



Photo 2. Proper final disposal of used syringes and needles in safety boxes.



Photo 3. Sealed safety boxes waiting for transport.

Key Training Messages for Injection Safety

- Use a sterile AD or disposable syringe and needle to vaccinate each person.
- Use a disposable syringe and needle to reconstitute each vaccine.
- Prevent contamination of injection equipment and vaccine.
- Prepare each injection in a designated, clean area where blood or body fluid contamination is unlikely.
- Always pierce the septum of multi-dose vials with a sterile needle.
- Do not leave a needle in the stopper.
- Protect fingers with small gauze pad when opening ampoules.
- Discard a needle that has touched any non-sterile surface (hands, environmental surfaces).
- Anticipate and take measures to prevent sudden patient movement during and after injections.
- Prevent needlestick injuries by not recapping needles, and placing used needles attached to the syringes directly into safety boxes located in a convenient location (Photo 2).
- Ensure that safety boxes are only $\frac{3}{4}$ full and that they are sealed after reaching that level. Never overfill a safety box and never transfer contents of safety boxes to other containers.
- Seal safety boxes for transport to a secure area. Do not open, empty, or reuse them (Photo 3).
- Manage injection waste in an efficient and environment-friendly way.
- Prevent accidents to personnel in charge of waste disposal.
- Do not place empty vials in the safety box, they may explode while burning.
- Put only potentially contaminated injection equipment in the safety boxes. Do not put empty vaccine vials, cotton pads, compresses, etc. in the safety boxes.

Adapted from World Health Organization. "First, do no harm" Introducing auto-disable syringes and ensuring injection safety in immunization systems of developing countries. WHO/V&B/02.26.

Checklist of Resources for an Emergency Vaccine Retrieval and Storage Plan

- Designated primary and backup vaccine coordinators with emergency contact information.
- Emergency staff contact list in order of contact preference.
- Vaccine storage unit specifications (type, brand, model number, serial number).
- Alternate vaccine storage facility or facilities.
- Written protocols, vehicles, and drivers for transporting vaccine to and from the alternate vaccine storage facility.
- Written instructions for entering your facility and vaccine storage spaces in an emergency if the building is closed or if it is after hours. These instructions should include the building security/after-hours access procedure, a floor diagram and the locations of the following:
 - Doors
 - Flashlights
 - Spare batteries
 - Light switches
 - Keys
 - Locks
 - Alarms (including instructions for use)
 - Circuit breakers
 - Packing materials
- Appropriate packing materials to safely transport or temporarily store vaccine.
- Prioritized vaccine packing list.
- Written protocol for vaccine packing.
- Written protocol for appropriately storing vaccine at the alternate storage facility.
- Up-to-date list of manufacturer quality control office telephone numbers.

Source: Centers for Disease Control and Prevention, National Center for Immunization and Respiratory Diseases. Emergency Vaccine Retrieval and Storage Plan. Available at: http://www2a.cdc.gov/vaccines/ed/shtoolkit/pages/SH_plans.htm#EmergencyRetrievalandStoragePlan.