

## TOOL 17

### Infection Control Practices in the Application of Injections

WHO, Department of Blood Safety and Clinical Technology

#### APPENDIX A: BEST INFECTION CONTROL PRACTICES FOR SKIN-PIERCING INTRADERMAL, SUBCUTANEOUS AND INTRAMUSCULAR NEEDLE INJECTIONS

*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*

Eliminating unnecessary injections is the highest priority to prevent injection-associated infections. When injections are medically indicated, they should be administered safely. These best practices are measures that have been determined through scientific evidence or expert consensus to protect patients, providers and communities most effectively.

#### USE STERILE INJECTION EQUIPMENT

A-1) Use a sterile syringe and needle for each injection, and to reconstitute each unit of medication.



A-2) Ideally, use a new, single use disposable syringe and needle.



A-3) Inspect packaging for breaches in barrier integrity. Discard a needle or syringe if the package has been punctured, torn or damaged by exposure to moisture.



A-4) If single use syringes and needles are unavailable, use equipment designed for steam sterilization. Sterilize equipment according to WHO recommendations and document the quality of the sterilization process using Time, Steam, Temperature (TST) spot indicators.



#### PREVENT CONTAMINATION OF INJECTION EQUIPMENT AND MEDICATION

B-1) Prepare each injection in a clean designated area, where blood or body fluid contamination is unlikely.



B-2) Use single-dose vials rather than multi-dose vials.



B-3) 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.



B-4) Select pop-open ampoules rather than ampoules that require use of a metal file to open.



B-5) If using an ampoule that requires a metal file to open, protect fingers with a clean barrier (e.g., small gauze pad) when opening the ampoule.



B-6) Inspect for and discard medications with visible contamination or breaches of integrity (e.g., cracks, leaks).



B-7) Follow product-specific recommendations for use, storage and handling.



B-8) Discard a needle that has touched any non-sterile surface



### **PREVENT NEEDLE-STICK INJURIES TO THE PROVIDER**

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C-1) Anticipate and take measures to prevent sudden patient movement during and after injection.



C-2) Avoid recapping and other hand manipulations of needles. If recapping is necessary, use a single-handed scoop technique.



C-3) Collect used syringes and needles at the point of use in an enclosed sharps container that is puncture- and leak-proof and that is sealed before completely full.



### **PREVENT ACCESS TO USED NEEDLES**

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D-1) Seal sharps containers for transport to a secure area in preparation for disposal. After closing and sealing sharps containers, do not open, empty, re-use, or sell them.



D-2) Manage sharps waste in an efficient, safe and environment-friendly way to protect people from voluntary and accidental exposure to used injection equipment.



### **OTHER PRACTICE ISSUES**

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E-1) Engineered technology. Whenever possible, use devices designed to prevent needle-stick injury that have been shown to be effective for patients and providers. Auto-disable (AD) syringes are increasingly available to prevent re-use of injection equipment in selected settings, including immunization services.

E-2) Provider's hand hygiene and skin integrity. Perform hand hygiene (i.e., wash or disinfect hands) before preparing injection material and



giving injections. The need for hand hygiene between each injection will vary based on the setting and whether there was contact with soil, blood or body fluids. Avoid giving injections if skin integrity is compromised by local infection or other skin condition (e.g., weeping dermatitis). Cover any small cuts.



E-3) Gloves. Gloves are not needed for injections. Single use gloves may be indicated if excessive bleeding is anticipated.

E-4) Swabbing of vial tops or ampoules. Swabbing of clean vial tops or ampoules with an antiseptic or disinfectant is unnecessary. If swabbing with an antiseptic is selected for use, use a clean, single use swab and maintain product specific recommended contact time. Do not use cotton balls stored wet in a multi-use container.



E-5) Skin preparation before injection. Wash skin that is visibly soiled or dirty. Swabbing of the clean skin before giving an injection is unnecessary. If swabbing with an antiseptic is selected for use, use a clean, single use swab and maintain product specific recommended contact time. Do not use cotton balls stored wet in a multi-use container.

