



Saskatchewan
Health

***GUIDELINES FOR THE MANAGEMENT OF
POTENTIAL EXPOSURES TO HEPATITIS B,
HEPATITIS C, HIV AND
RECOMMENDATIONS FOR POST-EXPOSURE PROPHYLAXIS***

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Saskatchewan Subcommittee on HIV/AIDS

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Acknowledgement

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Guidelines for the Management of Potential Exposures to Hepatitis B, Hepatitis C, and HIV

SUMMARY

In September 1997, the Saskatchewan Subcommittee on HIV/AIDS developed *Guidelines for the Prevention and Management of Hepatitis B, Hepatitis C, HIV and Blood borne Pathogens*. The document consisted of recommendations to assist health service organizations and direct care providers in the development of policies and procedures for reducing the risk of transmitting Hepatitis B (HBV), Hepatitis C (HCV), Human Immunodeficiency Virus (HIV) and other blood borne pathogens (BBP) as a result of exposures in the health care setting. Guidelines for post-exposure prophylaxis were included. Antiretroviral medications were recommended and made available in 3-day kits that were located in several sites throughout the province.

In April 2002, a working group comprised of a number of interested stakeholders met to review and update the guidelines in response to the availability of improved antiretroviral medications and in order to make the guidelines consistent with practices across the province. This document replaces the former.

Changes reflected in this document include:

- Expansion of guidelines to include potential exposures in community, including victims of sexual assault involving a high-risk source
- New guidelines for risk assessment (Chapter 2) and management (Chapter 3) following potential exposures to hepatitis B, C and HIV
- New guidelines for initiation of post-exposure prophylaxis (PEP) in potential exposures to HIV (Chapter 3: Tables 3A, 3B, 3C)
- **3-day PEP kits consisting of different antiretroviral medications - combavir and nelfinavir**
- The prophylaxis regimen is 28 days to allow adequate time for assessment. Following consultation with an Infectious Disease physician, the attending physician must write a prescription for the remaining antiretroviral medications. **In order to receive a 23 or 25 day of nelfinavir free of charge for a client who is NOT covered by insurance, the physician must verbally order from Royal University Pharmacy, Saskatoon.** See (Chapter 3, 3.1)
- Information on antiretroviral medications for physicians and clients (Chapter 3)
- Shorter Exposure Incident Report forms (Appendix 1)
- New PEP kit replacement forms (CDC 12) (Appendix 4)

INTRODUCTION

Purpose Of This Document

This document is intended to assist health service organizations and direct care providers in the development of policies and procedures for reducing the risk of transmitting Hepatitis B (HBV), Hepatitis C (HCV), Human Immunodeficiency Virus (HIV) and other blood borne pathogens (BBP), as a result of exposures in the health care setting and community, as well as those through sexual assault. It provides guidelines for dealing with situations where health care workers (HCWs) are suspected or known to be infected with blood borne pathogens, when care is being provided to known or potentially infected patients and clients, and when individuals in the community, or as a result of sexual assault, are exposed to blood borne pathogens. Appropriate practice precautions are discussed, and recommendations are made to guide the establishment of infection control policies and procedures to minimize the risk of transmission. The guidelines and recommendations outlined in this document are based on current available information about the risks and mechanisms of transmission of blood borne pathogens. Updates will be provided, as more scientific information becomes known. Consideration has been given to the requirements of The Public Health Act of Saskatchewan (1994), and to ethical, human rights, and legal implications.

The level of risk by accidental exposure may vary from the workplace setting to the community setting. Risk of exposure outside of the healthcare setting is likely significantly less than it is within the healthcare setting, however, with the exception of community exposure to HIV, the recommended response is the same in both settings.

Goal

The goal is to minimize the risk of transmission of blood borne pathogens in individuals exposed to HBV, HCV, and HIV through accidental exposures as health care workers, in the community, or by sexual assault. This will be accomplished by:

- Disseminating these guidelines to health care workers and others who encounter individuals accidentally exposed to blood or body fluids.
- Assessing the risk of transmission to the exposed individuals.
- Counselling exposed individuals to reduce anxiety and the risk of transmission to others; ensuring adequate management and follow-up.
- Laboratory testing of the exposed individuals and the source individuals if possible.
- Providing post-exposure prophylaxis in exposed individuals where indicated.

CHAPTER 1: POTENTIAL EXPOSURE TO HBV, HCV, AND HIV

Health Care Settings

1. Prevention

Prevention is an essential component for the overall control and management of exposure to blood borne pathogens in the health care setting. Prevention is largely achieved through the establishment of administrative controls, the training and insistence on safer workplace practices, the use of personal protective equipment, and utilization of the best instrument design available.

For additional information refer to CCDR Vol. 25S4, July 1999¹

In addition to the above, hepatitis B vaccination for all at-risk health care workers (HCWs) is a very important and necessary preventive measure against HBV transmission in the health care delivery environment.

Recommendation 1

Since an efficacious HBV vaccine is licensed in Canada, and since HBV is highly transmissible, it is recommended that:

- a) All health care workers at "significant" risk of exposure to blood borne pathogens should be vaccinated against HBV. Workers at "significant" risk can be determined on an agency-by-agency basis, **but should always include those performing invasive procedures.** (Health Canada Infection Control Guidelines)².
- b) HBV immunization should be mandatory for HCWs and students who will perform invasive procedures, if no personal contraindications are present.
- c) Post-HBV immunization antibody testing should be mandatory for HCWs who perform invasive procedures. Antibody testing can also be offered to all other HCWs who receive HBV immunization but who do not perform invasive procedures.

Recommendation 2

Routine/Standard Precautions must be clearly and consistently defined, and, where applicable, include the necessary engineering and behavioural controls to prevent the transmission of a BBP from HCW to patients. Routine/Standard Precautions should be reviewed and re-evaluated as new information becomes available.

Routine/Standard Precautions should be adhered to and monitored in all health care settings¹. Efforts should be made to ensure that all HCW understand the principles of Routine/Standard Precautions and integrate them into their daily practice.

Recommendation 3

To ensure effective prevention measures, health service administrators and providers should maintain acceptable standards of infection control practice in their health establishments. Some health establishments have standards already in place through accreditation. These standards for infection control practice as a minimum, should include:

- a) Updated and effective policies on infection control with in-service training and continuing education programs for HCWs;
- b) Credible Quality Assurance Protocols for infection control that could be subjected to accreditation scrutiny or to peer reviews and inspections. (e.g., peer inspection of control practices by units from other hospitals to ascertain that minimum standards are maintained.)
- c) Exploring new ways and technologies for reducing the risk of injury in health care settings. Workplace practices need to be modified to reduce the potential for transmission of Blood Borne Pathogens, e.g., no touch technique.

2. Invasive Procedures

Invasive Procedures are procedures during which transmission of HBV, HCV, and/or HIV from health care workers to patients are most likely to occur. These include:

- Digital palpation of a needle tip in a body cavity (i.e., hollow space within the body or one of its organs) or the simultaneous presence of the HCW's fingers and a needle or other sharp

instrument or object, in a blind or highly confined anatomic site e.g., during major abdominal / cardio thoracic / vaginal, and orthopaedic operations, or repair of traumatic injuries, or surgical entry into cavities or organs, or

- Repair of major traumatic injuries, or
- Manipulation, cutting, or removal of any oral or perioral tissue, including tooth structures, during which blood from an injured HCW might transmit infection to the patient.

It is recognized that it is difficult to determine every situation where there is a risk of transmission of a BBP, and therefore this definition is meant to guide in decision-making.

3. High Risk Body Fluids

Routine/Standard Precautions apply to the following types of body fluids or tissues that are capable of transmitting HBV, HCV, and HIV in the health care setting:

TABLE 1 Body Fluids Capable of Transmitting HBV, HCV, HIV

FLUID	HBV	HCV	HIV
Lab specimens containing concentrated HBV, HCV or HIV	Yes	Yes	Yes
Blood, serum, plasma or other biological fluids visibly contaminated with blood	Yes	Yes	Yes
Pleural, amniotic, pericardial, peritoneal, synovial and cerebrospinal fluids	Yes	Yes	Yes
Semen, vaginal secretions	Yes	Yes	Yes
Saliva	Yes	No, unless contaminated with blood	No, unless contaminated with blood
Breast milk	Biologically plausible, particularly if nipples are cracked or bleeding	Biologically plausible, particularly if nipples are cracked or bleeding	Yes
Organ and tissue transplants	Yes	Yes	Yes
Screened donated blood & manufactured blood products	Minimal risk in Canada	Minimal risk in Canada	Minimal risk in Canada

(Adapted from: BC Centre for Disease Control, April 2003)⁴

Although HBV and HIV have been found in secretions such as tears, vomitus, feces and urine, epidemiological studies have not implicated these substances in the transmission of HBV and HIV infections. The risk of transmission increases if these secretions have been contaminated with blood.

4. Initial Management of Injury/Exposure

a) First Aid:

Immediately following an injury or an incident of exposure, the HCW should:

- Quickly remove gloves or clothing to determine any injuries of the hand(s) or any part of the body affected.
- Allow immediate bleeding of the wound.
- Wash the injured area well with soap and water, and if the eyes, nose or mouth is involved, flush well with water.

b) Documentation of injury and description of exposure:

- i. Following injury/exposure and first aid the HCW should report the incident immediately to the appropriate occupational health officer or anyone designated for the purpose by the employer, and comply with any employer or occupational health and safety requirements in their workplace.
- ii. In addition to fulfilling workplace requirements as in a) above, the circumstances of the exposure should also be recorded on the Exposure Incident Report Form (**See Appendix 1**). Once completed, a copy of this form should be retained at the site and a copy sent to the regional Medical Health Officer. This will keep the Medical Health Officer informed of BBP exposure trends, and use of post exposure medication. The information on this form may also be used for Workers Compensation Board (WCB) coverage and injury claims processing. The actual clinical status of the HCW must remain confidential at all times. Administration need not be informed of the clinical status.

