

Advocating for national action plans for safe management of waste from health care facilities

Implementation of the Libreville Declaration on Health and Environment in Africa: Framework for health care waste management

Health care activities such as immunization, diagnostic testing, medical treatments and laboratory examinations protect and restore health and save lives. But they also generate waste and by-products.

Almost 80% of the waste generated by health care activities is comparable to domestic waste. The remaining 20% are considered hazardous materials that may be infectious, toxic or radioactive, and related risks have so far been only poorly investigated. Waste and by-products cover a range of materials that can include contaminated waste, sharps, body fluids, chemicals, pharmaceuticals, genotoxic or radioactive matter, and waste with high heavy metal content.

Health care waste is a potential reservoir of harmful microorganisms that can infect patients, health care workers and the general public, and may promote the spread of drug-resistant microorganisms from health care establishments. Wastes and by-products can also cause injuries through radiation burns or sharps-inflicted injuries, poisoning and pollution, for example, whether through the release of antibiotics, cytotoxic drugs and other medicines through waste water or in the form of toxic elements or compounds such as mercury or dioxins.

In response to this, the World Health Organization (WHO) advocates for robust national action plans and policies for safe management of waste from health care activities and the implementation of the *Libreville Declaration on Health and Environment in Africa*.

1. Background

The Libreville Declaration was adopted in 2008 and requests countries in Africa to establish health and environment strategic alliances as a basis for national plans of joint action. Countries also committed to develop or update their frameworks in order to address the environmental impact on health more effectively through the integration of health and environment links in policies, strategies, regulations and development plans.

Waste in general – and waste generated from health care activities in particular – poses a serious threat to both human health and the environment. It was against this backdrop that WHO organized a workshop in Douala, in Cameroon in July 2010. The aim was to review the current situation with respect health care waste management in the African region and to propose related

recommendation to countries. WHO National Programme Officers from health, environment and immunization programmes in 22 countries from West, Eastern, Southern and Central Africa participated in the workshop.

2. Setting the stage: key advocacy objectives

The main objective of the meeting was to promote a healthier environment, intensify primary prevention and influence public policies to address the root causes of environmental threats to health through implementation of the Libreville Declaration.

The specific objectives were to:

- provide technical and financial support to develop national plans and policies on safe disposal of health care waste (in particular from immunization-related activities);
- provide technical and financial support to countries with related policies to carry out studies on ways to improve safe disposal of health care waste;
- provide support to implement national plans and policies in targeted settings, in order to demonstrate effective waste management approaches.

3. The expected outcomes were:

- Implementation status of waste management from health care activities as supported by GAVI reviewed;
- Challenges pertaining to health care waste management in the region identified;
- Recommendations in order to accelerate and scale up health care waste management activities in the region in the form of a report to GAVI;
- The required step for incorporating health care waste management (HCWM) activities in the national plans of joint action agreed upon ; and
- A regional action plan for HCWM prepared.

At the end of the workshop, participants reached consensus and identified key interventions to elaborate a strategic plan for the management of health care waste.

4. What is known: situational analysis

Health care activities generate waste products that may cause adverse health effects. This waste is generated from providing diagnostic, curative, preventive and palliative health care in human as well as in veterinary medicine.

Management of health care waste is a serious public health problem, particularly in the African region. It is estimated that around 80 to 85% of waste produced in health facilities is domestic waste. However, the remaining 15 to 20% of health care waste is hazardous and must be disposed of in an appropriate, organized and safe manner.

Poor management of health care waste can pose considerable threats to health care personnel, waste handlers, patients, the general public and the environment. The greatest risks posed by infectious waste are accidental needle-stick injuries, which can transmit hepatitis, HIV and other infections.

WHO estimated that in 2000, injections with contaminated syringes caused:¹

- 21 million hepatitis B virus infections (32% of all new infections globally);
- 2 million hepatitis C virus (HCV) infections (40% of all new infections);
- 260 000 HIV infections (5% of all new infections).

