



health

Department of
Health
FREE STATE PROVINCE

INFECTION PREVENTION AND CONTROL MANUAL

Compiled by : *Standard Compliance Sub Directorate*

Date: : *25 September 2008*

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1. INTRODUCTION

This Manual will be applicable to all health care establishments and health care providers in the Free State Department of Health.

Basic standards of cleanliness need to be maintained both for hygiene and confidence of all those using the institution.

Cleaning is the physical removal of soiling/contamination such as organic matter from surfaces, thus rendering them safe for use. It helps maintain the appearance and efficiency of structures and equipment and contribute to the prevention of nosocomial (HAI) infection. This requires an understanding of how to use and maintain cleaning material and equipment. Only the best methods with the best equipment available are good enough for cleaning healthcare facilities

Hospital and environmental hygiene is the responsibility of the Management and all personnel, as well as patients and visitors.

Disinfection does not replace thorough cleaning of floors, walls and ceilings and should be applied where specifically indicated by institutional policy. It is important that the disinfectant is used at the proper concentration.

Sterilization means making an object free from all viable microorganisms, including spores. There are many methods available for sterilization. Sterilization may use exposure to heat, radiation or chemicals.

2. PURPOSE

The Manual forms part of the Free State Provincial Infection Prevention and Control Policy. The purpose of this Manual is to set guidelines for the implementation of Infection Prevention and Control Standards.

3. OBJECTIVES

- To reduce the risk of nosocomial infections
- To enhance the implementation of the Infection Prevention and Control Policy
- To improve Infection control surveillance

4. PRE-DISPOSING CONDITIONS TO INFECTION

The following factors predispose a patient to infection:

- 4.1 Micro – organisms
 - Intrinsic virulence – High virulence: Strep pyogenes
 - Low virulence: Staph epidermidis (opportunistic pathogen)
 - Infective dose
 - Antimicrobial sensitivity or resistance
- 4.2 Immune - status
 - Lack of protective antibodies due to lack of immunization
 - Malnutrition
 - HIV and other immuno – suppressive viral infections
- 4.3 Invasive devices
 - Prostheses, sutures, VP - shunts
- 4.4 Medication
 - Over - use of antibiotics
 - Cytotoxic chemotherapy, immuno – suppressive drugs
 - Contaminated infusates
 - Inadequately sterilized dressings
- 4.5 Extremes of Age
 - The very young and elderly
- 4.6 Length of stay in hospital
 - Prolonged hospitalization increases infection rates
- 4.7 Underlying diseases
 - Diabetes mellitus, COPD, renal failure, malignancies and hepatic diseases
- 4.8 Disruption of host barriers
 - Burns
 - Procedures such as IV therapy, urinary catheterization, Instrumentation e.g. Cystoscopy
- 4.9 Environment
 - High risk areas – ICU's
 - Contaminated air, food & water
 - Contaminated linen & mattresses
 - Contaminated equipment – Clinical : nebulizers, ventilators, e.g.
 - Non-clinical : bedpans, jugs, kitchen utensils
 - Contaminated disinfectants

5. INFECTION CONTROL PRACTICES

5.1 STANDARD PRECAUTIONS (OHS ACT 85 OF 1993)

Standard Precautions are designed to reduce the risk of transmission of micro-organisms from both recognized and unrecognized sources of infection in healthcare facilities.

These are the precautions taken by HCW to limit the risk of spread of infectious diseases. These precautions apply to blood and other body fluid as well as droplet and airborne transmission. In essence the guidelines centre around safeguards aimed at reducing the risk of transferring infections from patient to practitioner, patient to patient or practitioner to patient.

5.1.1 HAND HYGIENE

Hand washing is the cheapest, most effective and easiest way of reducing the risk of transmitting microorganisms from one person to another and from one site to another on the same patient.

Hands should be washed thoroughly before, between and after contact with the patient.

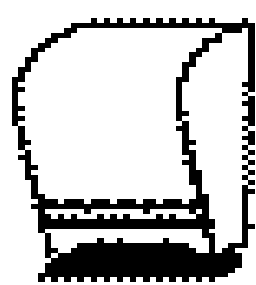
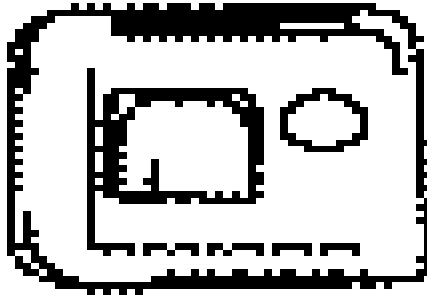
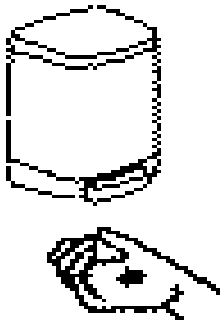
Hands should be washed after contact with body fluids, equipment and contaminated articles whether or not gloves are worn

Hands should be washed before putting on/donning gloves for invasive procedures with chlorhexidine or povidone-iodine scrub

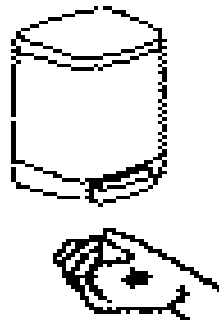
Alcohol - based hand rubs/gels should be readily available at each cot, bed, bassinette or incubator and should be used appropriately in between patients (**NB hand rubs/gels and gloves do not replace hand washing**).

Wash basins, soap dispensers, pedal bins and paper towels with dispensers should be made available in each cubicle.....The wash basins should be fitted with elbow taps whenever possible and should be mandatory for surgical procedures.

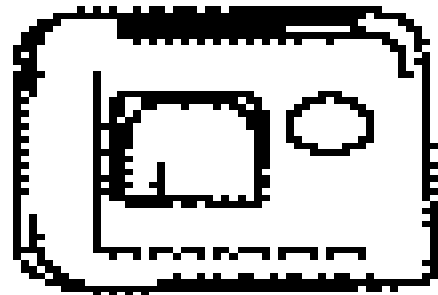
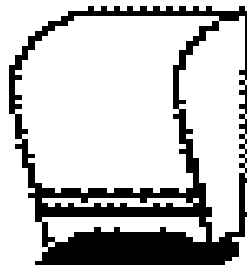
HAND WASHING PROCEDURE



Check if the area is clean and dry, soap dispenser and paper towel holder are filled up and dust bin available



Open taps; adjust water to right temperature, wet hands under running water
Apply soap and lather well till wrist **Work all surfaces thoroughly including wrists, palms, back of hands, fingers, and under fingernails - Rub hands together for at least 15-20 seconds.**



Thoroughly rinse with clean water. Be sure not to touch side of sink.
Dry hands completely use towel to turn off water and protect hands from resoiling.
Throw used paper towel in dustbin

Leave area clean and dry.

5.1.2 PERSONAL PROTECTIVE EQUIPMENT (PPE) (FS DOH – 16/08/2004)

5.1.2.1 MASK

To protect mucus membranes of the nose and mouth during procedures that might generate splash or spray. A N95 high particulate respirator must be worn by the health care worker if a patient is a suspected or newly diagnosed TB patient or a defaulter until there is significant improvement (no cough & clinical response to treatment and two successive negative AFB smears)

5.1.2.2 EYE PROTECTION

Goggles or face shields/visors must be worn to protect mucus membranes of the eyes during procedures anticipated aerosolization or splashing of blood and/or body fluid, like suctioning, emptying of portovacs, lumbar puncture, obstetric and surgical procedures

5.1.2.3 GOWNS / PLASTIC APRONS

To protect skin and soiling of clothing during activities or procedures that could generate splash or spray.

5.1.2.4 GLOVES

When touching or handling blood, secretions, body fluids and contaminated items, linen e.g.

5.1.3 PATIENT PLACEMENTS

Appropriate or selective placement of patients is important in preventing the transmission of infections in the hospital setting. General principles in relation to the placement of patients include the following:

5.1.3.1 SPACING BETWEEN BEDS

In open plan wards there should be adequate spacing between each bed to reduce the risk of cross contamination/infection occurring from direct or indirect contact or droplet transmission. Optimum spacing between beds is 2 meters.

5.1.3.2 SINGLE ROOMS

Single rooms reduce the risk of transmission of infection from the source patient to others by reducing direct or indirect contact transmission. Where possible, single rooms should have the following facilities:

- hand washing facilities;
- toilet and bathroom facilities.

5.1.3.3 ANTEROOMS

Single rooms used for isolation purposes may include an anteroom to support the use of personal protective equipment

5.1.3.4 COHORTING

For infection control purposes, if single rooms are not available, or if there is a shortage of single rooms, patients infected or colonized at the same site can be cohorted (sharing of room/s).

When cohorting is used during outbreaks these room/s should be in a well-defined area (a designated room or designated ward), which can be clearly segregated from other patient care areas in the health care facility used for non-infected/colonized patients.

5.1.4 TRANSPORTATION OF PATIENTS

Limiting the movement and transport of patients from the isolation room/ area for essential purposes, will reduce the opportunities for transmission of micro-organisms to other areas of the hospital.

If transportation is required, suitable precautions should be taken to reduce the risk of transmission of micro-organisms to other patients, health care workers or the hospital environment (surfaces or equipment). For example:

when transporting a patient with pulmonary tuberculosis (open/active) placing a surgical mask on the patient while in transit is an appropriate precaution and the HCW must wear a N95 respirator when in a TB isolation environment

5.2 PREVENTION AND MANAGEMENT OF SHARPS & SPLASH INCIDENTS

Under no circumstances should a needle be re-capped. The sharp containers should be filled up to the recommended level and disposed accordingly.

5.2.1 SPLASHES TO MUCOUS MEMBRANES - EYES AND MOUTH, AND BROKEN SKIN

Rinse exposed area thoroughly with running water or saline, dry and then follow procedure for sharps injuries

5.3 WASTE SEGREGATION/MANAGEMENT

Health care workers should be trained in proper segregation of waste, A separate bin with appropriate lining should be placed in each treatment area for infectious and non infectious waste. Containers should be of durable material, leak proof, non-corrosive and washable.

Labels on containers



<u>Color coding</u>	<u>:</u>	<u>container/plastic bag</u>
a) Highly infectious waste	:	red marked "highly Infectious" (P4 Unit)
b) Clinical/medical waste	:	red
c) Pharmaceutical/cytotoxic waste	:	dark green/brown
d) Household waste	:	black/transparent
e) Sharps container	:	yellow, puncture proof, marked "sharps"
f) Radioactive waste	:	Lead box, labeled with radioactive symbol

5.4 HANDLING LINEN

Clean and used linen should be handled away from body and clothes to avoid contamination

Soiled linen with blood, body fluids, secretions, and excretions should be handled, transported and processed in a manner that prevents skin and mucous membranes exposures and contamination of clothing, and that avoids transfer of microorganisms to other patients and environments.

Personnel must wear protective clothing while handling used linen

Used linen should be washed at temperatures according to guidelines

<u>Color coding</u>	<u>:</u>	<u>Bags</u>
Used linen	:	White canvas bag
Infectious linen	:	Yellow plastic bag
Soiled, wet linen	:	Blue plastic bag

5.5 INFECTION PREVENTION AND CONTROL IN THE KITCHEN

- ◇ Strict access control
- ◇ Inspection of personnel for diseases e.g. skin diseases, flu, diarrhea, etc
- ◇ Adherence to kitchen finesse, e.g. nails short and without cutex, no jewelry are allowed
- ◇ Wearing appropriate PPE e.g. aprons. caps, ect.
- ◇ Monthly hygiene inspections
- ◇ Hygiene inspections in personnel changing rooms and ablution blocks
- ◇ Ongoing training of personnel on prevention and control of infection in the kitchen
- ◇ Immunization of workers

5.6 APPROPRIATE HANDLING OF PATIENT CARE EQUIPMENT

5.6.1 MEDICAL DEVICES/CONSUMABLES

All hospital equipment is either single-use or reusable.
Single-use equipment should not be reused and should be discarded appropriately after use.

All reusable equipment must be decontaminated between patients to reduce the spread of infection via inadequately decontaminated equipment. Decontamination of items should be done according to the Equipment Instructions/manual or Internal policy.

5.6.2 MULTI DOSE VIALS

Avoid porcupine (leaving needles stick into the vial) by reducing the use of multiple dose vials, where used the vial should be discarded two hours after use. Smaller volumes of Saline & Dextrose 50% for example 50mls, 20mls should be used to prevent multi-dose. If multi dose vials must be used, use a closed-system device, (like a "Clave") with it to avoid contamination of the contents

PHC Immunisations – according to protocols

5.7 ENVIRONMENTAL CLEANING AND SPILLS MANAGEMENT

Damp cleaning must be used in all areas, including high dusting

An appropriate detergent must be used

Spill management : Cover spill with paper towels

Put on unsterile latex gloves

Wipe spill up with paper towels

Discard paper towels in red plastic bag

Wash area with hypochlorite detergent and let dry

Discard used gloves in medical waste bin and wash hands

Glass spills : Scoop glass up with scoop/cardboard and discard in medical waste container or sharps container

5.8 EQUIPMENT FOR INVASIVE AND NON – INVASIVE PROCEDURES

5.8.1 INVASIVE PROCEDURES

Equipment for invasive procedures must be sterilized with either autoclaving, EO2 gas, Starred or cold sterilization, like Cidex OPA, methods

5.8.2 NON-INVASIVE PROCEDURES

Equipment must be surgically clean before use. If contaminated or visible soiled, first wash with soap and water and then use either pasteurization or with a hypochlorite – detergent at 5000 ppm

5.8.3 PRECAUTIONS TO BE TAKEN IN SPECIFIC CLINICAL SETTINGS

The following precautions refer to specific clinical settings and must be adopted in addition to Standard Precautions.

5.8.3.1 HAEMODIALYSIS SETTING

Haemodialysis increases the patient's risk of blood borne virus infection because it involves access to the circulatory system. Infection may be due to contamination occurring at various steps in the haemodialysis procedure or intrinsic contamination of any of the dialysis system.

Infections may be the result of inadequate haemodialysis systems or procedures, breaks in established procedures, lack of monitoring for known contaminants, reprocessing failure, or inadequately trained/educated staff.