Community Settings

For the purpose of these guidelines, community exposures are defined as exposures outside of the health care system, for example, being stuck by a needle in a park or in the garbage dump, bites, fist fights. Although the same guidelines apply, the actual risk from exposures outside the health care setting is probably significantly less than in the health care setting.

Exposures following sexual assault must also be assessed for HBV, HCV, and HIV.

CHAPTER 2: RISK ASSESSMENT FOLLOWING POTENTIAL EXPOSURE TO HBV, HCV, AND HIV

Transmission Risk Assessment

The discussion on risk assessment below is largely based on studies of the risk of acquiring HIV infection following exposure in the health care setting. However, the transmission risk after exposure to infected blood varies by blood borne pathogen^{4, 5} and is estimated to be 0.37% after parenteral exposure to HIV-infected blood, between 2.7% and 10% after parenteral exposure to HCV-infected blood and up to 40% after parenteral exposure to HBeAg positive blood. Until more information is available about risk assessment for HBV and HCV, the following discussion may be used as a guide. For specific management protocols for each of the BBPs see Chapter 3.

The risk of transmission to the exposed person will vary depending on the body site of the exposure, the type of exposure and the source. In the instance of HIV transmission through percutaneous injury, increased risk is known to be associated with the following factors:

- Greater depth of the injury,
- Greater volume of blood injected,
- Visible blood on the device and/or the device previously in a source's artery or vein, and
- Larger gauge of needle (larger bore needles present greater risk because of the larger volume of blood exposure).

Exposures from sources with a high viral load of HBV, HCV, or HIV (i.e., seroconversion in the acute phase of these viral infections, or in untreated cases of HIV or AIDS) are also associated with a greater risk of transmission⁴.

The following table shows the risks of transmission for HBV, HCV, and HIV after percutaneous exposure^{4, 6}.

TABLE 2 Risk of Transmission for HBV, HCV, HIV after Percutaneous Exposure

FLUID	HBV	HCV	HIV
Risk of transmission after percutaneous exposure to infected source	6-30% (6- 30 in 100)	3-10% (3 –10 in 100)	0.3% (3 in 1000)
Risk of transmission after mucocutaneous exposure to infected source			0.1% (1 in 1000)

These figures are only an average risk. The risk may be higher depending on other risk factors.

If the source is not known to be infected, the risk of BBP transmission drops dramatically and the risk of prophylaxis may exceed the risk of infection.

The risks and benefits of post-exposure chemoprophylaxis or immunoprophylaxis should be discussed and appropriate measures recommended to the exposed person³.

For further discussion, refer to MMWR June 29, 2001/50 (RR11): 1-42⁶.

Protocol for Assessment Following Exposure to HBV, HCV and HIV

1. Occupational and Community

Premise

This protocol and Tables 1, 2 refer to source and exposed with an assumption that in a workplace setting the source is the patient/client and the exposed is the care provider/worker. If in the course of the exposure event investigation, it is determined that that high-risk source is the care provider/worker and the exposed is the patient/client, the clinical management and counselling continues to be as per the protocols.

For occupational and community exposures, management of HBV, HCV, and HIV follows assessment of risk based on material, exposure and source.

2. Baseline Clinical Assessment

The source of the exposure and the exposed person should be clinically evaluated. This may be done by a physician or a person authorized to take the clinical history from the source (if available) and the exposed. In an occupational exposure, administration need not be informed of the HCW's clinical status.

- a) Obtain history of behavioural risk factors for HBV, HCV and HIV such as injection drug use, multiple sexual partners, sexual or blood contact with persons whose history of infection with BBPs is known or unknown, history of tattoo or body piercing, or of receiving blood or component before 1991, etc.;
- b) Obtain clinical history indicative of HBV, HCV disease or HIV associated illness;
- c) Obtain history of HBV vaccination;
- d) Review previous laboratory results for HBV, HCV or HIV infection.

3. Testing

The exposed and source person should be tested for HBV, HCV and HIV as per the guidelines in Chapter 3. Testing should be done for any or all blood borne pathogens deemed necessary by the assessment. Informed consent is required before any of the tests are performed.

Consent must be obtained voluntarily before any testing is done. Additionally there must be pre-test counselling before any test is undertaken and arrangements should be made for post-test counselling.

Health care workers should be informed of the ethical obligation to be assessed and tested following exposure to blood or high-risk body fluid, if the health care worker's serological status is unknown. This obligation also applies to HCWs exposing patients to blood and/or high-risk body fluids.

Recommendation 4

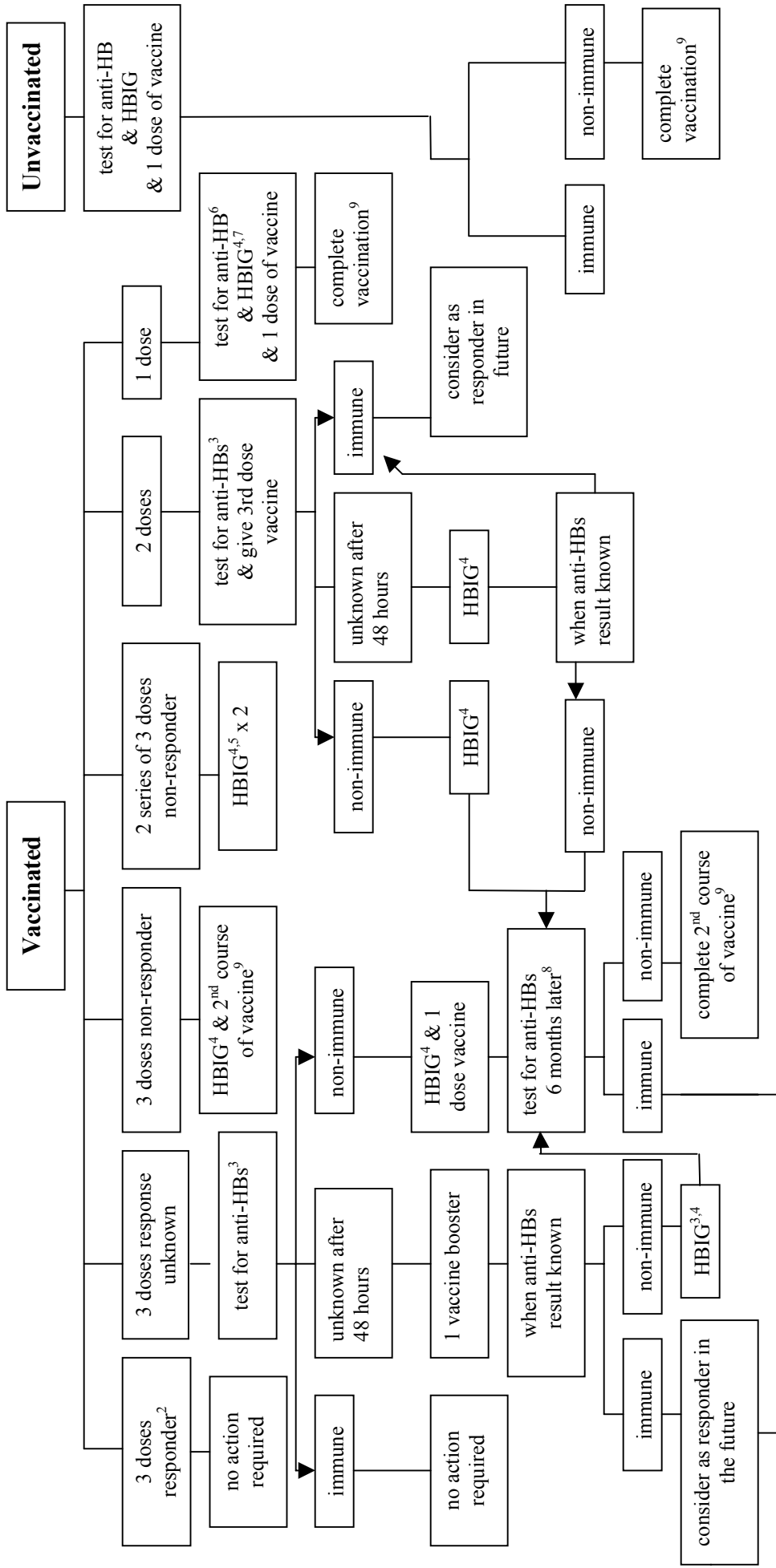
Options for HIV testing should include non-nominal, nominal and anonymous. It is recommended that non-nominal (name of client is not recorded) rather than anonymous (total identity of client unknown to service provider) HIV testing be done.

Note: Under the existing Freedom of Information & Protection of Privacy legislation, a person investigating a patient/client who is the source of a high-risk exposure should seek the consent of that patient/client and the patient's health provider in order to use information about that patient/client to evaluate the risk experienced by the person who was exposed. Such information may include clinical history, diagnosis, lab findings, etc.

