Waste generated by health care activities includes a broad range of materials, from used needles and syringes to soiled dressings, body parts, diagnostic samples, blood, chemicals, pharmaceuticals, medical devices and radioactive materials.

Poor management of health care waste potentially exposes health care workers, waste handlers, patients and the community at large to infection, toxic effects and injuries, and risks polluting the environment. It is essential that all medical waste materials are segregated at the point of generation, appropriately treated and disposed of safely.

Health-care waste management

To better understand the problem of health-care waste management, WHO guidance recommends that countries conduct assessments prior to any decision as to which health-care waste-management methods be chosen. Tools are available to assist with the assessment and decision-making process so that appropriate policies lead to the choice of adapted technologies. In support of sound health-care waste management, WHO proposes to work in collaboration with countries through the following strategy:

**In the short-term**

* Until countries have access to proven, environmentally safe options for the management of health-care waste, incineration may still be seen as an appropriate response. Incineration should comply with the following recommendations:
  + good practices in incinerator design, construction, operation (e.g., pre-heating and not overloading the incinerator, incinerating only at temperatures above 800°C), maintenance and lowest emissions;
  + The use of waste segregation and waste minimization practices to restrict incineration to appropriate infectious wastes;
  + availability of good practices tools, including dimensional construction plans, clear operational guidelines, etc.;
  + correction of current deficiencies in operator training and management support, which lead to poor operation of incinerators;
  + materials containing chlorine such as polyvinyl chloride products (e.g., some blood bags, IV bags, IV tubes, etc.) or heavy metals such as mercury (e.g., broken thermometers) should never be incinerated.
* Research and production by manufacturers of all syringe components made of the same plastic to facilitate recycling;
* Selection of PVC-free medical devices;
* Identification and development of safe recycling options wherever possible (for plastic, glass, etc.);
* Research and promotion of new waste management technologies or alternatives to incineration;
* Promotion of the principles of environmentally sound management of health-care waste as set out in the Basel Convention.

**In the mid-term**

* Further efforts to eliminate unnecessary injections to reduce the amount of hazardous health-care waste that needs to be treated;
* Research into the health effects of chronic exposure to low levels of dioxin, furan and co-planar PCBs;
* Risk assessment to compare the health risks associated with first incineration and secondly exposure to health-care waste.

**In the long-term**

* Support of countries in the development of national guidance manuals for the sound management of health-care waste;
* Effective, scaled-up promotion of non-incineration technologies for the final disposal of health-care wastes to prevent the disease burden from (a) unsafe health-care waste management and (b) exposure to dioxins and furans;
* Allocation of human and financial resources to safely manage health-care waste in countries
* Support of countries in the development and implementation of a national plan, policies and legislation on health-care waste.

WHO aims to promote effective non-burn technologies for the final disposal of medical wastes to avoid both the disease burden from unsafe health-care waste management and potential risks from dioxins, furans and co-planar PCBs. WHO will:

* Prevent the health risks associated with exposure to health-care waste for both health workers and the public by promoting environmentally sound management policies for health-care waste;
* Support global efforts to reduce the amount of noxious emissions released into the atmosphere to reduce disease and defer the onset of global climate change;
* Support the Stockholm convention on Persistent Organic Pollutants (POPs);
* Support the Basel Convention (1989) on hazardous wastes and other wastes;
* Reduce the exposure to toxic pollutants associated with the combustion process through the promotion of appropriate practices for high temperature incineration.

