Management of sharps
Objectives

- Describe **safe injection practices**
- Demonstrate **safe use of sharps**
INJECTION SAFETY AND SHARPS MANAGEMENT
Injection Safety Principles

• Syringes, needles, or other similar equipment should **NEVER** be reused

• Dedicate injection and parenteral medication equipment to a single patient and dispose of this equipment at the point of care

• Do not reuse single use vials; If using multi-dose vials, store appropriately, check expiration date and clean diaphragm prior to use

• Limit the use of needles and other sharp objects

• Limit the use of phlebotomy and laboratory testing to the minimum necessary for evaluation and patient care

Reference: WHO, 2014
CDC, 2014
One and Only

1 ONE NEEDLE, ONE SYRINGE, ONLY ONE TIME.

Safe Injection Practices Coalition
www.ONEandONLYcampaign.org
Preventing Needle Sticks

- Do not recap used needles
- Two hand capping is dangerous

Reference: WHO, 2014
Use Safety Engineered Injection Devices if Available
Additional Injection Precautions

- Never direct the point of a used needle towards any part of the body
- Do not remove used needles from disposable syringes by hand
- Do not bend, break, or otherwise manipulate used needles by hand
- Dispose of syringes, needles, scalpel blades, or other sharp objects in appropriate, puncture-resistant containers
- If appropriate container is not close to the point of use, place used sharp in a kidney dish (or something similar) to transport it to the sharps container
- Do not open a sealed sharps container

Reference: WHO, 2014
Sharps Containers

- Should be puncture-resistant, closed, and remain upright at all times

- Placement:
  - As close as possible to the point of use
  - Not easily accessible by visitors

- Replace when $\frac{3}{4}$ full
  - Close and seal the container for transport to a secure area
  - Do not open, empty or reuse the containers

Reference: WHO, 2014
Types of Sharp Containers

Open containers should **not** be used to collect sharps

Reference: WHO, 2014
Needle Cutters / Destroyers

Pros:
• Reduce risk by removing the sharp prior to disposal
• Prevent reuse and community exposure
• Significantly reduces the volume of the most dangerous waste

Cons:
• Manual needles cutters may still pose a splash risk
• An additional step potentially leading to more needle stick injuries
• Requires further disposal step (burial or autoclave)

Source: WHO, 2014
SAFE PHLEBOTOMY/EXTRACTION
How to Safely Obtain Blood Samples: Preparation

• Gather and assemble all supplies and equipment
  – Sterile glass or plastic tubes with rubber caps, vacuum extraction blood tubes, or glass tubes with screw caps (EDTA tubes are preferred)
  – A designated assistant wearing gloves that stays outside the patient room should be available

• PPE required prior to entering patient area:
  – Perform hand hygiene
  – Gloves, double (bring extra)
  – Long-sleeved gown or disposable coverall
    • Consider impermeable gown or apron for direct contact with blood
      Rubber, closed-toed shoes
  – Face protection (mask and goggles or face shield

Source: WHO, 2014
How to Safely Obtain Blood Samples: Preparation, cont.

Step 1c: Fill out patient documentation:

- Label blood collection tubes with date of collection, patient name, and his/her identifier number.
- Do NOT forget to fill out necessary laboratory form and epidemiological questionnaire.

- If several patients have to be sampled in the same place or during the same investigation, create a line list. One patient per line. The list should include: patient name, identifier number, sex, age (birthdate), clinical information: symptoms, date of onset, date specimen was collected, type of sample taken.
How to Safely Obtain Blood Samples: Preparation, cont.

Step 1d: Assemble materials for packaging of samples:
- Plastic leak-proof packaging container
- Disposable (paper) towels
- Cooler or cold box, if sample requires refrigeration

For the shipment of samples to the National Central Laboratory follow Sample Shipment packaging requirements (see document “How to safely ship Emerging and Dangerous Pathogen samples”)

Primary Container
Secondary Container
Tertiary Container
How to Safely Obtain Blood Samples: Procedure

Step 3a: Prepare room.
- Put infectious waste bags and leak-proof and puncture resistant sharps container into patient room and make sure they are ready for use.
- Place all blood collection equipment in a place that is easy to access.