CHAPTER 3: MANAGEMENT FOLLOWING POTENTIAL EXPOSURE TO HBV, HCV, AND HIV

1. Management of Exposures to Body fluids Potentially Infected with Hepatitis B

a) Infected (HBsAg +) or High Risk-Source¹

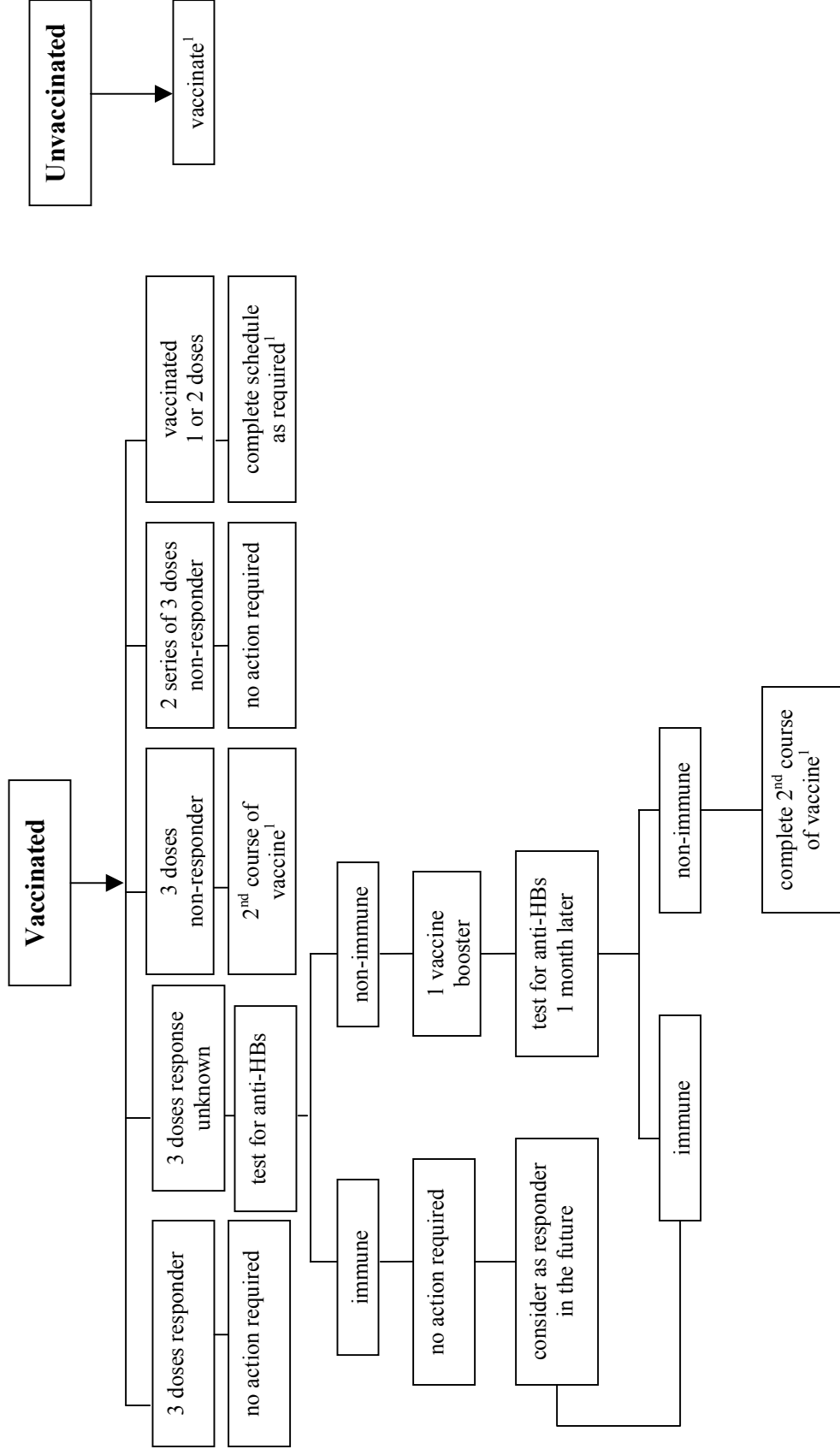


Please consult the product monograph for complete information concerning dosages and contraindications for Hepatitis B vaccine

1. A known source is high risk if the person comes from a highly endemic region for HBV, has sexual relations with multiple partners, has a partner infected with HBV or is at high risk of being so, is in close family contact with an infected person, uses injection drugs, or received blood or blood products prior to 1970. Wherever possible, the source should be tested. In the case of an unknown source, background circumstances may provide some indication of the degree of risk, e.g., syringe found in the street, attendance at an STD, detoxification or well baby clinic.
2. Responder known to be immune. No measures are required if the person has developed an immunity following an infection.
3. Anti-HBs titre should be determined as soon as possible to avoid needless administration of HBIG and because efficacy is unknown if given after 7 days.
4. The administration of HBIG can be omitted if the high risk source can be tested within 48 hours and the result is negative. In that case, the non-infected source algorithm is followed.
5. The second dose of HBIG should be given 1 month after the first.
6. This test does not change the continuation of vaccination, but may reassure the exposed individual about the immediate risk of becoming infected.
7. If it is possible to quickly obtain anti-HBs titre confirming immunity, administration of HBIG should be omitted.
8. Determination of anti-HBs titre should be delayed for 6 months to allow HBIG antibodies to wane.
9. Test for anti-HBs 1 to 6 months after the course of vaccine.

(Canadian Immunization Guide, p. 108-109)⁷

b) Uninfected (HBsAg-) or Low Risk Source

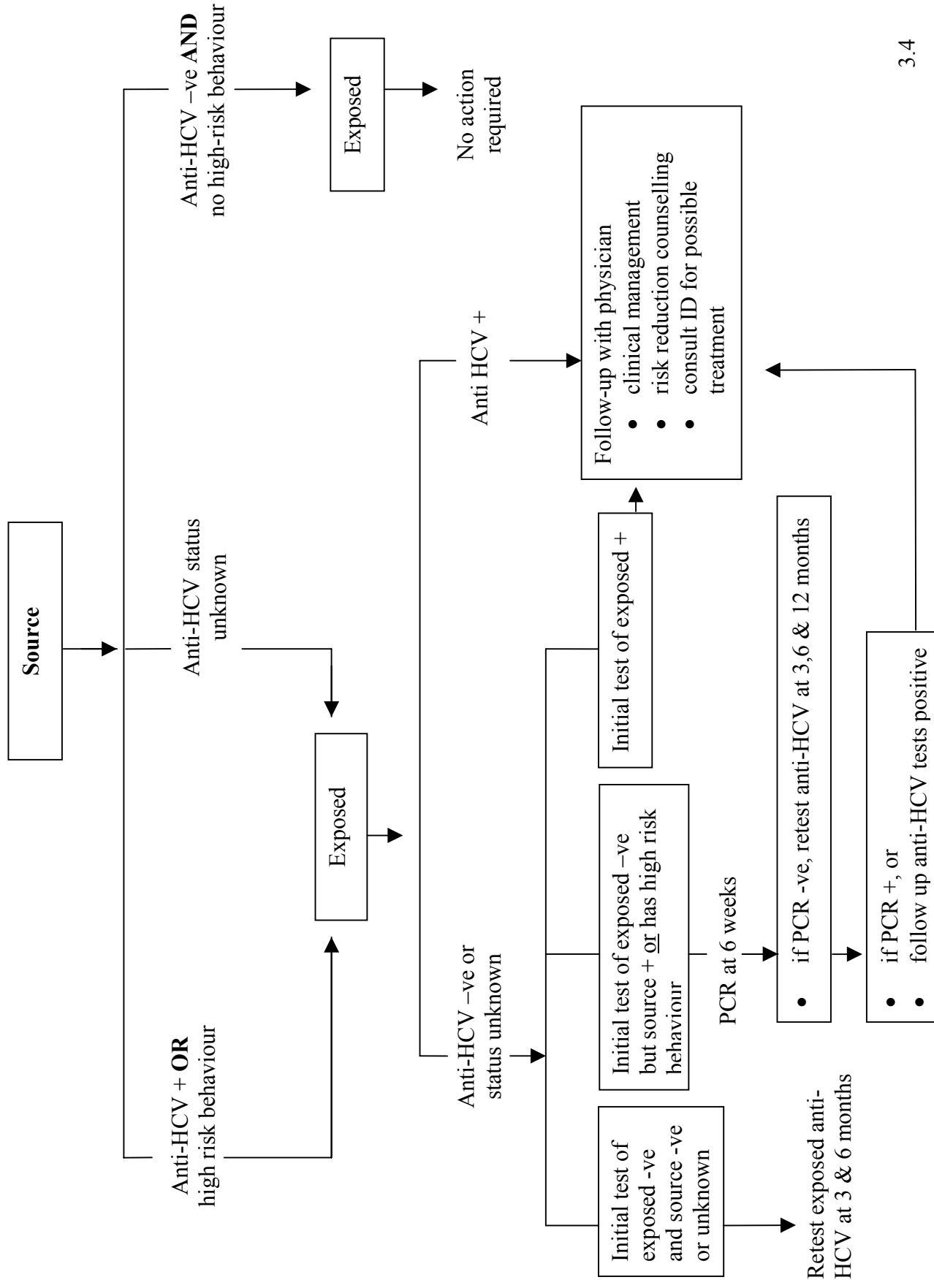


1. Test for Anti-HBs 1 to 6 months after the course of vaccine

(Canadian Immunization Guide, p.110)⁷

2. Management of Exposures to Body Fluids Potentially Infected with Hepatitis C

No effective post-exposure prophylaxis is available for HCV at this time (Fall, 2003)



3. Management of Exposures Potentially Infected with HIV

- These guidelines are not intended to be absolutely prescriptive. For any concerns consult ID specialist or MHO
- Refer to this table along with Table 3B and 3C; Situation A, B, C, D in the following table refer to percutaneous injuries, E refers to management following sexual assault

TABLE 3A Assessment of Risk

SITUATION	A. HIGH RISK	B. LOW RISK	C. NO RISK	D. UNKNOWN RISK	E. SEXUAL ASSAULT
	High risk material, and High risk exposure, and High risk source person	Low risk material, or Low risk exposure, or Low risk source person	No risk	Abandoned needle where there is no history of risk	Involving high risk source
Action for exposed person	<ul style="list-style-type: none"> ✓ Counsel ✓ Offer PEP* ✓ Baseline HIV test 	<ul style="list-style-type: none"> ✓ Counsel ✓ No PEP ✓ Baseline HIV test 	No HIV tests required	<ul style="list-style-type: none"> ✓ Counsel ✓ No PEP ✓ HIV test for reassurance 	<ul style="list-style-type: none"> ✓ Counsel ✓ Offer PEP* ✓ Baseline HIV test
Source person	<ul style="list-style-type: none"> Available: ✓ Counsel ✓ Baseline HIV test 	<ul style="list-style-type: none"> Available: ✓ Counsel ✓ Baseline HIV test 		N/A	<ul style="list-style-type: none"> Available: ✓ Counsel ✓ Baseline HIV test
Source person test result and actions	<ul style="list-style-type: none"> Available: <i>Positive:</i> ✓ Consult ID* for ongoing therapy <i>Negative:</i> ✓ Stop PEP ✓ Reassure & educate 	<ul style="list-style-type: none"> Not Available: ✓ Consult ID* 		<ul style="list-style-type: none"> ✓ Reassure & educate 	<ul style="list-style-type: none"> Positive: ✓ Consult ID* Negative: ✓ Stop PEP ✓ Reassure & educate
Follow-up	For exposed person repeat the HIV test at 6, 12, and 24 weeks and if PEP was taken at 1 year. Follow for Hepatitis B & C, Table 1 & 2				

*Consult ID Specialist as soon as possible regarding appropriate anti-retrovirals when: source person is known HIV +ve or high risk, exposed person staying on antiretrovirals for 4 weeks, or in pediatric cases.

