



**Office of the  
Deputy Dean**

**TO ALL STUDENTS IN THE FACULTY OF HEALTH SCIENCES**

**January 2025**

Dear Student

**OCCUPATIONAL EXPOSURE RISKS**

**GENERAL UNIVERSAL SAFETY PRECAUTIONS**

Please note the following important information regarding clinical occupational exposure risks:

**General universal safety measures for preventing infection with HIV and other blood-borne viruses**

**NOTE:** Needle-stick injuries mostly occur when recapping needles. During your rotation, the hospital or clinic is responsible for providing the necessary equipment for you to implement universal safety precautions.

Blood splash events are the second most common cause of exposure to blood. To avoid exposure, you should always wear eye protection when carrying out or assisting with a procedure on a patient.

- Before attempting any procedure, students should consider all necessary precautions to prevent exposure to blood.
- Students should cover any existing injuries on their own bodies using waterproof dressings, and by wearing gloves.
- Prevent prick-wounds, cuts, and abrasions.
- Always use the Vacutainer system for venepuncture.
- As far as possible, avoid using or being exposed to sharp objects, including needles, glass and metal. If unavoidable, be extremely careful when handling and disposing sharp objects.
- Students should protect their eyes, mouth, and clothing by wearing eye protection, a mask, and waterproof/ water resistant protective clothing.
- If the floor or soil is contaminated, students should wear gumboots or plastic disposable overshoes.
- Students should exercise good basic practices, including hand washing and avoiding hand-to-mouth contact.
- Decontaminate surfaces contaminated by blood and body fluids using appropriate procedures.
- Contaminated waste should be disposed in a responsible and safe manner.

(Information from the Royal College of Pathologists, 1995 and “Handbook of HIV Medicine” Oxford/Southern Africa – Wilson Douglas et al.)

If the necessary equipment to implement these “universal precautions” is not available at the institution where you work, you must report this, in writing, to the Department of Family Medicine, University of Pretoria, as soon as possible.

## POLICY REGARDING PROCEDURES ON HIV-POSITIVE PATIENTS

The safety of the student is paramount. Students are advised to view all patients as living with HIV, always implementing “universal safety precautions”. Students must insist that the correct equipment is available to implement the “universal safety precautions” at the facility where they work. At the Faculty of Health Sciences, different schools have their own particular protocols. Students will be informed of these details during training.

## IMMUNISATION AGAINST INFECTIOUS/COMMUNICABLE DISEASES

- During your studies, you will be exposed to patients who are living with, or are carrying, infectious and communicable diseases. **For your own protection, we recommend that you are immunised against Diphtheria, Tetanus, Polio, Measles, Chickenpox, Rubella, Mumps, COVID-19, as well as Hepatitis B.**
- Although children are routinely immunised by local authorities against Diphtheria, Tetanus, Polio, Measles and Hepatitis B, we request that you make sure of your immunity status before starting your studies.
- **Rubella** is a highly contagious disease. While it rarely results in serious illness, it presents a serious risk to unborn babies if a pregnant woman becomes infected.  
**NB: All students need to be immunised against Rubella.**
- **Hepatitis A, B, C and D** are discussed in item 2.

### 1. HUMAN IMMUNODEFICIENCY VIRUS (HIV)

The risk of HIV infection after a needle-stick is 0.3% and even lower (0.09%) after a splash injury to mucous membranes by HIV-infected fluids. No cases of transmission have been reported where HIV-infected blood has landed on intact skin.

## HIV STARTER PACK

All students should know their HIV status. All students should carry a post-exposure prophylaxis (PEP) starter pack at all times during clinical training. The starter pack comprises three TLD (tenofovir + lamivudine + dolutegravir) tablets, and is available at a specially reduced price from Riviera Pharmacy (corner of Annie Botha Avenue and Viljoen Street, Riviera). Other options are available, contact Dr Marietjie van Rooyen from the Family Medicine Department for more information. Carrying a PEP starter pack is a precautionary measure in case you experience problems in obtaining the necessary medication after a needle-stick injury. Healthcare facilities where you work are not responsible for providing this medication. Please note that the tablets should not be exposed to the sun or high temperatures (such as in a parked car), and that they have an expiry date.

## 2. HEPATITIS A, B, C, D

### **Hepatitis A virus (HAV):**

- Occupational exposure and subsequent infection with HAV have been reported. The route of transmission is mainly through close contact, faecal-oral transmission, or blood transfusion products.
- Routine testing for HAV is not cost effective as most adults are immune to HAV and do not need immunisation.

