Government of **Western Australia**
Department of **Health**

Operational Directive

Enquiries to:	Healthcare Associated Infection Unit	**OD number:**	OD: 0641/15
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Subject: **Management of Occupational Exposures to Blood and Body Fluids**

Compliance with this Operational Directive is mandatory for all public hospitals and those licensed private healthcare facilities contracted to provide services to public patients.

Compliance with this Operational Directive supports the requirements of Standard 3 of the *National Safety and Quality Health Service Standards*.

The purpose of this document is to ensure that WA Health meets its legal, ethical and moral obligations relating to the management of health care workers (HCWs) who are exposed to another person's blood or body fluids in the course of their work. It provides guidance on the management of occupational exposures and describes the mandatory requirements to ensure the HCW is managed appropriately to minimise the risk of blood-borne virus (BBV) acquisition and in accordance with current evidence-informed protocols.

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DIRECTOR GENERAL
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This information is available in alternative formats for a person with a disability.

Government of **Western Australia**
Department of **Health**

Management of Occupational Exposure to Blood or Body Fluids in the Healthcare Setting

Title: Management of Occupational Exposures to Blood or Body Fluids in the Healthcare Setting Policy

1. Background

An occupational exposure (OE) is defined as an incident that occurs during the course of a healthcare worker's (HCW's) employment and involves direct contact with another person's blood or body fluids. Transmission of human immunodeficiency virus (HIV), hepatitis B virus (HBV) and hepatitis C virus (HCV) may occur via parenteral or non-parenteral exposure.

Generally, a HCW who sustains an OE has a low risk of contracting a blood-borne virus (BBV) (Refer Table 1). The risk of transmission is dependent on the type of injury sustained, the extent of the exposure and the current viral load of the source of the exposure. A thorough risk assessment of each OE is required (refer Appendix A).

Adherence to standard infection prevention practices remains the first line of protection for HCWs against OE to BBVs. Knowledge regarding the management of exposures to BBVs continues to evolve, so the advice of a suitably qualified medical specialist should always be sought following any exposure with a known positive or high-risk source.

Any HCW in Western Australia (WA) who undertakes exposure-prone procedures (EPP) has an ethical responsibility to know their own BBV status, to follow recommended procedures to prevent BBV transmission, and to report BBV exposure incidents.

Table 1: Risk of developing HBV, HCV or HIV following an occupational exposure

Source Blood	Risk of acquisition	Comments
HBsAg positive and HBeAg negative[1]	1-6% when recipient non-immune	The risk of HBV infection is primarily related to the degree of contact with blood and also to the hepatitis B e antigen (HBeAg) status of the source person.
HBsAg positive and HBeAg positive[2]	22-31% when recipient non-immune	
HCV Ab positive[3]	2-8%	Following percutaneous exposure. Transmission rarely occurs following mucous membrane exposure.
HIV Ab positive[4]	Approximately 0.3%	Following percutaneous exposure to blood.
	Approximately 0.09%	Following mucous membrane exposure to blood.
	The risk for transmission has not been quantified but is probably considerably lower than for blood exposures.	Exposure to fluids or tissues other than HIV-infected blood.

[1] Reference list 8.1
[2] Reference list 8.1
[3] Reference list 8.3
[4] Reference list 8.4

2. Scope

This document describes the requirements for the management of HCWs who sustain an OE to blood or body fluids in a healthcare facility (HCF) and have a potential risk for acquisition of a BBV. In addition, guidance is provided for a situation in which a patient is accidentally exposed to blood or body fluids from a HCW or another patient.

This policy does not apply to non-occupational exposures. For management of non-occupational exposures, please refer to Section 10: Related Documents.

3. Policy statement

Any HCW who sustains an OE is to be managed in a timely manner and consistent with the current evidence-informed literature (refer Appendix B). The following key principles are to be adopted by WA HCFs.

- HCFs are to encourage the reporting of all OEs in a non-punitive manner and analyse the cause of exposures to address areas where improvements can be made, either by a change in work practice, use of personal protective equipment (PPE) or introduction of safety engineered medical devices (SEMDs) to prevent OEs.
- All HCFs are to have a nominated healthcare provider (HCP) who is responsible for coordinating the management of all OEs, including provision of pre- and post-BBV test discussions and ensure procedures are in place to manage exposures that occur at any time during the 24 hour period. HCFs where there is no on-site HCP need to ensure processes are in place for the provision of this service via telephone or tele-health to a nominated HCP at another site.
- Confidentiality of both the HCW sustaining an OE (the recipient) and the person from whom the exposure originated from (the source) is to be maintained at all times.
- Any exposure of a HCW from a source positive for a BBV (or likely to be positive) is to be referred immediately to a suitably qualified medical specialist for discussion relating to ongoing management and follow up, excluding those who are exposed to HBV positive source and have serological evidence of immunity to HBV (Refer Table D1).