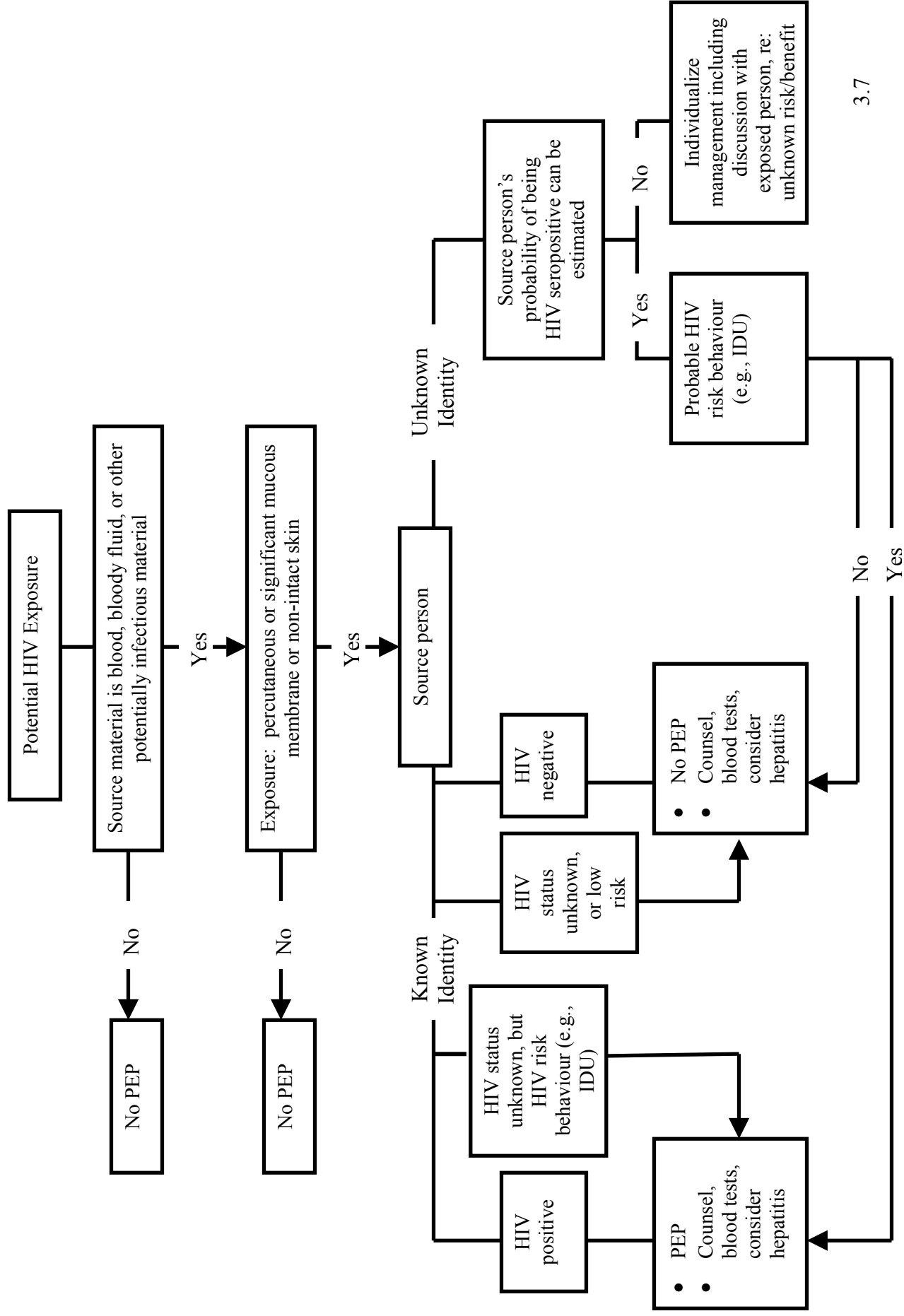
As a general rule for PEP: Start with 3 drugs; for ongoing therapy ID specialists may decrease to 2 drugs based on resistance, risk and testing in consultation with client

TABLE 3B Definitions of Risk

	High Risk	Low Risk	No Risk	Unknown	Sexual Assault
Material	<p>Infectious body fluid (capable of transmitting HIV):</p> <ul style="list-style-type: none"> • Blood • Any body fluid visibly contaminated with blood • Semen • CSF, amniotic, pleural, pericardial, peritoneal and synovial fluids and inflammatory exudates • Tissue or organs, e.g., transplantation • Breast milk • Vaginal secretions 		<p>Non-infectious body fluid (not implicated in transmission of HIV unless bloody)</p> <ul style="list-style-type: none"> • Stool • Urine • Tears • Saliva • Nasal secretions • Vomitus 		<p>Infectious body fluid (capable of transmitting HIV):</p> <ul style="list-style-type: none"> • Blood • Any body fluid visibly contaminated with blood • Semen • Vaginal secretions
Exposure	<p>Types of exposures (Refer to Table 3A):</p> <ul style="list-style-type: none"> • Percutaneous • Mucous membrane or non-intact skin • Perhaps prophylaxis for prolonged exposure to large amounts of blood on intact skin 	<p>Types of exposures:</p> <ul style="list-style-type: none"> • Minor percutaneous, mucous membrane or skin to non-infectious body fluid, source HIV+ve or -ve • Intact skin; small quantity of blood or fluid visibly contaminated with blood of short exposure duration • Bites unless clearly transmission of blood • Superficial scratch; no bleeding • Injuries received in fights are rarely indications for PEP unless transfer of infected blood has occurred 		<p>Types of exposure – needle stick injuries from:</p> <ul style="list-style-type: none"> • Abandoned needle found outside health care setting where there is no history of the origin of the needle or time of its abandonment 	<p>Type of exposure (Refer to Table 3A):</p> <ul style="list-style-type: none"> • Sexual assault
Source Person	<p>HIV+ve, or known to be at high risk for HIV infection:</p> <ul style="list-style-type: none"> • Injection drug users • Multiple sex partners (male or female) • Persons who have had multiple transfusions of blood or blood products, e.g., haemophiliacs prior to November 1985 • Sexual partners of persons known to be HIV+ve 	<p>Presumed HIV–ve: if source is not in a high-risk group, consider them negative until the results of the testing are available.</p>	<p>Source HIV–ve</p>	<p>Unknown</p>	<p>HIV+ve, or known to be at high risk for HIV infection:</p> <ul style="list-style-type: none"> • Injection drug users • Multiple sexual partners (male & female) • Persons who have had multiple transfusions of blood or blood products, e.g. hemophiliacs prior to November 1985 • Sexual partners of persons known to be HIV positive

TABLE 3C

Accidental Exposure Algorithm for HIV



a) Antiretroviral Therapy

Antiretroviral starter kits containing a 3-day supply of antiretroviral medications (Combivir and Nelfinavir), information sheets for the medications and a copy of Appendix 4, will be provided by Saskatchewan Health and will be given according to the guidelines outlined here. Five-day kits will be provided to Prince Albert and sites north of Prince Albert. Refer to Table 5 *Characteristics of Antiretroviral Medications*.

Ensure follow up occurs within 3 days of offering PEP so that an assessment can be made of the need for further antiretroviral medications. The Medical Health Officer or infectious disease expert may be consulted to assist with this assessment.

If a 4-week regimen of antiretrovirals is indicated, the physician must consult with an Infectious Disease specialist and write a prescription for the remaining 23 or 25 days of therapy. For a community exposure involving a client who is NOT covered by insurance, a prescription can be written for combivir because the Saskatchewan Drug Plan covers it. However, because the Saskatchewan Drug Plan does not cover nelfinavir 100%, the following process must be followed in order for the client to receive the remaining nelfinavir free of charge from Saskatchewan Health:

- Verbal order to Royal University Pharmacy, **655-2260 Monday to Friday during office hours; 655-1986 evenings or weekends**
- RUH pharmacy will send the supply of nelfinavir by bus to a site specified by the physician (i.e., local pharmacy, hospital)
- Try to give RUH pharmacy 48 hours notice
- Nelfinavir from a PEP kit can be used until the remaining supply reaches the client.

Antiretroviral medications will vary for children, pregnant women, and for those exposed to a source known to have been on antiretroviral therapy. An infectious disease expert should be consulted to tailor prophylactic regimens for these individuals and if there is a possibility of the source's HIV infection being drug resistant.

Recommendation 5

A 3-day supply of the recommended drugs in the form of a Post Exposure Prophylaxis Starter kit should be made available at strategic sites throughout Health Regions (**see Appendix 2**), since maximum benefit is likely to be obtained when prophylaxis is started within 2 hours following exposure. A 5-day supply of drugs should be made available to Prince Albert and sites north of Prince Albert.

If a 28-day regimen of antiretroviral medications is warranted, a prescription is required.

b) Sexual Assault and Post-Exposure Prophylaxis

The use of antiretrovirals in post exposure HIV prophylaxis in sexual assault has come into practice in the past few years despite the lack of evidence from human studies of its effectiveness.

A Vancouver study from 2000⁸, revealed that individuals who started taking antiretrovirals in low risk scenarios were much less likely to complete the course than those with high-risk sexual exposures. Based on that experience, a cost analysis and the fact there were no seroconversions in those who did not complete prophylaxis, the Sexual Assault Service changed their practice to offer PEP only to those victims for whom the assailant was known to be HIV positive or known to be at high risk for HIV infection.

