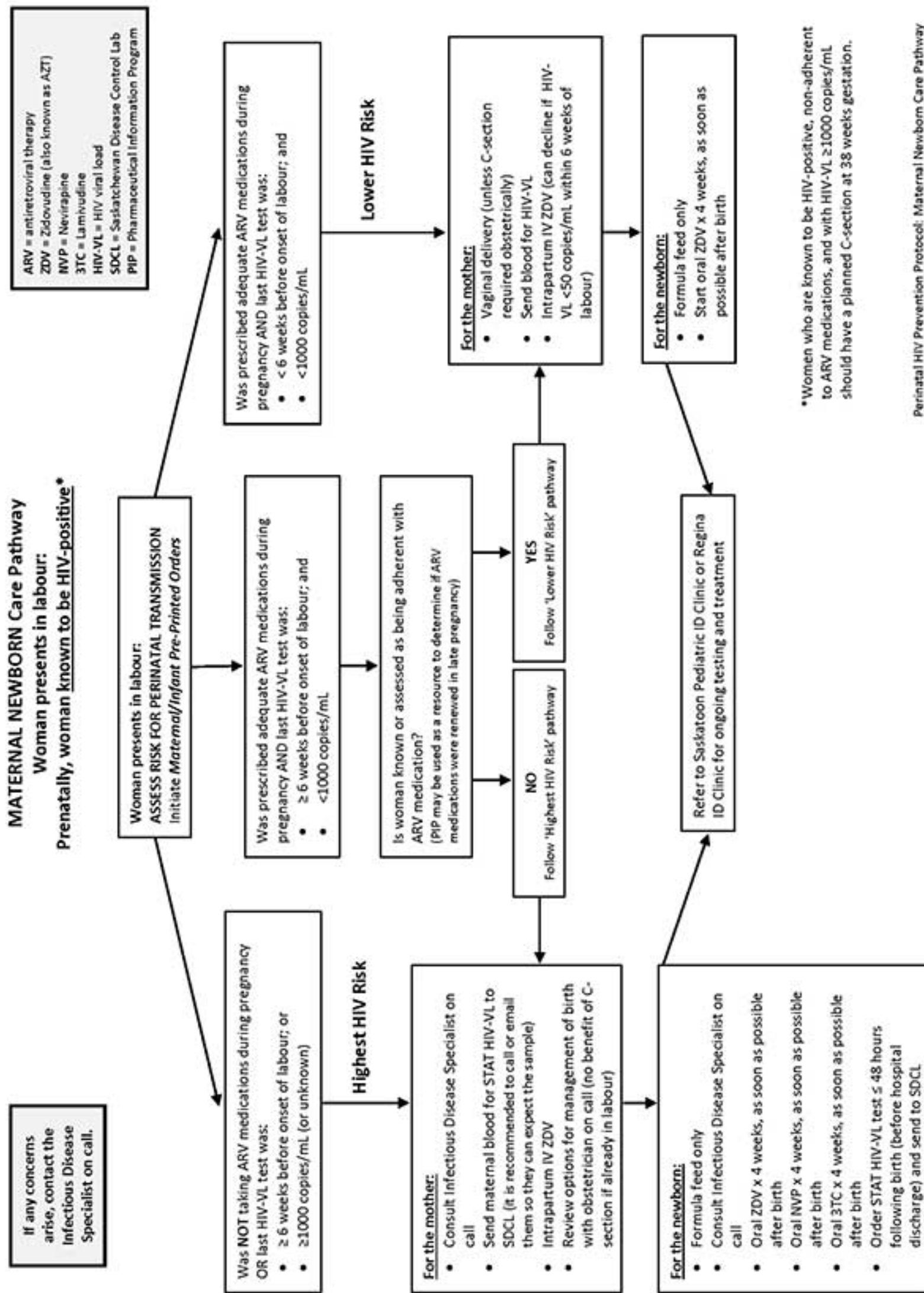
However, a pre-labour elective caesarean section delivery (at around 38 to 39 weeks gestation) may reduce the risk of vertical transmission in some instances. The SOGC's Clinical Practice Guidelines suggest that elective caesarean sections should be offered to women living with HIV in the following specific situations:

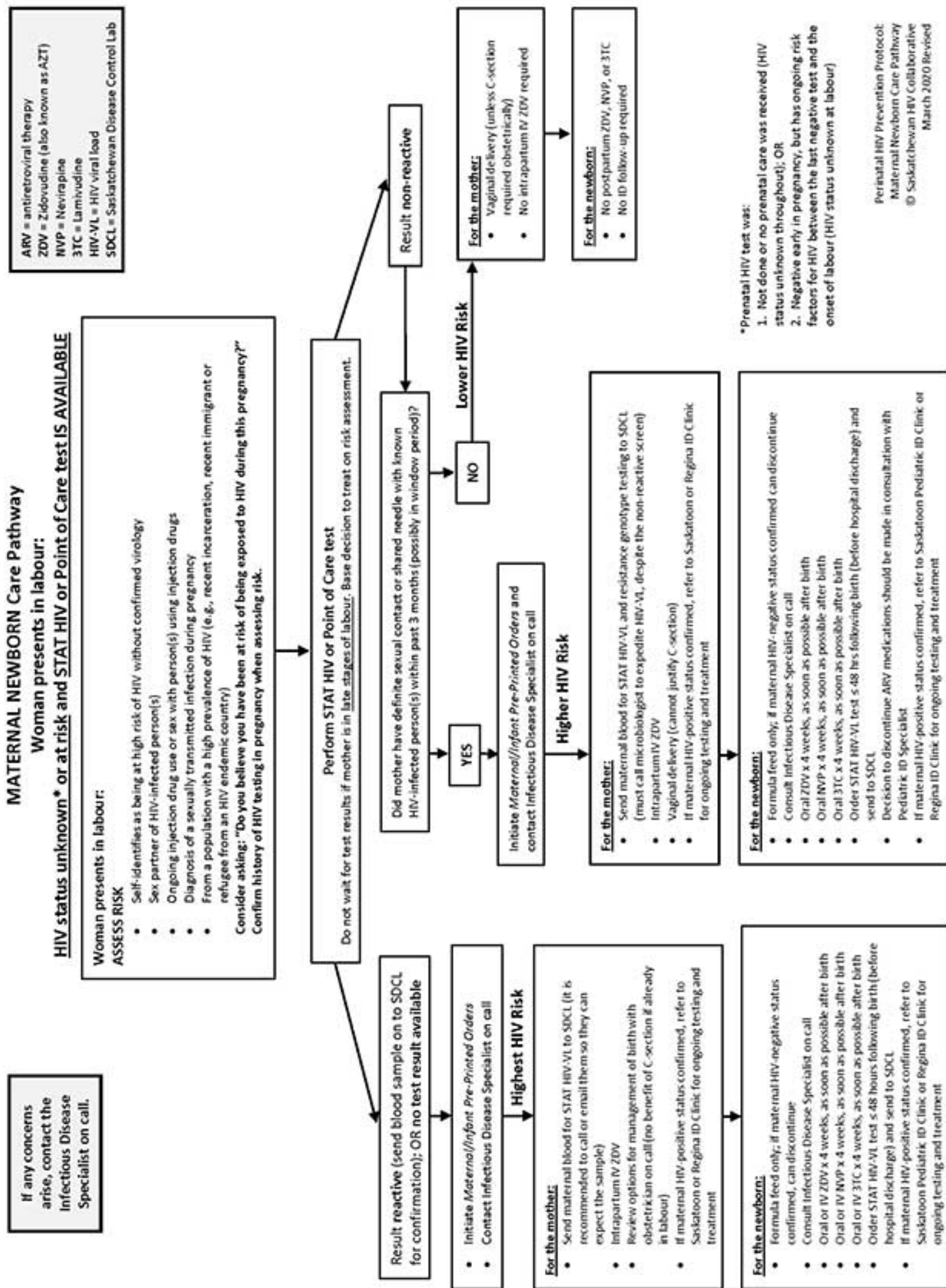
- Women who have not received cART
- Women receiving anti-retroviral treatment monotherapy
- Women with a detectable viral load
- Women with an unknown viral load
- Women with unknown prenatal care

Maternal/Newborn Assessment

The Saskatchewan Ministry of Health and the Saskatchewan HIV Collaborative have developed resources to assist healthcare providers working with pregnant women living with HIV to prevent vertical transmission. For more information, visit: <https://skhiv.ca/pregnancy-and-newborn-care/>. Included on this page are the updated Saskatchewan HIV Prevention Perinatal Protocols (2020), which include Maternal/Newborn Assessment and Care Guidelines (see <https://skhiv.ca/wp-content/uploads/2020/04/Overview-Perinatal-HIV-Prevention-Protocol-2020.pdf>), physician pre-printed orders for both mother and infant, and Maternal/Newborn Care Pathways. The Care Pathways (current as of May 2020) are provided on the following pages.