4. Roles and Responsibilities

Executive Directors of each HCF are responsible for ensuring:

- implementation and compliance with this policy
- a process is in place for HCWs, whose work places them at risk of contact with blood or body fluids to provide either serological evidence of immunity to HBV, documentation of their non-responder status or refusal to be vaccinated
- all HCWs receive education regarding standard infection prevention practices, and OE prevention strategies at induction, and ongoing, to maintain and update knowledge.
- a non-punitive culture exists that encourages the reporting of all OEs in a timely manner

- OEs are regularly reported at an Executive level and interventions are implemented, including the use of safety engineered medical devices (SEMDs) where appropriate, that minimise the frequency of OEs within their HCF
- there is a nominated HCP, with appropriate knowledge, to coordinate the management of OEs
- local systems are in place for reporting and managing OEs that includes:
  - to whom the exposed HCW is to report and the afterhours management of OEs
  - protocol for obtaining consent from the recipient and source for serology tests
  - documentation requirements for consent obtained from the source
  - the serology tests that are to be performed on both the recipient and source
  - how to access hepatitis B vaccine and hepatitis B immunoglobulin (HBIG)
  - contact details of the medical specialist that is to manage the HCW who has had an OE from a source that is positive or likely to be positive for HBV or HCV
  - contact details of the HIV Service that is to manage the HCW who has an OE from a source that is positive or likely to be positive for HIV, and who is to authorise the release of post exposure prophylaxis (PEP), and of the pharmacy that stocks that HCF's PEP drugs.
- the HCW is supported with appropriate information, serology testing and review of work allocation if they perform exposure-prone procedures (EPPs)
- that confidentiality for the HCW and the source is maintained at all times
- that all reported OEs are fully documented and the records filed permanently, including the incident notification and all serology tests.

Nominated Healthcare Providers are responsible for ensuring:

- all OEs are managed in accordance with Appendix B
- a risk assessment is conducted in accordance with Appendix A that includes defining the:
  - nature and extent of the injury / exposure
  - nature of the object causing the exposure
  - amount of blood or body fluid that the HCW was exposed to
  - vaccination and immune status of the HCW
  - BBV status of the source
  - likelihood of an unidentified source being HBV, HCV or HIV positive.
- that pre-test and post-test discussion is held with the HCW following a reported exposure, and prior to, and following, any testing for BBVs
- informed consent is obtained from the HCW to perform baseline serology to determine hepatitis B surface antibody levels and HBV, HCV and HIV status
- assessment of the HCW for HBV vaccination status and, if not immunised, the HCW should be commenced on a HBV vaccination schedule. The need to provide HBIG PEP in the non-immune HCW is to be assessed as per Table B2
- assessment of the HCW for any potential risk for other diseases e.g. tetanus, and offer PEP as appropriate

- every effort is made to identify the source of the exposure and the medical practitioner responsible for the source is informed of the exposure
- the nominated HCP, or medical practitioner responsible for the source, is to obtain informed consent from the source to perform serology testing for HBV, HCV and HIV
- prompt reporting of BBV results to the recipient and documentation of all exposure-related test results. Notification of source positive results is the responsibility of the source medical practitioner
- documentation of interventions, in consultation with the recipient, designed to prevent the recurrence of that type of exposure.

All Healthcare workers are responsible for ensuring:

- they know their own BBV status, especially if they are performing EPPs
- their vaccination status against vaccine preventable diseases is current and those who have contact with blood or body fluids provide evidence of HBV vaccination or documented evidence of non-responder status
- any refusal by a HCW to undertake recommended vaccinations and / or serology is to be documented
- they adopt infection prevention practices to minimise the risk of OEs e.g. use of appropriate PPE and safe handling and disposal of sharps.

When the exposed person is a patient

On rare occasions, a patient may be inadvertently exposed to blood or body fluids from a HCW or another patient. The same requirements as for OEs to HCWs should be applied. The nominated HCP should ensure the patient's medical team is informed of the exposure and the incident is disclosed to the patient and / or their guardian as soon as possible.