Therefore, in Saskatchewan, it is most appropriate to **offer PEP to a sexual assault victim when the assailant is known to be HIV positive or in a high-risk group for HIV infection.** It is inappropriate if the assailant is known to be HIV negative or believed to be at low risk for HIV infection.

c) Community Exposure and Post-Exposure Prophylaxis

Antiretroviral therapy is not recommended for needle sticks from abandoned needles when they are **outside the health care setting** or when there is **no history of the use of the needle or the time of abandonment.** The rationale for this decision is based on information known at this time as follows:

- a) The literature does not report any seroconversions with this type of injury. There has never been an HIV seroconversion from community exposure reported anywhere
- b) There are real risks from the antiretroviral medications.
- c) Risks from antiretrovirals outweigh the theoretical risk of seroconversion from a community exposure.

Certain circumstances may make consideration of PEP appropriate; for example, when needles are found in areas where there is a high concentration of injection drug use and HIV infection, or fresh blood in hollow bore needles.

Bites and injuries in fights are rarely indications for PEP unless transfer of infected blood has occurred. Refer to 'First Aid Care', Chapter 1.

d) Personal Lifestyle Choices and Post-Exposure Prophylaxis

Antiretroviral medications are not provided free to persons exposed to HIV as part of their personal lives (e.g., consensual adult sex or sharing drug injection equipment).

Saskatchewan Health will not supply PEP in these situations. If the individual and his/her physician feel prophylaxis is indicated, the individual may purchase prophylaxis medications with a prescription from the physician to the pharmacy

e) Cost Effectiveness of Post-Exposure Prophylaxis

Based on estimated HIV prevalence in Saskatoon, Dr. Cordell Neudorf, Medical Health Officer, Public Health Services, Saskatoon Health Region, compiled the following report, dated August 1997, of estimates of HIV seroconversion, efficacy of prevention, the number of HIV cases averted per post-exposure prophylaxis (PEP) treatment is given and the cost per case averted.

TABLE 4 PEP Kit Efficacy/HIV Risk Chart, including Cost-Effectiveness

Needle stick	Estimated Probability of HIV, based on prevalence rates	Risk Of Seroconversion* if source is HIV+	(AxB) Risk Of Seroconversion	Known** efficacy of prevention	(CxD) HIV cases averted per 1 month 3 drug therapy (PEP)	Cost per case averted ***
Known HIV+ Source	1.0	0.0037	0.0037	0.79	2.9/1000=1/345	a. \$347,760 b. \$62,100
IV Drug User	0.03	0.0037	0.00011	0.79	8.7/100,000=1/11,494	a. \$11,585,952 b. \$2,068,920
Unknown (hospital patient)	0.001	0.0037	0.0000037	0.79	2.9/million=1/344,828	a. \$347,586,620 b. \$62,069,040
Unknown (community)	0.0001	0.0037	0.00000037	0.79	2.9/10 million=1/3,448,276	a. \$3,475,862,200 b. \$620,689,680

Notes:

- * General = 0.0037
Deep Injury = 0.0592 (or 0.0037 x 16)
Large volume of blood/or high titre of HIV = 0.0185 (or 0.0037 x 5)
- ** For AZT therapy only. May be better with 3-drug regimen.
- *** Based on: a) \$1,008 (1-month treatment including 3-drug regimen starter kit – AZT, 3TC, Indinavir)
b) \$180 for 5 days (starter kit portion only)

f) Drug Information for Physicians Re: adults and adolescents

The following information is from *Guidelines for the Use of Antiretroviral Agents in HIV-Infected Adults and Adolescents*, Table 14 July 2003

<http://www.aidsinfo.nih.gov/guidelines>

For further information, refer to:

Medication Fact Sheets: Toronto General Hospital <http://www.tthivclinic.com/> or <http://www.aegis.com/> to search this for patient information on Combivir & Nelfinavir.

TABLE 5 Characteristics of Antiretroviral Medications

	Characteristics of Nucleoside Reverse Transcriptase Inhibitors (NRTIs) e.g. Combivir™ (150mg 3TC + 300mg AZT per tab)	Characteristics of Protease Inhibitors (PIs) Nelfinavir (Viracept™)
Form	Lamivudine (3TC) Zidovudine (AZT) 300 mg per tablet	250 mg tablets
Dosing Recommendations	1 Tablet po q12h	1250 mg po q12h
Food Effect	Take without regards to meals	Levels increase 2-3 fold Take with meal or snack
Oral bio availability	86%	20-80%
Serum half-life	3-6 hours	3.5 – 5 hours
Intracellular half-life	12 hours	
Elimination	Renal excretion unchanged	
Storage		Room temperature
Adverse Effects	(Minimal toxicity) Lactic acidosis with hepatic steatosis is a rare but potentially life-threatening toxicity with the use of NRTIs.	Diarrhea Hyperglycemia Fat redistribution & lipid abnormalities Possible increased bleeding episodes in patients with hemophilia

g) Drug Information for Physicians Re: children

The following information is from *Guidelines for the Use of Antiretroviral Agents in HIV-Infected Children*. Reference: University of British Columbia web site:

<http://cfeweb.hivnet.ubc.ca/guide/page/sectg/consg2.html>

HIV Post-Exposure Prophylaxis (“PEP Kits”) in Children

Dosages for Children

Recommended antiretroviral chemoprophylaxis is for a total of 28 days.

- D4T 40 mg capsules (stavudine, Zerit®)
- 3TC 150 mg tablets
- Nelfinavir 250 mg tablets (Viracept®)

Regimens:

Children > 40 kg: D4T 40 mg bid + 3TC 150 mg bid and if indicated, Nelfinavir 1250 mg bid (750 mg/po q8h or 1250 mg po q12h)

Children < 40 kg*: D4T 1 mg/kg per dose: dose bid + 3TC 4 mg/kg per dose: dose bid (maximum 150 mg bid) and if indicated Nelfinavir 35 mg/kg per dose: dose bid

[Note: if AZT is used instead, the dose is: >40kg = 200mg po tid; <40kg AZT 5mg/kg (max. 600mg/day)]

* **NOTE:** Children < 40 kg and unable to swallow capsules and tablets. The capsules and tablets can be used to initiate therapy as follows:

1. For D4T calculate dose, open 40mg capsule and dilute to 10mL with water. The suspension strength is 4 mg/mL. Give 1 mg (0.25 mL) per kg bid. The suspension must be well shaken and given immediately after mixing. e.g. for child 10 kg dose is 10 mg (2.5 mL) bid. *The remaining solution must be discarded.*
2. For 3TC calculate dose to nearest 75 mg (=½ x 150mg tablet). Tablets and half tablets can be crushed and mixed with food.
3. For Nelfinavir calculate the dose to nearest 125 mg (=½ x 250mg tablet). Tablets and half tablets can be crushed and mixed with food (e.g., milk, yogurt, ice cream, chocolate pudding).

For therapy for the remaining days, D4T and 3TC are available as liquid suspension. D4T suspension strength is 1mg/mL; 3TC suspension strength is 10 mg/mL. Nelfinavir is available in a powder formulation; each level scoop provided with the powder contains 50 mg Nelfinavir (one level teaspoon contains 200 mg). The powder can be mixed with food.

Consult ID for pediatric dosage and scheduling.

The website listed has been used to facilitate quick first doses and the availability of only one capsule strength. Additional information on antiretroviral dosages for children may be found on the Canadian Paediatric Society website:

<http://www.cps.ca/english/statements/ID/id99-02.htm>

CHAPTER 4: COUNSELLING AND FOLLOW-UP

- HBV/HCV/HIV counselling must be "client-centred." Risk-reduction messages must be personalized and realistic. Counselling should be culturally relevant, sensitive to issues of sexual identity, and information provided at a level of comprehension that is consistent with the learning skills of the person being served.
- Skills required for counselling include communication, assessment, knowledge of human coping mechanisms, knowledge of HBV, HCV, HIV/AIDS and related conditions, familiarity with community resources and referral mechanisms.
- Counsellors should avoid providing information that is irrelevant to their clients and should avoid structuring counselling sessions on the basis of a data-collection instrument or form.
- Pre-test counselling must include a personalized client-risk assessment. Client acceptance of risk is a critical component of this assessment. Because the risk-assessment process serves as the basis for assisting the client in formulating a plan to reduce risk, it is an essential component of all pre-test counselling.
- Persons exposed to BBP:
 - Must not donate blood, semen, organs or tissues until they are certain they have not been infected.
 - Must practice safer sex until they are certain of not being infected (negative test at 12 weeks following exposure).
 - Notify sexual partner(s).
 - Avoid pregnancy for six months.
 - Discontinue breastfeeding unless an HIV antibody test in a known low risk source is expected to be available in the next few days. In this case, breast milk can be temporarily expressed or pumped and breast-feeding resumed if the result is negative. The decision to breast-feed ultimately should be made by the client after an analysis of the potential risks and benefits.
 - Must not share razors, dental floss, toothbrushes, or needles until certain they have not been infected.
 - Cover cuts until healed.
 - Dispose of articles with blood (e.g., tampons, pads, Kleenex) appropriately.
 - Dispose of sharp items (e.g., razors) in hard-sided containers, taped shut.
- Persons potentially infected with HCV should advise sexual partners of the potential risk, although the risk of sexual transmission of HCV appears to be lower than that of HBV or HIV. Individuals should be provided with information on safer sex practices. Current data indicate that transmission from mother to infant is rare; specific recommendations for or against pregnancy and breastfeeding must be provided on a case-by-case basis.

- If the exposed person is immune to HBV, no further precautions are necessary. For those who are having HBIG and/or the HB vaccine series, a discussion leading to an informed decision may be undertaken on issues regarding safer sex and notifying sexual partner(s).
- Active steps should be taken to address failure to return for post-test counselling. Counsellors should routinely assess whether clients require additional post-test counselling sessions.
- Follow-up is required for all persons receiving antiretroviral therapy and those having had a probable high-risk exposure to HIV. This should be done by the exposed person's family physician. If the exposed person does not have a family physician, a designated physician may be identified for follow-up.