Saskatchewan healthcare providers should contact the Infectious Diseases Specialist on-call following birth or if questions regarding management of either the mother or newborn arise (Saskatoon: 306-655-1000; Regina: 306-766-3915).





ARV = antiretroviral therapy
 ZDV = Zidovudine (also known as AZT)
 NVP = Nevirapine
 3TC = Lamivudine
 HIV-VL = HIV viral load
 SDCL = Saskatchewan Disease Control Lab

*Prenatal HIV test was:

- Not done or no prenatal care was received (HIV status unknown throughout); OR
- Negative early in pregnancy, but has ongoing risk factors for HIV between the last negative test and the onset of labour (HIV status unknown at labour)

Perinatal HIV Prevention Protocol:
 Maternal Newborn Care Pathway
 © Saskatchewan HIV Collaborative
 March 2020 Revised

MATERNAL NEWBORN Care Pathway

Woman presents in labour:

HIV status unknown* or at risk and STAT HIV or Point of Care test is NOT AVAILABLE

If any concerns arise, contact the Infectious Disease Specialist on call.

ZDV = Zidovudine (also known as AZT)
NVP = Nevirapine
3TC = Lamivudine

Woman presents in labour:
ASSESS RISK

- Self-identifies as being at high risk of HIV without confirmed virology
- Sex partner of HIV-infected person(s)
- Ongoing injection drug use or sex with person(s) using injection drugs
- Diagnosis of a sexually transmitted infection during pregnancy
- From a population with a high prevalence of HIV (e.g., recent incarceration, recent immigrant or refugee from an HIV endemic country)

Consider asking: "Do you believe you have been at risk of being exposed to HIV during this pregnancy?"
Confirm history of HIV testing in pregnancy when assessing risk.

Highest HIV Risk

Prepare woman for transport.
Contact Infectious Disease Specialist/Obstetrics on-call.

- Discuss referral to facility with obstetrics program where STAT HIV or Point of Care testing and ARV medications are available
- Case-by-case judgement is required as to most appropriate and closest referral center

Lower HIV Risk

For the mother:

- Vaginal delivery
- No intrapartum ZDV

For the newborn:

- No postpartum ZDV, NVP, or 3TC

* Prenatal HIV test was:
1. Not done or no prenatal care was received (HIV status unknown throughout); OR
2. Negative early in pregnancy, but has ongoing risk factors for HIV between the last negative test and the onset of labour (HIV status unknown at labour)



HOW TO PROVIDE SUPPORTIVE CARE

How to Provide Supportive Care

Research has shown that one of the most significant barriers to using HIV care services is fear of stigma and discrimination. Social determinants of health and issues concerning testing and treatment can also create barriers to HIV prevention and to prenatal care for pregnant women already living with HIV. It is important for service providers to understand the barriers that women face and address them whenever possible. This can help to increase women's willingness to seek care and treatment for their HIV, which will improve their own health and reduce the risk of vertical transmission.

Cultural Sensitivity

In Saskatchewan, people who self-identify as Indigenous are disproportionately affected by HIV (76% of all new cases in 2018 were identified in people who self-declared as Indigenous). It is important that healthcare providers understand the links between colonization, the residential school system, and intergenerational trauma and vulnerability to HIV (e.g., substance use, sex work). Healthcare providers can support their patients by addressing the social determinants of health and by recognizing the importance of family, community, and culture as part of holistic care.

For more information on the Federation of Sovereign Indigenous Nations' (FSIN) Cultural Responsiveness Framework, visit: <https://allnationshope.ca/userdata/files/187/CRF%20-%20Final%20Copy.pdf>.