All HCFs are to ensure systems are in place for reporting, managing and documenting blood and body fluid exposure incidents that may occur from a HCW to a patient or patient-to-patient. HCWs have an obligation to care for the safety of others in the workplace, including patients, under both common law and the *Occupational Health and Safety and Welfare Act 1986.*

5. Compliance

Compliance with this Operational Directive is mandatory for all public HCFs and those private HCFs contracted to provide services to public patients, but has relevancy to all HCFs in WA. It is recommended that private healthcare facilities align their OE management with this policy to promote standardisation across the sectors.

All HCWs need to comply with infection prevention practices to reduce the incidence of OEs. Repeated failure to comply with recommended infection prevention practices to minimise preventable OEs e.g. appropriate use of PPE to avoid a splash exposure when performing high-risk procedures, may result in performance management and / or disciplinary action.

6. Evaluation

Evaluation of this policy is to be carried out by the Healthcare Associated Infection Unit (HAIU). The following means / tools are to be used:

- evaluation of the key principles of this policy
- survey of prevention strategies in place at HCFs
- review of OE data submitted to the Healthcare Infection Surveillance WA (HISWA) program at an aggregated level and by identified hospital level.

7. Abbreviations / Definitions

ALT	Alanine aminotransferase is an enzyme commonly found in the liver. Used as a marker to monitor liver health post exposure to HCV positive blood.
Blood-borne viruses (BBVs)	Hepatitis B virus, hepatitis C virus and Human Immunodeficiency virus
Exposure-prone procedure	A subset of invasive procedures where there is potential for contact between skin of the HCW and sharp surgical instruments, needles or sharp tissue in body cavities or in poorly visualised or confined areas of the body.
HBIG	Hepatitis B immunoglobulin.
HBcAb	Hepatitis B core antibody (indicates prior or ongoing infection).
HBsAb	Hepatitis B surface antibody (indicates immunity).
HBeAg	Hepatitis B antigen (marker of infectivity).
HBsAg	Hepatitis B surface antigen (indicates active infection).
HBV	Hepatitis B virus.
HCV	Hepatitis C virus.
HCV RNA PCR	Detects HCV viraemia.
HIV	Human immunodeficiency virus.
HIV Ab	Human Immunodeficiency virus antibody.
HIV service	A service that can provide access to a physician with expertise in HIV medicine. This may be an Immunology or Infectious Diseases Service.
Healthcare facility	Any facility providing a healthcare service, private or public, including ambulance services in Western Australia.
Healthcare provider	An appropriately trained and qualified HCW responsible for the management of occupational exposures to blood or body fluids.
Healthcare worker	A person whose activities involve contact with patients or with the blood or body fluids of patients in a healthcare or laboratory setting and includes those who are employed, honorary, contracted, on student placement or volunteering at the HCF.
Non-parenteral exposure	Contamination of mucous membranes e.g. eyes, mouth, non-intact skin with blood or body fluids.
Non-responder	A person who has been fully vaccinated but has failed to demonstrate adequate antibody levels.
Occupational exposure	An incident that occurs in the course of a person's work and involves contact with blood or body fluids that places them at risk of acquiring a BBV.

PEP	Post exposure prophylaxis.
PCR	Polymerase chain reaction.
Parenteral exposure	Piercing of skin or mucous membranes with a sharp that is contaminated with blood or body fluids.
Post exposure prophylaxis	Administration of drugs or vaccines after exposure to a blood borne virus, i.e. HIV or HBV, in an attempt to prevent seroconversion.
Recipient	The person who is exposed to another person's blood or body fluids.
Seroconversion	A change in serological test results from negative to positive as antibodies develop in reaction to an infection or vaccine.
SEMD	Safety engineered medical devices.
Sharp	Any object capable of inflicting a penetrating injury.
Source	The person that the blood or body fluids originated from.
Window period	The time from exposure to seroconversion when the source may be asymptomatic, experiencing seroconversion illness, and when routine antibody testing may be negative.

8. References / Bibliography

8.1 Centres for Disease Prevention and Control. Updated U.S. Public Health Service Guidelines for the management of occupational exposures to HBV, HCV and HIV www.cdc.gov/mmwr/preview/mmwrhtml/rr5011a1.htm.

8.2 Australian Government. Transmission of hepatitis C. www.health.gov.au/internet/publications/publishing.nsf/Content/phd-hepc-manual-toc~phd-hepc-manual-ch1~phd-hepc-manual-ch1-6.

8.3 Australian Society for HIV Medicine (ASHM). National guidelines for post-exposure prophylaxis after non-occupational and occupational exposure to HIV. 2013.

8.4 National Health and Medical Research Council. The Australian Immunisation Handbook. 10th Edition 2013.

8.5 Centre for Healthcare Related Infection Surveillance and Prevention (CHRISP). Guideline for the management of occupational exposure to blood and body fluids. Queensland Health. QH-IMP-321-8:2014.