Risk of blood borne infection in the haemodialysis setting may be reduced by:

- ◆ Adherence to Standard Precautions;
- ◆ Adherence to procedures for cleaning, disinfection and maintenance of equipment;
- ◆ Knowledgeable, well-trained staff that understand the implications of deviating from infection prevention and control guidelines and standards
- ◆ Established infection control procedures;
- ◆ Careful monitoring of all procedures in which blood contamination can occur;
- ◆ An effective patient education program that includes teaching patients and their families their role in prevention of infections;
- ◆ Routine monitoring and follow up of patients undergoing haemodialysis in relation to blood borne viruses status;
- ◆ Hepatitis B vaccination for all susceptible haemodialysis patients and staff;

5.8.3.2 COLLECTION OF LABORATORY SPECIMENS

Care must be taken when collecting any specimens. PPE must be used while collecting the specimens. Lids of specimen's containers must be closed properly and it must be transported in a sealed container.

Sputum specimens for TB investigations should be collected in well ventilated areas or in open spaces outside.

Used specimen containers must be discarded according to protocol of clinical waste management

5.8.3.3 PEST CONTROL

Health care areas provide an ideal environment in which pests can flourish. Pests that commonly infest health institutions are cockroaches, ants, birds and rodents. Although it is unlikely that all pests could be eradicated from health care institutions an effective continuous programme to control their numbers is essential.

5.8.3.4 DENTAL PRECAUTIONS

Dental health care workers are routinely exposed to high concentrations of aerosols and splatter during dental procedures. The use of personal protective clothing is highly recommended to prevent the transmission of infection from the health care worker to the patient or the patient to the health care worker. The type of protection used should be related to the dental procedure.

The rubber dam, high-velocity air evacuation, patient positioning; personal protective equipment including protective eyewear should be used for the patient and the dental team.

Air and water lines should be flushed for a minimum of two minutes at the start of the day and for 20-30 seconds between patients. All dental equipment, which supplies water to the oral cavity, is to be fitted with anti-retraction valves

5.8.3.5 EYE CARE

Never use eye drops/ointment that is in use for more than 30 days or prescribed for somebody else. Discard by expiry date and use only for the person it is prescribed for

Pre – operative care	:	Avoid touching of the eyes Wash hands after using the toilet
Post – operative care	:	Cover eyes until the next day Never rub or touch the eye Wash your hands before putting in eye drops Avoid water getting into your eyes for first two weeks after operation Do not use make-up for first two weeks

5.8.3.6 MORTUARY/FORENSIC

Standard Precautions are required at all times when handling bodies of deceased persons. Disease specific precautions (see 5.11.2) should be adopted when handling bodies that are known or suspected to have been infected with a pathogen for which additional precautions are recommended. Disease specific Precautions should be maintained until the body is completely “enclosed” for transport.

The essential purpose of guidelines for post-mortem is to minimize the risk of exposure of a health care worker to a communicable disease and to minimize the risk of infection being passed outside the autopsy room to others and the environment.

Those undertaking post mortem examinations should adopt Standard Precautions, and, depending on the known or suspected infectious status of the body, disease specific precautions.

5.9 EMPLOYEE DISEASE MANAGEMENT

As to ensure national uniformity in management of occupational infections, policies and/or guidelines will be developed for the following:

- ◆ Employee vaccination programs.
- ◆ Employee placement (of compromised, predisposed, and infected or contagious employees and their placement under quarantine) Management of HIV and Aids in the Workplace policy – 28/08/06
- ◆ Yearly medical questionnaire.
- ◆ Outbreak investigation testing. Disease Outbreak Response Policy – 28/08/06
- ◆ Chemicals safety
- ◆ Post exposure prophylaxis. Occupational Injuries and Diseases Policy – 28/11/06
- ◆ Personal protective equipment. Personal Protective Equipment Policy – 28/08/08
- ◆ Exposure to EO2 yearly testing (FBC, U&E, Urine testing)
- ◆ Pre-employment testing and examinations according to facilities guidelines

5.10 EMS - PATIENT TRANSPORT

- ✓ Handle sterile equipment and supplies carefully to avoid contamination
- ✓ Clean and sterilize re-usable equipment as per protocol
- ✓ Use PPE when working with blood and body fluids
- ✓ Use a N95 respirator when transporting a patient with MDR or XDR-TB
- ✓ Wash hands as soon as possible after treating a patient
- ✓ Use waterless hand disinfectants when no hand washing facilities are available
- ✓ Infection Risk assessment and management plan
- ✓ Use aseptic techniques for invasive procedures
- ✓ Handle and wash linen as per protocol
- ✓ Segregation and disposal of sharps, infectious and hazardous waste according to protocol
- ✓ Cleaning of vehicles as per policy

- ✓ Cleaning of vehicles after transporting patients with an infectious/communicable disease (see 13.2.1)
- ✓ Supply names of contacts to Infection control coordinator in facility after transporting patients with an infectious/communicable disease (see 13.2.1)

5.11 ISOLATION

5.11.1 TYPES OF ISOLATION PRECAUTIONS

❖ Airborne

Airborne transmission occurs when droplet nuclei (evaporated droplets) <5 micron in size are disseminated in the air. These droplet nuclei can remain suspended in the air for some time. Droplet nuclei are the residuals of droplets and when suspended in the air, dry and produce particles ranging in size from 1-5 micron. These particles can remain suspended in the air for long periods of time, especially when bound on dust particles. Diseases which spread by this mode include open/active pulmonary tuberculosis (TB), measles, chicken pox, pulmonary plague and haemorrhagic fever with pneumonia.

The following precautions need to be taken:

- Implement standard precautions as well as administrative and environmental control :
- Place patient in a single room that has a monitored negative airflow pressure of more than 6 air changes, and is often referred to as a "negative pressure room". The air should be discharged to the outdoors or specially filtered before it is circulated to other areas of the health care facility.

If technological environmental controls are not available, natural ventilation can be obtained by means of open doors and windows to bring in air from outside

- Anyone who enters the room must wear a special, high filtration, particulate respirator (e.g. N 95) mask.
- Limit the movement and transport of the patient from the room for essential purposes only. If transport is necessary, minimize dispersal of droplet nuclei by masking the patient with a surgical mask.

It is important to have the support of engineering services to ensure that the correct airflow is maintained.

❖ Droplet precautions

Diseases, which are transmitted by this route, include pneumonias, pertussis, diphtheria, influenza type B, mumps, and meningitis. Droplet transmission occurs when there is adequate contact between the mucous membranes of the nose and mouth or conjunctivae of a susceptible person and large particle droplets (> 5 microns). Droplets are usually generated from the infected person during coughing, sneezing, talking or when health care workers undertake procedures such as tracheal suctioning / bronchoscopy.

The following precautions need to be taken:

- Implement standard precautions.
- Place patient in a single room (or in a room with another patient infected by the same pathogen).
- Wear a surgical mask when working within 1-2 meters of the patient.
- Place a surgical mask on the patient if transport is necessary.
- Special air handling and ventilation are not required to prevent droplet transmission of infection.

❖ Contact precautions

Diseases which are transmitted by this route include colonization or infection with multiple antibiotic resistant organisms, enteric infections and skin infections.

The following precautions need to be taken:

- Implement standard precautions.
- Place patient in a single room (or in a room with another patient infected by the same pathogen). Consider the epidemiology of the disease and the patient population when determining patient placement.
- Wear clean, non-sterile gloves when entering the room.
- Wear a clean, non-sterile gown/plastic apron when entering the room if substantial contact with the patient, environmental surfaces or items in the patient's room is anticipated.
- Limit the movement and transport of the patient from the room; patients should be moved for essential purposes only. If transportation is required, use precautions to minimize the risk of transmission.

❖ Environmental precautions (protective isolation)

Protective isolation requirements are patient specific and depend on the degree of immuno-deficiency eg. extensive burns, leukaemia, patients with low white cell count

- Private room
- Masks and gowns be worn by all who enter the room
- Hands must be washed before entering the room
- Gloves must be worn by all persons giving direct care to patient
- Room to be clean first in the morning with clean equipment

5.11.2 INFECTIONS WITH MULTIDRUG RESISTANT ORGANISMS

- ❖ Methicillin-resistant *Staphylococcus aureus* (MRSA)
 - Transmission is usually through the hands of health care staff.
 - The following precautions are required for the prevention of spread of epidemic MRSA:
 - Minimize ward transfers of staff and patients,

- Ensure early detection of cases, especially if they are admitted from another hospital.
- Screening of high risk patients will ensure early
- Detection and appropriate precautions can be implemented,
- isolate infected or colonized patients in a single room, isolation unit or cohorting in a larger ward,
- Treat patients with MRSA pneumonias with airborne precautions in place,
- Reinforce hand washing by staff after contact with infected or colonized patients
- Consider using an antiseptic hand washing agent or alcohol hand-rub or hand gel,
- Wear gloves when attending to the patient or when handling MRSA contaminated materials,
- Wear a gown or apron when attending to the patient or when handling contaminated materials,
- Develop protocols or guidelines for management of patients and staff during an outbreak,
- Ensure that operating surgeons should not perform surgeries until declared negative for carriage.

❖ Vancomycin-resistant enterococcus (VRE)

- The major route of transmission of VRE within the health care facility is the hands of HCWs following contact with patients with VRE or their immediate environment. Usually this is associated with inadequate hand washing.
- *Infection control measures for VRE*
- Standard precautions with additional contact precautions should be applied.
- *Contact precautions* (See No 13)
- It is essential that all staff, visitors or any other person entering the patient's room strictly follow standard and contact precautions.
- Daily environmental cleaning is essential.
- Patient must have his/her own patient care items.
- Any item must be disinfected after it is removed from the patient's room prior to being sent to another area in the hospital or being used on another patient.

❖ Multidrug-resistant tuberculosis (MDR-TB & XDR – TB)

Multidrug resistant TB is resistant to any combination of anti-TB drugs that includes Isoniazid and Rifampicin (the two most effective anti-TB drugs).

- TB is usually transmitted by exposure to airborne droplet nuclei produced by people with pulmonary or laryngeal disease, during expiratory efforts such as coughing and sneezing.
- Prolonged, close contact with such patients increases the risk of transmission.
- *Infection control measures for MDR-TB*
- Rapid detection,

- Immediate implementation of infection control precautions for all suspect or proven cases,
- Diagnosis and treatment of TB,
- Transport of patient – patient should wear a surgical mask, appropriate infection control precautions include standard precautions
- Plus additional precautions (airborne precautions).

5.11.3 ADDITIONAL PRECAUTIONS

- Toys in childcare facilities
Toys must be washable.
Wash with soap and water daily.
Discourage sharing of toys between children
Practice good hygienic practices
- Emergency situations
See policy on Disaster management
- Food & Nutrition
- TB prevention/control
See policy
- Environmental Management Practices/ environmental safety and hygiene
- Air
The Engineering Department is responsible for monitoring the number of air changes and quality of air
- Water
The Engineering Department must routinely check the water tanks, supply lines and outlets. An adequate maintenance program must be in place
- Cleaning procedures
According to cleaning program, for concurrent and terminal cleaning
- Laundry
According to policy
- Reprocessing of instruments and equipment
Look at manufacturers' guidelines.
Never reuse single use items
First clean reusable equipment before reprocessing
- Cleaning, disinfection and sterilization of equipment
Monitor sterilization records
Evaluate the decontamination and packaging process
Evaluate environmental hygiene
Refer to manufacturers guidelines
- Meningococcal meningitis
- SARS – see Policy
- Other infections

5.12 COMMUNICABLE DISEASES - comply with notification

- 5.12.1** The initial notification of a medical condition is done on a case-based form (**GW 17/5**). Depending on the structural organization of the province, the completed **GW 17/5** forms is sent to the relevant local health authority, district health office or the provincial office.
- 5.12.2** The first health care professional to come into contact with a patient presenting with one of the prescribed Notifiable Medical Conditions is required by law to notify.
- 5.12.3** Notifiable medical conditions have been sub-divided into two categories according to type of disease:
a) **Category A:** these are medical conditions that require immediate notification to the regional/provincial or Department of Health by telephone or fax upon initial diagnosis (presumptive or confirmed) with written notification form (**GW17/5**) to follow within five days.
b) **Category B:** these are medical conditions that require written notification (GW17/5 form) only, within seven days of diagnosis.
- 5.12.4** Appropriate laboratory tests should be performed but you do not have to wait for results to notify. Some conditions are only ever based on clinical criteria such as tetanus.
- 5.12.5** Reporting a Notifiable Disease during an outbreak – see policy
- 5.12.6** Priority Reporting of MDR & XDR –TB
Report all cases of MDR and XDR to the department of health within 2 hours.
- 5.12.7** List of Notifiable Medical Conditions in South Africa

ICD9	ICD10	Medical Condition
AFP	AFP	Acute flaccid paralysis 📄:
022	A22	Anthrax 📄:
023	A23	Brucellosis
001	A00	Cholera 📄:
090	A50	Congenital syphilis
0650	A98	Crimean-Congo hemorrhagic fever, Other hemorrhagic fevers of Africa 📄:

032	A36	Diphtheria
005	A02&A05	Food poisoning 🦠:
HIB	HIB	Haemophilus influenzae type B
984	T56	Lead poisoning
040L	A48	Legionellosis
030	A30	Leprosy
084	B54	Malaria
055	B05	Measles 🦠:
036	A39	Meningococcal infection 🦠:
0029	A01	Paratyphoid fever
020	A20	Plague 🦠:
989	T57&T60	Poisoning agricultural stock remedies
045	A80	Poliomyelitis (ICD10: Acute)
071	A82	Rabies, human 🦠:
390	100	Rheumatic fever
037	A35	Tetanus (ICD10: other)
7713	A33	Tetanus neonatorum
076	A71	Trachoma
010	A16.7	Tuberculosis Primary

011	A16.2	Tuberculosis Pulmonary
012	A16.9	Tuberculosis (other respiratory organs)
013	A17.0&G01	Tuberculosis of meninges
014	A18.3	Tuberculosis of intestine, peritoneum
015	A18.0	Tuberculosis of bones and joints
016	A18.1	Tuberculosis of genito-urinary system
017	A18.8	Tuberculosis of other organs
018	A18.9	Tuberculosis miliary
0020	A01	Typhoid fever (ICD10: Typhoid fever)
080	A75.0	Typhus fever (lice-borne)
081	A75.2	Typhus fever (ratflea-borne)
0701	B15.9	Viral hepatitis type A (ICD10: Acute)
0703	B16.9	Viral hepatitis type B (ICD10: Acute)
0705	B17.8	Viral hepatitis non-A non-B (ICD10: Acute)
0709	B19	Viral hepatitis unspecified
033	A37	Whooping cough
0600	A95	Yellow fever 🦟:

5.12.8 SCHEMATIC OF INFORMATION FLOW FOR NOTIFYING

☞ Category A disease: Immediate notification [within 24-hours] after diagnosis by the health care professional through telephone or fax to the designated district or provincial health officer

5.13 SURVEILLANCE

5.13.1 DEFINITION:

Surveillance is a system of monitoring infections in health care facilities by methods for the purpose of identification, prevention and control of infections.