Social Determinants of Health

The Canadian Public Health Association defines the social determinants of health as "social and economic factors that influence people's health. These are apparent in the living and working conditions that people experience every day." The social determinants of health that may affect women's ability to access treatment and care may include:

- inability to meet basic needs
- difficulty accessing testing and treatment (e.g., lack of transportation)
- lack of access to appropriate substance use treatment programs
- lack of childcare while attending appointments
- high-risk employment (e.g., sex worker)
- mistrust of healthcare providers
- difficulty accessing information about HIV and pregnancy
- fear of baby being apprehended

Awareness and sensitivity of these factors, along with the use of trauma and violence-informed care³, may increase women's willingness to seek testing, care, and treatment.

³ For more information on trauma- and violence-informed care, please visit: <https://www.cpha.ca/trauma-and-violence-informed-care-toolkit-reducing-stigma-related-sexually-transmitted-and-blood>.

Harm Reduction

Harm Reduction International defines harm reduction as “a set of practical strategies and ideas aimed at reducing negative consequences associated with drug use. Harm reduction is also a movement for social justice built on a belief in, and respect for, the rights of people who use drugs.”⁴

Harm reduction includes offering treatment for substance use disorders such as methadone or suboxone (for women with opioid use), addiction counselling, residential treatment, and naloxone kits. Addressing needs holistically can help in engaging pregnant women in care.

Harm reduction can be a trauma-informed approach that can be applied to all areas of care. Its underlying premise is to meet people “where they are at” and to provide non-judgemental support. In Saskatchewan, the highest risk factor for becoming infected with HIV is injected drug use. It is important for healthcare providers to understand and apply the concept of harm reduction to engage pregnant women in care.

Stigma and Discrimination

Fear of potential judgements and discrimination by health professionals, based on a pregnant woman’s HIV status, can greatly decrease the likelihood that women will seek prenatal care. Stigma and discrimination against people living with HIV are reported to be the main reasons for reluctance to be tested, to disclose HIV status, and to take cART medications. Stigma and discrimination related to diverse identities, such as those who identify as lesbian, gay, bisexual, transgender, queer, two-spirit, or intersex (LGBTQ2SI+), may also impact decisions related to accessing healthcare services and support.

Stigma and discrimination:

- may be internal (a person judging self) as well as external (others judging person)
- are often based on fear and a lack of accurate information
- can limit the services women receive and/or the quality of those services
- can prevent women from having the opportunity to learn healthy baby and self-care skills
- can cause women to avoid seeking treatment and/or avoid disclosing their HIV status
- may be especially experienced by women who use drugs and alcohol

In contrast, understanding and supportive behaviours of healthcare providers and other service providers can serve to motivate women to engage in self-care and prenatal care.

⁴ For more information about harm reduction, including the principles and goals, please visit <https://www.hri.global/what-is-harm-reduction>.

Motivational Interviewing (MI) Approaches

Effectively assisting people who are participating in high-risk behaviours to change their behaviour requires a sensitive and non-threatening approach. This approach should be reflected during intake, in all discussions, in referral to appropriate services, and follow-up care.

Effective strategies in engaging with people who are living with HIV include:

- being non-judgemental
- using motivational interviewing (MI)
- being open and honest
- building on strengths
- being culturally sensitive
- being supportive

MI comes from an evidence-based approach developed by Dr. William Miller. It posits that motivation is determined by the patient and healthcare professional's interaction. While a healthcare professional cannot instill motivation in patients, they can draw it out from them. Brief motivational approaches include effective strategies and skills needed to evoke and strengthen a patient's motivation to change. The philosophy and communication strategies of MI can act as a guide for healthcare professionals to engage in discussion.

Philosophy or Spirit of Motivational Interviewing

- **Partnership:** Work together in a collaborative way. Take time to build rapport and trust. Patients are the experts on their lives and health professionals have expertise to offer them. This partnership means the patient and healthcare professional work toward change together. The healthcare professionals put aside what they would like to see happen and work to understand what the patient needs and wants. This practice avoids arguments and direct confrontation that can turn into a power struggle.
- **Acceptance:** An attitude of non-judgemental acceptance of whatever the patients bring to the conversation allows them to open up and be honest with their healthcare professionals and with themselves. Full acceptance requires empathy; an attempt by the healthcare professional to understand the patient's perspective. Acceptance also includes honouring and respecting each person's right to decide for themselves, and that each person has absolute worth and deserves respect.
- **Compassion:** A healthcare provider who shows compassion gives priority to the patient's needs, promotes their welfare and well-being, and provides hope.
- **Evocation:** Evocation draws out what they think and feel. It is about gently pulling out their own thoughts and ideas, instead of the healthcare provider's inclination to fix them by providing them with information, facts, and advice about how to change. It is always more effective to evoke from them what they already know, and, if they decide to change, what they think would work best for them.