Reference may be made to the following articles on the subject of counselling:

- Counselling Guidelines for Human Immunodeficiency Virus Serologic Testing. Canadian Medical Association 1995.
- Guidelines for Counselling Persons Who Have Had An Occupational Exposure to Human Immunodeficiency Virus. Canadian Disease Weekly Report, November 1990, Vol. 16S2.
- MMWR Recommendations and Reports. *Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HBV, HCV, and HIV and Recommendations for Post exposure Prophylaxis.* June 29, 2001/50(RR11): 1-42.

Worker Compensation Board Issues:

- If the incident occurred in an occupational setting, complete and submit appropriate WCB forms.
- Ensure that the exposure is reported to the employer and properly documented. Adequate documentation including HIV testing is important if the worker becomes HIV-positive.
- The exposed worker must be tested for HIV as soon as possible after the exposure.
- The circumstances of the exposure must be investigated to identify causes and contributing factors, and implementation of corrective actions must be taken in order to prevent future exposures occurring in a similar manner.

Recommendation 6

An “Exposure Incident Report Form” (**Appendix 1**) has been provided as a template for physicians. A copy should be submitted to the Medical Health Officer for the Health Region after the investigation has been completed.

Recommendation 7

Each Health Region should have a detailed institutional policy that may be adapted from the guidelines in this document and updated as necessary, to better manage BBP exposures and avoid or reduce the potential for liability suits.

APPENDIX 1

Exposure Incident Report Form

EXPOSURE INCIDENT REPORT FORM (3 PART)

- *Copy to the Medical Health Officer in your region when investigation is completed.*

Exposure	Date	Time	Location
Physician Assessment	Date	Time	ER <input type="checkbox"/> Office <input type="checkbox"/>

PART 1

HISTORY

A. EXPOSED INDIVIDUAL'S HISTORY

Name		Home ph# _____
Address		Work ph # _____
DOB	____ / ____ / ____	<input type="checkbox"/> Female <input type="checkbox"/> Male
PHN		Family Physician

Prior Hep B vaccination none, 1, 2, 3 doses (*circle correct number*)

Hepatitis B surface antibody (Anti-HBs) immune	<input type="checkbox"/> Yes <input type="checkbox"/> No Date: _____
Prior Hepatitis B surface antigen (HbsAg) status	<input type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Unknown
Prior Hepatitis C antibody (anti-HCV) status	<input type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Unknown
Prior HIV antibody (anti-HIV) status	<input type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Unknown

B. SOURCE HISTORY

Name		Home ph# _____
Address		Work ph # _____ Current Location: (e.g. room #) _____
DOB	____ / ____ / ____	<input type="checkbox"/> Female <input type="checkbox"/> Male
PHN		Family Physician

B. SOURCE HISTORY continued

Prior Hep B vaccination

none, 1, 2, 3 doses (*circle correct number*)

Hepatitis B surface antibody (Anti-HBs) immune	<input type="checkbox"/> Yes <input type="checkbox"/> No Date:
Prior Hepatitis B surface antigen (HbsAg) status	<input type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Unknown
Prior Hepatitis C antibody (anti-HCV) status	<input type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Unknown
Prior HIV antibody (anti-HIV) status	<input type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Unknown
Other relevant patient information (including risk factors for HBV, HCV, HIV)	
Family Physician &/or Infectious Disease Specialist	

C. DETAILS OF EXPOSURE

1. Type of Exposure and Injury

Exposure:	<input type="checkbox"/> Occupational	<input type="checkbox"/> Community	<input type="checkbox"/> Sexual Assault
Injury:	<input type="checkbox"/> Needle stick	<input type="checkbox"/> Percutaneous	<input type="checkbox"/> Bite
	<input type="checkbox"/> Non-intact skin	<input type="checkbox"/> Splash	<input type="checkbox"/> Mucous membrane

2. Type of Source Fluid

<input type="checkbox"/>	Blood, serum, plasma or other biological fluids visibly contaminated with blood
<input type="checkbox"/>	Pleural, amniotic, pericardial, peritoneal, synovial and cerebrospinal fluids
<input type="checkbox"/>	Uterine/vaginal secretion and semen
<input type="checkbox"/>	Saliva contaminated with blood
<input type="checkbox"/>	Lab specimens containing concentrated HBV, HCV, or HIV
<input type="checkbox"/>	Organ and tissue transplants
<input type="checkbox"/>	Unknown (e.g., needle found on street)
Other (describe)	

PART 2

MANAGEMENT OF EXPOSURE

1. Hepatitis B

- Prophylaxis is most effective if begun within 48 hours. This allows some time to determine status of exposed and source.
- If the exposed is immune to Hep B, *no further action required*.
- For all others, refer to pages 11 –12 for appropriate use of HBIG and Hepatitis B vaccination.

COUNSELLING GIVEN: Hepatitis B

HBIG given (date, dose)	
HB vaccine given (dates)	

2. Hepatitis C

COUNSELLING GIVEN: Hepatitis C

Currently there is no effective post exposure prophylaxis. (Refer to page 13)

3. HIV prophylaxis (*HIV PEP Kit*) most effective if begun within 2 hours of exposure.

CLASSIFICATION OF HIV RISK: Refer to Table 3 A, B, C, page 3.5, 3.6, 3.7

High Low Unknown Sexual assault

- If high risk, offer PEP
- If low or no known risk, PEP not recommended
- If sexual assault with high risk source, PEP recommended

HIV POST EXPOSURE PROPHYLAXIS COUNSELLING GIVEN: HIV

(Please indicate)	<input type="checkbox"/> Recommended	<input type="checkbox"/> Not Recommended
PEP started:	Date:	Time:
Comments/Notes		

- If PEP accepted, obtain written informed consent.
- PEP kit contains 3 days of medications and instructions.
- Instruct the exposed to make an appointment to see the family physician/treating physician within 3 days.
- During this time every reasonable attempt must be made to obtain informed consent from the source to provide a blood sample.

- If the source HIV blood results are not available, or if the source tests positive, the exposed will likely be advised to continue the antiviral treatment for 1 month. The treating physician is strongly encouraged to discuss this decision with an ID specialist.
- Pediatric prophylaxis requires consult with ID specialist.

Part 3

LABORATORY RESULTS FOLLOW-UP OF EXPOSED

Lab test	6 weeks	3 months	6 months	12 months
Date				
Hepatitis B surface antigen (Hbs Ag)				
Hepatitis C antibody (anti-HCV)				
HIV antibody (anti-HIV)				

If the source tests positive for BBP, ensure appropriate follow-up.

Exposure Incident Form completed by:

- Occupational Health
 Physician
 Other (specify)

Date: _____

Name of Occupational Health Officer / Designate:	Signature: _____
Name of Emergency Care Physician:	Signature: _____
Name of Personal Physician:	Signature: _____

APPENDIX 2 Health Region Sites for Post-Exposure Prophylaxis Starter Kits (PEPS)

<i>Health Region</i>	<i>Location</i>	<i>Phone/Fax</i>	<i>Contact</i>
Cypress	Shaunavon Hospital Box 789 Shaunavon SK S0N 2M0	P: 297-2644 F: 297-2502	Cathy Ruetz Team Leader/Nurse in charge
Cypress	Maple Creek Hospital Box 1330 Maple Creek SK S0N 1N0	P: 662-2611 F: 662-3210	Sheila Mulatz Director of Care/Nurse in charge
Cypress	Leader Hospital Box 128 Leader SK S0N 1H0	P: 628-3845 F: 628-4413	Ricki Fauth Health Services Manager/Nurse in charge
Cypress	Swift Current Hospital 499 – 4 th Avenue NE Swift Current SK S9H 2J9	P: 778-9400 F: 778-9431	Fern Nevard Team Leader/Nurse in charge
Cypress	Mankota Health Centre Box 390 Mankota SK S0H 2W0	P: 478-2200 F: 478-2462	Yolanda Harrison Manager Health Services/Nurse in charge
Cypress	Swift Current Public Health 350 Cheadle Street W. Swift Current SK S9H 4G3	P: 778-5280 F: 778-5282	Lisa Haubrich Public Health Nurse Clinical Supervisor
Five Hills	Pharmacy Dept. Moose Jaw Union Hospital 455 Fairford Street E. Moose Jaw SK S6H 1H3	P: 694-0396 or 694-0200 F: 694-0325	Mr. J. Oxley Director, Pharmacy
Five Hills	Pharmacy Dept. South Country District Health Box 1120 Assiniboia SK S0H 0B0	P: 642-3351 F: 642-3804	Betty Peterson
Five Hills	Pharmacy Dept. Central Butte Hospital 3 rd Avenue W. Central Butte SK S0H 0T0	P: 796-2180 or 796-2190 after hrs F: 796-4610	Joanne Wilm
Five Hills	Pharmacy Dept. St. Joseph's Hospital 216 Bettez Street Gravelbourg SK S0H 1X0	P: 648-3185 F: 648-3440	Debra Hapke
Heartland	Kindersley Integrated Health Care Facility 1003 1 st St. W. Kindersley SK S0L 1S0	P: 463-2611 F: 463-4550	Nancy Knorr
Heartland	Unity Hospital Box 741 Unity SK S0K 4L0	P: 228-2666 F: 228-2292	Colleen Boucher
Heartland	Biggar Hospital Biggar SK S0K 0M0	P: 948-3323 F: 948-2011	Marion Fritz