### **Hepatitis B virus (HBV):**

- The risk of HBV infection after exposure is 5-40%. HBV is thus more than ten times more infectious than HIV.
- Any skin injury or mucous membrane exposure must be regarded as a significant exposure risk that requires attention.
- All students in the Faculty of Health Sciences are required to ensure that they are immune to HBV. All HBV vaccines are highly effective.
- Successful candidates admitted to the Faculty of Health Sciences are expected, during the Orientation week, to visit the clinic and receive a HBV booster [cost is for the student].

### **Hepatitis C virus (HCV):**

- Various incidents of transmission of HCV to healthcare workers have been recorded in the literature and the risk is calculated at 3-10% per needle-stick injury.
- HCV infection is suspected if the blood of a patient tests positive for Hepatitis C antibodies. Such patients should have a HCV PCR test to confirm whether or not they have an active HCV infection.
- At this stage, there is no recommended post-exposure prophylaxis for HCV infection.

### **Hepatitis D virus (HDV):**

- The sero-prevalence of HDV is currently very low in South Africa. HDV is controlled by controlling HBV.

## NEEDLE-STICK INJURIES AND SPLASH INJURIES

- All students are at risk of sustaining needle-stick or splash injuries during the course of their practical training. All patients should be treated as if they have a blood-borne virus and universal safety precautions should be implemented.
- If a student sustains a needle-stick or splash injury, the following information about the patient should be obtained:
  - HIV status.
  - HIV viral load.
  - HIV treatment history, including current antiretroviral treatment (ART) regimen.

**Students should follow these steps if they sustain a needle-stick or blood splash injury. These steps are also set out in the form**

<i>STEP</i>	<i>ACTION</i>
Cleanse and disinfect	Wash with soap and water. Do not squeeze the wound.
Start initial medication	TLD: take one tablet immediately, then every 24 hours <b>NOTE:</b> Informed consent is implied if the student decides to take the medication. <b>Medication <i>may</i></b> also be available at the healthcare facility where you are working: <b>Steve Biko Academic Hospital:</b> Surgical and Trauma ICU, Level 4. <b>Tshwane District Hospital:</b> Casualty <b>Kalafong Hospital:</b> Casualty and the Hospital Pharmacy. <b>Jubilee Hospital:</b> Casualty. <b>Witbank Hospital:</b> Casualty & Infection Control Sister. <b>Weskoppies Hospital:</b> Admissions Ward and Matron. <b>Oral &amp; Dental Hospital:</b> Sr W Labuschagne at Infection Control Office, Room 6-49 (Tel 012 319 2281, 082 303 5972). <b>Clinic:</b> At Doctor or Sister in charge.
Report incident immediately to academic supervisor, and as soon as possible thereafter, to:	Mrs Karin Ainslie, Department of Family Medicine, University of Pretoria, HW Snyman Building North, Floor 7, Room 7-15, Tel 012 356 3302. Use this <a href="#">Qualtrics survey</a> (or open it with the QR code below)
Blood tests from source patient	Students should ensure that blood samples are drawn from the patient, and that the following diagnostics are conducted: Draw blood for HIV-1/2 Ab/Ag ELISA (if the patient's status is not known), HBsAg & anti-HCV (Hep C Ab). Patients need to give written consent and receive counselling before testing. Should the patient not give consent, the hospital superintendent may give permission to test left-over blood from the patient. Blood may never be drawn without informed consent from the patient. The results of a "Rapid" HIV test should be available within 10 minutes. The results are verified later by routine test methodology.

Baseline blood tests of student	At the time of exposure, the student must have their own blood taken for the HIV combo-assay and hepatitis C antibodies. If not known previously also test for Hepatitis B surface antibody.. <b>Students will not receive counselling before HIV testing, but will receive counselling before the results are made known. As a safety precaution, students should immediately proceed with taking the first tablet of their HIV PEP starter pack even though the results of the patient's HIV test might not be available yet. Once the results are known, and if medication is proven to be unnecessary, the medication can be stopped.</b>
Blood tests to laboratory	Students are responsible for correctly labelling their own blood and the source patient's blood samples. The labels must include "Student injury on duty". All samples should be submitted together to the closest NHLS laboratory as soon as possible.
Further help will be organised by the Department of Family Medicine	<b>A source patient living with HIV:</b> If the student is HIV negative and was indeed exposed to potentially infectious body fluids, they are prescribed a month-long course of antiretroviral medication. The University will carry the cost of the medication, provided the prescription is filled at the Riviera Pharmacy (c/o Annie Botha Avenue & Viljoen street, Riviera). <b>A source patient living with hepatitis B:</b> If the student does not have evidence of immunity, the student will need Hepatitis B immunoglobulin, as well as a booster dose of the Hepatitis B vaccine. NB: students should confirm that they are immune after this vaccination by doing a hepatitis B surface antibody test (anti-HBs).
Report to Faculty Management	Incidents will be reported by the Department of Family Medicine to Administration (Faculty Manager or his representative) or the Deputy Dean.
Follow-up blood tests and supportive counselling	Will be arranged by the Department of Family Medicine, Level 7, HW Snyman Building North.