5.13.2 PURPOSE OF SURVEILLANCE:

- To assess the effectiveness of existing infection control practices
- To identify the existing or imminent spread of an outbreak
- To identify emerging pathogens
- To decide when to introduce special steps to control an outbreak, and to assess the outcome of these measures
- To collect relevant data
- To analyze and interpret the data by : use of statistical methods
the calculation of incidence rates eg

5.13.3 METHODS OF SURVEILLANCE OF NOSOCOMIAL INFECTIONS:

- Kardex review
- Routine ward visits
- Microbiological data surveillance
- Hospital-wide surveillance
- Targeted surveillance
- Computer-generated surveillance
- Prevalence surveys :
 - Will provide Healthcare associated prevalence rates to individual hospitals
 - All the wards take part, specific time frames, each bed only counted once
 - Been done in three rounds – 9months apart
 - Data collection sheet is used
 - Focus on specific infections : surgical site infections, primary bloodstream infections, pneumonia and urinary tract infections.

5.14 OUTBREAK SUSPICIONS

Refer to Policy - Disease Outbreak Response Policy – 28/08/06 - Draft

5.15 MONITOR

5.15.1 SELECTED SURFACES

5.15.1.1 Particle counts in theatre – must be done by an accredited laboratory once a year. Engineering Department is responsible for it. A copy of the results must be available in the Infection Control Officer's office

5.15.1.2 Environmental swabs must only be taken if there is a problem

5.15.2 WATER SUPPLY

- routine sampling is not necessary, unless there is a problem. It is the responsibility of the hospital Engineering Department.

5.15.2.1 Warm water : Must be tested for Legionella species at least once a year
Keep warm water temperatures at 60 °C
Keep water tanks clean and securely covered to prevent contamination from birds, rodents & dust

5.15.2.2 Cold water : Water supply tanks and emergency water tanks must be inspected and cleaned regularly

5.15.3 CSSD

- Dedicated, trained staff must work there
- Monitor sterilization records
- Evaluate the decontamination and packaging process
- Evaluate environmental hygiene
- The management of hospital has a legal responsibility to provide safe equipment which is appropriately processed
- Do not re-use single use items
- Restricted entry and movement of staff
- Regular in-service training necessary
- Detailed procedure manuals must be available
- Detailed records must be kept :
 - Costing
 - All sterilization done
 - Maintenance done to equipment
 - Preventative maintenance plan in Place

5.16 ANTIBIOTIC RESISTANCE

The overuse and misuse of antimicrobials has resulted in the development of antimicrobial resistance in many parts of the world.

In health care settings, the spread of resistant organisms is facilitated when hand washing, infection control precautions, and equipment cleaning are suboptimal. The strategies for control of antimicrobial resistance thus consist of:

- Appropriate use of antimicrobials,
- Strengthening of basic infection control measures.
- Appropriate antimicrobial use

- Each health care facility should have an antimicrobial use programme. This policy must be implemented through the Infection Control Committee or an Antimicrobial Use Committee.
-
- Control of endemic antibiotic resistance
 - ◇ Ensure appropriate use of antibiotics (optimal choice, dosage and duration of antimicrobial therapy and chemoprophylaxis based on defined hospital antibiotic policy, monitoring and antibiotic resistance, and up-to-date antimicrobial guidelines).
 - ◇ Institute protocols (guidelines) for intensive infection control procedures and provide adequate facilities and resources, especially for hand washing, infection control precautions (e.g. isolation), and environmental control measures.
 - ◇ Improve antimicrobial prescribing practices through educational and administrative methods.
 - ◇ Limit use of topical antibiotics.

6 **ABREVIATIONS**

AIDS	-	
CPN	-	Chief Professional Nurse
CSSD	-	Central Sterilization & Supplies Department
EO ₂	-	Ethylene oxide sterilization
FBC	-	Full blood count
FED	-	-Formidable epidemic diseases
HAI	-	Healthcare associated infection, Hospital acquired Infection
HCW	-	Health care workers
Hep A	-	Hepatitis A
Hep B	-	Hepatitis B
Hep C	-	-Hepatitis C
HIV	-	Human immunodeficiency virus
MDRTB	-	Multi Drug - Resistant Tuberculosis
MRSA	-	Methicillien – resistant Staphylococcus aureus
PH	-	Pelonomi Hospital
PTB	-	Pulmonary Tuberculosis
RN	-	Registered Nurse
SARS	-	Severe Acute Respiratory Syndrome
TB	-	Tuberculosis
TSSD	-	Theatre Sterilization & Supplies Department
U&E	-	Urea & Electrolyte
UM	-	Unit manager
VRE	-	Vancomycin – resistant Enterococcus
XMDRTB	-	Extensively Drug - Resistant Tuberculosis

7 **DEFINITIONS**

AIDS: Acquired Immunodeficiency Syndrome

Antiseptic: Disinfectant that is suitable for application to living skin and

tissues.

Autoclaving: A sterilization system making use of high-pressure steam for sterilization of equipment, e.g.

Chemical waste: Waste generated from the use of chemicals in medical and laboratory procedures, during sterilization process and research.

Color-coding: Designates the use of different colors for the storage of different categories of healthcare wastes.

Community: The people living in the vicinity of a proposed, planned or developed activity

Community-acquired infection – An infection is present or incubating at time of admission and appears within incubation period of illness

Disinfection: means reducing the number of pathogenic microorganisms on an object. Disinfection does not mean that all microorganisms are killed. A disinfectant is a chemical used to disinfect objects and surfaces.

Domestic waste: Municipal solid waste generated from households.

Healthcare associated infection – HAI (nosocomial or hospital-acquired infection): Is an infection acquired by a patient during hospitalization, a healthcare worker while working, or a visitor in a healthcare facility. Such an infection should have neither been present nor incubating at the time of admission, or contact with the health care facility and appear more than 48 hours after contact. This includes infections acquired in the hospital, but appearing after discharge, and also occupational infection among staff of the facility.

Hepatitis B: Hepatitis caused by a virus and transmitted by exposure to blood or blood products.

Hepatitis C: Hepatitis caused by a virus and transmitted by exposure to blood or blood products.

HIV: Human Immunodeficiency Virus

Infection: The entry and development or multiplication of an infectious agent in the body of the host

Infection prevention & control: refers to activities aiming at the prevention of the spread of infection between patients, from HCW to patients and from patients to HCW in a healthcare facility.

Infection prevention & control committee: It is a multidisciplinary committee that deals with infection control issues. Each member of the committee makes inputs on infection control matters as they relate to his /her discipline in order to share information and cooperate. The team may be made up of management,

physicians, other healthcare workers, clinical microbiologist, pharmacy, sterilizing service, housekeeping, food services, laundry, maintenance and training services.

Infection prevention & control program: This refers to all aspects of Infection control, collectively. It includes education, surveillance, environmental management, waste management, outbreak investigation, standard and additional precautions, cleaning, disinfection, isolation, sterilization and notification, employee health and quality management in infection control.

Medical/Clinical waste: Is waste generated in places like hospitals & clinics that has the potential to cause injury or infection and includes the following types of waste:

- Sharps
- Human tissue (excluding hair, teeth and nails)
- Bulk body fluids and blood
- Visibly blood stained body fluids and visibly blood stained disposal material and equipment
- Laboratory specimens and cultures.

Medical Devices: All products, except medicines, used in health care for diagnosis, prevention, monitoring or treatment. The range of products is very wide: it includes contact lenses and condoms; heart valves and hospital beds; resuscitators and radiotherapy machines; surgical instruments and syringes; wheelchairs and walking frames.

Personal protective equipment: These are items used to protect the healthcare worker from exposure to blood, body fluids, excretions or from droplets or airborne transmission of organisms. The equipment includes gloves, gowns, goggles, caps, boots and masks.

Recapping: The act of placing a protective sheath on a needle.

Risk Management: Covers all the processes involved in identifying, assessing and classifying risks, assigning ownership, taking actions to mitigate or anticipate them, and monitoring and reviewing progress, as well as corrective measures.

Sharps: Objects or devices having sharp points or cutting edges capable of cutting or piercing the skin.

Standard precautions: An approach to infection control that treats all human blood and other potentially infectious materials as if they were infectious.

Sterilization: The destruction of all microorganisms, including spores. This is defined as a decrease in microbial load. Sterilization can be either conducted by physical or chemical means.

Waste management system: All the activities, administrative and operational, involved in the production, segregation, handling, treatment, conditioning, storage, transportation and disposal of waste generated by health-care establishments.

8. MANAGEMENT OF SHARP INJURIES

HEALTH HUMAN RESOURCE MANAGEMENT CIRCULAR NO. 75 OF 2008:
MANAGEMENT OF OCCUPATIONAL EXPOSURES TO HIV, HBV, HCV AND
RECOMMENDATIONS FOR PEP:

MANAGEMENT OF OCCUPATIONAL EXPOSURES TO HIV, HBV, HCV AND RECOMMENDATIONS FOR PEP.

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1. TITLE.

GUIDELINE: MANAGEMENT OF OCCUPATIONAL EXPOSURES TO HIV, HBV, HCV AND RECOMMENDATIONS FOR POST EXPOSURE PROPHYLAXIS.

2. DATE OF APPROVAL AT EXCO MEETING: 10 MARCH 2008

3. AUTHORS

**Compiled by Dr. S de W Oosthuizen, Principal Medical Officer, Provincial
Occupational Health Unit (POHU)**

4. ACKNOWLEDGEMENTS

Health Support Cluster, Eastern and Northern Complexes,

The following contributed to drafting the guidelines:

Prof. N v. Rensburg and Dr. N Goedhals, Dept. Virology, UFS. 2004.
Dr. D Steyn & Dr. C v Vuuren, Infectious Diseases, Dept. Internal Medicine, UFS
Dr. WJ Rabie - Dept. of Family Medicine, UFS.
Mr. J Mokgatle & Me. Q Oliphant - Non-Personal Health Sub-directorate.
Dr. N v Zyl, Medical Manager, Univ. H.
Dr. B de Klerk – Occupational Health PMO, Univ. H.
Me. R Oosthuizen – Chief Pharmacist, Univ. H.
27 OH doctors and nurses at a meeting at the POHU on 3/5/2007
FSP OH District Coordinators at a meeting 5/2/2008 with their subsequent feedback.
Me. Hettie Marais - Manager: Pharmaceutical Services
Dr. Kerry Uebel – KZN
Presented to EXCO Meeting, Dept. of Health, FSP on 10/3/2008.

6. LIST OF ACRONYMS

HIV	Human Immunodeficiency Virus
HBV	Hepatitis B Virus
HCV	Hepatitis C Virus
PEP	Post Exposure Prophylaxis
HR	Human Resource
IOD	Injuries on Duty
OH&S	Occupational Health and Safety
GAR	General Administrative Regulations of the OHS Act 85 of 1993
HCW	Health Care Workers
HbsAg	Hepatitis B surface Antigen
HbeAg	Hepatitis e Antigen
HbsAb	Hepatitis B surface Antibody
HBIG	Hepatitis B Immuno Globulin
ART / ARVT	Anti-Retroviral Treatment

7. DEFINITION OF TERMS

PEP	Prophylactic (preventative) treatment given to a HCW exposed to a virus to prevent them from getting infected by the virus
Secondary transmission	The transmission of a virus from the HCW, which got infected by a virus, to other patient/s again.
Universal precautions	Precautionary measures that should always be applied to prevent getting infected or infecting patients e.g. hand washing, gloves, masks, goggles, etc.
Seroconversion	When someone converts from having no antibodies for a virus to developing antibodies against a virus i.e. positive

8. BACKGROUND INFORMATION

Section 8(1) of the Occupational Health and Safety Act 85 of 1993 stipulates: Every employer has to provide and maintain, as far as reasonably practicable, a working environment that is safe and without risk to the health of his employees. According to subsection 2 the employer's duties include: "(a) the provision and maintenance of systems of work.... that are safe and without risks to health. (b) taking such steps as may be reasonably practicable to eliminate or mitigate any hazard or potential hazard, (d) establishing what hazards to the health or safety of persons are attached to any work which is performed, (e) providing such information, instructions, training and supervision as may be necessary to ensure the health and safety at work of his employees, (g) taking all necessary measures to ensure that the requirements of this Act are complied with by every person in his employment, (h) enforcing such measures as may be necessary in the interest of health and safety; (i) ensuring that work is performed under the general supervision of a person trained to understand the hazards associated with it and who have the authority to ensure that precautionary measures taken by the employer are implemented."

Section 14 (a) & (c) of the OHSA state the duties of employees, (a) to take reasonable care for the H&S of himself and of other persons who may be affected by his acts or omissions. (c) carry out any lawful order given to him, and obey the H&S rules.....

Other documents that might overlap with the above mentioned: Disposal of Medial Waste, Infection Control Policy, and Occupational Health Policy.

Needle sticks are occupational injuries that can lead to serious occupational diseases. Other occupational exposures to body fluids can also lead to serious occupational diseases. This may lead to compensation claims. These occurrences therefore have to be reported and managed as prescribed in the Compensation for Occupational Injuries and Diseases Act, 1993 (Act. 130 of 1993).

In terms of the above, implementing a guideline and policy, which ensure that HCWs are protected and optimally managed, is essential.