Five Basic Communication Strategies to Use in Motivational Interviewing

- 1) Ask open-ended questions that cannot be answered with a single word or phrase. The more patients talk, the greater the chance they have of figuring out their thoughts, feelings, and ideas. Ask questions that evoke their concerns, their wishes, their needs, and their intentions to change.
- 2) Use reflective listening to show that what the patients have said has been heard and understood; repeat in your own words what they have said. Provide complex reflections that indicate a deeper understanding of what the patient is saying, thinking, and feeling. This helps to continue and respectfully guide the conversation.
- 3) Summarize periodically what the patient has said, deliberately focusing on underlying motivations for change and on strengths.
- 4) Provide genuine affirmations about patient's strengths, character, motivation, intention, and progress. This will increase their confidence to consider change.
- 5) Always ask their permission before you share any information with them. This allows patients to feel in charge of what they choose to do. Ask them how that information or advice might fit for them. Let them know that what they choose to do is up to them. Before you provide information, it is also useful to ask them what they already know or have heard about the issue. It is respectful to find this out before providing them with information they already know.

For more information about MI, including information about MI training in Saskatchewan, visit <https://skprevention.ca/alcohol/motivational-interviewing/> or email info@skprevention.ca.



**AFTER-CARE FOR
BABIES OF WOMEN
LIVING WITH HIV**

After-Care for Babies of Women Living with HIV

According to the Saskatchewan Perinatal HIV Prevention Protocol (2020), babies born to mothers living with HIV should be bathed as soon as possible after delivery (i.e., once the infant's condition, including temperature, has stabilized). Babies should be bathed with soap and water to remove maternal blood or amniotic fluid prior to intramuscular injections or blood sampling. If urgent blood work is required for other medical reasons, the access site should be washed with soap and water prior to sampling.⁵

HIV Testing for Babies

All babies are born with their mothers' antibodies. Standard HIV tests look for the presence of these HIV antibodies. In the past, these tests resulted in many babies testing positive for HIV, even though they were not infected (false positive). Therefore, tests that directly detect the presence of HIV are now being used for infants. Vertical transmission may occur in utero, but the majority of HIV transmissions from mothers to infants occur at the time of delivery.

In Saskatchewan, infants exposed to HIV are tested at 4-6 weeks of age and again at 4 months of age. In high-risk situations (e.g., mother's viral load is high, no prenatal care), infants are also tested at 2 days of age and 2 weeks of age.

HIV infection is definitively diagnosed when two HIV tests performed on separate blood samples are returned positive. All infants should be referred to a Pediatric Infectious Diseases Specialist to ensure they have appropriate testing and follow-up.

HIV Treatment for Babies

If women have been on cART medication during pregnancy, ZDV (zidovudine, also known as AZT) will be given to the baby as soon as possible after delivery and will be continued for 4 weeks. Oral ZDV is preferred, but IV may be used if the baby is unable to tolerate oral feeding.

Babies of women who did not receive medication or whose mothers had a high viral load during delivery may receive cART.

Discharge instructions for babies are available at <https://skhiv.ca/wp-content/uploads/2020/04/Discharge-Instructions-for-Infant-2020.pdf>. These instructions include information about medication administration and medical appointments for the baby. The information included should be discussed and provided to the mother/caregiver prior to the baby's discharge from the hospital.

⁵ For more information about the Saskatchewan Perinatal HIV Prevention Protocol, including Maternal/Newborn Care Pathways, please visit: <https://skhiv.ca/pregnancy-and-newborn-care/>.

Saskatchewan Infant Formula Program

Breastfeeding is NOT recommended for women living with HIV because there is still a risk of passing HIV to the baby. This risk has been found even in those who have an undetectable viral load through a blood test. Switching between breastfeeding and formula feeding is also NOT recommended because this increases the risk of HIV infection.