The University of Pretoria uses Riviera Pharmacy at 52 Annie Botha Drive (Tel 012 329 3414/5), Corner of Annie Botha Avenue & Viljoen Street, Riviera.

The University will bear the cost of a month's course of antiretroviral medication as well as the costs of the required blood tests. As a precaution, students should buy their own "starter pack" of TLD (tenofovir [TDF] + lamivudine [3TC] + dolutegravir [DTG]) tablets. HIV starter packs are available at the Riviera Pharmacy at a reduced price. Students are to bear the cost of the HIV starter pack, and should keep the starter pack with them at all times to be available in case of an exposure incident.

**Attachment A** contains the flow chart with all the relevant steps.

Please contact any of the following persons if you experience any problems:

- Dr JM Louw, Department of Family Medicine, HW Snyman North, Floor 7, Tel 082 788 6644
- Dr M van Rooyen, Department of Family Medicine, Tel 082 785 4500
- Mrs Karin Ainslie, Department of Family Medicine, HW Snyman North, Floor 7, Tel 012 356-3302

**NOTE:** If a student sustains a needle-stick or splash injury after-hours or on a weekend day, blood tests must be done on the same day. The results will only be reported during office-hours. Students must continue taking the initial TLD until the results of the blood tests are known and discussed at the Department of Family Medicine.

## **ACCEPTED STUDENTS AND REGISTERED STUDENTS WHO HAVE CHRONIC VIRAL CARRIER STATUS**

The policy of the Faculty of Health Sciences, University of Pretoria regarding HIV and hepatitis B carrier status states the following:

- The rights of students or applicants living with HIV are recognised and supported;
- The HIV status of an individual is confidential medical information and a student may accordingly not be forced to have their HIV sero-status tested, unless a justified emergency situation arises;
- No applicant will be refused admission to the Faculty of Health Sciences on the grounds of a positive HIV sero-status;
- No student who becomes infected with HIV during the course of their studies will be excluded from further study at the university due to living with HIV.
- The view is supported that students living with HIV pose minimal risk to patients, provided that the students concerned are properly informed, instructed, and trained in all aspects of HIV, are keeping abreast of medical and scientific advances concerning HIV, and adhere to recognised standard and universal precautionary measures;
- Students living with HIV should be allowed to execute *most* of the surgical procedures, provided that universal precautionary measures are strictly applied (justified restrictions may, however, be identified and made applicable to the relevant student);
- Any student who is living with HIV should undergo regular treatment and counselling and anyone who has reason to believe that they may be infected, should receive regular testing and counselling at an appropriate healthcare facility to ensure that they are physically and mentally able to continue performing their professional activities competently and safely while also protecting patients from risks. Considering the inevitable risk of infections (e.g. tuberculosis) that health care students face, all students living with HIV are strongly encouraged to be on antiretroviral treatment and to ensure that their HIV viral load is suppressed;
- The Faculty of Health Sciences, as well as the University of Pretoria, offers services by providing information regarding HIV, the benefit gained when a student knows their HIV sero-status, and advice regarding the professional and personal choices facing an individual as student and later on, as a professional;
- A student living with HIV with an unsuppressed viral load, is legally obligated to disclose his or her HIV sero-status to a patient if there is a substantial risk of the transmission of infection from the student to the patient, or alternatively, to refrain from performing invasive therapeutic or diagnostic procedures in such a situation.

**Prof V Steenkamp**

**Deputy Dean: Teaching and Learning**

**FACULTY OF HEALTH SCIENCES**

Please indicate that you have read this document and are aware of the following by placing your initials in the space provided:

1. There is a risk of sustaining a needle-stick injury or a splash injury during the course of my practical training, while handling a patient who may be living with a blood-borne virus.
2. It is my responsibility to practice universal safety precautions and take all possible care to avoid needle stick injuries and exposure of mucosa or non-intact skin to potentially infected blood or body fluids.
3. I understand the importance of always having a starter pack of antiretroviral treatment available to me when working with patients.
4. I understand the importance of starting the recommended antiretroviral medication immediately after any needle stick injury or exposure of mucosa or non-intact skin to potentially infected blood or body fluids.
5. I understand the importance of ensuring that I am immune against the hepatitis B virus.