RISKS FOR VIRAL TRANSMISSION:

- Globally, 0.5% of HCW are exposed to HIV annually.
- Average risk of HIV transmission without treatment: 0,3% (=1 in 300) for hollow needle injuries and 0,09% (=1 in 1000) in mucous membrane & damaged skin exposure to positive blood. Zidovudine given within 1-2 hours and taken for 28 days post exposure reduces the risk by about 80%. 4% of seroconverting occurs after 6 months
- If the source's blood was HbsAg and HbeAg positive the risk of developing clinical hepatitis varies between 22-31%. The risk of developing serologic evidence of HBV infection is about 37%-62%.
- The risk of developing clinical hepatitis if the source blood was HbsAg positive and HbeAg negative is about 1-6%. The risk of developing serologic evidence of HBV infection is about 23-37%.
- Most HBV occupationally infected health care workers (HCW) could not recall percutaneous injury. They got it from caring for HBV patients and from direct or indirect body fluid exposures through broken skin and mucosal surfaces.
- HBIG and the HBV vaccine given after birth to babies born to HBsAg and HbeAg positive mothers were 85 to 95% effective in preventing HBV infection.
- No evidence exists that HBIG has ever transmitted HBV, HCV or HIV in the USA.
- HCV is very rare in SA. It occurs mainly in hemophiliacs, intravenous drug users and hemodialysis patients. In a small survey in Baragwaneth hospital about 1% of HIV cases were HCV positive.
- The average incidence of anti-HCV sero-conversion after accidental percutaneous exposure from an HCV-positive source is 1.8%. It occurred almost only from hollow-bore needles, rarely from mucous membrane exposures to blood and not yet documented from intact or non-intact skin exposures. Environmental contaminations with blood containing HCV, exposure to fluids or tissue other than blood are not significant risks. In hemodialysis settings with poor infection control practices the risk is much higher.
- Blood, serum, csf, pleural fluid, semen, synovial, vaginal, pleural, joint, pericardial, amniotic and all blood stained body fluids transmit blood borne infections through percutaneous injuries or by mucocutaneous exposure or through long exposure to intact skin. But with HIV there is no risk for transmission through intact skin.
- Feaces, nasal secretions, saliva, sputum, sweat, tears, urine and vomitus are not considered potentially infectious unless they contain blood.

- Human bites: Transmission of HBV and HIV infection only rarely has been reported to occur through human bites. In this case, both parties are exposed to blood borne pathogens.

9. SCOPE OF GUIDELNE:

9.1. Purpose.

The purpose is to provide a guideline to Free State provincial health care workers on the correct management of occupational exposure to HIV, HBV and HCV.

PREVENTION OF EXPOSURE

10. **PREVENTION OF NEEDLE PRICKS AND EXPOSURE TO BODY FLUIDS:**

- 10.1 Education and training of all staff at risk
- 10.2 HCWs to ensure they are vaccinated against Hep.B and immune.
- 10.3 Universal precautions: Wash hands after patient contact, after removing gloves and immediately after contamination with body fluids. Wear gloves if contamination anticipated. Double glove for exposure prone procedures. Wear goggles or visors - NB.
- 10.4 HCW with exuding lesions, dermatitis or broken skin should refrain from direct patient care
- 10.5 HCW to place sharps bin next to him/her before the procedure. Discard sharps IMMEDIATELY. Do not walk around with exposed sharps. Beware of recapping!! Always use the one hand technique when recapping.
- 10.6 Use only sharp bins for sharps.
- 10.7 The employer has to ensure that sharp bins are always readily available where required.
- 10.8 When working with any human material always concentrate, be patient and be careful.
- 10.9 Get assistance when working with any uncooperative patients.

PROCEDURES

11. **IMMEDIATE ACTIONS AFTER EXPOSURE:**

A HCW MUST:

- 11.1 Wash wound with running water and soap (or an antiseptic), encourage and allow free bleeding. Liberally wash eyes and skin if exposed.
- 11.2 **Take anti-retroviral Rx STAT, ideally within 1-2 hours. No Rx is given if HCW is known HIV positive.** Get/write a script – with or without a file and get Rx STAT from the sister in charge. Issue **3 day starter pack** or **enough Rx to last until the main pharmacy opens**. Do not delay for the sake of a file. (Stat doses are available 24 hrs per day in).
- 11.3 **Report to immediate supervisor** or professional nurse in charge, or head of section or Matron and explain how you got pricked. He/she completes the forms as in 20.
- 11.4 **Open a folder** at admissions as an **Injury on Duty**
- 11.5 Go to **Occupational Health Clinic with your file. After hours to Casualty.**
- 11.6 Collect the **Injury on Duty set of forms**. (They are available in Human Resource and in Occupational Health Clinics.)
- 11.7 **Decide** if the Occupational Health Doctor or your own doctor should do further management. Sign the **CHOICE OF DOCTOR form** indicating your choice. If a private doctor & treatment is chosen, the HCW will bear the costs.

THEN:

11.8 HCW: ONLY Casualty or Occupational Health Staff may take Blood.

They should also ensure that the HCW's own blood is submitted - to prevent fraud.
Failure to comply could result in rejection of an IOD claim.

BLOOD TO BE TAKEN FOR: (within 24 hours of the exposure)

- a. HIV **ELISA** - after pre-test counseling.
- b. **Hepatitis B surface Antibodies & titers** only if no previous confirmation of immunity.
- c. **FBC**.

11.9 Anti-Tetanus Toxoid; Give if soil contamination with a penetrating injury occurred AND if not immunized within last 5 years. Not needed for needle pricks and mucous membrane exposures.

11.10 SOURCE / PATIENT

- a. Record Name, Surname, ID, Hospital number, contact details, treating doctor's name and contact details and results. Occupational Health staff records it in CASE MANAGEMENT RECORD (Annexure C).
- b. Assess clinical symptoms (e.g. acute syndrome suggestive of primary HIV infection or undiagnosed HIV disease) and history of recent exposure to HBV, HCV or HIV or clinical stage of HIV disease if known positive (asymptomatic, symptomatic, AIDS), CD4, viral loads, ART's used, viral resistance & ALT. Record these.

Check records of source for the following results and if not done yet, ask attending doctor to do them.

- a) **HIV rapid and ELISA** to confirm - if unknown or previously negative.
 - ✓ **Pre-test counsel** the patient and
 - ✓ **Counselor** to complete **PRE-TEST CONSENT TO HIV TESTING**.
 - ✓ **Patient signs HIV consent** form.
 - ✓ **Collect blood or use the blood already taken** & send for testing.
 - ✓ **If source patient refuses HIV test**, ask if it can be done **anonymously** and without informing him/her of the result. If he still refuses, record it clearly. Medico-legally there is scope to **use available blood for HIV testing** in any case **but anonymously**.
 - ✓ If **unconscious**, get **consent from patient's family or the treating doctor but do the test anonymously**.
- b) **PREVIOUS EXPOSURE OF SOURCE TO ARVT:**

If the source is or was on ART, collect blood for **HIV RNA** (viral load purple top) & consult a specialist. [If the viral load is not suppressed (undetectable viral load, <400 copies per ml.), there is possible resistance].
- c) **HEPATITIS B surface Antigen** a.s.a.p. Notify if positive.
- d) **Hepatitis C Virus Antibodies**. See Annexure B. IF POSITIVE, do Hepatitis C Virus RNA on an EDTA tube. (If both Positive – do Hepatitis C Virus Antibodies on HCW.) (HCV incidence is very low in our population. Hemophiliacs, renal dialysis and IV drug users have a higher incidence).

12. MANAGEMENT OF HIV RESULTS

	<u>SOURCE:</u> POSITIVE	<u>SOURCE</u> UNKNOWN	<u>SOURCE</u> NEGATIVE
<u>HCW</u> POSITIVE	STOP RX	STOP RX	STOP RX
<u>HCW</u> NEGATIVE	CONTINUE RX Practice safe sex.	Assess risk Individually. Rather be aggressive.	Do ELISA on source to confirm & STOP RX. "WINDOW PERIOD" unlikely in absence of acute retroviral syndrome. Consider source's life, risk, last exposure and condition. If HCW insists on PEP, supply it.

- 13.** If **HCW's** initial **HIV test is positive**, do **post-test counseling, stop treatment and return the remaining treatment** and the **Final Medical** report WCL 5 will be completed. Continue further management and assistance.

14. HIV PROPHYLACTIC TREATMENT.

PEP has failed to prevent HIV infection for several reasons e.g. if source was on ART, large viral inoculation, long delay before start of ART, short duration and low dosages of ART, host factors, etc.

- ✓ For improving effectiveness of PEP, start a.s.a.p (golden 1 hour) preferably within 4 hours. Possibly ineffective after 24 hours. Beyond 7 days, consult a specialist.
- ✓ If PEP is out of stock or not available, buy it privately and submit the claim through Occupational Health / Sickbay to Head Clinical Services for refund by hospital like a buy-out.
- ✓ Always consider possible drug interactions with ART (TB Rx, statins), contraindications, liver and renal diseases, pregnancy, breast-feeding and possible toxicity. Consult specialist where indicated.

a. **TREATMENT** when indicated according to Par. 12.

- i. Retrovir (AZT, zidovudine) 300mg STAT & 12 hourly for four weeks.
3TC (lamivudine) 150mg STAT & 12 hourly for four weeks.
OR COMBIVIR one tab two times per day x 28 days. Not on code
- ii. Addition of Kaletra (400/100 mg bd) or Stocrin (Efavirenz, EFZ) (600mg/d) – both on ARV code. Or Crixivan (Indinavir) (800mg tds with 1.5l fluids per day) (not on code & generally poorly tolerated) - recommended for late starters (after 72 hours) and for high-risk exposures i.e. major inoculation or severe injury or rape. Consult an infectious diseases specialist. A third drug increases side effects and drop out rate. Where indicated, get a private script and claim costs back.
- iii. Pharmacies must arrange that Kaletra and Stocrin are available at each provincial hospital for stat treatment and for at least 3 days more. Where indicated, these drugs must be taken within one hour after exposure for an optimal effect. Systems must also be established to ensure a supply for the remainder of the course.

b. CONSIDERATIONS: Consult a specialist.

- i. Pregnancy in first trimester. Weigh the risks depending on the exposure. Risk of HIV worse than risk of Rx on baby. Consult a specialist. Avoid EFV in pregnancy.
- ii. Breast-feeding. Weigh the risks.
- iii. Severe liver disease or insufficiency.
- iv. Immuno-suppression – endogenic or due to treatment
- v. If source is on ART or was on ART. Different regimens then indicated.
- vi. If source has possible viral resistance. Suspect it with clinical progression of disease, increasing viral load, declining CD4, lack of virological response to Rx.

c. SIDE EFFECTS of ART

- i. **HCW to return** when experiencing any **side effects**.
- ii. For nausea - take Rx after meals and / or use Maxolon before meals. Can add Valoid. Maxolon not ideal for long term use.
- iii. Add Vit.B6.
- iv. Split the dosages.
- v. Eat something early before getting up. Don't miss meals.
- vi. Can add buclizine or emetrol. Alternatively try Motilium (domperidone). **Not on code.**
- vii. **Use alternative ART** if side effects are **really intolerable** - Consult specialist.

15. HEPATITIS B MANAGEMENT.

- 15.1 No employee may be exposed to contact with possible sources unless immunized against HBV.
- 15.2 Follow the Hep.B flow diagram attached. Annexure A.
- 15.3 Pregnancy: Hep B vaccine and HBIG are not contraindicated in pregnancy.
- 15.4 HBsAg can be done stat but HBsAB might not be available within 72 hours.
- 15.5 If the source is HepB surface Antigen positive OR unknown AND the HCW was not vaccinated or has no immunity or there is no lab confirmation of immunity:
 - a. Give HBIG (0.06ml/kg) 500IU and Hep B Vaccine imi in separate sites as soon as possible (preferably within 24-72 hours) after exposure.
 - a.1 Non-responders to the first 3-dose series of Hep B vaccine should complete a second 3-dose vaccine series.
 - a.2 Non-responders to the second 3-dose series, should also receive a second dose of HBIG 4 weeks after the exposure additionally to treatment stated under point a.
 - b. Do HepBsAg on HCW to establish status. If positive - notify. If negative, repeat after 6 months to establish if infection occurred or not.

16. HEPATITIS C MANAGEMENT

- 16.1 Follow the HCV flow diagram Annexure B.
- 16.2 The HCV incidence is very low in our populations.
- 16.3 Higher incidences of HCV positivity are found in dialysis, hemophiliacs, and intravenous drug users.
- 16.4 No PEP exists. Available data suggests that established infection might need to be present before interferon can be an effective treatment. A theoretical argument is that intervention with antivirals when HCV RNA first becomes detectable might prevent the development of chronic infection but 15-25% of patients with acute HCV infection spontaneously resolve their infection. These might therefore be treated unnecessarily if they are all treated early.

- 16.5 Early identification of chronic disease and referral for evaluation of treatment options are advised.
- 16.6 IF source's HCV A/B and RNA both POSITIVE, do Hepatitis C Virus Antibodies and ALT on HCW.

17. POST EXPOSURE COUNSELING.

- 17.1 No special precautions at work are needed to prevent secondary transmission during follow-up period. All the usual recommended infection-control practices should be followed.
- 17.2 If a HCW becomes acutely infected with HBV or HIV, he/she should be evaluated for work allocation according to the recommendations for infected HCW. No restrictions exist re. HCV.
- 17.3 Refrain from donating blood, plasma, organs, tissue or semen during follow-up period.
- 17.4 Any illness compatible to acute retroviral syndrome in follow-up period (fever, rash, myalgia, fatigue, malaise, and lymphadenopathy) should be reported and assessed.
- 17.5 SEX: HCWs exposed to Hepatitis do not need to modify sexual practices or refrain from becoming pregnant.
- 17.6 HCW exposed to HIV: The recommended safe practice is abstinence from sex for 6 months to protect the spouse until HCW is definitely sure sero-conversion did not occur. If a condom is used, the risk of failure to prevent transmission of infection must be considered.
- 17.7 Breast-feeding: Can continue in Hepatitis virus exposure. Consider discontinuation in HIV exposure.
- 17.8 Continue support and counseling e.g. support at home, refer for counseling, etc.
- 17.9 Warn about consequences of false statements and failure to comply.