In 2002, the results of a WHO assessment conducted in 22 developing countries showed that the proportion of health care facilities that do not use proper waste disposal methods ranges from 18 to 64%.

According to WHO, it is estimated that in 2003:

- 156 million syringes and needles were generated by routine immunization activities in the 46 countries of the WHO African Region.²
- 120 million syringes and needles were used for supplementary measles and tetanus campaigns, giving a total of 276 million syringes and needles that needed proper disposal.

In order to improve the safe management of health care-generated waste, WHO is working with partners in selected countries to develop and implement corresponding national action plans. This has resulted in the construction of treatment and disposal infrastructure, provision of equipment such as colour-coded bins, and training of waste handlers. Some countries, such as Mali, Kenya and Ghana, have made good progress by establishing functional systems for HCWM. These systems include national steering committees, defined responsibility by level, as well as related policies and action plans.

5. Key issues and challenges

According to *Safe health care waste management* (see footnote below), countries need to make evidence-based and sound policy decisions regarding approaches and technologies to be used for ensuring the safe management of waste from health care activities. Despite the availability of related guidelines, however, many countries still do not have policies to guide HCWM activities and as a result activities remain very fragmented. Health care waste management is frequently not integrated into the health care delivery system and many countries lack strategic direction to guide the development of integrated plans of action. This is due, in part, to weak coordination between and among sectors and partners. There is also a low rate of adoption of appropriate technologies due to a lack of evidence-based decision-making, locally available technologies and general lack of resources for such activities.

The importance of health risks associated with inadequate HCWM is not yet fully realized by most national authorities. As a result, HCWM are uncoordinated and there is a lack of established procedures to guide implementation. There are also insufficient numbers of adequately skilled personnel and limited monitoring and evaluation capacities for HCWM.

¹ *Safe health care waste management: Policy paper*. World Health Organization, Geneva, 2004.

² Report of a workshop on the management of health care waste. Organized by the GAVI West and Central Africa Sub-regional Working Group, Saint-Louis, Senegal, 30 September to 2 October, 2003.

6. What needs to be done: strategic approach

In order to address the issues and challenges outlined above, countries are recommended to establish structured, organized and integrated HCWM approaches. These should clearly specify stakeholder coordination mechanisms, assignment of specific tasks and responsibilities at the various levels of the health care system, and define a clear financial mechanism to fund waste management activities as part of the health care service delivery system.

7. Taking action: priority activities at the country level

It is recommended that individual countries develop national roadmaps for HCWM as a contribution to the national plans for the implementation of the Libreville Declaration. These roadmaps should require that relevant national authorities undertake the following:

- a) Carry out an assessment of ongoing HCWM activities.
- b) Develop a national policy for the management of health care waste.
- c) Set up a national committee to oversee HCWM.
- d) Develop/update national curricula and training materials for training of health workers on HCWM.
- e) Carry out training sessions of health workers at all levels.
- f) Construct essential HCWM facilities.
- g) Prepare an annual budget for HCWM activities.
- h) Develop information, education and communication materials on HCWM.
- i) Develop and disseminate national guidelines for monitoring and evaluation of HCWM.
- j) Undertake regular supervision of staff in charge of HCWM.
- k) Carry out an assessment of the annual production of health care waste.
- l) Develop and disseminate national norms, standards and procedures on HCWM.
- m) Document and disseminate best practices for HCWM.
- n) Organize regular meetings with HCWM stakeholders.
- o) Carry out studies and research to enhance technologies for HCWM.
- p) Develop a national system for integrated HCWM.
- q) Promote treatment techniques and technologies that meet international standards on environmental protection.
- r) Develop indicators for monitoring and evaluation.

8. Monitoring and evaluation – reviewing successes.

It is recommended that every country develop indicators for monitoring and evaluation of national action plans for HCWM. These indicators should focus on the amount of health care waste that is generated, treated and managed nationally through established systems.