Saskatchewan's Infant Formula Program provides free formula to all babies born to mothers living with HIV. Formula is provided free, from birth to approximately 1 year of age. with HIV can self-refer to the program or be referred by a doctor or nurse. For more information about this program, visit <https://skhiv.ca/infant-formula-program/> or call one of the following numbers:

- Prince Albert: 306-765-6535
- Saskatoon: 306-655-1477
- Regina: 306-766-3915

Not breastfeeding can be very difficult for mothers living with HIV. They may feel guilt or sadness, or they may worry that people will guess that they have HIV because they are not breastfeeding. It may be helpful for a mother to come up with a plan before the baby is born to explain why she is not breastfeeding. Healthcare providers can help with this plan. Women who have questions about breastfeeding and vertical transmission risk should talk to their infectious diseases specialists.



CONCLUSIONS

Conclusions

As there is no cure for HIV infection, prevention is currently the only way to stop the spread of HIV.

Effective prevention of vertical transmission of HIV requires the following combination strategy:

- Preventing HIV infection among prospective parents
- Avoiding unplanned pregnancies among women living with HIV
- Preventing transmission of HIV from mother to infants during pregnancy, labour, delivery, and feeding
- Integration of care, treatment, and support for women living with HIV and their families

Healthcare professionals play a key role in the primary care setting and can have a major impact on influencing patient behaviours and improving health outcomes.

Referrals to the appropriate services, programs, and follow-up care for women who require further assistance may be required. Access to services that address issues such as poverty, isolation, inadequate food or shelter, and violence can increase a woman's circle of care and support, which will help improve maternal and child health outcomes.

Education about HIV and pregnancy is important for the general public, youth, vulnerable women, and health professionals. It is hoped that increased knowledge will improve the care and services received by pregnant women living with HIV, and ultimately reduce the number of infants born with HIV infection in Saskatchewan.



**ADDITONAL
INFORMATION AND
SUPPORT SERVICES**

Additional Information and Support Services

There are many organizations available to provide additional information, support, and resources related to HIV and pregnancy.

Websites

Canadian Aboriginal AIDS Network (CAAN): <https://caan.ca>

Information about national Aboriginal HIV strategies and projects, toolkits, information specific to youth and women, and links to related information and resources.

Canadian AIDS Society: <https://www.cdnaids.ca>

Represents community-based HIV/AIDS organizations across the country. Provides information and resources for specific population affected by HIV, as well as information about hotlines, projects, publications, and research.

CATIE (Canadian AIDS Treatment Information Exchange): <http://www.catie.ca/>

Source for the most up-to-date guidelines for the care of people living with HIV during pregnancy. Also includes general information about HIV, information specific to healthcare providers, and free-of-charge print resources for healthcare professionals and patients.

Saskatchewan HIV Collaborative: <https://skhiv.ca>

Information and resources for people living with HIV and healthcare professionals, including information about testing, peer support programs, harm reduction programs, and available trainings. The **Saskatchewan HIV Prevention Perinatal Protocols** are available at <https://skhiv.ca/pregnancy-and-newborn-care/#hiv-prevention-perinatal-protocols>. Resources specific to physicians, nurse practitioners, nurses, and pharmacists are available at <https://skhiv.ca/resources-for-healthcare-professionals/>.

Saskatchewan Infectious Disease Care Network: <https://sidcn.ca/>

Offers accredited continuing medical education specific to HIV and HCV primary care, free of charge. Programs are delivered online or in-person and are designed for primary care physicians, medical residents, and nurse practitioners. Includes a module on HIV and pregnancy.

Saskatchewan Prevention Institute: <https://skprevention.ca/sexual-health/hiv-and-pregnancy/>

Evidence-based information and resources on HIV and pregnancy, including information about testing, treatment, infant feeding, and available online learning.

Saskatchewan HIV-Related Organizations

For a current list of community-based organizations that deliver programming and services to those affected by or at risk of HIV and hepatitis C or those at risk of acquiring HIV, please visit

<https://skhiv.ca/support/#community-based-organizations>.