8.6 HIV, viral hepatitis and STIs: a guide for primary care. Australasian Society for HIV Medicine (ASHM) 2014 update.

8.7 Department of Health Western Australia. OD 0394/12. Policy for Health Care Workers Known to be Infected with Blood-borne Viruses.

8.8 CDC Guidance for Evaluating Health-Care Personnel for Hepatitis B Virus Protection and for Administering PEP. MMWR December 20, 2013 / 62(RR10); 1-19.

9. Relevant legislation

9.1 *Western Australia Occupational Safety and Health Act 1984* and *Occupational Safety and Health Regulations 1996*.

9.2 *National Code of Practice for the Control of Work-related Exposure to Hepatitis and HIV (Bloodborne) Viruses*. [NOHSC: 2010 (2003)].

10. Related documents

The following WA Health documents are available at:
http://www.health.wa.gov.au/circularsnew/search.cfm

10.1 Operational Directive - *Protocol for Non-occupational post exposure prophylaxis* to *prevent HIV in Western Australia*.

10.2 Operational Directive - *Policy for healthcare workers known to be infected with a blood-borne virus.*

10.3 Operational Directive – *Healthcare worker immunisation policy.*

11. Authority

Title:	Healthcare Associated Infection Unit		
Contact:	08 9388 4868		
Directorate:	Communicable Disease Control Directorate		
Version:	**V 4.0**	**Date Published:**	18/12/2015
Date of Last Review:	18/12/2015	**Date Next Review:**	18/12/2020

Appendix A

Risk assessment and classification of occupational exposures

The highest risk of transmission for any BBV is associated with:

- a deep injury with a device visibly contaminated with blood
- injuries associated with contaminated hollow bore needles
- a source patient with late stage HIV infection or high viral load
- a source patient with HBV who is HBeAg positive, HBV DNA detectable or high viral load
- a source patient with HCV who is HCV RNA PCR detectable.

Classification and Risk	Assessment
Massive Exposure ***(High Risk)***	• Transfusion of blood. • Injection of large volume of blood or body fluid (>1ml). • Parenteral exposure to laboratory specimens containing high titre of virus.
Definite Exposure (Moderate Risk)	• Skin penetrating injury with a needle contaminated with blood or body fluid. • Injection of blood or body fluid <1ml. • Laceration or similar wound which causes bleeding, and is produced by an instrument that is visibly contaminated with blood or body fluid. • In laboratory settings, any direct inoculation with material likely to contain HIV, HBV or HCV.
Possible Exposure ***(Low Risk)***	• Intradermal (superficial) injury with a needle contaminated with blood or body fluid. • A wound not associated with visible bleeding, caused by an instrument contaminated with blood or body fluid. • Prior wound or skin lesion contaminated with blood or body fluid. • Mucous membrane or conjunctival contact with blood or body fluid. • Scratched/broken skin caused by a fingernail injury when there is blood evident on the source hands. • Human bites that break the skin - the clinical evaluation should include the possibility that both the person bitten and the person who inflicted the bite were exposed to BBVs.
Doubtful Exposure ***(Very Low Risk)***	• Intradermal (superficial) injury with a needle considered not to be contaminated with blood or body fluid. • Superficial wound not associated with visible bleeding, caused by an instrument considered not to be contaminated with blood or body fluid. • Prior wound or skin lesion contaminated with a body fluid other than blood, e.g. urine. • Mucous membrane or conjunctival contact with a body fluid other than blood.
Non Exposure ***(No Risk)***	• Intact skin visibly contaminated with blood or body fluid.

Appendix B

Exposure Management

1. Immediate Management of Person Exposed - 'Recipient'

Immediately following exposure to blood or body fluids, the recipient is to:

1.1 Wash the wound or skin sites thoroughly with soap and water or use a waterless cleanser or antiseptic if water is unavailable. Apply a waterproof dressing as necessary, and apply pressure through the dressing if bleeding is still occurring. Do not squeeze or rub the injury site.

1.2 Rinse the eyes gently but thoroughly (remove contact lenses), for at least 30 seconds, with water or normal saline. If blood or body fluids are sprayed into the mouth, spit out and then rinse the mouth with water several times.

1.3 If any clothing is contaminated, remove and shower if necessary.

1.4 The recipient should inform an appropriate person e.g. supervisor or manager as soon as possible after the exposure so a risk assessment and follow-up can be undertaken in a timely manner.

