

Post Occupational Exposure of Blood and Fluids Policy-Angkor Hospital for Children

Updated: Kazumi Akao RN, 2005

This policy must be adhered to by all staff and volunteers of Angkor Hospital for Children, by order of the Executive Director.

Contact persons in case of exposure

1. Any one of:

- Employee Health doctor: Dr. Leakhena (any working day + night or day when on-call)
- On-call or duty doctor: Drs Pheaktra, Pises, Seitaboth, Lyda, Heng, Kimsong, Pagnarith, Chheng (night/ weekend when on call)

In the event of problems/ queries, please contact any one of:

1. HIV project supervisor: Kazumi Akao, RN
2. Senior HIV doctor: Dr S. Seitaboth MD

These names with contact phone numbers will be available in ER.

I. Introduction

Every patient has the potential of transmitting disease through their blood or other body fluids. Therefore **all hospital staff and volunteers** are required to observe international **universal precautions**. It is the responsibility of every staff member to understand universal precautions and apply them to their daily hospital tasks, where appropriate. (see **Appendix 1**).

Staff who do not know the universal precautions should contact the head of their department at the earliest possible opportunity. Departmental heads are responsible for ensuring that new staff, including foreign volunteers, are aware of this policy.

This policy is focused on blood/body fluids exposure with the risk of contracting Hepatitis B (HBV), Hepatitis C (HCV), and HIV infections. Revisions will be made in the future as other procedures and management strategies become available.

What is a risky exposure?

1. Percutaneous injury (e.g. needlestick or cut with a sharp object).
2. Contact of mucous membrane or non-intact skin (ex.-broken, chapped, or skin with dermatitis) with blood or other body fluids that are potentially infectious.

risk for HIV transmission after occupational percutaneous exposure when :

- deep injury
- source patient has terminal illness
- device is visibly contaminated with patient's blood

- procedure that involves a needle placed directly in a vein or artery.

Are all body fluids high in risk of carrying HBV, HCV, or HIV?

Blood is the primary risky fluid in the body that can carry all three infections.

HIV: body fluids such as semen, and vaginal secretions, CSF, synovial fluid, pleural fluid, pericardial, and amniotic fluid have a significant risk of transmission.

Faeces, nasal secretions, saliva, sputum, sweat, tears, urine and vomitus are not considered potentially infectious unless they contain blood. Their risk of transmission is extremely low.

When in doubt, **always** use universal precautions.

What are the chances of infection from occupational exposure?

Studies have been done in the US that show the following transmission rates after a percutaneous needlestick injury:

Infection type	Rate of transmission
	17-30%
HCV	2-3%
HIV	0.3-0.4%

For HCV and HIV, exposure to a blood-filled hollow needle or visibly bloody device suggests a higher risk exposure than a needle that was used for giving an injection.

The risk of transmitting HIV through mucous membranes is **0.03-0.09%**.

Are there any preventive ways to avoid getting infected besides using universal precautions?

Please follow written safety measures (e.g. Health Facility Infection Control Manual, available in all departments) for procedures and supervision given for clinical practice at all times. Failure to do so could end in risky exposure.

All staff are offered hepatitis B vaccine, which is recommended globally for all health care workers (HCW). All staff must be tested for HBV antibodies one month after their third dose of vaccine.

Post-vaccination HBV antibody titres are not available at AHC but are recommended for those that are able to test this privately.

II. Policy Procedure: (See Appendix 1 and flow chart 1)

1. Even with universal precautions, one may be exposed to potentially infectious blood or body fluids. Be constantly aware that a needle can easily puncture your skin and put you at risk. Leaving sharps in the beds of patients or elsewhere is prohibited. Recapping needles is generally **not** recommended. However, in AHC we often have to re-use sharps containers. In this situation **only**, re-sheathing needles by the **ONE HAND TECHNIQUE** is recommended to protect housekeepers from needle-stick injuries. If you are using a disposable sharps bin, avoid re-sheathing needles under any circumstances. Please ask your departmental head if you are unsure which type of sharps disposal container is being used in your department,. Always be aware of your surroundings and avoid

contact with patient blood or body fluids that may be on equipment or other surfaces.

- 2 If a percutaneous injury occurs, clean the area immediately with soap and water and disinfect with one of the following solutions: 70% Alcohol for 3min, 2.5% Betadine for 5 minutes. For mucous membranes, use normal saline or clean water, especially to the eyes, for at least 5-10 minutes.
- 3 All occupational exposures should be reported to the area supervisor (e.g. unit manager, senior on call doctor) immediately, so that a detailed account of the event can be documented; the source patient and exposed staff can be counselled and blood samples taken for screening tests, when appropriate; and prophylactic medications may be started when indicated. Even if the exposed staff declines to report the incident, any other staff with knowledge of the incident, should report it. This gives others the opportunity to educate and offer help to the exposed staff. However, this person should respect the confidentiality of the exposed staff and source patient and not give information to anybody who does not need to know.
- 4 An HIV doctor, the employee health doctor or a senior on-call/ duty doctor must be called to assess the wound of the exposed staff. The doctor must document:
 - the circumstances of the exposure
 - relevant past medical history
 - HBV HCV, and HIV status of the source patient
 - stage of disease, if applicable
 - whether the patient is on antiretroviral therapy, if applicable
 - management plan.

The doctor who assesses the wound will call the HIV counsellor on-call if necessary. The HIV counsellor is responsible for pre- and post-HIV test counselling of the source patient and/ or exposed staff. The on-call schedule for HIV counsellors is posted in IPD and ER.