FORMS TO BE COMPLETED

18. FORMS TO BE COMPLETED

Most forms can be completed during normal working hours at Occupational Health Clinic unless the HCW, the supervisor, witnesses or source will not be available. Carefully complete forms to avoid being called back. Forms are available at HR & Occupational Health Clinics.

a. The Treating Doctor

WCL 4 = First Medical Report i.r.o. an ACCIDENT. In duplicate
Sign **CHOICE OF DOCTOR** in duplicate

b. Occupational Health Department

- ✓ **CHECKLIST FOR IOD FORMS** in duplicate.
- ✓ **CASE MANAGEMENT RECORD.** (Replaces Old Annex 1, 2, & 3. PRE-TEST CONSENT TO HIV TESTING, POST EXPOSURE INCIDENT REGISTER, POST EXPOSURE HEALTH CARE WORKER PROPHYLAXIS).
- ✓ **SECTION B RECORDING AND INVESTIGATION OF INCIDENT. ANNEX.1 Reg. 9 of GAR.**
- ✓ **REPORT OF INCIDENT** to Dept. of Labor Annex.1 MAN 144
- ✓ **INFORMATION LEAFLET TO HCW** - hand to HCW
- ✓ Keep copies of WCL 4, 3/14, 6, WCL2-B, Choice of Doctor, Checklist, original Case management record & HIV consent in an IOD file with the Checklist as front page. Tick off as documents are managed.
- ✓ Send all relevant completed originals to HR.
- ✓ Monthly follow-up until case is closed.

c. HCW

- ✓ **UNUSUAL INCIDENT REPORT** in duplicate.
- ✓ **CHOICE OF DOCTOR** = ANNEXURE 2 in duplicate.
- ✓ **CONSENT FOR HIV TEST** on yourself after pre-test counseling
- ✓ **COPY I.D. DOCUMENT** & certify at HR.
- ✓ **WCL 3 /14 CLAIM FOR COMPENSATION** SECTION C
- ✓ **SECTION B RECORDING AND INVESTIGATION OF INCIDENT. ANNEX.1**
Reg. 9 of GAR.
- ✓ Checklist for IOD forms – 1st part – to capture required details.

d. Supervisor

- ✓ **WCL 2 - Employer's Report of an Accident.** Print name at top.
- ✓ **Sign CHOICE OF DOCTOR Annexure 2 - in duplicate**
- ✓ **UNUSUAL INCIDENT REPORTING DOCUMENT (Old HA 109) - in duplicate**
- ✓ **SECTION C RECORDING AND INVESTIGATION OF INCIDENT. ANNEX.1**
Reg. 9 of GAR.
- ✓ **WCL 6 RESUMPTION REPORT** when officer resumes duty

e. Human Resource: Adjust procedures according to local arrangements.

- ✓ Ensures all forms are completed and submitted.
- ✓ Completes portions of the above forms on behalf of the Employer.
- ✓ Copies forms and sends them in duplicate to Occupational Injuries and Diseases Section, HR Management Directorate.
- ✓ Keeps a set of copies in an IOD file until case is closed.
- ✓ Does monthly follow-up on files until case is closed. Then to Registry for filing.

19. INCIDENT REPORTING AND INVESTIGATION:

- 19.1 Incidents must be reported and investigated to identify and manage the causes and to prevent recurrences,
- 19.2 The legally prescribed form Annexure 1 of Reg. 9 of the GAR of 25 June 2003 is used,
- 19.3 The completed forms must be presented to the OHS Committee meetings as prescribed,
- 19.4 The OHS Committee ensures that appropriate actions were taken by manager to prevent recurrences.

20. FOLLOW-UPS AND TESTS.

Follow-ups and tests are done as indicated.

Follow the attachments for Hep.B & C i.e. Annexure A and B.

Annexure C is used to record Source's details and test result and to record HCW's test results and follow-ups.

21. FINAL ASSESSMENT

- 21.1 If no seroconversion occurred at 6 months – complete FINAL MEDICAL REPORT (WCL 5) and case is closed. (4% of seroconversions occurs after 6 mths)
- 21.2 If **seroconversion occurred** (i.e. you turned HIV + or Hep B or C + after the exposure)
 - a. complete **PROGRESS MEDICAL REPORT** (WCL 5) with results.
 - b. **refers the HCW to an infectious diseases specialist** for the latest advised management and treatment.
 - c. make copies of all documents and safely keeps them for future use.

- 21.3 After two years, HCW's case is automatically closed by the WCC.
- 21.4 Once HCW starts getting ill &/or CD4 gets to 300 and HAART or other treatment is indicated, apply for re-opening of your case. Submit a specialist report indicating the causal relationship between HCW's present condition / illness and the injury and the treatment plan and request re-opening of the case. (WCC needs to accept liability and will then pay all costs and a pension when HCW cannot work.)

22. DEFAULTING

If the injured / exposed worker defaults to return for the prescribed tests, the **Final Medical Report** will be completed. It will be stated that the HCW did not return for the follow-up blood tests. The case will then be closed. If it is later found that the worker is positive, he/she will have no grounds to prove that he/she seroconverted due to the occupational exposure. The Compensation Commissioner will then not accept liability for compensation.

PROCEDURE FOR PEOPLE OTHER THAN EMPLOYEES

23. STUDENTS

Students who are **not employees** are **not covered by the COID Act**. They or their training institution need to arrange and provide their own system and coverage. No IOD forms are completed.

UFS STUDENTS: Do the following after the needle prick or contamination:

- 23.1 Report immediately to the responsible person in the ward and the registrar on call for Internal Medicine or to the Dept. of Internal Medicine.
- 23.2 **Open a file.** Students will be charged according to their income and medical aid. (If there will be a delay, go to casualty for the STAT dose and return for your file)
- 23.3 Go to Casualty, get a **script for the STAT dose of AZT and 3TC** and for enough Rx until you can get the rest through your teaching authority. (UFS at the Dept. of Medicine or Dr. Dewald Steyn) No Rx is given if student is known HIV positive.
- 23.4 Report to your responsible teaching authority. At UFS to Dr. Dewald Steyn (083 2946682) or Prof. Mollentze (082 557760) or Internal Medicine (4053154) as soon as available / reasonable i.e. next morning or next working day for the rest of the management and treatment.
- 23.5 Return for follow-up bloods after 6 weeks, 3 and 6 months where arranged.

24. PHC CLINIC STAFF

- 24.1 PHC Clinic staff is handled as above at their designated hospital.
- 24.2 Staff needs to ensure local arrangements are in place.
- 24.3 Manage the source patient as above in section 14.10 and Annexure C before he/she goes home.

25. EMERGENCY AMBULANCE SERVICES PERSONNEL

Procedure and forms as above BUT management is done by EMS and where they have arranged.

After hours:

- 25.1 Open a file as an IOD. (If there will be a delay, first go to a casualty doctor to prescribe the STAT Rx, and return to admissions to open your file.)
- 25.2 Go to a casualty doctor to prescribe the STAT dose of AZT and 3TC on the Casualty Clinical sheet and take a starter pack or enough until the next day or next working day until you can collect your supply from your department. No Rx is given if HCW is known HIV positive.
- 25.3 Treating doctor completes First Medical Report WCL.4.
- 25.4 Manage the source patient as above in section 14.j and Annexure C before he/she goes home.
- 25.5 Where possible, complete all your forms and collect your blood the next day as arranged by your department. If not possible, do it through casualty if the source patient, witnesses or exposed worker may not be available the next day.

26. VOLUNTEERS:

According to the OHS Act of 1993 Section 9, the employer is also responsible for the health and safety and the protection of people other than workers against hazards to health and safety arising out of or in connection with the activities of persons at work. Volunteers need to be fully vaccinated against HBV and immunity ensured before exposure.

If exposed, no IOD forms are completed, but the incident is investigated and they are managed as set out above.

The employer bears all the costs.

27. CONTRACTED WORKERS:

27.1 The contract with contractors should ensure that the contractor provides a comprehensive OH&S service to its employees in full compliance with the OHS Act 85 of 1993 and the COID Act 130 of 1993.

27.2. No contracted employee may be exposed to HBV unless fully vaccinated with proven immunity.

27.3 If contracted workers are managed at Dept. of Health facilities after prior agreement with a Contractor, the costs will be charged to the Contractor.

27.4 Costs for treatment of IOD cases are for the contractor or the Compensation Commissioner.

28. FURTHER INFORMATION:

Specialist Infections Diseases consultations – Dr. Dewald Steyn. 051 4053154, 083 2946682
Virologist on Call – Universitas Hospital, Bloemfontein.

This guideline and general OH&S – Dr. Faan Oosthuizen 051 405 3144/3136 or 083 2659395

29. GUIDELINE REVIEW.

This policy should be adhered to by all the relevant stakeholders, and will be reviewed from time to time to accommodate any changes or national directives.

30. APPROVAL AND AUTHORIZATION:

Signed by:

HEAD OF HEALTH

DATE:

MANAGEMENT OF HEPATITIS B AFTER EXPOSURE TO BLOOD & BODY FLUIDS:

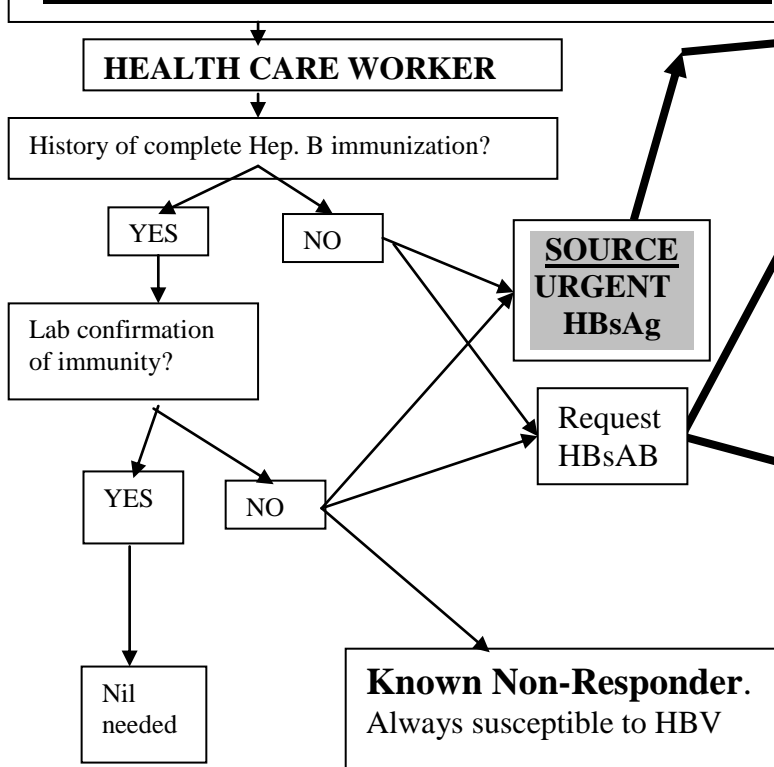
ANNEXURE A

All staff must ensure that they are vaccinated and have confirmed immunity. This service is supplied free of charge.

If this was not done, your employer and the Compensation Commissioner will not be responsible for any damages or claims due to occupational Hepatitis B infection.

HepBsAg can be done STAT. HepBsAB is done in batches and not stat. Contact your laboratory for details.

EXPOSURE TO BLOOD OR BODY FLUID.



NB: If any problem or queries, consult Virology pathologist on call. Get number at Medipage, Universitas Hospital, Bloemfontein.

SOURCE: HBsAg POSITIVE OR UNKNOWN.		SOURCE: HBsAg = NEGATIVE
A: HCW UNVACCINATED OR UNKNOWN / UNSURE IF IMMUNIZED		
1. MX OF HCW IF HbsAB RESULT IS NOT AVAILABLE BY 72 HRS AFTER EXPOSURE:		
HCW: HbsAB not available at 72hrs	a. Hep.B immune globulin 500 IU (HBIG) b. Hep. B Vaccine at different site.	Await HCW AB results
2. MX OF HCW WHEN HEPBsAB RESULT BECOMES AVAILABLE		
HBsAB NEG.	As in A1 above - if not yet done. Do HCW HBsAg. If + - notify & refer Repeat Vaccine 4 weeks after 1 st . Repeat 3 rd Vaccine 2 mths after second. Check HBsAb 6-8 w later & HBsAg after 6 mo	Vaccinate fully or repeat 2 nd 3dose series Check A/B 6-8 weeks after last dose.
HBsAB POS BUT <10 IU/L	As in A1 above - if not yet done Do HCW HBsAg. If + - notify & refer. Repeat vaccine. after 4 weeks. Check HBsAb 6-8 w later & HBsAg after 6 mo	HepB vaccine. Booster Check Ab after 6-8 w.
HBsAB POS >10 IU/L	Nil	Nil
B. HCW FULLY VACCINATED BUT NO LAB CONFIRMATION OF IMMUNITY.		
1. MX OF HCW IF HbsAB RESULT IS NOT AVAILABLE BY 72 HRS AFTER EXPOSURE:		
HCW: VACCINATED Unknown immunity	a. Hep.B immune globulin 500 IU (HBIG) b. Hep. B Vaccine at different site.	Await HCW AB result No Rx here.
2. WHEN HCW's HEPBsAB RESULT AVAILABLE		
HBsAB = NEG. 3 past vaccinations. Or incomplete 2 nd 3-dose series.	As in B1 above - if not yet done. Do HCW HBsAg . If HCW HBsAg Neg: Complete 2 nd 3-dose series vaccine. Check HBsAb 6-8 w later & HBsAg after 6 mo Refer to specialist if still no Ab IF HBsAg POS: Notify. Do HBeAg and refer to specialist.	Do HCW HBsAg If HBsAg Neg:- Compl. 2 nd 3-dose series vaccine. Repeat A/B after 6-8 w If neg. > refer If HBsAg Pos. -do HBeAg & refer
HepBsAB = NEG. Completed 2 nd 3-dose series vaccine.	As in B1 above - if not yet done. Do HCW HBsAg (Had B.1.) If HBsAg Neg: Repeat HBIG 4 weeks after exposure Refer to specialist IF HBsAg POS: Notify Do HBeAg and refer to specialist.	Do HCW HBsAg If neg. - refer to spec. If pos. Notify. Do HBeAg & refer to specialist.
HBsAB POS <10 IU/L	As in B1 above - if not yet done. Do HCW HBsAg No Rx Had HB vaccine. Booster. Check Ab after 6-8w	HepB vaccine. Booster Check HBsAb after 6-8w
HBsAB POS >10 IU/L	Nil	Nil
C. NON-RESPONDERS. HAD 2X 3-DOSE SERIES VACCINE AND DEVELOPED NO ANTIBODIES.		
	a. Give HBIG and REPEAT after 4 weeks. b. Do HBsAg . Repeat after 6 months. Refer if pos.	Nil. Everything was done

A: EXPOSED HCW UNVACCINATED OR UNKNOWN / UNSURE IF IMMUNIZED AGAINST HBV.

DO on HCW HbsAB
(Can take days before results available)

DO ON SOURCE URGENT HBsAg
Request results stat. Can be done stat.