Prince Albert

Access Place: Hepatitis C and HIV Positive Care Program

#3 – 101 15th Street East, Prince Albert, SK S6V 1G1

Phone: 306-765-6544

<https://paphr.ca/hospitals-clinic-locations/primary-care-walk-in-clinics/sexual-health-clinic-access-place>

Regina

AIDS Programs South Saskatchewan (APSS)

1325 Albert Street, Regina, SK S4R 2R6

Phone: 306-924-8420

Toll free: 1-877-210-7623

<https://www.aidsprogramssouthsask.com/>

All Nations Hope AIDS Network (ANHAN)

2735 5th Avenue, Regina, SK S4T 0L2

Phone: 306-924-8424

Toll free: 1-877-210-7622

<http://allnationshope.ca>

Regina Infectious Diseases Clinic

Regina General Hospital, 1440 14th Avenue, Regina, SK S4P 0W5

Phone: 306-766-3915

Fax: 306-766-3995

<http://www.rqhealth.ca/department/ambulatory-care-services/infectious-diseases-clinic>

Saskatoon

AIDS Saskatoon

1516 20th Street West, Saskatoon, SK S7M 0Z6

Phone: 306-242-5005

Toll Free: 1-800-667-6876 in Western Canada

Fax: 306-665-9976

<http://www.aidssaskatoon.ca>

OUTSaskatoon

213 Avenue C South, Saskatoon, SK S7M 1N3

Phone: 306-665-1224

Toll Free: 1-800-358-1833

<http://www.outsaskatoon.ca/>

Persons Living With AIDS (PLWA) Network of Saskatchewan

127C Avenue D North, Saskatoon, SK S7L 1M5

Phone: 306-373-7766

Toll Free: 1-800-226-0944 in Saskatchewan

<http://www.aidsnetworksaskatoon.ca/>

Positive Living Program – Royal University Hospital

103 Hospital Drive, Saskatoon, SK S7N 0W8

Phone: 306-655-1783

https://www.saskatoonhealthregion.ca/locations_services/Services/Positive-Living

Positive Living Program – Westside Clinic

1528 20th Street West, Saskatoon, SK S7M 0Z6

Phone: 306-664-4310

Fax: 306-664-4310

<https://www.saskatooncommunityclinic.ca/medical-and-primary-care-services-westside/>

Saskatoon Community Clinic

455 2nd Avenue North, Saskatoon, SK S7K 2C2

Phone: 306-652-0300

Fax: 306-664-4120

<https://www.saskatooncommunityclinic.ca/>

Peer Support Programs

There are a number of Peer Programs available throughout Saskatchewan. For more information about these programs, including up-to-date contact information, refer to the Saskatchewan HIV Collaborative's website at

<https://skhiv.ca/support/#peer-programs>.

Sanctum 1.5 – HIV Prenatal Home

Sanctum 1.5 is Saskatchewan's first HIV prenatal care home, located in Saskatoon. Sanctum 1.5 is a 10-bed home that supports high-risk, HIV positive pregnant women and/or women at risk of becoming HIV positive during their pregnancy.

Sanctum 1.5 has a 3-pronged approach to care that includes harm reduction and housing, prenatal care, and child protection prevention. The prenatal home works preventatively to meet the health and social needs of the women more effectively and efficiently, thereby decreasing the risk of vertical transmission and improving family planning.

Sanctum 1.5 incorporates existing community services into their model of care, including intensive case management and family support, detox services and methadone assisted recovery, family planning, Elder and peer support, and mental health and addiction outreach services.

For more information, visit: <https://sanctumcaregroup.com/programs/sanctum-1-5>.

Important Phone Numbers for Saskatchewan Healthcare Providers

For an up-to-date list of the following contact information, please refer to the Saskatchewan HIV Collaborative's website at <https://skhiv.ca/wp-content/uploads/2017/11/Health-Care-Provider-Important-Phone-Numbers.pdf>.

	Contact Information	Comments
Infectious Diseases (ID) Specialists		
Regina ID Clinic	306-766-3915	Monday to Friday, 7:30 a.m. to 4:00 p.m.
Regina – On call	306-766-4444	Page ID on call
Saskatoon ID – On call	306-655-1000	Page ID on call
Saskatoon	306-655-1777	
Pediatric Infectious Diseases (ID) Specialists		
Saskatoon	306-844-1159	Page ID on call
Obstetricians		
Regina – On call	306-766-4444	Ask for obstetrician on call
Saskatoon ID – On call	306-655-1000	Ask for obstetrician on call
Labour and Delivery Wards		
Regina – Regina General Hospital	306-766-6150	
Saskatoon – Royal University Hospital	306-655-1844	
Prince Albert – Victoria Hospital	306-765-6266	
Saskatchewan Infant Formula Program		
Regina	306-766-3915	
Saskatoon	306-655-1783	
Prince Albert	306-765-6535	
Provincial Lab		
Regina	306-787-3055	
Support		
Regina – ID Clinic	306-766-3915	
Saskatoon – Positive Living Program	306-655-1783	
Prince Albert – Positive Care Program	306-765-6544	
Public Health Services		
Regina	306-766-7777	
Saskatoon	306-655-4620	On call 306-655-4420
Prince Albert	306-765-6500	