- 5 The following forms will be provided for use by the doctor, (each unit will be responsible for ensuring that forms are available):
 - Occupational exposure medical notification form (appendix 3) – to be completed by the doctor who assesses the wound
 - PEP treatment consent form (appendix 6) – this documents treatment or refusal of treatment for the exposed staff and must be sent to the employee health doctor.
 - HBV vaccination form (appendix 7) for HBV-negative staff
- 6 Post-exposure prophylaxis (PEP) must be prescribed by an HIV doctors, the employee health doctor or a senior on-call/ duty doctor; and must be started within 24 hours of the exposure. Two doses of all antiretroviral drugs used in

post-exposure prophylaxis are kept in ER. Please ask the ER unit manager or team leader if you require them.

Evidence shows that PEP must be started within 24-36 hours of the exposure in order to be effective.

Follow up will be organized by the employee health doctor.

- 7 The source patient will be counselled and asked to undergo blood testing for HBV, HCV, HIV, and TPHA. The source patient must be counselled for HIV with the pre-counselling forms filled out and documentation in the patient's medical record. This must be done by an HIV counsellor. If the source patient is under 18 months of age or breastfed, HIV counselling and testing will be carried out on the mother if she is available and with her consent.
- 8 Either the patient and/or the exposed staff may refuse blood testing, but this must then be documented in the appropriate records. If a senior on-call doctor feels that the exposed staff should have further discussion about the incident, they must contact HIV doctors or the employee health doctor for help.

Blood testing of the source patient must **not** be carried out without counseling and consent documented by the counselor.

The exposed staff should **not** under any circumstances participate in this procedure.

It is **not** acceptable for the exposed staff to pressure the doctor, HIV counselor, laboratory staff or source patient/caretaker in any way.

The exposed staff should **not** approach the source patient/ carrier during this procedure.

- 9 Anyone violating a patient's rights by not adhering to the above procedure or misrepresenting information to the patient may be disciplined and may be at risk of suspension or job termination from the hospital. In this situation, exposed staff will still be entitled to the appropriate medical care.

110. Reporting of blood/fluid exposures:

- i. Day – employee health doctor ; or
- ii. Night – doctor on-call/ duty; +/-
- iii. Day/ night – HIV counsellor on call (to be contacted by the doctor , only if they are needed for pre- and post-HIV test counselling).

The doctor , HIV counsellor and laboratory must complete the following as soon as practically possible:

- wound assessment
- counselling of source patient/caretaker
- blood testing of source patient +/- exposed staff if appropriate

- PEP prescription if appropriate

This procedure should never be delayed until the following shift.

11. Follow-up (see Appendix 8) for the exposed staff is dependent on the circumstances of the exposure and the screening test results. This must be discussed with all exposed staff.

If the exposed staff becomes HIV+ from the exposure, the hospital will help and refer to appropriate medical facility (e.g. MSF chronic disease clinic) for management of their disease. Staging of the exposed staff's immune status must be done in order to correctly plan treatment options. An HIV doctor or the employee health doctor should be involved in the counselling process and arrangements would be made for our hospital or with an outside physician capable of following this type of health management.

HIV seroconversion in HCW study statistics(2)

95% within 6 months after exposure

Median 46 days, mean 65 days

Acute retroviral syndrome: 81% at median of 25 days after exposure

Delayed seroconversion after 6 months is reported but rare

May be associated with co-transmission and infection by HCV

Post Exposure Management

HBV

HBV infection causes a wide spectrum of clinical manifestations, from a mild viral syndrome to acute liver failure. If HBsAg is positive, other tests must be performed to verify active liver disease. The exposed staff or source patient must understand that they are a HBV carrier and can transmit this infection through blood, (e.g. by blood donation) or sexual contact. Spouses or sexual partners of such carriers must be screened and carriers must be advised to use condoms at all times until the clinical status of all concerned is verified.

Currently, AHC has no treatment options available for HBV. If the exposed staff is found to be negative for HBV, the vaccine series will be provided. Pregnant women may be vaccinated.

Specialized care may need to be sought outside of the country, depending on the severity of the illness.

HCV

If the source patient or the exposed staff is positive for anti-HCV antibodies, ALT must be obtained at baseline and then at 4-6 months.

Currently, there are no recommended treatment options for HCV infection. If significant disease is found over time, referral to a medical facility with more specialized care may be appropriate.

HIV

Many studies on animals and humans have shown the benefit of antiretroviral (ARV) therapy post blood exposure. AHC uses either a two-drug basic regime or a three-drug expanded regime for 28 days. This is recommended for exposed staff who are

being monitored after a first negative HIV test, but still have significant risk of HIV transmission because of the source patient or exposure circumstances.

If the situation is not clear, (e.g. if the test results of the source patient are pending), it is acceptable to begin PEP and discontinue later. PEP should be offered if the exposure is significant and the HIV status of the source patient remains unknown; or if the exposed staff chooses to take it. It should be explained that PEP will not prevent HIV infection after exposure in 100% of cases.

It is the responsibility of the exposed staff on PEP to report any side effects of the medications taken and to follow the instructions of the medical staff providing PEP and follow-up. For recommendations on PEP in pregnancy, see appendix 5.

All related problems and concerns about any of this process must be reviewed with Kazumi Akao or Dr Soeung Seitaboth.

All decisions concerning PEP or blood testing must be discussed with an HIV doctor, the employee health doctor or the senior on-call/ duty doctor. Counselling issues must be discussed with the HIV counsellor.

All staff test results remain confidential and are kept by the employee health doctor .

An exposed staff cannot be dismissed as an employee by AHC, solely on the basis of being HIV+.