Step 3b: Identify and prepare the patient.
- Introduce yourself to the patient and explain what you will do with the blood sample and why.
- Make sure that this is the correct patient from whom you wish to take the blood sample.

Step 3c: Select the site, preferably at the bend of the elbow.
- Palpate the area; locate a vein of good size that is visible, straight and clear.
- The vein should be visible without applying a tourniquet.

Source: WHO, 2014
How to Safely Obtain Blood Samples: Procedure, cont.

Step 3d. Apply a tourniquet around the arm.
✓ Tie approximately 4–5 finger widths above the selected site.

Step 3e: Ask the patient to form a fist so that the veins are more prominent.

Step 3f: Disinfect the area where you will put the needle.
✓ Use 70% isopropyl alcohol.
✓ Wait 30 seconds for the alcohol to dry.
✓ DO NOT touch the site once disinfected.

Source: WHO, 2014
How to Safely Obtain Blood Samples: Procedure, cont.

Step 3g: When using vacuum extraction system with holder, insert the blood collector tube into the holder.
- Avoid pushing the collector tube past the recessed line on the needle holder or you may release the vacuum.

Step 3h: Anchor the vein by holding the patient’s arm and placing a thumb BELOW the place where you want to place the needle.
- DO NOT touch the disinfected site.
- DO NOT place a finger over the vein to guide the needle.

Step 3i: Perform the blood draw.
- Enter the vein swiftly at a 30° angle.

Source: WHO, 2014
Step 3j: When blood starts to flow, ask patient to open his/her hand.

Step 3k: Once sufficient blood has been collected (minimum 5ml), release the tourniquet BEFORE withdrawing the needle.

Step 3l: Withdraw the needle gently.
✓ Give the patient a clean gauze or dry cotton wool ball to press gently on the site.
✓ Ask the patient NOT to bend the arm.

Source: WHO, 2014
How to Safely Obtain Blood Samples: Procedure, cont.

Step 3m: Remove blood collector tube from holder and put into rack.

Step 3n: Put needle into leak-proof and puncture resistant sharps container.

If the sharps container DOES NOT HAVE a needle remover:
✓ Put the needle and holder into a sharps container.
✓ Do not remove the needle from the holder.
✓ Do not reuse the needle.

If the sharps container HAS a needle remover:
✓ Remove the needle following instructions on the sharps container.
✓ Put the holder into the infectious waste bag for disinfection.

Source: WHO, 2014
How to Safely Obtain Blood Samples: Procedure, cont.

Step 3o: Stop the bleeding and clean the skin.
- Do not leave patient until bleeding has stopped.
- Put an adhesive bandage on the site, if necessary.

Step 3p: Put items that drip blood or have body fluids on them into the infectious waste bag for destruction.

Quick Tips:
- The blood holder tray and rack will need to be disinfected after use.
- A minimum of 5ml of blood should be collected for each patient.

Source: WHO, 2014
How to Prepare Blood Sample for Transport

Step 4a: Take the blood tube from the tray and wipe the blood tube with a disposable paper towel.

Step 4b: Place all items that came into contact with blood into the infectious waste bag for destruction.

Step 4c: Protect the sample from breaking during transport by wrapping the tube of blood in a paper towel.
How to Prepare Blood Sample for Transport, cont.

Step 4d: Ask the designated assistant to approach the patient room, without entering.
✓ This person should have gloves on.
✓ This person should come close to you holding the open plastic leak-proof packaging container.
✓ This person should not enter the patient room.

Step 4e: The person who has collected the blood sample should put the wrapped tube of blood into the plastic leak-proof packaging container.
✓ Be careful not to touch outside of leak-proof plastic tube with gloves.

