Health-care activities protect and restore health and save lives

But what about the waste and by-products they generate?

Of the total amount of waste generated by health-care activities, about 85% is general, non-hazardous waste. The remaining 15% is considered hazardous material that may be infectious, toxic or radioactive.

Types of waste
Waste and by-products cover a diverse range of materials, as the following list illustrates:

- **Infectious waste:** waste contaminated with blood and other bodily fluids (e.g. from discarded diagnostic samples), cultures and stocks of infectious agents from laboratory work (e.g. waste from autopsies and infected animals from laboratories), or waste from patients with infections (e.g. swabs, bandages and disposable medical devices);
- **Pathological waste:** human tissues, organs or fluids, body parts and contaminated animal carcasses;
- **Sharps waste:** syringes, needles, disposable scalpels and blades, etc.;
- **Chemical waste:** for example solvents and reagents used for laboratory preparations, disinfectants, sterilants and heavy metals contained in medical devices (e.g. mercury in broken thermometers) and batteries;
- **Pharmaceutical waste:** expired, unused and contaminated drugs and vaccines;
- **Cytotoxic waste:** waste containing substances with genotoxic properties (i.e. highly hazardous substances that are, mutagenic, teratogenic or carcinogenic), such as cytotoxic drugs used in cancer treatment and their metabolites;
- **Radioactive waste:** such as products contaminated by radionuclides including radioactive diagnostic material or radiotherapeutic materials; and
- **Non-hazardous or general waste:** waste that does not pose any particular biological, chemical, radioactive or physical hazard.

The major sources of health-care waste

- hospitals and other health facilities
- laboratories and research centres
- mortuary and autopsy centres
- animal research and testing laboratories
- blood banks and collection services

Health risks
Health-care waste contains potentially harmful microorganisms that can infect
hospital patients, health workers and the general public. Other potential hazards may include drug-resistant microorganisms which spread from health facilities into the environment.

Adverse health outcomes associated with health care waste and by-products also include:

- sharps-inflicted injuries;
- toxic exposure to pharmaceutical products, in particular, antibiotics and cytotoxic drugs released into the surrounding environment, and to substances such as mercury or dioxins, during the handling or incineration of health care wastes;
- chemical burns arising in the context of disinfection, sterilization or waste treatment activities;
- air pollution arising as a result of the release of particulate matter during medical waste incineration;
- thermal injuries occurring in conjunction with open burning and the operation of medical waste incinerators; and radiation burns.

**Waste management: reasons for failure**

- Lack of awareness about the health hazards related to health-care waste
- inadequate training in proper waste management
- absence of waste management and disposal systems,
- insufficient financial and human resources
- the low priority given to the topic

These are the most common problems connected with health-care waste. Most of the time we do not have appropriate regulations, or do not enforce them.

**The way forward**

The management of health-care waste requires increased attention and diligence to avoid adverse health outcomes associated with poor practice, including exposure to infectious agents and toxic substances.

**Key elements in improving health-care waste management are:**

- promoting practices that reduce the volume of wastes generated and ensure proper waste segregation;
- developing strategies and systems along with strong oversight and regulation to incrementally improve waste segregation, destruction and disposal practices with the ultimate aim of meeting national and international standards;
- where feasible, favouring the safe and environmentally sound treatment of hazardous health care wastes (e.g., by autoclaving, microwaving, steam treatment integrated with internal mixing, and chemical treatment) over medical waste incineration;
- building a comprehensive system, addressing responsibilities, resource allocation, handling and disposal. This is a long-term process, sustained by gradual improvements;
- raising awareness of the risks related to health-care waste, and of safe practices; and
- selecting safe and environmentally-friendly management options, to protect people from hazards when collecting, handling, storing, transporting, treating or disposing of waste.

Government commitment and support is needed for universal, long-term improvement, although immediate action can be taken locally.


Compiled by:

Dr. Shilanthi Seneviratne
Epidemiology unit
Ministry of Health Sri Lanka
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* T = Timeliness refers to returns received on or before 04th May 2018, Total number of reporting units 351
* Number of reporting units data provided for the current week: 351
* C** = Completeness

A = Cases reported during the current week
B = Cumulative cases for the year.
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<th>No. of Cases by Province</th>
<th>Number of cases during current week in 2018</th>
<th>Number of cases during same week in 2017</th>
<th>Total number of cases to date in 2018</th>
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**Key to Table 1 & 2**

**Provinces:**
- W: Western
- C: Central
- S: Southern
- N: North
- E: East
- NC: North Central
- NW: North Western
- U: Uva
- Sab: Sabaragamuwa

**RDHS Divisions:**
- CB: Colombo
- GM: Gampaha
- KL: Kalutara
- KD: Kandy
- NE: Nuwara Eliya
- GA: Galle
- HB: Hambantota
- MT: Matara
- JF: Jaffna
- KN: Kilinochchi
- M: Mannar
- VA: Vavuniya
- ML: Matale
- BM: Batticaloa
- TR: Trincomalee
- KM: Kalmunai
- RP: Ratnapura
- KG: Kegalle
- PO: Polonnaruwa
- BD: Badulla
- MO: Moiragala
- AP: Anuradhapura
- GL: Galle
- MT: Matara
- PU: Puttalam
- BD: Badulla
- MO: Moiragala
- RP: Ratnapura
- KG: Kegalle

**Data Sources:**
- Weekly Return of Communicable Diseases: Diphtheria, Measles, Tetanus, Neonatal Tetanus, Whooping Cough, Chickenpox, Meningitis, Mumps, Rubella, CRS
- Special Surveillance: AFP (Acute Flaccid Paralysis), Japanese Encephalitis
- CRS** = Congenital Rubella Syndrome
- NA = Not Available

**Dengue Prevention and Control Health Messages**

**Look for plants such as bamboo, bohemia, rampe and banana in your surroundings and maintain them free of water collection.**

PRINTING OF THIS PUBLICATION IS FUNDED BY THE WORLD HEALTH ORGANIZATION (WHO).

Comments and contributions for publication in the WER Sri Lanka are welcome. However, the editor reserves the right to accept or reject items for publication. All correspondence should be mailed to The Editor, WER Sri Lanka, Epidemiological Unit, P.O. Box 1567, Colombo or sent by E-mail to chepid@sltnet.lk. Prior approval should be obtained from the Epidemiology Unit before publishing data in this publication.

**ON STATE SERVICE**

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