<i>Health Region</i>	<i>Location</i>	<i>Phone/Fax</i>	<i>Contact</i>
Heartland	Davidson Hospital Davidson SK S0G 1A0	P: 567-2801 F: 567-2346	Elaine Feltis
Heartland	Outlook Union Hospital Box 309 Outlook SK S0L 2N0	P: 867-8676 F: 867-9449	Thelma McPherson
Heartland	Rosetown District Health Centre Box 850 Rosetown SK S0L 2V0	P: 882-2672 F: 882-3335	Bev Lavigne Shelly Robson
Athabasca, Keewatin Yatthé & Mamawetan Churchill River *	St. Joseph's Hospital Box 219 Ile a la Crosse SK S0M 1C0	P: 833-2016 F: 833-2556	Pauline Favel Director of Nursing (KYRHA)
Athabasca, Keewatin Yatthé & Mamawetan Churchill River *	La Loche Health Centre Bag Service # 1 La Loche SK S0M 1G0	P: 822-3200 F: 822-2112	Director of Nursing (KYRHA)
Athabasca, Keewatin Yatthé & Mamawetan Churchill River *	La Ronge Hospital Box 6000 La Ronge SK S0J 1L0	P: 425-2422 F: 425-5513	Pat McLachlan Director of Nursing (MCRCHA)
Athabasca, Keewatin Yatthé & Mamawetan Churchill River *	Beauval Health Centre Box 68 Beauval SK S0M 0G0	P: 288-4800 F: 288-2225	Nurse in charge (KYRH)
Athabasca, Keewatin Yatthé & Mamawetan Churchill River *	Buffalo Narrows Health Centre Box 40 Buffalo Narrows SK S0M 0J0	P: 235-5800 F: 235-4500	Nurse in charge (KYRHA)
Athabasca, Keewatin Yatthé & Mamawetan Churchill River *	Pinehouse Health Centre Box 296 Pinehouse SK S0J 2B0	P: 884-5670 F: 884-5699	Nurse in charge (MCRCHA)
Athabasca, Keewatin Yatthé & Mamawetan Churchill River *	Sandy Bay Health Centre General Delivery Sandy Bay SK S0P 0G0	P: 754-2188 F: 754-2091	Nurse in charge (MCRCHA)
Athabasca, Keewatin Yatthé & Mamawetan Churchill River *	Stony Rapids Health Centre Box 59 Stony Rapids SK S0J 2R0	P: 439-2220 F: 439-2210	Public Health Nurse of Diane Moberly (AHA)
Athabasca, Keewatin Yatthé & Mamawetan Churchill River *	Population Health Unit Box 6000 La Ronge SK S0J 1L0	P: 425-8586 F: 425-8530	Communicable Disease Control Nurse (AHA, KYRHA & MCRCHA)
Kelsey Trail	Melfort Union Hospital Pharmacy Dept. Box 1480 Melfort SK S0A 1A0	P: 752-8719 F: 752-8711	Cheryl Mclean Terri Williams

<i>Health Region</i>	<i>Location</i>	<i>Phone/Fax</i>	<i>Contact</i>
Kelsey Trail	Nipawin Union Hospital Pharmacy Dept. Box 2134 Nipawin SK S0E 1E0	P: 862-4643 F: 862-9310	Barry Lyons
Kelsey Trail	Tisdale Union Hospital Box 1630 Tisdale SK S0E 1T0	P: 873-2621 F: 873-5994	Darin Walter
Kelsey Trail	Hudson Bay Hospital Box 940 Hudson Bay SK S0E 0Y0	P: 865-2219 F: 865-2429	Darin Walter
Kelsey Trail	Kelvington Hospital Box 70 Kelvington SK S0A 1W0	P: 327-4711 F: 327-5115	Darin Walter
Kelsey Trail	Porcupine Plain Box 70 Porcupine Plain SK S0E 1H0	P: 278-2211 F: 278-3088	Darin Walter
Kelsey Trail	Cumberland House Health Centre Box 8 Cumberland House SK S0E 0S0	P: 888-2244 F: 888-2269	Val Warriner Nurse in charge
Northern Intertribal Health Authority *	Black Lake Health Centre General Delivery Black Lake SK S0J 0H0	P: 284-2132 F: 284-2090	Senior Health Nurse (PAGC)
Northern Intertribal Health Authority *	Deschambault Lake Health Centre General Delivery Deschambault Lake SK S0P 0C0	P: 632-2106 F: 632-4555	Senior Health Nurse (PAGC)
Northern Intertribal Health Authority *	Fond du Lac Health Centre Box 213 Fond du Lac SK S0J 0W0	P: 686-2003 F: 686-2144	Senior Health Nurse (PAGC)
Northern Intertribal Health Authority *	Montreal Lake Health Centre General Delivery Montreal Lake SK S0J 1Y0	P: 663-5995 F: 663-5986	Senior Health Nurse (PAGC)
Northern Intertribal Health Authority *	Patuanak Health Centre General Delivery Patuanak SK S0M 2H0	P: 396-2072 F: 396-2047	Senior Health Nurse (MLTC)
Northern Intertribal Health Authority *	Southend Health Centre General Delivery Southend SK S0J 2L0	P: 758-2063 F: 758-2050	Senior Health Nurse (PBCN)
Northern Intertribal Health Authority *	Pelican Narrows Health Centre General Delivery Pelican Narrows SK S0P 0E0	P: 632-2046 F: 632-4502	Senior Health Nurse (PBCN)
Northern Intertribal Health Authority *	Stanley Mission Health Centre General Delivery Stanley Mission SK S0J 2P0	P: 635-2090 F: 635-2189	Senior Health Nurse (LLRIB)

Health Region	Location	Phone/Fax	Contact
Northern Intertribal Health Authority *	Wollaston Health Centre General Delivery Wollaston Lake SK S0J 3C0	P: 633-2167 F: 633-2080	Senior Health Nurse (PAGC)
Northern Intertribal Health Authority *	Community Health Status and Surveillance Unit Box 787, 3601 – 5 th Avenue E. Prince Albert SK S6V 5S4	P: 953-0670 F: 922-0166	Shirley Woods, Nurse Epidemiologist (NITHA)
Prairie North	Union Hospital Battlefords SK	P: 446-6654 (pharmacy)	Ed Madwid
Prairie North	Loon Lake Union Hospital Loon Lake SK	P: 837-2123	Alison Warner
Prairie North	Hospital Lloydminster SK	P: 820-6198 P: 820-6071 (pharmacy)	Gayle Almond Edith Wobeser
Prairie North	Union Hospital Maidstone SK	P: 893-4136	Chad Sayers
Prairie North	Memorial Union Hospital Turtleford SK	P: 845-2195	Judy Friesen
Prairie North	Union Hospital Meadow Lake SK	P: 236-3661	Jennifer Lamontagne
Prince Albert Parkland	Victoria Union Hospital Pharmacy Dept. 100 – 24 th Street W. Prince Albert SK S6V 5T4	P: 765-6006 or 765-6007 F: 765-6290	Dennis Derbowka
Prince Albert Parkland	Shellbrook Hospital Box 70 Shellbrook SK S0J 2E0	P: 747-2603 F: 765-6290	Patty Couture
Regina Qu'Appelle	Regina-Pharmacy Contact for both is Regina General Hospital Pasqua Hospital	P: 766-2487 F: 766-2772	Michelle Inglis
Regina Qu'Appelle	Fort Qu'Appelle Indian Hospital 780 Broadway St. Box 300 Fort Qu'Appelle SK S0G 1S0	P: 332-5611 F: 332-5033	Bev Desautels Nursing Supervisor
Regina Qu'Appelle	St. Joseph's Hospital Lestock SK S0A 2G0	P: 274-2215 F: 274-2045	Lois Horvath Director of Nursing
Regina Qu'Appelle	Balcarres Integrated Care Facility Box 340 Balcarres SK S0G 0C0	P: 334-2634 F: 334-2634	Lois Dixon Manager
Regina Qu'Appelle	Broadview Union Hospital Box 100 Broadview SK S0G 0K0	P: 696-2441 F: 696-2611	Linda Beutler Director of Nursing
Saskatoon	Royal University Hospital 103 Hospital Drive Saskatoon SK S7N 0W8	P: 655-1362 F: 655-1011	Patty Simonar

<i>Health Region</i>	<i>Location</i>	<i>Phone/Fax</i>	<i>Contact</i>
Saskatoon	Saskatoon City Hospital 701 Queen Street Saskatoon SK S7K 0M7	P: 655-8203 F: 655-8759	Joan Gegner
Saskatoon	St. Paul's Hospital 1702 – 20 th Street Saskatoon SK S7K 0Z9	P: 655-5113 F: 655-5963	Shelly McFadden
Saskatoon	Borden Community Health Centre Box 90 Borden SK S0K 0N0	P: 997-2110 F: 997-2114	Colleen Nesbitt
Saskatoon	Delisle Health Centre Box 119 Delisle SK S0K 0N0	P: 493-2810 F: 493-2812	Sharon Stonehouse Nora Bettig
Saskatoon	Rosthern Hospital Box 309 Rosthern SK S0K 3R0	P: 232-4811 F: 232-4887	Lorna Neufeldt
Saskatoon	Lanigan Hospital Lanigan SK S0K 2M0	P: 365-1411 F: 365-3354	Donna Steffen Darla Washington
Saskatoon	St. Elizabeth Hospital Box 10 Humboldt SK S0K 2A0	P: 682-8118 F: 682-4461	Ellen Kachur
Sunrise	Canora Hospital Box 749 Canora SK	P: 563-5621 F: 563-5571	Karen Kraynick Nurse Administrator
Sunrise	Invermay Health Centre Box 160 Invermay SK	P: 593-2133 F: 593-4566	Roberta Wiwcharuk Nurse Administrator
Sunrise	Kamsack Hospital Box 429 Kamsack SK	P: 542-2635 F: 542-4360	Brenda Walsh Nurse Administrator
Sunrise	Norquay Health Centre Box 190 Norquay SK	P: 594-2133 F: 594-2488	Barb Tomilin Nurse Administrator
Sunrise	Preeceville Hospital Box 469 Preeceville SK	P: 547-2102 F: 547-2223	Joanne Bodnar Nurse Administrator
Sunrise	St. Anthony's Hospital Box 280 Esterhazy SK	P: 745-3973 F: 745-3388	Carol Unchulenko Director of Care
Sunrise	Pioneer Health Care Centre Box 13 Ituna SK	P: 795-2622 P: 795-2622 F: 795-3592	Jane Halyk Health Services Manager
Sunrise	St. Peter's Hospital Pharmacy Dept. Box 1810 Melville SK	P: 728-5407 F: 728-4870	Glen Miller Pharmacy Department

<i>Health Region</i>	<i>Location</i>	<i>Phone/Fax</i>	<i>Contact</i>
Sunrise	Foam Lake Health Centre Box 190 Foam Lake SK	P: 272-3325 F: 272-4449	Arlene Scratton Facility Manager
Sunrise	Langenburg Health Centre Box 370 Langenburg SK	P: 743-2661 F: 743-2844	Janice Veal Facility Manager
Sunrise	Yorkton Regional Health Centre 270 Bradbrooke Drive Yorkton SK	P: 782-2401 F: 782-3359	Darlene Onslow NUM Emergency
Sunrise	Sunrise Public Health Services AG Kuziak Building 72 Smith Street E. Yorkton SK	P: 786-0600 F: 786-0620	Bonnie Blenner-Hassett
Sun Country	Weyburn General Hospital Weyburn SK	P: 842-8442 F: 842-0064	Dale Rodenbush Pharmacy
Sun Country	St. Joseph's Hospital Estevan SK	P: 634-0413 F: 634-5327	David Sereda Pharmacy
Sun Country	Wawota Hospital Wawota SK	P: 739-2400 F: 739-2802	Laurel Charles Manager
Sun Country	Weyburn Public Health Weyburn SK	P: 842-8627 F: 842-8638	Laraine Tremblay CD/Immunization Co- Coordinator

Updated April 2003

* Replacement kits for sites in Athabasca, Keewatin Yatthé & Mamawetan Churchill River RHAs and NITHA should be sent to La Ronge and PA respectively. They will arrange for distribution to the individual sites.

