



MODULE 7

Safety and Supportive Care in the Work Environment



Module 7: Objectives

- Describe strategies for preventing HIV transmission in the healthcare setting.
- Define universal precautions in the context of the prevention of mother-to-child transmission (PMTCT) of HIV.
- Identify key steps and principles involved in the decontamination of equipment and materials.



Module 7: Objectives

- Assess occupational risk and identify risk-reduction strategies in maternal and child health (MCH) settings.
- Describe the management of occupational exposure to HIV.
- Identify measures to minimise stress and support healthcare workers and caregivers.



Introduction:

Elements for infection prevention in the work place

- Developing an infection prevention policy
- Ensuring that all staff receive orientation on the protocols in the policy
- Providing necessary medications for post exposure prophylaxis
- Ensuring that all staff are immunised against common infectious blood-borne pathogens. (e.g. Hepatitis B Virus)
- Providing on-going infection prevention education for employees



Safety and Supportive Care in the Work Environment

Section 1

Universal Precautions and Creating a Safe Work Environment



Basic Concepts of HIV Transmission

Primary source of HIV infection in the healthcare setting

- **Blood or body fluids in direct contact with an open wound, or by needle or sharp stick**
- **High-risk MCH settings**
 - Obstetric procedures
 - Labour and delivery
 - Immediate care of the infant



Bloodborne Pathogens

In addition to HIV, bloodborne pathogens include:

- **Hepatitis B and C viruses**
- **Syphilis**
- **Brucellosis**



Prevention of HIV Transmission

- Apply universal precautions.
 - **Healthcare worker to patient**
 - **Patient to healthcare worker**
- Prevent patient-to-patient transmission .
 - **Sterilise contaminated equipment and devices**



Infection Control Measures

- Universal precautions
- Management of the work environment
- Ongoing education of employees in all aspects of infection prevention



Universal Precautions Definition

A simple set of effective practices designed to protect health workers and patients from infection with a range of pathogens including bloodborne viruses.

These practices are used when caring for all patients, regardless of diagnosis.



Universal Precautions

Applied in caring for all patients:

- **Hand washing**
- **Decontaminate equipment and devices**
- **Use and dispose of needles and sharps safely (avoid recapping, especially two-handed)**
- **Wear protective items**
- **Promptly clean up blood and body fluid spills**
- **Use safe disposal systems for waste collection and disposal**



Promoting a Safe Work Environment

- Implement, monitor and evaluate use of universal precautions
- Develop procedures for reporting and treating occupational exposure to HIV infection
- Attain and maintain appropriate staffing levels
- Provide protective equipment and materials



Education in Infection Prevention

- Make all staff aware of established infection control policies
- Provide ongoing training to build skills in safe handling of equipment and materials
- Supervise and evaluate practices to remedy deficiencies



Safety and Supportive Care in the Work Environment

Section 2

Handling and Decontamination of Equipment and Materials



Handling of Equipment and Materials

Risk reduction strategies

- **Assess condition of protective equipment**
- **Safely dispose of waste materials**
- **Make available appropriate cleaning and disinfecting agents**
- **Decontaminate instruments and equipment**
- **Monitor skin integrity**

Instrument Processing

Decontaminate



Clean



Sterilise
Chemical
High pressure
steam
Dry heat



High-Level
Disinfect

Boil
Steam
Chemical



Dry/Cool and Store



Handling and Disposal of Sharps

- Use syringe or needle once only
- Avoid recapping, bending, or breaking needles
- Use puncture-proof container for disposal
- Clearly label container—“SHARPS”
- Never overfill or reuse sharps containers
- Dispose of sharps according to local protocol



Handling Needles and Sharps



- Use a puncture-proof container for storage and/or disposal
- Do **not** recap a needle before disposal unless using one-hand technique



Hand Hygiene

Recommended practice:

- **Soap and water hand washing using friction under running water for at least 15 seconds**
- **Using alcohol-based hand rubs (or antimicrobial soap) and water for routine decontamination**