Resources for Healthcare Providers

Guidelines for HIV screening and testing

Saskatchewan Routine HIV Testing Policy: <https://skhiv.ca/hiv-testing-in-saskatchewan/#sk-routine-hiv-testing-policy>

Saskatchewan Routine HIV Testing Resource Kit: <https://skhiv.ca/hiv-testing-in-saskatchewan/#sk-routine-hiv-testing-tool-kit>

Guidelines for the care of women living with HIV before and during pregnancy

CATIE's MaterniKit (2013): <https://skhiv.ca/wp-content/uploads/2020/01/CATIE-MaterniKit-2013.pdf>

Saskatchewan HIV Prevention Perinatal Protocols (2020): <https://skhiv.ca/pregnancy-and-newborn-care/#hiv-prevention-perinatal-protocols>, including the Overview of Maternal/Newborn Assessment and Care at <https://skhiv.ca/wp-content/uploads/2020/04/Overview-Perinatal-HIV-Prevention-Protocol-2020.pdf>

Society of Obstetricians and Gynaecologists of Canada (SOGC) Clinical Practice Guideline (2018), No. 354-Canadian HIV Pregnancy Planning Guidelines: [https://www.jogc.com/article/S1701-2163\(17\)30701-6/pdf](https://www.jogc.com/article/S1701-2163(17)30701-6/pdf)

Society of Obstetricians and Gynaecologists of Canada (SOGC) Clinical Practice Guideline (2014), Guidelines for the Care of Pregnant Women Living With HIV and Interventions to Reduce Perinatal Transmission: [https://www.jogc.com/article/S1701-2163\(15\)30515-6/fulltext](https://www.jogc.com/article/S1701-2163(15)30515-6/fulltext)

Guidelines for the care of infants perinatally exposed to HIV

Canadian Paediatric Society Position Statement (2019), HIV in pregnancy: Identification of intrapartum and perinatal HIV exposures: <https://www.cps.ca/en/documents/position/hiv-in-pregnancy>

Saskatchewan HIV Prevention Perinatal Protocols (2020), Discharge Instructions for Infant: <https://skhiv.ca/wp-content/uploads/2020/04/Discharge-Instructions-for-Infant-2020.pdf>

HIV/AIDS Surveillance Reports

Saskatchewan's HIV/AIDS Reports, from the Ministry of Health, can be found at <https://skhiv.ca/provincial-reports/>. National HIV/AIDS reports can be found at <https://skhiv.ca/national-reports/>.

Related Programs and Services

Harm reduction programs are part of a comprehensive prevention strategy through public health that aim to reduce the spread of HIV, hepatitis C, and other sexually transmitted and blood-borne infections (STBBIs). For information about harm reduction programs in Saskatchewan, including a list of locations, please visit <https://skhiv.ca/saskatchewan-harm-reduction-services/>.

For information about **methadone programs** in Saskatchewan, including standards and guidelines, please visit

[https://www.cps.sk.ca/imis/CPSS/Programs and Services/Methadone Program Overview.aspx?MethadoneCCO=Methadone%20Program%20Overview](https://www.cps.sk.ca/imis/CPSS/Programs_and_Services/Methadone_Program_Overview.aspx?MethadoneCCO=Methadone%20Program%20Overview). For updated information about practitioners authorized to prescribe methadone, please contact the College of Physicians and Surgeons of Saskatchewan at 306-244-7355 or ocatp@cps.sk.ca.

For information about **alcohol and drug services**, including outpatient services, detoxification services, inpatient services, and long-term residential services, please visit

<https://www.saskatchewan.ca/residents/health/accessing-health-care-services/mental-health-and-addictions-support-services/alcohol-and-drug-support/alcohol-and-drug-services>. This page also contains a link to the **Mental Health and Addictions Services Directory**.



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⁶ For more information and further references, please refer to the literature review titled *Vertical (Mother-to-Child) Transmission of HIV: Prevention, Treatment, and Education* available from the Saskatchewan Prevention Institute website (www.skprevention.ca, search 7-501).

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