2. Blood Borne Virus (BBV) Testing

2.1 Informed consent for BBV testing must be obtained from both the recipient and the source, prior to performing any baseline serology testing as described in Table 1.

2.2 In some instances, the source may have provided the HCF with written consent for BBV testing, at time of their admission. If written or verbal consent is unable to be obtained then attempts should be made to obtain consent from the next-of-kin. If consent cannot be obtained at the time of the incident, delayed testing of the source should be considered.

2.3 Where the source is a neonate or an infant (up to 6 months of age), it is preferable to collect the blood from the mother.

Table B1 Source and Recipient Serology Baseline Testing

Testing	Baseline Tests required	Rationale
Source	HBsAg, HIV Ab, HCV Ab	• Evidence of disease
If:		
Source known positive HCV Ab	HCV-RNA	• Determine viral load / degree infectivity
Source known positive HBsAg	HBeAg and HBV quantitative PCR	
Recipient	HBsAb	• Evidence of immunity
	HIV Ab, HCV Ab	• Baseline results
If source positive HBV, HCV, HIV ***add***	Baseline LFT, ALT	• Baseline liver function
If recipient is a known non-responder to hepatitis B vaccine and HBV status unknown ***add***	HBsAg, HBcAb	• Evidence of HBV infection

3. Management of Source

3.1 **Source negative for BBV:** If the source is found to be HBV, HCV and HIV negative, further testing of the source is generally not required unless there is reason to suspect that the source was involved in high risk behaviours for BBV infection. Follow-up can be undertaken through the source's general practitioner if required.

3.2 **Source positive for BBV:** Ensure additional testing as per Table B1 is ordered. Pre-test discussion should include the need for further testing should a source return a positive result. If the source is BBV positive and is not already in the care of an appropriate medical specialist referral by the treating medical practitioner is required.

3.3 **Source likely to be positive for BBV:** In the situation where it is suspected that the source is in the "window period" for a BBV, the source should receive appropriate counselling and be asked to consent to follow-up at appropriate intervals, usually 6 weeks and 12 weeks to ascertain whether or not they develop a BBV, by the Medical Practitioner responsible for their care.

3.4 **Source unknown or unable to be tested:** If the source status remains unknown, the probable risk of the source being positive for a BBV must be assessed from historical and epidemiological information when considering management of the exposed HCW. This is dependent on the type of exposure (Refer to Appendix A), the probability that the cause of the exposure e.g. needle, scalpel blade, was contaminated with blood or body fluid and the prevalence of HBV, HCV and HIV in the community from which the source came. If it is considered there is a high risk of the source being infected with a BBV, then the HCW is to be managed in accordance with a source positive approach.

3.5 Testing of needles or other sharp objects implicated in an exposure is not recommended. The reliability of findings in such circumstances are unknown and pose additional risks to the persons handling them.

4. Management of Recipient

4.1 The nominated HCP is to discuss test results and have a post-test discussion to the recipient.

4.2 If the recipient, on baseline testing is found to be non-immune for HBV, a review of the recipient's hepatitis B vaccination status is to be undertaken as per Table B2.

4.3 If the recipient, on baseline testing, is found to be infected with a BBV and is not already in the care of an appropriate medical specialist, they should be referred as soon as possible. Management of a HCW known to be infected with a BBV must be managed as per the current version of the WA Health Operational Directive Healthcare Workers Known to be infected with Blood-borne Viruses.

4.4 It is strongly recommended that recipients of OEs attend all follow up appointments organised by the HCP. Recipients may opt to attend to follow up care with their own GP.

4.5 Source negative: When the source is confirmed negative on baseline testing for BBVs, the HCW should be offered follow up serology testing at 3 months for reassurance. No further follow up of the source is required. No behavioural or work practice modifications are required by the HCW.

5. Management of Recipient - source positive for HBV (or likely to be positive)

5.1 The recipient will be managed in line with the recommendations in Table B2.

5.2 The non-immune recipient is to have follow up testing as per Table B3.

5.3 No modifications to a recipient's patient care responsibilities are required, based solely on exposure to HBV positive blood.

5.4 Any recipient who is non immune or a known non-responder and is exposed to a HBV positive source should be reviewed by a physician with expertise in viral hepatitis.