B: EXPOSED HCW FULLY VACCINATED AGAINST HBV BUT NO LABORATORY CONFIRMATION OF IMMUNITY. (HbsAB not checked before)

1. IF HBsAB RESULT OF HCW IS NOT YET AVAILABLE BY 72 HRS AFTER EXPOSURE.

GIVE:
a. Hep.B immune globulin 500 IU (HBIG)
b. Hep. B Vaccine at different site.

Await HCW AB results

2. WHEN HEPBsAB OF HCW RESULT BECOMES AVAILABLE

HBsAB NEG.

As in 1 above - if not yet done.
Do HCW HBsAg. If + - notify & refer
Repeat Vaccine 4 weeks after 1st.
Repeat 3rd Vaccine 2 mths after second.
Check HBsAb 6-8 w later & HBsAg after 6 mths

HBsAB POS BUT <10 IU/l

As in 1 above - if not yet done
Do HCW HBsAg. If + notify & refer.
Repeat vaccine. after 4 weeks.
Check HBsAb 6-8 w later & HBsAg after 6 mths.

HBsAB POS >10 IU/l

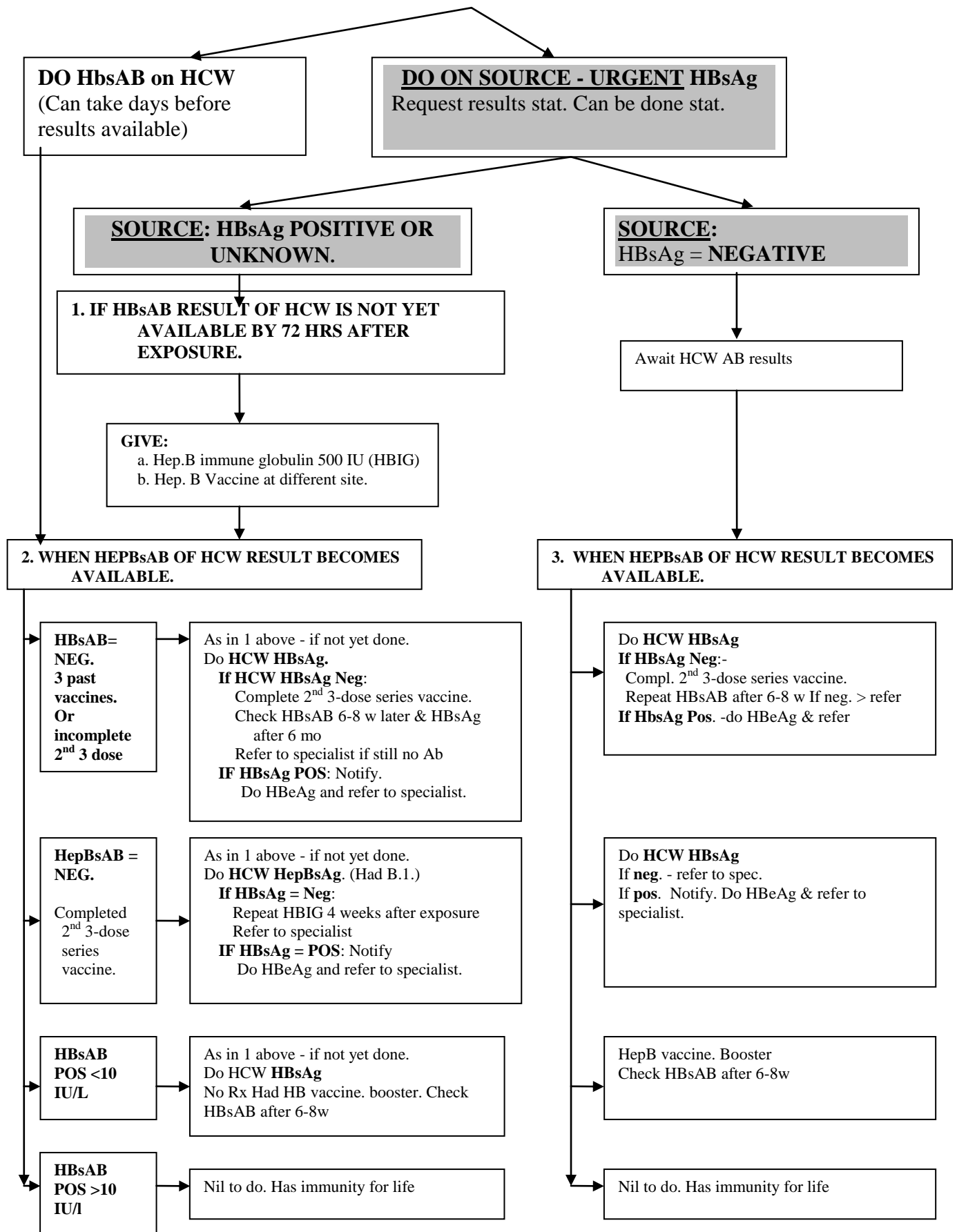
Nil to do. Has immunity for life

3. WHEN HEPBsAB OF HCW RESULT BECOMES AVAILABLE

IF HCW HBsAB NEG.
Vaccinate fully or repeat 2nd 3dose series
Check A/B 6-8 weeks after last dose.

IF HCW HBsAB POS BUT <10 IU/l
Give HepB vaccine. Booster
Check Ab after 6-8 w.

IF HCW HBsAb POS >10 IU/l – Nil to do.
Has immunity for life



C: NON-RESPONDER. EXPOSED HCW FULLY HAS HAD 2X 3-DOSE VACCINE AND DEVELOPED NO ANTIBODIES AGAINST HBV.

Has been referred to specialists and worked out.

DO HbsAB on HCW
(Can take days before results available)

DO ON SOURCE - URGENT HBsAg
Request results stat. Can be done stat.

SOURCE: HBsAg POSITIVE OR UNKNOWN.

SOURCE: HBsAg = NEGATIVE

a. Give HBIG and REPEAT after 4 weeks.
b. Do **HepBsAg**. Repeat after 6 months. Refer if pos.

Nil. Everything was done

MANAGEMENT OF STAFF AFTER POSSIBLE HEPATITIS C EXPOSURE: ANNEXURE B

1. Hep. C incidence is very low in SA. Hemophiliacs, people on dialysis and intravenous drug users have a higher incidence. About 1% of HIV cases in Baragwaneth Hospital were HCV positive.
2. Risk after percutaneous exposure with positive blood is around 2%.
3. 50% to 80% of infected people fail to clear the virus and are at risk of developing chronic liver disease.
4. There is no effective post exposure prophylaxis for Hepatitis C
5. Health care workers who are exposed to infected blood should be monitored, as early treatment of Hepatitis C infection is more effective than if it is delayed.

Protocol:

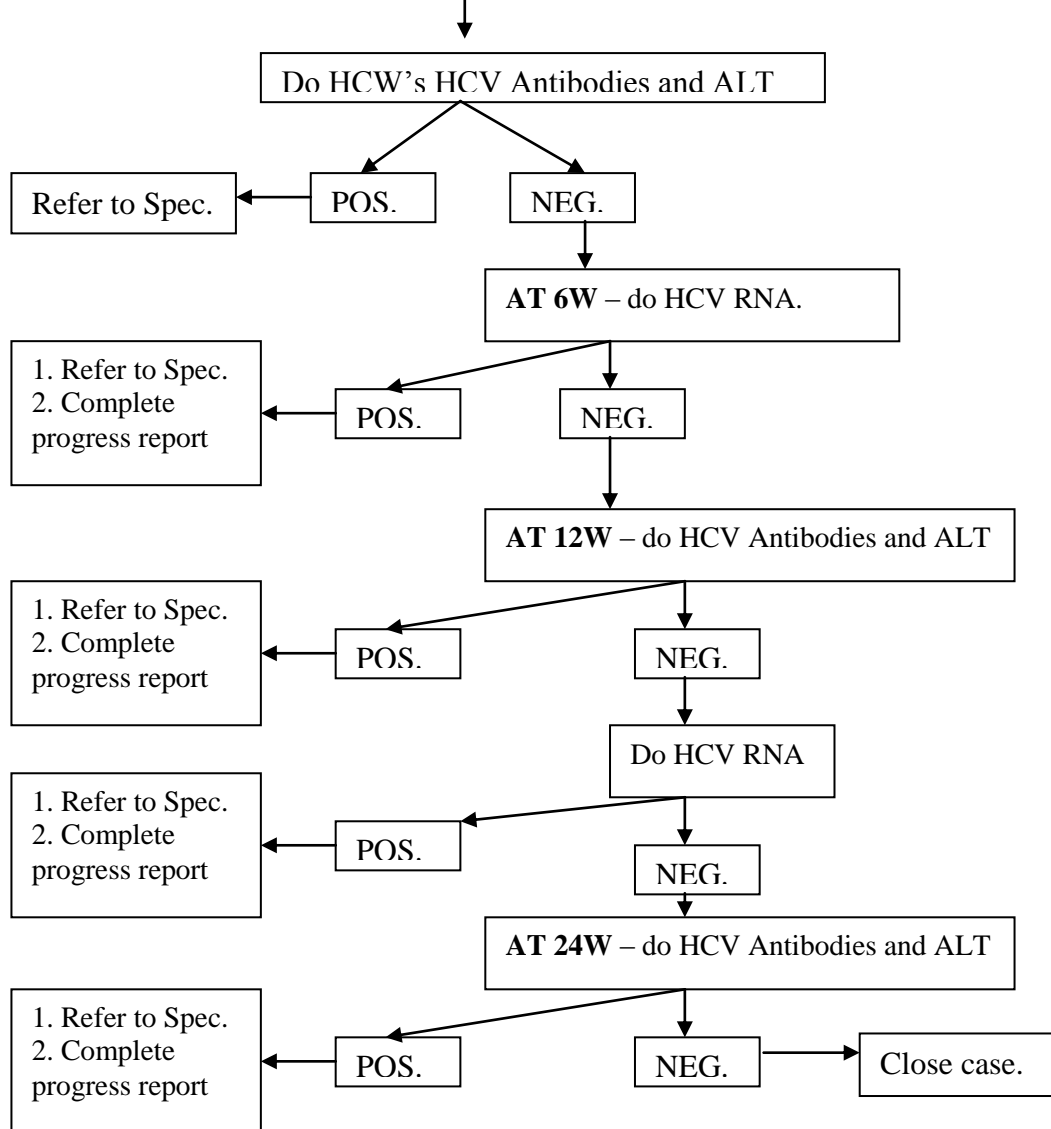
1. **Source:** Take blood for Hepatitis C Virus antibodies

If positive - do Hepatitis C Virus PCR / RNA to confirm.

If both are positive, consider infectious and refer source to specialist. .

2. **Health Care Worker:**

a. IF SOURCE IS HCV ANTIBODIES AND RNA POSITIVE



??? b. If source's blood is not available or unknown

Risk is very small. Consider the circumstances e.g. dialysis, hemophiliacs, IV drug users. Hep.C monitoring in the HCW is not routinely recommended.

Source:

Hardie, D; Yeats, J; Calling the shots - post-exposure prophylaxis against viruses. CME Journal, June 2003. Vol 21 No.6. 322-330

Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HBV, HCV, and HIV and Recommendations for PEP.CME June 2003

Prof. N v Rensburg & Dr. N Goedhals, Dept. Microbiology, UFS, July 2004. Updated at discussion group 12/5/2005

EXPOSED CASE - MANAGEMENT RECORD.

ANNEXURE C

PRE-TEST COUNSELLING AND CONSENT TO HIV TEST. Replaces previous Annexure 1, 2 & 3

HCW Name and Surname: _____ **Date of injury:** _____

COMPLETION OF THE FOLLOWING SECTIONS SERVES AS INFORMED CONSENT TO TESTING:

THE FOLLOWING SECTION IS COMPLETED BY THE CLIENT:

YES NO

- Do you know what HIV is?
- Has it been explained to you how the test is done?
- Have the advantages and disadvantages of the tests been explained to you?
- Has it been explained to you how a positive result will affect your treatment?
- Do you know what a negative result is?
- Has the window period been explained to you?
- Has it been explained what will happen if you are not tested?
- Do you want to know what the results are?
- Do you consent that your blood be tested for HIV?
- Do you want your result to be made known to your spouse, relative or friend?
- Has it been explained to you that you have to practice safe sex (condom use or abstinence) post exposure until the last blood test results?
- Do you understand that if the first blood results are positive then the virus is not from the exposure/ or is not due to needle stick injury?
- Has it been explained to you how long it takes for your body to produce anti-bodies against the virus (sero-conversion)

THE FOLLOWING SECTION IS COMPLETED BY THE COUNSELOR:

Have you explained to the client / patient?

- What HIV/AIDS is?
- How the test will be done?
- What a negative result is?
- What the window period is?
- What the advantages and disadvantages of testing are?
- Why the information is needed?
- How a positive result will affect treatment?
- What will happen if the test is not done?
- Have you yourself explained the above?
- Was a translator used to explain the above?
- Did the client / patient give consent that a spouse, relative or a friend can be informed of his/her HIV positive status?
- Have you explained that client has to practice safe sex (condom use or abstinence) post exposure until the last blood test results?
- Did the client understand that if the first blood results are positive then the virus is not from the exposure/ or is not due to needle stick injury?
- Did you explain to the client how long it takes for body to produce anti-bodies against the virus (sero-conversion)

SIGNATURE PATIENT / CLIENT FOR CONSENT FOR HIV TEST:

Patient / Client: _____ Counselor: _____
Date: _____ Date: _____

POST EXPOSURE: INCIDENT REGISTER & MANAGEMENT RECORD:

A. PATIENT / SOURCE DETAILS:

Name & Surname: _____ Age: ____ Hospital No: _____
Section/Ward _____ Tel. Ext.: _____ Cell ph. Patient: _____
Treating Dr. _____ Cell phone: _____
Address patient: _____
Assess risk of window period: Age, last sex, closed relationship, promiscuity, and etc. _____
Source on ART? _____ Which ones: _____
Possible resistance to ARV's? _____
Clinical condition of source: _____

TESTS - WHERE INDICATED & after counseling and consent. INDICATE "IOD" ON LAB FORMS

<u>Due date</u>	<u>DATE</u>	<u>GEN.</u>	<u>HIV</u>	<u>HBV</u>	<u>HCV</u>	<u>NOTES</u>
Base			HIV RAPID HIV ELISA / combin. to confirm +>cont. Rx. Neg.> ?stop RESULT	HEPB surface Antigen STAT – IF HCW has no proof of immunity. RESULT If pos.> notify & manage.	HEP C Virus Antibodies - hemophiliacs, dialysis, iv drug users. If pos.> refer	
Base			If neg.? window >? repeat HIV after 1 week. RESULT: If pos: Manage appropriately.		If pos., do HEP C Virus RNA: RESULT: If pos.> refer	
			If on ART do HIV RNA (viral load) purple top. If not suppressed, refer HCW to specialist.			