Personal Protective Equipment

Basic personal protective equipment:

- **Gloves—correct size**
- **Aprons—as a waterproof barrier**
- **Eyewear—to avoid accidental splash**
- **Footwear—rubber boots or clean leather shoes**



Safe Work Practices

To reduce occupational risks:

- **Assess high-risk situations and areas**
- **Develop safety standards and protocols**
- **Institute measures to reduce occupational stress.**
- **Orient new staff to protocols**
- **Provide ongoing staff education and supervision**
- **Develop protocols for post-exposure prophylaxis (PEP)**
- **Explore different strategies for meeting resource needs**



Risk Reduction in the Obstetric Setting

Minimise high risk of exposure to HIV-infected blood and body fluids in obstetric unit:

- **Cover broken skin with watertight dressing**
- **Wear proper protective clothing**
- **Dispose of solid waste according to local protocols**



Safety and Supportive Care in the Work Environment

Section 3

Managing Occupational Exposure to HIV



Post-Exposure Prophylaxis (PEP)

Immediate steps post-exposure:

- **Wash exposed wound or skin with soap and water**
- **For needle or sharp injury, allow to bleed for a few seconds before washing**
- **Inform supervisor of type of exposure and the actions taken**
- **Assure confidentiality and support and referral for treatment**

Short-course of ARV drugs is recommended to reduce the likelihood of infection



Guidelines for PEP

- Start PEP for HCW within 2 hours of exposure, even when patient's HIV status is unknown
- 2 doses of ARV treatment should be available and accessible at the facility at all times
- Superficial percutaneous injury with a solid needle from a low-risk source, 2-drug combinations should be considered
- Severe (deep) percutaneous injury with a large bore needle irrespective of perceived risk of the source, any exposure from a high-risk source or with history of treatment with nucleoside analogues in source, 3-drug combinations should be used. You should avoid the use of the same drug type and combination as the source



Guidelines for PEP

Follow approved PEP regimen:

Recommended 2-Drug Combinations	Recommended 3-Drug Combinations
ZDV (300 mg twice daily) + 3TC (150 mg twice daily) D4T (40 mg twice daily) + 3TC (150 mg twice daily) D4% (40 mg twice daily + ddl (400 mg once daily)	Any of the 2-drug combinations + EFV or a Protease Inhibitor (EFV) should be avoided if pregnancy is suspected Preferred combination is: + EFV (600 mg once daily) or NFV (1250 mg twice daily) or LPV/RTV (400 mg/100 mg twice daily).

The duration of treatment in each case should be 28 days or until the results of HIV tests for the patient and exposed healthcare worker are known to be negative



Safety and Supportive Care in the Work Environment

Section 4

Supportive Care for the Caregiver



Compassion Fatigue and Burnout

Characteristics of burnout syndrome:

- **Emotional exhaustion**
- **Loss of interest**
- **Decreased productivity**



Tips to Prevent Burnout

- Find a support group of peers
- Search out a mentor
- Become educated on methods of coping
- Take a new course or update skills
- Exercise, eat right, and get enough rest
- Make time for yourself and your family



Module 7: Key Points

- Universal precautions apply to all patients, regardless of diagnosis
- Key components include:
 - **Hand washing**
 - **Safe handling and disposal of sharps**
 - **Use of personal protective equipment**
 - **Decontamination of equipment**
 - **Safe disposal of infectious waste materials**
 - **Safe environmental practises**



Module 7: Key Points

- Needle-stick injuries from patients who are infected with HIV are the most common source of HIV transmission in the workplace
- Cleaning, disinfection, and sterilisation of all instruments used in invasive procedures reduces risk of patient-to-patient transmission of infection
- During labour and delivery, safe care reduces risk of occupational exposure



Module 7: Key Points

- Short-course ARV treatment reduces the risk of HIV infection after occupational exposure
- Burnout syndrome is related to intense, prolonged job stress but can be managed and the effects minimised by individual and organisational supports