- Contact person for Athabasca, Keewatin Yatthé & Mamawetan Churchill River RHAs is Rhonda Oliver at (306) 425 8588
- Contact person for NITHA is Gail LeBlanc at (306) 953 0670

APPENDIX 3

Consent for HIV Post-Exposure Prophylaxis
Retain consent in patient file in treatment facility

My situation and the details of these drugs have been explained to me. I have been given the opportunity to ask questions relevant to Combivir & Nelfinavir. If I have questions in the future, I may contact

_____ at _____
I have been given a copy of this consent.

Client

Date

Name (Print)

Supervising Physician

Date

Name (Print)

This information is collected to enable the patient to receive PEP. This consent is subject to the Saskatchewan Freedom of Information & Protection of Privacy Act.



APPENDIX 4

HIV Post-Exposure Prophylaxis Replacement Form

Please complete this form when a PEP kit is prescribed and fax to Royal University Pharmacy, Saskatoon at (306) 655-2350. A replacement kit will not be released without all the information being completed. *It is the responsibility of the Health Region to update Saskatchewan Health when PEP kit site locations or contact people change.

Health Region: _____

PEP Kit Site: _____

Exposed Person's Name: _____

Pregnant: Yes No

Exposed Person's Health Services Number: _____

WCB Coverage: Yes No

RCMP: Yes #: _____

Exposed Person's Out of Province Number: _____

Province/Territory: _____

Other Insurance Company (Name): _____

Policy #: _____

Date PEP kit used: _____

Date of Exposure/Injury: _____

Type of Exposure and Injury

Exposure:	<input type="checkbox"/> Occupational	<input type="checkbox"/> Community	<input type="checkbox"/> Sexual Assault
Injury:	<input type="checkbox"/> Needlestick	<input type="checkbox"/> Percutaneous	<input type="checkbox"/> Bite
	<input type="checkbox"/> Non-intact skin	<input type="checkbox"/> Splash	<input type="checkbox"/> Mucous membrane

Type of Source Fluid

- Blood, serum, plasma or other biological fluids visibly contaminated with blood
- Pleural, amniotic, pericardial, peritoneal, synovial and cerebrospinal fluids
- Uterine/vaginal secretion and semen
- Saliva contaminated with blood
- Lab specimens containing concentrated HBV, HCV, or HIV
- Organ and tissue transplants

Other (describe): _____

Authorized Signature _____
(MHO or Site designate)

Prescribing Physician _____
(Printed Name and Signature)

This information is collected for invoicing purposes and for replacement of PEP kits. The prescription guidelines are defined in the document: Guidelines For The Management of Potential Exposures To Hepatitis B, Hepatitis C, HIV and Recommendations For Post-Exposure Prophylaxis. Saskatchewan Health, September 2003.

Medical Health Officers

1. Provide in-service on the BBP guidelines and introduce the PEP kit protocols to respective regional health authority stakeholders:
 - Community health workers;
 - Acute care workers;
 - Long-term care/special care home workers;
 - Family physicians;
 - Emergency physicians/employee health nurses.

2. Inform sites about the requirement for completing all the appropriate client information. This includes:
 - Completing and providing a copy of the Exposure Incident Report form (to be submitted to local public health office after the incident has been investigated);
 - Completing the client consent form for the prescription of the 3-day starter kit (to be retained by the agency);
 - Completing Worker Compensation Board (WCB) forms that include the worker's form and the employer's form, which must be submitted to WCB. (WCB assigns a number to the file and returns a file report to the employer and the worker.) Saskatchewan Health notifies WCB about the number that is assigned to the file in order to invoice WCB for the starter kit.

(If the worker is covered by other than WCB, the appropriate forms must be completed. If the worker or a member of the public has no coverage, indicate no coverage on the HIV POST-EXPOSURE PROPHYLAXIS (PEP) REPLACEMENT FORM and submit to Royal University Hospital Pharmacy, Saskatoon at fax: (306) 655-2350 who in turn will notify Communicable Disease Control, Saskatchewan Health for a decision on invoicing.)

3. Inform sites re protocol for obtaining replacement kits.

4. Inform sites that they are responsible for monitoring the expiry dates on the PEP starter kits. If the kits are not used and are not returned to Royal University Hospital Pharmacy for recycling within the specified time limit, the health region will be invoiced for the cost of the kit. It is also the responsibility of the health regions to update Saskatchewan Health with changes in PEP kit site locations or contacts.

Saskatchewan Health

1. Saskatchewan Health will distribute PEP kits to specified sites.
2. Saskatchewan Health will ensure that replacement kit(s) is retained in the health region office for emergency replacement. RUH Pharmacy will provide replacement kits upon the submission of *HIV POST-EXPOSURE PROPHYLAXIS (PEP) REPLACEMENT FORM* (See Appendix 4) to Saskatchewan Health.
3. Inform sites re options for replacing kits which have been used:
 - Fax request for replacement directly to RUH Pharmacy Department at (306) 655-2350

APPENDIX 6

Information for HIV Post-Exposure Prophylaxis (PEP Kits)

What is the risk of HIV infection after an exposure?

- *Most exposures do not result in infection.* The risk of infection varies with the type of exposure & the factors such as the amount of blood involved and the amount of virus in the source's blood at the time of exposure.
- The average risk of HIV transmission after exposure to HIV-infected blood through needle sticks or cuts is estimated to be 0.3% (or 1 in 300).
- The risk from mucocutaneous exposure (e.g., eye, nose or mouth) to HIV-infected blood is approximately 0.1% or (1 in 1000).

Why should post-exposure prophylaxis (PEP) be considered?

- Based on animal studies, evidence shows that antiretroviral therapy taken soon after exposure may prevent infection by as much as 86%.

What drugs are recommended for PEP?

- These medications are antiretrovirals.

Adult Dosage:

- Combivir® 1 tablet every 12 hours (contains 2 medications: 150 mg 3TC & 300 mg AZT/tablet)
- Nelfinavir (Viracept®) 1250 mg (5x250mg tablets) every 12 hours

For pediatric dosage and schedule, consult ID Specialist.

How do antiretrovirals work?

- Antiretrovirals work by stopping HIV from multiplying.
- They are commonly used in the *treatment of* individuals with AIDS and HIV infection.

How should these drugs be taken?

- Treatment should be started promptly, preferably within 1 - 2 hours after the exposure.
- They are available with a prescription at no charge for the first 3 days of therapy.
- If the result of the source patient's blood is negative for HIV, the drugs should be stopped.
- If you need to take these antiretrovirals for a 4-week (28 day) period of time, the medications are covered by the provincial drug plan. If Nelfinavir has been prescribed there may be a charge based on your ability to pay.
- Take each dose as close to the scheduled times as possible in order to maintain effective levels of medication in your body.
- Do not skip any doses.
- Take with a meal or light snack.

What should you do if you forget a dose?

- Take it as soon as you remember
- Then just carry on with your regular dosing schedule.

What are the side effects of Combivir and Nelfinavir?

- Some people may experience allergic reactions to medications. **If you have any of the following symptoms soon after taking a dose, STOP taking the drug & tell your doctor immediately:**
 - Sudden wheeziness & chest pain or tightening
 - Swelling of eyelids, face or lips
 - Skin rash or “hives” anywhere on the body.
- Common side effects of Combivir are mild and often temporary, and may include **headaches, dizziness, nausea, vomiting, diarrhea, fever, rash, fatigue, a general feeling of being unwell, insomnia, or muscle aches.** If these effects occur and are bothersome, please call the clinic or discuss them at your next visit.
- The most common side effects of Nelfinavir are diarrhea, gas, nausea and rash.
- **Nelfinavir may reduce the effectiveness of birth control pills.** Other or additional methods of birth control should be used.
- If side effects occur and are bothersome, inform your doctor.
- If therapy is to continue for 28 days, other side effects may occur. Inform your physician if you notice any symptoms of fever, chills, shortness of breath, palpitations, or fatigue.

What other precautions should you follow while using antiretrovirals?

Before beginning treatment, tell your doctor if:

- You had or have a problem with your kidneys
- You had or have any disease of the liver, particularly hepatitis B or C infections
- You have any other illnesses
- You are pregnant, plan on becoming pregnant or are breast-feeding
- You are taking **ANY** other drugs, including non-prescription agents such as herbs, etc. (Do not start taking other medications while on these medications without discussing them with your doctor first)

How should these medications be stored?

- Store in tightly closed containers in a cool (15-30°C), dry place, protected from light.
- Do not store in your bathroom or kitchen as heat & moisture may cause the out of reach from children.

If you have any questions or concerns about these medications, please discuss them with your pharmacist, doctor or nurse.

(Adapted from Patient Information provided by Pharmacy, Regina and Saskatoon Infectious Disease)¹⁰

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