Table B2 Recommended HBV PEP

Recipient Status	Source HBsAg Positive or Unknown or Unable to be Tested
Unvaccinated	Administer HBIG* as a single dose within 72 hours of exposure **and** initiate hepatitis B vaccination within 7 days and at 1 and 6 months after 1st dose.
Previously Vaccinated BUT Known NON-Responder **	Administer HBIG* as a single dose within 72 hours of exposure.
Previously Vaccinated BUT response unknown / vaccination incomplete.	If HBsAb < 10IU/L administer HBIG* as a single dose within 72 hours of exposure **and** initiate hepatitis B vaccination within 7 days.*** If HBsAb ≥10 IU/L no treatment is required.
Previously Vaccinated **Known responder with documented HBsAb level ≥10 IU/L at any time post vaccinations.**	No Treatment Required.
Known HBV positive	Persons previously infected with HBV are immune to reinfection and do not require PEP.

- * Dose of HBIG: 400 IU by intramuscular injection (100IU if body weight < 30kg). HBsAb response should be done when passively acquired antibody from HBIG is no longer detectable i.e. 4-5 months.
- ** Non-responder: A non-responder is a person without HBV infection who has a documented history of an age-appropriate primary course of hepatitis B vaccine, but with a current HBsAb level <10 IU/mL. There are a number of potential options for non-responders. Persons who do not respond to the primary vaccination course, and in whom chronic HBV infection has been excluded, should be offered further HBV vaccination doses. (See Australian Immunisation Handbook, current edition).
- *** Review vaccination history and administer additional doses of HBV vaccine at 1 month and months after 1st dose if required. Re-test for HBsAb 4-6 weeks post completion of course.

6. Management of Recipient - source positive for HCV (or likely to be positive)

6.1 Any recipient exposed to a HCV RNA PCR positive source is to be reviewed and counselled by a physician with expertise in viral hepatitis as soon as possible.

6.2 Currently there is no prophylaxis proven to be effective of altering the likelihood of HCV transmission. Immunoglobulin (IG) and antiretroviral are not recommended for use as PEP after exposure to HCV-positive blood.

6.3 The recipient is to have follow-up testing as per Table B3.

6.4 The recipient should be advised that during the follow up period they should refrain from donating plasma, blood, organs, body tissue, breast milk or sperm. The Recipient is not required to modify sexual practices or refrain from becoming pregnant or breastfeeding.

6.5 No modifications to a recipient's patient care responsibilities are required based solely on exposure to HCV positive blood, however those recipients who perform EPPs may require more frequent testing (refer Table B3).

6.6 If the recipient becomes HCV Ab positive and/or has an elevated ALT on subsequent testing, then HCV RNA testing should be performed.

6.7 The recipient should be advised to seek medical attention if they become unwell with symptoms consistent with acute hepatitis such as nausea, vomiting, abdominal discomfort or jaundice.

6.8 Ongoing support must be continued for the duration of post-exposure follow up and be extended to the recipient's significant others as required.

7. Management of Recipient - source positive for HIV (or likely to be positive)

7.1 Any recipient exposed to a HIV positive source is to be referred immediately to a physician with expertise in managing HIV infection for consideration of initiation of HIV PEP. Physician contact details, PEP drug regimens and indications for PEP are described in Appendix D Tables D1, D2 and D3.

7.2 The decision to commence HIV PEP is based on the type of exposure and the risk associated with that exposure, source characteristics such as stage of HIV infection, viral load and antiretroviral treatment history (Refer Table D3).

7.3 The recipient is to be evaluated as soon as possible after their exposure and a history taken that includes information about any medications, current or underlying medical conditions or circumstances e.g. renal disease, breast feeding that may influence HIV PEP selection. All women with the potential to be pregnant on presentation for PEP should be offered pregnancy testing.

The interval within which HIV PEP should be initiated for optimal efficacy is not known. However, where HIV PEP is indicated, it should be commenced as soon as possible following the exposure, preferably within 1-2 hours and no longer than 72 hours.

7.4 Recipients who are prescribed HIV PEP must be informed of the uncertain efficacy of this intervention, the importance of adherence to the regime and the potential adverse effects associated with a 28 day course of antiretroviral medication.

7.5 The recipient must be fully informed of the symptoms associated with HIV seroconversion e.g. fever, rash, myalgia or lymphadenopathy and advised to report as soon as possible to their treating physician if any symptoms occur.

7.6 Irrespective of the decision to take HIV PEP, or the type of exposure, the recipient is to have follow-up testing as per Table B3.

7.7 The recipient should be advised that during the follow up period they should:

- refrain from donating body tissue, breast milk or semen
- refrain from donating plasma or blood for a period of 12 months as per the requirements of the Australian Red Cross Blood Service[5].
- exercise sexual abstinence or use condoms to protect sexual partners and avoid pregnancy
- not share razors, toothbrushes, or other possible sources of BBV transmission
- cover open cuts and wounds with a waterproof dressing.

