

## Prevention of Transmission of HIV

- In the clinical setting, HIV may be transmitted by:
  - **Injury with needles or sharp instruments contaminated with blood or body fluids,**
  - **The use of equipment that has not been properly disinfected, cleaned and sterilized,**
  - **Contact between open wounds, broken skin (for example, caused by dermatitis) or mucous membranes and contaminated blood or body fluids,**
  - **Transfusion of infected blood or blood products,**
  - **Vertical transmission between mother and child during, pregnancy, delivery and breast feeding.**
  
- Purpose of infection precautions and aseptic technique is to prevent the transmission of infection.
  
- Best protection against HIV and other transmissible infections is attention to every detail of asepsis, with special care to avoid injury during operation.
  
- Each hospital should have clear guidelines for the management of injury or exposure to infectious materials.

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## **Prevention of Transmission of HIV** continued

*Take care of your patients, your co-workers and yourself:*

- Do not recap needles
- Set up sharps containers in the places where you use sharps; the further you have to move to dispose of a sharp the greater the chance of an accident
- Do not use the same injection set on more than one patient
- Dispose of your own sharps
- Pass needles, scalpels and scissors with care and consideration.
- After use, always put disposable needles & scalpel blades (“sharps”) into a puncture and tamper-proof container that has been labeled clearly.

*Several points of aseptic routine applicable to members of the surgical team are also particularly relevant to the prevention of transmission of HIV:*

- Protect areas of broken skin and open wounds with watertight dressings
- Wear gloves during exposure to blood or body fluids and wash your hands with soap and water afterwards
- Wash immediately with soap and water in case of skin exposure or contamination, whether from a splash, glove puncture or non-gloved contact
- Wear protective glasses where blood splashes may occur, such as during major surgery; wash out your eyes with water as soon as possible if they are splashed
- Wear a protective gown or apron if splash potential exists.
- Clean blood spills immediately and safely.

## Aseptic technique

- Infection is the most important and preventable cause of impaired wound healing.
- Microorganisms can reach the tissues during an operation or manipulation of the surgical wound.
- They are carried and transmitted by:
  - people, including the patient,
  - inanimate objects, including instruments, sutures, linen, swabs, solutions,
  - mattresses and blankets,
  - air around a wound, which can be contaminated by dust and droplets of moisture from anyone assisting at the operation or caring for the wound.
- The aseptic treatment of a wound is an attempt to prevent contamination by bacteria from all these sources, during the operation and throughout the initial phase of healing.
- Bacteria can never be absolutely eliminated from the operating field, but aseptic measures can reduce the risk of contamination.

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## Aseptic technique continued

- Aseptic technique includes attention to innumerable details of operating technique and behaviour.
- Anyone entering the operating room, for whatever reason, should first put on:
  - **Clean clothes**
  - **An impermeable mask to cover mouth and nose**
  - **A cap or hood to cover all the hair on the head and face**
  - **A clean pair of shoes or clean shoe-covers.**
- Caps, gowns and masks are worn to decrease the risk of patient exposure to contamination or infection from the surgical team.
- Sterile instruments, gloves and drapes are also key elements in the fight against contamination.

## **PREVENTION OF BLOOD-SPREAD INFECTIONS DURING ANAESTHESIA AND SURGERY**

- ***Where blood supplies are scarce or unsafe, it may be possible to use pre-donation by the patient in elective cases or to use autologous transfusion in emergencies.***
  
- **Minimize the risk of transmission of infection:**
  - **Never leave syringes attached to needles that have been used on a patient;**
  
  - **For intravenous injections, use plastic infusion cannulae with injection ports that do not require the use of a needle, wherever possible;**
  
  - **Ensure that blood spills are immediately and safely dealt with;**
  
  - **Use gloves for all procedures where blood or other body fluids may be spilled;**
  
  - **Where blood spillage is likely, use waterproof aprons or gowns and eye protection.**

# **Infection Prevention And Universal Precautions**

***Hand washing is the single most important measure  
for prevention of infection***

**Hand washing, the use of barrier protection such as gloves and aprons, the safe handling and disposal of "sharps" and medical waste and proper disinfection, cleaning and sterilization are all a part of creating a safe hospital.**

- 1. A safe injection does not harm the recipient, does not expose the provider to any avoidable risk and does not result in any waste that is dangerous for other people;**
- 2. Use a sterile syringe and needle for each injection and to reconstitute each unit of medication;**
- 3. Ideally, use new, quality controlled disposable syringes and needles;**
- 4. If single-use syringes and needles are unavailable, use equipment designed for steam sterilization;**
- 5. Prepare each injection in a clean, designated area where blood or body fluid contamination is unlikely;**
- 6. Use single-dose vials rather than multi-dose vials;**
- 7. If multi-dose vials must be used, always pierce the septum with a sterile needle; avoid leaving a needle in place in the stopper of the vial. Once opened, store multi-dose vials in a refrigerator.**