DO POST TEST COUNSELLING ON SOURCE.

B. HEALTH CARE WORKER:

HOSP.NO: _____

NAME & SURNAME: _____ Date of injury: _____

Complete further detail in the Checklists for IOD Forms.

INCIDENT DETAILS:

Date: _____ Time: _____ Place: _____ Witness/es _____ Contact details: _____

Could injury be prevented? _____ How? _____

TESTS AND RESULTS: HCW: Refer to Policy. INDICATE “IOD” ON LAB FORMS

PRE TEST COUNSELLING DONE? _____

Due date	DATE done	GEN.	HIV	HBV: Follow Annexure A flow diagram.	HCV Follow Annexure B	NOTES
BASE		FBC	HIV Ensure correct blood taken & sent. HIV ELISA to confirm. RESULT: Stop Rx if positive.	If not yet done, do HBsAb & titer on HCW (and HbsAg on source). RESULT: HbsAg (if indicated acc. to flow chart.) RESULT: If indicated (see flow chart) – give HBIG GIVEN? If indicated GIVE HEPB VACCINE GIVEN?.....	HCV Ab ALT for baseline RESULT:	
2 WKS		FBC				
4 WEEKS		FBC		If indicated (see flow chart) – give HBIG 2 nd dose: GIVEN?		
				If indicated. GIVE HEPB VACCINE 2nd dose GIVEN?.....		
8 WEEKS				If indicated, do HBsAb (see flow chart) No use if HBIG was given. RESULT..... If no response, check HBsAg . & refer	HCV RNA if indicated (see Annex. B.) RESULT:	

12 WEEKS			HIV & ELISA. RESULT: Refer if + WCL 5.	If indicated. GIVE HEPB VACCINE 3rd dose at 12 or 16 weeks. GIVEN?.....	HCV ANTIBODIES if indicated (see Annex. B) And ALT. RESULT: HCV RNA if indic. RESULT:	
18 WEEKS				Do HBsAb 4-8w after 3 rd dose to check response of first 3 dose series of vaccine: RESULT: If Neg start 2nd 3dose series HB Vacc.		
24 WEEKS			HIV & ELISA RESULT: Refer if positive. WCL 5	DO HBsAg if indicated (see flow chart i.e. when HCW had no HBsAb at exposure. To check if HCW got infected) RESULT: If pos > Refer WCL 5	HCV AB where indicated. See flow diagram And ALT. RESULT: If pos > Refer. If neg. > close WCL 5	

C. POST-TEST COUNSELLING DONE? _____

Date: _____ By: _____ Signat: _____

D. HIV PROPHYLAXIS: Refer to the guideline.

Is or was Source on ART? If so, consult specialist. _____

STAT Treatment: AZT (Zidovudine) 300 mg and 3TC (Lamivudine) 150mg. _____

Taken? _____ Date: _____ Time: _____

Time elapsed since exposure: _____ Reason for delay: _____

Treatment: AZT (Zidovudine) 300 mg 12 hourly and 3TC (Lamivudine) 150mg 12 hourly. _____

Other: _____

Management plan: _____

E. HEPATITIS B MANAGEMENT: Refer to the guideline:

HCW fully vaccinated? _____ No of doses? _____ When? _____

HCW: Proven HBsAB? _____ When/How? _____ Titer: _____

	SOURCE	
	HBsAg Positive or Unknown	HBsAg Negative
HCW: HepB Vaccinated & Lab proven immunity	Nil needed.	Nil needed
HCW: HepB Unvaccinated or No proven immunity by 72 hrs.	1. Hep.B immuno globulin 500 IU (HBIG) 2. Hep. B Vaccine at different site. 3. Do HBsAg on HCW & follow-up	Await HCW Ab result

1. HBIG 500 IU imi given? _____ 2. HB Vaccine given? _____ Signat: _____
Management plan: _____

F. HEPATITIS C MANAGEMENT: Refer to HCV flow diagram. _____

G. EDUCATION, INFORMATION AND APPOINTMENTS:

Leaflets given? _____ Safe Sex warnings if source was HIV or HepB pos? _____

H. AGREEMENT AND CONFIRMATION OF ABOVE.

Signature HCW: _____

Signature: Occ. H. MO / CPN _____ Name: _____ Date: _____

K. FOLLOW-UP NOTES:

DATE	NOTES

INSTRUCTIONS TO EXPOSED HCW AND SUPERVISORS.**MANAGEMENT: OCCUPATIONAL EXPOSURE TO HIV, HBV & HCV.**

Please refer to the **GUIDELINES: MANAGEMENT OF OCCUPATIONAL EXPOSURES TO HIV, HBV, HCV AND RECOMMENDATIONS FOR PEP** for full details and for follow-up management.

1. PREVENTION:

- 1.1 Education and training of all staff at risk
 - 1.2 HCWs to ensure they are vaccinated against Hep.B and immune.
 - 1.3 Universal precautions. Wear goggles or visors - NB. Beware of recapping!!
 - 1.4 HCW to place sharps bin next to him/her before the procedure. Discard sharps IMMEDIATELY. Do not walk around with exposed sharps. Always use the one hand technique when recapping.
 - 1.5 Use only sharp bins for sharps.
 - 1.6 The employer has to ensure that sharp bins are always readily available where required.
 - 1.7 When working with any human material always concentrate, be patient and be careful.
 - 1.8 Get assistance when working with any uncooperative patients.
 12. Rinse, wash with running water and / or bleed the exposed area well.
 13. Report the incident to the supervisor in the section,
 14. Give **STAT OR WITHIN 2 HOURS**: (No Rx is given if HCW is known HIV positive)
 1. AZT (zidovudine) 300mg STAT and then 12 hourly
 2. 3TC (lamivudine) 150mg STAT and then 12 hourly
 3. **Take starter pack or enough Rx** to last until results are available and the final decision is made and / or until the main pharmacy opens.
 4. Get it from the person in charge of the AZT and 3TC – as arranged locally.
 5. **These tablets should ALWAYS be available.**
 6. Do not delay for the sake of a file. A file can be opened afterwards.
 15. **SOURCE:**
 - 5.1 Record **source's details**, hospital nr, contact details, treating doctor's contact details and if source is or was on ART and which, clinical condition of source, viral load & CD4 count if available.
 - 5.2 If source is or was on ART, consult specialist re. appropriate PEP.
 - 5.3 Request the following results from the attending doctor of the **SOURCE** - after counseling and informed consent: (Or to be done if not yet done) Lab to do tests during normal hours.
 1. HIV ELISA.
 2. If source is on ART, request HIV RNA (viral load, purple top).
 3. HEPATITIS B SURFACE ANTIGEN = HBsAG - if HCW has no proven HBV immunity.
 4. HEPATITIS C VIRUS ANTIBODIES (=HCV AB) – red and purple top. If positive, request HEPATITIS C VIRUS RNA = HCV RNA on purple top. If both pos. - do HCV AB on HCW.
 16. **HCW:**
 - 6.1 Open a file at registrations as an INJURY ON DUTY,
 - 6.2 Report to Occupational Health (or to Casualty after hours).
 - 6.3 ONLY the casualty doctor / staff or Occupational Health Staff may request, take and submit the blood of a HCW. This is to prevent fraud,
 17. **STUDENTS:** Give stat dose; open a file according to scales and medical aid coverage. Do the bloods and contact the in charge. (UFS - Dr. Dewald Steyn at Internal Medicine. 083-2946682 Short dial: 6106).
- For more information: Contact Virologist on call, Universitas Hospital.

ANNEXURE E

GUIDELINES TO CASUALTY / OCCUPATIONAL HEALTH MEDICAL OFFICERS.

MANAGEMENT OF OCCUPATIONAL EXPOSURES TO HIV, HBV & HCV.

1. Give AZT (zidovudine) 300mg STAT, then 12hrly and 3TC (lamivudine) 150mg. STAT, then 12hrly – Must be given within 2 hours. Do not delay for the sake of a file. No Rx is given if HCW is known HIV positive.
2. Addition of 3rd drug (Stocrin or Kaletra or Crixivan (Indinavir)) - recommended for late starters and for high-risk exposures i.e. major inoculation or severe injury or rape. (Tenofovir is another alternative.^{5,7}) Consult infectious diseases specialist. Indinavir is not available from Province. Where indicated, get private script and claim costs.
3. Open file. **Document** the nature & severity of the injury and all relevant information in HCW's medical file.
4. **HEALTH CARE WORKER (HCW):** Casualty MO / staff or Occupational Health Staff to do the following on the exposed HCW & ensure that the HCW's blood is submitted. (HCW is not allowed to do this by him/herself to prevent fraud). Lab to do tests during normal hours. With counseling and consent, do:
 - 5.1.1. **HIV ELISA.**
 - 5.1.2. **HEPATITIS B SURFACE ANTIBODIES AND TITER** (=HBs AB) – if not proven before,
 - 5.1.3. **FBC**
 - 5.1.4. If **SOURCE is Hepatitis C antibodies and RNA positive**, do Hepatitis C Virus Antibodies (HCV AB) on HCW. Wait for source's HCV AB and HCV RNA before doing this.
5. Record **SOURCE'S DETAILS**, hospital nr, contact details, treating doctor's contact details, HIV & HBV results, if source was or is on ART and which, clinical condition, viral load and CD4 count.
6. **SOURCE / PATIENT:** Request the following **results** from the attending doctor of the source / patient. Or to be done if not yet done - after counseling and informed consent. Lab to do tests during normal hours.
 - a. **HIV ELISA.**
 - b. **If source is or was on ART, request HIV RNA (viral load, purple top),**
 - c. **HEPATITIS B SURFACE ANTIGEN = HbsAg**, - if HCW has no proven HBV immunity.
 - d. **HEPATITIS C VIRUS ANTIBODIES (=HCV AB) – red and purple top. If positive, request, HEPATITIS C VIRUS RNA (HCV RNA) on the purple top. If both pos. - do Hepatitis C Virus antibodies (HCV AB) on the Health Care Worker.**
7. **MANAGEMENT OF RESULTS:**
HBsAg can be done stat but HBsAB might not be available within 72 hours. If the HCW's antibodies are or will not be available by 72 hours, HBIG must be given where indicated. Contact the lab. prn.

	SOURCE			
	HIV POS / UNKNOWN	HIV NEG	HBsAg Positive or Unknown	HBsAg Negative
HCW HIV: POS.	STOP RX	STOP RX		
HCW HIV: NEG.	CONTINUE RX	Do ELISA on source to confirm & STOP RX. "WINDOW PERIOD" very unlikely in absence of acute retroviral syndrome. Consider source's life, risk, last exposure and condition. If HCW insists on PEP, supply it.		
HCW: HepB Vaccinated & Lab proven immunity			Nil.	NIL.
HCW: HepB Unvaccinated or No proven immunity by 72 hrs or HBsAB negative.			1. Hep.B immuno globulin 500 IU (HBIG) 2. Hep. B Vaccine at different site. 3. HBsAg on HCW &F/U	Await HCW's Ab result

8. **PROPHYLACTIC RX IF INDICATED:**
 1. If source is or was on ART, consult specialist on choice of PEP Rx
 2. AZT 300mg 12 hourly and
 3. 3TC 150mg 12 hourly
 4. If after hours, prescribe / issue starter pack or enough treatment until Main Chemist opens.
- } for 28 days when indicated
9. Complete **WCL 4 – FIRST MEDICAL REPORT I.R.O. AN ACCIDENT**. Record initial results and treatment.
 10. Advise abstinence from sex for 6 months to be sure no sero-conversion occurred. If a condom is used, the risk of failure to prevent transmission of infection must be considered.
 11. Report to **OH&S Section** for completion of all required forms and for further management and follow-up.
 12. Students: Give stat dose, open a file according to scales (H4M4 if covered by a medical aid or H1 if not), do the bloods and student to contact Dr. Dewald Steyn at Internal Medicine. 083-2946682 (Short dial: 6106),
For more information: Contact Virologist on call, Universitas.

HEPATITIS B ROUTINE IMMUNIZATION OF HCW.

Annexure F

1. All staff must ensure that they are vaccinated and have confirmed immunity. This service is supplied free of charge.
2. If this was not done, your employer and the Compensation Commissioner will not be responsible for any damages or claims due to occupational Hepatitis B infection.
3. Pregnancy and breast feeding are not contraindicated.

ALL HEALTH CARE WORKERS AT RISK*

*Working with patients, Contact with blood & body fluids or contaminated articles, e.g. files, equipment, trolleys, etc.

History of complete Hep. B immunization?

NO

YES

Allergy to baker's yeast?

YES

NO

NO HBV Vaccine is given.

3 Doses HBV vaccine deep imi.
1. stat
2. after 4 weeks
3. 2-3 mths after 2nd

1. COUNSEL:
a. HCW is susceptible to HBV
b. Needs HBIG when exposed to HBsAg+ source.

HBV Antibodies checked before?

NO

Request HBsAB

YES

<10 IU/l

>10 IU/l

= OK Nil needed^{1,3}

<10 IU/l

>10 IU/l

= OK. Has life long immunity. Nil further needed.1, 3

Request HBsAB 4-8 weeks after 3rd dose

>10 IU/l

<10 IU/l

= OK. Has life long immunity. Nil further needed.1, 3

REPEAT 3 Dosis HBV vaccine deep imi.
1. stat
2. after 4 weeks
3. 2-3 mths after 2nd

Request HBsAB 4-8 weeks after 3rd dose

>10 IU/l

<10 IU/l

Request HBsAg

Compiled by Dr S Oosthuizen. POHU. Updated May 2007.

Sources:

1. Centers of Disease Control, Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HBV, HCV, and HIV and Recommendations for PEP. Morb. Mortal. Wkly. Rep. 2001.

CHECKLIST for FORMS for OCCUPATIONAL INJURIES AND DISEASES.