Step 4f: Have the designated, gloved assistant tightly close the top of the plastic leak-proof packaging container.
How to Prepare Blood Sample for Transport, cont.

• Sample is now ready for shipment to the National Center Laboratory.

• Follow shipment packing requirement for infectious substance

• **Sample storage:**
  – Store at room temperature for up to 24 hours
  – Store for a week at 0-5°C
  – Storage for more than a week at -20°C (or -70°C if available
  – Avoid freeze-thaw cycles
Key Points to Remember

• Never reuse a needle or other sharp
• Limit the use of sharps
• Do not recap a used needle
• Keep the sharps container as close to the point of care as possible
• Change sharps container when ¾ full
• If transferring blood from a syringe to a specimen tube, place specimen tube in a tube rack prior to transfer
• Plan the blood draw procedure and preform with meticulous care
Management of Occupational Exposure
Exposure Definition

Percutaneous or muco-cutaneous contact with blood, body fluids, secretion, or excretions from a patient with suspected or confirmed Ebola

Examples:
• Needle sticks
• Splashes while not wearing appropriate PPE

Reference: WHO, 2014
First Steps Post-Exposure

- Immediately and safely stop any current task
- Leave the patient care area
- Safely and carefully remove PPE
- Wash the affected skin surfaces or percutaneous injury site with soap and water
- Irrigate mucous membranes with copious amounts of water or an eyewash solution
- Do not use chlorine solutions or other disinfectants to wash or irrigate

Reference: WHO, 2014
Next Steps

• Immediately report the incident to the local coordinator

• Medical evaluation for other blood borne pathogens (HIV, HCV, HBV) and appropriate follow-up care

• Fever monitoring twice a day and symptom monitoring for 21 days
  – Immediately alert the appropriate party if a fever develops within the 21 days post-exposure

Reference: WHO, 2014
• Develop a plan for managing Occupational Exposure at your clinic
  – Monitoring and Managing Exposed Employees
  – Non-punitive sick-leave policies
  – Asymptomatic Employees
  – Symptomatic Employees
Resources

• CDC 2014 Infection Prevention and Control Recommendations for Hospitalized Patients with Known or Suspect Ebola Virus Disease in U.S. Hospitals

• WHO 2014 Interim Infection Prevention and Control Guidance for Care of Patients with Suspected or Confirmed Filovirus Haemorrhagic Fever in Health-Care Settings, with Focus on Ebola
  http://apps.who.int/iris/bitstream/10665/130596/1/WHO_HIS_SDS_2014.4_eng.pdf?ua=1&ua=1

• WHO (unpublished) How to safely collect blood samples from persons suspected to be infected with highly infectious blood-borne (provided as a hand out).

• WHO 1999 Aide-Memoire: Injection Safety

• CDC 2014 One and Only Campaign
  http://www.oneandonlycampaign.org/
Activity - Sharps Safety Role Play

- Divide into groups
- Each group takes a scenario
- Groups have 10-15 min to prepare how they will maximize sharps safety in this scenario
- Each group act out the role play to the group demonstrating sharps safety

- Handouts/Materials:
  - Set of sharps (e.g. IV cannulation, blood draw materials) x 1 per group
  - Sharps container x 1 per group
STAGE

Doctors/ Nurses

FACILITATOR:
Dr. T. Subido

Doctors/ Nurses

FACILITATOR:
Dr. J. Garcia

Medical Techs

FACILITATOR:
Dr. J. de Jesus
Activity Scenarios – ROLE PLAY

DOCTORS/NURSES:
A staff member has arrived for their shift to care for the suspected Ebola patient. What are some of the sharps that he/she may be using during their shift? How will you remind the staff member the key points of sharps safety when caring for this patient?

MEDICAL TECHNOLOGISTS:
A suspect Ebola patient needs blood drawn for laboratory testing. How would you set up the room and plan the procedure?