7.8 No modifications to a recipients patient care responsibilities are required based solely on exposure to HIV positive blood, however those recipients who perform exposure prone procedures may require testing more frequently.

7.9 Ongoing support for the HCW must be continued for the duration of the HIV PEP or, if the HCW chooses not to have PEP, for the duration of the post-exposure follow up period. Support must be extended to family and other intimate contacts of the HCW.

Table B3 – Recipient follow up testing recommendations

Source	Follow up Testing Recommendations
HBV positive and non-immune recipient	• LFT at 6 weeks and 12 weeks. • HBsAg at 12 weeks and 24 weeks (may give a false positive if tested within 12 weeks of giving Hepatitis B vaccine). • HBsAb at 4-6 weeks post vaccination or delay for 4-5 months if HBIG administered (refer Table B2).
HCV positive	• HCV RNA PCR and ALT at 4, 8, and 12 weeks post exposure. • HCV antibody at 12 and 24 weeks.
HIV positive	• HIV antibodies at 4-6 weeks and at 3 months post exposure.

8. Availability of antiretroviral starter packs

8.1 All HCFs are responsible for ensuring that the recommended HIV PEP starter packs can be accessed to enable administration of the drugs as soon as possible after presentation, and no longer than 72 hours of an exposure.

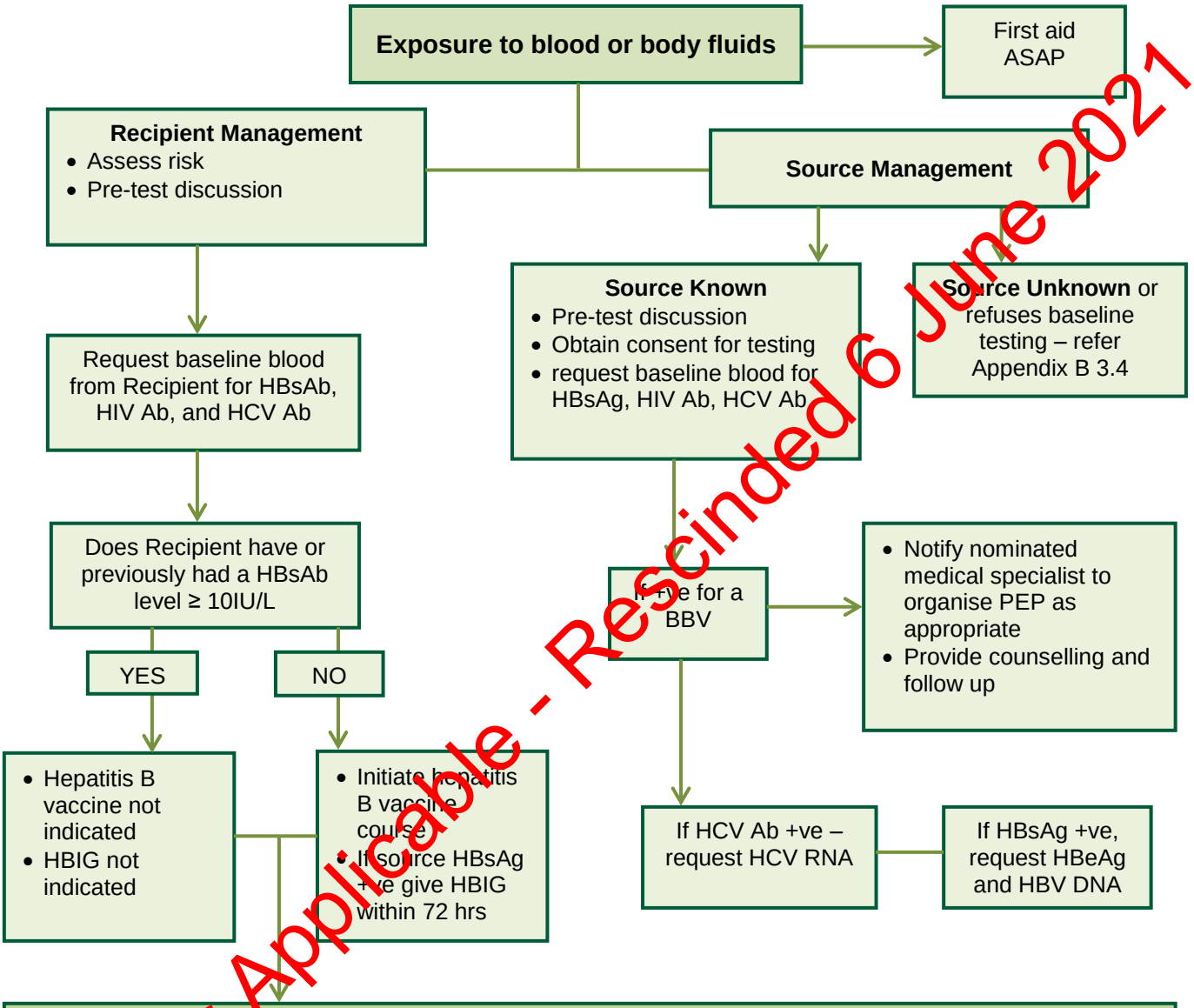
8.2 Smaller HCFs, including regional HCFs, are to have a documented process in place outlining the process for obtaining HIV PEP, when prescribed, from a tertiary facility or a regional resource centre that ensures availability within 12-24 hours of request.