By signing below, you indicate that you understand the information provided.

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Student name and surname

Student number

Student signature

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Date

# University of Pretoria, School of Medicine

## Student Injury on Duty – needle stick or splash Jan 2025

ATTACHMENT A

**THIS IS A MEDICAL EMERGENCY!!!!!!**  
Student should be excused from normal duty to follow the protocol

Wash skin with water and soap, or rinse mucous membranes with water  
Do **NOT** squeeze the wound – resultant inflammation is of benefit to the virus

**Immediately** take the initial dose of antiretroviral post-exposure prophylaxis  
**TLD (tenofovir+ lamivudine+ dolutegravir)** HIV starter pack

1. **Get patient information**
2. Open a hospital file for yourself.
3. Draw blood from the patient and yourself

Report to the Department of Family Medicine **ASAP** (within 48 - 72 hours) by completing this [report on exposure incident](#) survey and follow the instructions for an in person or virtual consultation to guide you through the next steps. This survey can be found at:  
[https://pretoria.eu.qualtrics.com/jfe/form/SV\\_aWZBfKVSvxx2TXw](https://pretoria.eu.qualtrics.com/jfe/form/SV_aWZBfKVSvxx2TXw)  
or by scanning this QR code:



Student gets consent (from patient) and **draws blood from source patient** for:  
HIV-1/2 Ab/Ag ELISA  
Hepatitis B surface Ag  
Hepatitis C Ab

Student has **own blood drawn** for:  
HIV Elisa  
Hepatitis C Ab  
And if unknown:  
Hepatitis BsAb (immunity)

Samples must be labelled with name, "**Student Injury on Duty (STIOD)**"  
**Do not use a ward number.**

**If more than 72 hours since the injury, get expert advice at the telephone numbers listed before initiating prophylaxis**

**(Advice available 24 hours per day)**

### POST-EXPOSURE SUPPORT SYSTEM

1. Open file at Dept of Family Medicine
2. Counselling
3. Student blood tests results
4. Patient blood tests results
5. Management plan drawn up after reviewing patient profile

**ALL** of which must be brought back to Pretoria with you and handed in to Mrs Ainslie – Room 7.15 HW Snyman North if you are not in Pretoria.

**If you have ANY concerns or problems, please contact us by telephone**

012 356 3302 (K Ainslie)  
HW Snyman North R7-15

083 785 2343 (Prof V Ueckermann)  
082 788 6644 (Dr JM Louw)  
082 785 4500 (Dr M van Rooyen)

Your starter pack should be with you at all times.

A prescription is available from the Department of Family Medicine. The prescription can be filled at Riviera Pharmacy, 52 Annie Botha Ave.



**PLEASE NOTE:**

To fully document the incident, we need to submit your blood and the patient's blood for testing simultaneously. If the patient is unable to give consent, please approach the superintendent (medical manager) to give consent for the patient's HIV test.

You will not easily find someone to give you adequate counselling after hours. Therefore, take your blood to the laboratory but wait for your appointment with your supervising Family Physician the next working day to discuss **your results**. This will make no difference to **the immediate decisions that you should take on the basis of the exposure**, provided that you take your **STARTERPACK** immediately and then use the action tree to do what is required.

The University of Pretoria pays for all costs involved in the investigation and follow-up of this incident.

**PLEASE** remember to bring all reports, results, and notes **back to Pretoria** with you, so that we can follow you up effectively and keep correct records of all incidents.

AS SOON AS POSSIBLE, PLEASE REPORT ALL INCIDENTS TO THE DEPARTMENT OF FAMILY MEDICINE, REGARDLESS OF PATIENT STATUS, DEGREE OF RISK, OR CHOICE TO RATHER SEEK HELP IN THE PRIVATE SECTOR

1. It is important to note the following regarding your patient:
  - a. Is/was your patient on ARV treatment?
  - b. For how long have they been on treatment and what is the latest CD4 count and HIV viral load of the patient?
  - c. Are there any clinical signs and symptoms present in the patient that may indicate treatment failure (for example any opportunistic infections)?
2. If the patient is treatment naïve or the probability of viral resistance is unlikely:  
Continue 28 days of **TLD (tenofovir+lamivudine+dolutegravir)**
3. If there is a significant risk that antiretroviral drug resistance is likely in the source patient:  
Change to zidovudine+lamivudine (Combivir) and dolutegravir for 28 days.

Your starter pack should be with you at all times.

A prescription is available from the Department of Family Medicine. The prescription can be filled at Riviera Pharmacy, 52 Annie Botha Ave.