SOP-CRF-2 - V4

Title: Dealing with a needle-stick or mucous membranes exposure to blood or body fluids

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Document History

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3	Scheduled review, no update	06-09-22
4	Reformatted to GRO Clarification added at 3.4 Updated IMS handbook link added at 5	16-10-25

1. Scope

1.1 To minimise the risks of exposure to blood or body fluids.

1.2 To ensure that all health care workers, who experience a needlestick injury or have a mucous membrane exposure to blood or body fluids, are aware of the correct action to take to deal with the situation rapidly and appropriately.

2. Responsibilities

Line Manager	To ensure that a member of staff is offered all the necessary immunisations, before dealing with human samples. Ensure that individual staff members are trained and competent.
Research Staff	Individual staff members should be trained and competent in any procedure where obtaining samples is required, such as venepuncture. It is the responsibility of the individuals who have sustained a needlestick injury or mucous membrane exposure to blood or body fluids to ensure that they take the necessary actions to prevent long term damage, as described below.

3. Procedure

Please note that the Clinical Research Facility (CRF) laboratory is designated as Containment Level 2 (CL2) which means that the processing of unscreened bloods or bodily fluids is permitted but the processing of known positive samples for any blood borne virus is not.

Good working practices and preparation of work areas reduce the risk of exposure to human bodily fluids, but spillage of fresh fluid specimens poses a risk of infection to anyone who gets in contact with them. With rules and safety guidance in place, risks of exposure should be minimised. While every effort is taken to prevent incidents, exposure to bodily fluids sometimes occurs and it is the most likely route of transmission of infection.

A percutaneous injury occurs when a needle or another sharp instrument accidentally penetrates the skin. A mucous membrane injury occurs when blood or other body fluids splash into the eyes, nose or mouth or onto broken skin.

Other potential routes of exposure to blood, or other body fluids, are bites or scratches.

Most percutaneous or mucous membrane injuries are caused by unsafe practices and are therefore preventable. Needlestick injury is a common occupational hazard among health care workers. The risk of infection transmission is lower for mucous membrane exposure than for percutaneous exposures. Only a few agents are known to have been transmitted by needlestick injuries: hepatitis B, human immunodeficiency virus (HIV) and hepatitis C. All health care personnel at risk of exposure to hepatitis B virus should be vaccinated.

The standard safety procedures adopted in the UK for the prevention of needlestick injuries are known as standard or universal precautions, where all blood and body fluids, regardless of their source, are considered to contain infectious agents and treated as such.

3.1 Measures to avoid exposure to blood-borne viruses

- Immunisation against hepatitis B
- Wearing of plastic aprons, gloves, masks, eye protection (visors, goggles or safety spectacles) and appropriate Personal Protective Equipment (PPE)
- Hand washing before and after each patient contact, and after contact with blood or body fluids
- Covering of any pre-existing cuts or abrasions with waterproof plasters
- Safe handling of sharps (never re-sheathing a needle by hand)
- Immediate and safe disposal of sharps into appropriate, puncture-proof sharps bins
- Safe disposal of needles, syringes and sharps into the sharps disposal bins.
- Following the procedures for safe use and disposal of sharp bins, including avoid overfilling.

The administration of first aid action will depend on the nature of the exposure and the type of body fluid, but as a rule the following action should be taken:

3.2 For a needlestick injury

- If skin is punctured, gently encourage free bleeding.
- The wound should be washed under copious amounts of warm running water for **at least 2 minutes**. It should not be scrubbed.
- If necessary, cover the wound with a waterproof dressing.

3.3 For mucous membrane exposure

- Immediately wash the exposed site for 10 minutes with copious amounts of warm water or normal saline, in the case of conjunctival contamination.
- If possible, ensure that the sample of the body fluid which resulted in the exposure is retained, in case it is needed for testing (consent is required).

3.4 Accident Reporting Procedure

- **All incidents need to be reported to the University Director of Health and Safety. Serious accidents should be reported to the University Safety Advisers immediately, by telephone (ext. 3894 or 3896) or as an online report. An accident is 'serious' if the injured person has gone to hospital as a result of the accident.**
- Procedure and forms are available at: http://abdn.ac.uk/ims/safety/az.php
  An accident report form must be completed by the immediate supervisor of the injured person and submitted to the IMS Safety Adviser (a copy also needs to be sent to the University Safety Adviser). Only if there is an expected delay in getting the incident reported by the line manager or the person in charge of area, the injured person themselves can report the accident on line

Please note: the form should not be completed by the injured person.

The completed form should be submitted within 48 hours of the accident.

- If employed by NHS Grampian, the accident should **also** be reported to the line manager and to NHS Grampian Occupational Health Service on 01224 553663 and an Incident Report (DATIX) should be completed. Accident and Emergency should only be involved where there is a significant injury occurring out of hours or an exposed employee cannot be seen in occupational health within 36 hours. Comply with advice given by Occupational Health.

3.5 Assessment of Risk of Blood Borne Virus Transmission

- **If the source of body fluid is known to be HIV or eAg positive, it must not be processed in the CRF laboratory**.
- If HIV or eAg status is not known then, after informed consent is obtained, a blood sample should be requested to be tested for hepatitis B, C and HIV and a copy should be requested to go to occupational health.
- The blood sample taken should be taken to the Virology laboratory marked '**Hepatitis B, Hepatitis C and HIV status source patient needlestick injury. Copy to OHS please'.**
- If the source of body fluid is found out to be HIV positive, prophylactic therapy must be offered to the exposed worker, **if possible, within one hour of contact**. Advice should be sought from the Infection Unit Consultant who can be contacted via the NHS Grampian switchboard on **0845 456 6000**.
- If a non-immunized member of staff sustains a needle-stick injury from an eAg positive HBV carrier, he/she should be offered Hepatitis B Immune Globulin (HBIG) and a course of vaccine.
- If the source is not eAg positive, then a course of vaccine alone would be sufficient.

3.6 Follow-up of Potentially Exposed Staff

If a member of staff has been exposed to any blood/fluid borne virus, then a blood sample from the exposed person should be sent to a virology or microbiology laboratory for serum to be saved and stored. The purpose of this sample is to be able to show that, in the unlikely event of subsequent seroconversion, the member of staff was not infected at the time of the exposure, and therefore the infection was occupationally acquired.

Follow-up any blood tests to confirm that occupational blood-borne virus transmission has not occurred. Confidentiality should be assured throughout.

4. Abbreviations and definitions

CRF	Clinical Research Facility
HSB	Health Sciences Building
PPE	Personal Protective Equipment

5. Related documentation and references

SOP-CRF-1	What to do in the Event of Spillage of Bodily Fluids and/or Specimens
SOP-CRF-3	Standard Operating Procedure for Disposal of Waste Materials from the CRF

- University of Aberdeen, IMS Safety A-Z – https://www.abdn.ac.uk/ims/about/safety/ims-safety-a-z/
- NHSG Occupational Health Service – Management of Occupational Exposure to Blood-Borne Viruses - https://gohealthservices.scot.nhs.uk/rgu/bbvexposure
- ICH/GCP Guidelines - https://www.ich.org/page/efficacy-guidelines