8.3 Follow up arrangements with a physician with expertise in managing HIV, MUST be made for the HCW within 7 days of the exposure to ensure appropriate follow up / access to ongoing supply of HIV PEP as required.

[5] Still a requirement as per personal communication with clinical staff Red Cross Blood Transfusion Service July 2015.

Appendix C

Exposure Management Flow Chart



Recipient follow up testing

- **Source HIV positive/unknown**
  Repeat HIV Ab at 6 and 12 weeks

- **Source HCV positive/unknown**
  - HCV RNA PCR and ALT at 4, 8, and 12 weeks post exposure and
  - HCV antibody at 12 and 24 weeks.

  If HCW performs EPP, earlier testing may be required – discuss with medical specialist

- **Source negative for HIV, HCV**
  HCW is offered follow up testing at 3 months for reassurance.

- **Source HBV positive/unknown and Recipient not immune to HBV (no prior documented history of HBsAb>10iu/L)**
  - LFT at 6 and 12 weeks
  - HBsAg at 12 weeks and 24 weeks

Appendix D

HIV Specialist and HIV Post Exposure Prophylaxis

Table D 1 HIV Specialist Contact Details for HIV PEP Advice

Facility	Contact Number	Who to Contact
Fiona Stanley Hospital Infectious Diseases Department	**(08) 6152 2222**	**Infectious Diseases Physicians**
Royal Perth Hospital Clinical Immunology	**(08) 9224 2899** (Monday-Friday) **(08) 9224 2244** (Weekends, public holidays and after hours)	**Clinical Nurse Specialist** (Monday-Friday) **Page on call Immunology Registrar** (Weekends, public holidays and after hours)
Sir Charles Gairdner Hospital Microbiology Department	**(08) 9346 3333**	**Clinical Immunology Registrar** (Monday-Friday) **Page on call Immunology Registrar** (Weekends, public holidays and after hours)

Table D2 Drugs Commonly Prescribed in HIV PEP

Drug Class and Name
Nucleoside reverse transcriptase inhibitor (NRTI) zidovudine (AZT) lamivudine (3TC) stavudine (d4T) emtricitabine (FTC)
Nucleotide reverse transcriptase inhibitor (NtRTI) tenovir (Viread®)
Protease inhibitor (PI) lopinavir with ritonavir (Kaletra®)
Co-formulations lamivudine and zidovudine (Combivir®) emtricitabine and tenovir (Truvada®)

Table D3 Recommendations for PEP after exposure to a known HIV positive source

Type of Exposure	Estimated Risk of transmission of HIV per exposure [6]	PEP Recommendation		Comments
		Source viral load undetectable	Source not on treatment or on treatment with detectable viral load	
Percutaneous	1/440 (moderate risk)	**Recommend** 2 drugs ^ in consultation with HIV service	**Recommend** 3 drugs ^^ in consultation with HIV service	Starter packs to contain sufficient drugs for 7 days. Follow up with HIV medical specialist must be made for the HCW within 7 days to facilitate further supplies. A 28 day course of PEP is recommended.
Mucous membrane or non-intact skin	<1/1000 (low to very low)	**Consider** 2 drugs in consultation with HIV service	**Recommend** 3 drugs in consultation with HIV service	
Non-blood stained urine, saliva, faeces	Not quantifiable (negligible risk)	Not offered		

^ Truvada® is the recommended 2 drug combination to be available in WA HCF Pharmacies.

^^ Truvada® plus the addition of one other drug as recommended by the HIV Service.

[6] Risk estimates from *ASHM Post-exposure Prophylaxis after Non-Occupational and Occupational exposure to HIV.* National Guidelines 2013

This document can be made available in alternative formats on request for a person with a disability.