IOD REGISTR. NO: _____

ANNEXURE G

Complete in triplicate. Supervisor, OH & S keep a copy each and HR keeps the original. Each section records what was done & sent in.

SURNAME _____

NAME: _____

DATE OF INJURY: _____

ID NO: _____ PERSAL NO: _____ RANK: _____

_____ HOSPITAL NO: _____

RESIDENTIAL ADDRESS: _____

WORK _____

SECTION/WARD: _____

CONTACT TEL. NR: _____ SHORT NR. _____

SECTION/WARD TEL: _____ EXT: _____

SUPERVISOR: _____ SECTION: _____ CONTACT NO. _____

**NB: All forms sent to IOD office must be in duplicate.

FORM	SUPERVISOR		WORKER		DOCTOR		O H & S		HR		SE
	Date	Name	Date	Name	Date	Name	Date	Name	Date	Name	Date
WCL1/2 Employer's Report.											
WCL 3/14 Claim for Compensation											
WCL 4/22 FIRST Medical Report											
ID document Certified copy											
Choice of Doctor											
Incident / Statement by Employee											
Incident by Witness/Supervisor.											

Send the above to the IOD office as soon as possible

WCL 5/26 Progress Medical Report											
WCL 5/26 Progress Medical Report											
WCL 5/26 FINAL Medical Report											
Radiological report											
Clinical Description											
Supplementary report / questionnaire											
Medical certificates & Copies.											
Leave form Z1 & Copies											
WCL 6 Resumption report.											
Covering letter to Head Office											
Case Management Record											
Appointment letter for follow-up											
Information sheet to worker											
Recording and Investigation of Incident for O H&S Committee. Annex.1 Reg. 9 of GAR.											
Reporting of Incident to Dept Labor Annex.1 MAN 144											

- 5.11.2 Disease specific precautions
 5.11.2. Viral hemorrhagic fever

CRITERIA FOR CLINICAL DIAGNOSIS FOR CRIM-CONGO HAEMORRHAGIC FEVER (Prof R. Swanepoel from NICD)

	History of exposure to infection	Incubation period for exposure	
		Less than one week	More than one week or unknown
1	Bitten by tick or tick squeezed with hands.	3	2*
2	Direct contact with fresh blood or other tissue of farm animals.	3**	2****
3	Direct contact with blood, body fluids of confirmed or suspected patient with CCHF including needle-prick.		
4	Live in or visited country sides and where contacts with animals or ticks was possible, without confirmation of a specific incident.	2	1
5	Sign and Symptoms:		
	• Sudden onset.	1	1
	• Temperature above 38°C at least once.	1	1
	• Severe headache.	1	1
	• Myalgia	1	1
	• Nausea, and/or vomiting.	1	1
	• Hemorrhage: petechia, nose bleeding, hematuria, melena stools.	3	3
6	Clinical pathology for 1 -5 days of illness		
	• Leucopaenia/leucocytosis white cell count:		
	• Less than $3 \times 10^9/l$ or more than	1	1
	or more than $9 \times 10^9/l$	1	1
	(low-early and increase later)		
	• Thrombocytopenia:		
	• Platelets $< 150 \times 10^9/l$	1	1
	• $< 100 \times 10^9/l$	2	2
	• More than 50% reduction in white cell or platelet counts within 3 days.	1	1
	• Abnormal PT	1	1
	PTT (prolonged)	1	1
	• Raised transamination:		
	• AST $> 100u/l$	1	1
	• ALT $> 100u/l$	1	1
	Tick bite fever and Rickettsiae must be eliminated		
	** Rift Valley fever.		
	*** Brucellosis, Q Fever and Anthrax must be eliminated.		
	Score of 12 points must be accepted as an indication for treatment of patient as a case of CCHF.		

	Incubation time:		
	• Primary (after tick bite) 5 – 6 days.		
	• Secondary (after exposure) 3 – 4 days.		
	• Average: 2 - 9 days.		

2. Signs and Symptoms:

- Sudden onset.
- Pyrexia > 38°C.
- Severe headache.
- Pharyngitis.
- Hepatitis.
- Myalgia.
- Conjunctivitis.
- Erythema: Face, neck, sole and feet, hand palms.
- Marble appearance of skin.
- Nausea and/or vomiting.
- Hemorrhage.
- Abdominal pain.
- Rigor attacks.
- Disorientation.

3. Treatment:

- No healing treatment available.
- Blood platelet and plasma can be administered.
- Body must form own antibodies within 14 days.
- Ribavirien.
- Homodynamic support.
- Fluid and electrolyte maintenance.

4. Prognosis:

Mortality: 10 – 50%.

Early diagnoses and homodynamic support can improve prognosis.

5. Protocol for handling of a patient with suspected of confirmed diagnosis of CCHF.

- 5.1 The National Health Act of 2003, Act 61 of 2003 stated that patients with contagious diseases, which held a danger to the community, must be nursed in P4 Isolation Units.
- 5.2 Admission of patient with diagnosis of Pyrexia with unknown source.
 - 5.2.1 Isolate patient in single room with limited access.
 - 5.2.2. Use Contact isolation precautions.
- 5.3 Contact ICC.

- 5.4 Take full history of patient.
 - Suspected or confirmed case of tick bite.
 - Visited or live in country/rural districts.
 - Contact with animals or sick person in last 3 weeks.
 - Bite site on skin, skin folds, and hairline covered with eczema or necrotic area.
 - Pyrexia, one or more episodes or more than 38%.
 - Hematuria or bleeding tendency.
 - Insect bite site, skin rash.
 - Signs and symptoms that can be connected with a diagnosis of Tick bite fever.
 - Hematological abnormalities ex. low platelet or white cell counts.
- 5.5 Transfer patient to private room with own bathroom – arrange transfer to P4-unit after consultation with treating Doctor.
- 5.6 Get FED pack and supply equipment to staff nursing the patient.
- 5.6.1 Contents of FED pack : **For 6 people**
 - Waterproof long sleeve gowns
 - Plastic apron
 - Balaclava caps
 - N95 Respirator
 - Gloves – 2 pairs per person
 - Over shoes
 - Goggles
 - Red plastic bags large x 5
 - Red plastic bags medium x 10
 - Condemned linen
- 5.7 Contact persons on flow chart (Annexure 1):
 - Information about patient with suspected or confirmed CCHF
- 5.8 Compile contact list. (Annexure 2).
- 5.9 Trace Contacts (Annexure 3).
- 5.10 Follow-up all contacts (Annexure 4).
And supply with Temp control sheet (Annexure 5).
- 5.11 Fax information to Department of Health: Provincial. (Annexure 6)
- 5.12 Inform Dept. of Virology at UV. (Annexure 1)
- 5.13 Inform Dept. of Health: District. . (Annexure 1)
- 5.14 Inform City Health Officer. (Annexure 1)
- 5.15 Keep everybody calm and don't talk to anybody from the press. Get the Marketing Officer to supply a press release after consultation with the family.

Information Dept. of Health to Provincial Office when admitted a suspected or confirmed Congo Fever case: - within 24 hours. (Annexure 6)

1. Introduction:

- Congo Fever case.
- Attention: Communicable Disease Control
- Fax nr : 051 – 408 1734
- Attention: Assistant Manager : Infection Control
- Fax nr : 051 408 1076

2. History:

2.1 Personal Information:

- Name : _____
- Address : _____
- Age : _____
- Gender : _____

2.2 How and when exposed : _____

2.3 Type of contact – low, medium, high, risk/bite by tick:

.....

2.4 Signs and Symptoms : _____

2.5 Where is the patient treated, and how is he/she transported? _____

2.6 Condition of patient : _____

2.7 Treatment : _____

2.8 Laboratory results : _____

3. Contacts of patients – secondary cases.

3.1 Classification of contact – low, medium, high.

- Name : _____
- Home address : _____
- Date of contact : _____
- Type of contact : _____ visit / telephone

3.2 When and who contacted by? : _____

3.3 Do contacts have any signs or symptoms of illness? Yes / No.

3.3 If yes, what symptoms present?

.....

4. **General.**

4.1 Any problems to trace contacts?

4.2 Is a media statement done? Yes / No.

If yes, by whom:

Please fax information before 12h00 every day.

Annexure 3

TRACING OF CONTACTS

(Fill in the following questionnaire. Each person identified in the question will have to provide further information as on the contact list.)

(Form to be used by hospitals)

1. Time and date of admission:
2. Was the patient escorted: by whom:
3. Did an admission officer take down his details?
His/Her name:
4. Did a porter or any other person/ aid him to gain admission into the ward/out-patient department / emergency services department:
5. Who received the patient in the above department:
6. Who did his admission observations:
7. Did any body examine the patient in the above department:
8. Who else had contact with the patient in that department:
9. What treatment/special investigation / X-rays did the patient have:
.....
10. Who was involved in the treatment/investigation above:
11. Where any blood or other specimens sent to the laboratory:
 - Name the type of specimens:
12. When was he transferred to the ward where he/she is at present:
13. Who assisted in the transfer procedure?
14. List all the persons known to have had direct contact with the patient:

FOLLOW UP OF CONTACTS:**CONTACT FOLLOWS UP QUESTIONARE:**

Name:

Address:

Date of visit:

Age:

Sex:

Telephone Nr.

Last date of contact with patient (disease confirmed/suspected):

Name of patient with confirmed disease/suspected:

Do you feel well? YES NO

IF YES:

Signs and symptoms	Yes	No
Fever		
Headache		
Generalized aches and pains		
Cough		
Conjunctivitis		
Abnormal Bleeding		
Other		

Degree of Contact:

Live in the same home: YES NO

Random contact once only How many times?

Relationship to contact:

Action to be taken:

Active surveillance:

Passive surveillance: (telephonic only)

Date taken:

Completed by:

Date:

HANDLING OF CONTACTS

ALL CONTACTS MUST BE TRACED AS SOON AS POSSIBLE.

1. Complete information is :
Name, Address, Work address, Contact telephone numbers, (Annexure 6)
2. Tracing of contacts – information for hospital personnel involved. (Annexure 2).
3. Follow up of contacts. (Annexure 3).
4. Temperature control sheet (Annexure 4).
- 5 Remember to support all contacts emotionally for 14 days after last contact with source patient.

TEMPERATURE CONTROL SHEET FOR CONTACTS:

Name:

Address:

Contact telephone nr.

Date		Temp °C		Urine	Headache	Pain	Signature
Day 1		M	E				
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							

NB: REMEMBER TO SUPPORT ALL CONTACTS EMOTIONALLY FOR THE
WHOLE PERIOD.

The following flow card must be used to inform the hospital management, Department of Health and other people involved about a possible or confirmed case of CCHF:

Hospital

Hospital	DEPT. HEALTH / OTHER EXTERNAL FACILITIES	OTHER FACILITIES
1. Infection Control Coordinator (Tel) (Isolation of patient and Occupational Health/Internal contact tracing, Drawing of FED pack from Pharmacy)	Manager : Notifiable Diseases - Dept of Health (Tel. 051 408 1734 / Fax 051 408 1961) ? (Activate Pelonomi, community, "DORT" / external contract tracing) Assistant Manager : Infection Control : Standard Compliance Sub Directorate (Tel. 051 408 1437 / Fax 051 408 1076)	Dr Dewald Steyn, Snr. Consultant, Dept. Internal Medicine, UVS (Tel. 082 568 3641 / 051 4053154) Of Prof W Mollentze (Tel. 051 4051308 / 082 557760) (Patient care and transport, transfer of patient to P4 Unit at Pelonomi Hospital and activating of special nursing team)
2. Out patient: Alert Trauma Unit. (UM or RN in charge) (To receive patient and put in isolation before transfer to PH P4 Unit) Or In patient : Contact UM/ SPN of Unit (Isolation & decontamination of unit)	District Infection Prevention and Control Coordinator	Pathologists Dr F Weyers, Voigt en Partners, (Tel. 051 505 5375 / 082 800 0220) of Dr C J van Rensburg, Van Rensburg Pathologists (Tel. 082 494 9309 / 051 502 1500) (Alert of possible contamination of personnel,) NHLS
3. Nursing Services Manager (Tel) (UM on duty (Personnel availability)	Dept Virology, UV Prof N M J van Rensburg (Tel. 082 498 1897 / 051 4053162) or Dr C van Vuuren Dept. Virology, (Tel. 083 294 6684/ 051 4053165) (Blood specimen handling, Consultation, transport of blood specimens to NICD sifting	Nasional District Hospital,. CPN on Duty - Mortuary(Tel. 051 4052911, ask for Medipage
4. Hospital manager (Tel) (Notice)	Mangaung Local Municipality <u>Patients from Bloemfontein:</u> Dr B Barnes (Medical Officer): Mangaung Local municipality (Tel. 051 4058163 Faks 051 400 5315) (Contract tracing) <u>Patient from outside of Bloemfontein:</u> Referring doctor or Primary	Family members that was in contact with patient over last 4 – 10 days

	health care clinic nearest to residential address (Contact tracing)	
5. Pharmacy Manager (Tel. After hours) (Dispensing of extra supplies)	Other Health Care Workers in contact with suspected patient	SANBS (Blood bank, Universitas Hospital) Mr. Andries Geringer 051-4443468 (a.u.) (Alert for Platelets / Blood needed)
6. Media Officer Me (Tel.) (Media reports)		
7. Housekeeping (Tel) (Special cleaning and waste management)		
8. Laundry (Tel.) (Notice)		
9. Security Mr. (Tel) (Assistance)		

ANNEXURE 2**CONTACT LIST**

NAME	HOME PHONE	WORK PHONE	CAPACITY IN WHICH EMPLOYED	DATE AND TIME OF CONTACT	TIME AND DATE OF LAST CONTACT	*TYPE OF CONTACT

***TYPE OF CONTACT:** **Direct**
 Secretions
 Blood
 Fomites
 Specimens
 Any other

9. REFERENCES

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- **Leeds Teaching Hospitals. Decontamination of Hospital Equipment Including Medical Devices**
- **Nzimamde Philda Nomusa, Communicable Diseases in the Africa Continent, 2006**
- **NSW Health. Infection Control Policy**
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- **St Helena Hospital. Infection Control: Program and Procedures**
- **University of North Carolina at Chapel Hill. Infection Control Manual**
- **White, N. & Reznik, D. Infection Control Manual**
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- **Ziady, L.E., Small, N. & Louis, A.M.J. Rapid Reference Infection Control, 1997**
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