

Mercury Waste Management in Health Care Facilities

Norway ODA Mercury Storage and Disposal in the Caribbean

Jamaica, Suriname, Trinidad and Tobago

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UNDP-WHO Guidance

- Guidance on the Clean-up, Storage and Transport of mercury Wastes from health Care Facilities 2010 <http://www.undp.org>
- WHO Safe Management of Wastes from Health Care
http://apps.who.int/iris/bitstream/10665/85349/1/9789241548564_eng.pdf

A Medical Mercury Waste plan should include:

- *Education and training of staff and community* – awareness-raising, public education, periodic training on mercury management, simulation (response to mock spills) as part of training
- *Proper maintenance of mercury devices*
- *Appropriate labeling and collection* – segregation of mercury from infectious and regular wastes, use of appropriate containers, labeling
- *Mercury spill management* – spill kits, proper procedures, staff training
- *Mercury waste collection plan* – procedures for on-site storage and transport, a designated storage area
- *External management strategies* – take-back arrangements with vendors, arrangements with approved mercury recycling facilities (if available), phase-in of non-mercury devices
- *Proper disposal methods* – transport to approved treatment and disposal facilities (if available)

UNDP WHO guidance Spill Kits-

- “Managing Small Mercury Spills,” Fact Sheet, HCWH Europe and HEAL (ibid.); U.S. Environmental Protection Agency’s website “Mercury Releases and Spills: Cleanups and Proper Disposal,” updated December 2, 2009 <http://www.epa.gov/hg/spills/>
- Spills kits should include the following:
 - Personal Protective Equipment (PPEs)
 - Containers
 - Tools to Remove mercury
 - Materials for Decontamination
 - Submit spill report

Storage Criteria

- Must be secure-restricted access
- Exhaust vents to outside air
- Segregated from all other medical wastes
- No drains, has spill containment
- Temperature controlled
- Proper Signance

Storage Containers

- Leak proof, air tight, puncture resistant
- Small enough to easily carry
- Broken equipment may have to be packaged and then placed in containers
- Container will not degrade in contact with mercury
- Corrosion resistant
- Can be repacked for further shipment

Example of Handling and Storage

- o The 1000 thermometers are carefully wrapped in a plastic bag and taped together to form a compact volume of about 2 liters; the thermometers—along with crumpled paper, plastic bubble wrap, or packing foam to prevent breakage—are then placed in a 3 liter stainless steel can with a tight-fitting lid (primary container). The outside of the can is marked with the quantity, description, and date. The can is placed inside a 4 liter, 2 or 3 mil (50 or 75 micron) thick, transparent, sealable plastic bag (secondary container).
- o The 20 unbroken sphygmomanometers are placed back in their original 2-liter cases which have labels that identify the contents (primary container). The cases are taped together in groups of 4 and placed in 2 to 4 mil (50 to 100 micron) thick garbage bags which are taped close with duct tape or strong adhesive tape (secondary container). A label is placed on the outside of the garbage bag.

Example -Continued

- o The 500 broken thermometers are placed in a 3-liter, marked, stainless steel can (primary container). The can is placed inside a 4 liter, 2 or 3 mil (50 or 75 micron) thick, transparent, sealable plastic bag (secondary container).
- o The 350 liters of cleanup waste (contaminated rags, fabric and other materials that do not have sharp edges or points) are placed in multiple, 2 or 3 mil (50 or 75 micron) thick, sealable plastic bags (primary containers). The plastic bags are labeled and placed in two steel or plastic drums (secondary container), each with a capacity of 220 liters (55-gallons or 44 imperial gallons) and a gasketed, manual latching lid to prevent vapor release. The outside of the drums are labeled.

Transport

- Transport documentation allows tracking from origin to final destination
- Use of trained licensed transporter
- If shipping internationally, shipments should have all prior governmental/international approvals
- Tracking shipments is critical