

This is a sample document. The full version will be released via GGHH Connect: [www.gghhconnect.net](http://www.gghhconnect.net)



# Waste

## Guidance Document for Members

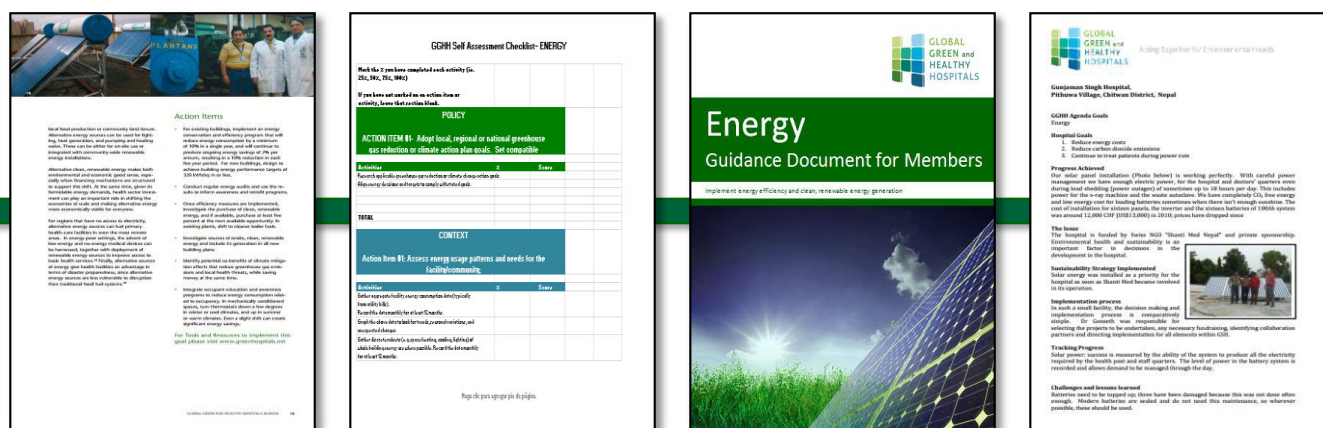
Reduce, treat and safely dispose of healthcare waste



# The GGHH Guidance Document Series

Global Green and Healthy Hospitals is producing a series of Guidance Documents—one for each of the ten GGHH goal areas. These documents are intended to assist GGHH member hospitals and health systems around the world reduce their environmental footprint and promote environmental health.

They are also designed as integral parts in a system that logically progresses from the Action Items in the GGHH Agenda; to Self-Assessment Checklists that members can use as a benchmarking tools; to the Guidance Documents themselves and associated case studies and resources; to a series of measurement tools to help members measure their progress over time.



These documents, which are available to members as an integrated online system via GGHH Connect, are also downloadable in PDF format. They are designed as participatory, living documents. That is to say, GGHH wants membership feedback and suggestions for actions, examples, case studies with photos, links and the like so that these Guidances can evolve based on the real experience and input of our members. We aim to update them regularly.

## About this Healthcare Waste Guidance Document

Healthcare waste management is often neglected by sectoral leaders, who do not regard it as a priority in comparison to the many other tasks involved in caring for the sick. However, scientists have estimated that over half of the world's population is at risk from environmental, occupational or public health threats deriving from improperly treated healthcare waste<sup>1</sup> and the UN Human Rights Council agree that improper waste treatment often breaches human rights<sup>2</sup>.

<sup>1</sup> Harhay, M.O., Halpern, S.D., Harhay, J.S. & Olliaro, P.L. (2009) Health care waste management: a neglected and growing public health problem worldwide. *Tropical Medicine and International Health* 14(11): 1414-1417; <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-3156.2009.02386.x/pdf>

<sup>2</sup> Georgescu, C. (2011) Report of the Special Rapporteur on the adverse effects of the movement and dumping of toxic and dangerous products and wastes on the enjoyment of human rights. Human Rights Council Eighteenth session Agenda item 3, Promotion and protection of all human rights, civil, political, economic, social and cultural rights, including the right to development. Geneva, Human Rights Council: 21 pp, <http://www.ohchr.org/EN/NewsEvents/Pages/MedicalWaste.aspx>

This health care waste management guide sets out ways to meet the target of treating waste in the most sustainable way considering that the different situations found in different countries will mean there is no perfect solution that will suit all circumstances. The recommended actions are supported with links to case studies and other resources that have been successfully implemented and should provide good models to those trying to tackle this complex issue.

This document was produced in collaboration with Mazetti, Foursight - an employee-owned benefit corporation providing Finance, Planning, Project Delivery, Research and Policy in a number of fields, including designing human-centered healthcare infrastructure. GGHH acknowledges the significant technical contribution made by Mazetti, Foursight in developing this document, as well as the GGHH Water document. For more information see: <http://www.mazzetti.com>

Written by: Ruth Stringer, Susan Wilburn and Laura Brennan

The following individuals helped develop, review, or otherwise contribute to the content and creation of this document: Antonella Risso, David Sgarzi, Trevor Thornton and Vital Ribeiro.

The aim of the waste goal:

- to reduce the amount and toxicity of the waste generated at the facility;
- to ensure staff area able to handle waste safely;
- To ensure that any waste that is generated is transported, stored, treated, recycled, or disposed of in the most environmentally friendly way possible and poses no threat to staff, patients, or the public.
- To promote a policy framework that supports the safe management of wastes from health care activities



[www.greenhospitals.net](http://www.greenhospitals.net)



[www.noharm.org](http://www.noharm.org)



[www.medwastealternatives.org](http://www.medwastealternatives.org)

For more information, contact [globalnetwork@hcwh.org](mailto:globalnetwork@hcwh.org)

*DISCLAIMER: This document is for the exclusive use of Global Green and Healthy Hospitals (GGHH) members and their affiliated organizations and may not be distributed, in whole or in part, beyond GGHH members and their affiliated organizations without prior written authorization by Health Care Without Harm.*

Copyright 2015, Health Care Without Harm

# Table of Contents

|  |    |
|--|----|
| Overview.....  | 4  |
| Policy framework for national legislation/ regulation on health care waste management.....                   | 5  |
| Legal provisions.....  | 5  |
| Policy and Strategy document(s).....   | 6  |
| Technical Guidelines.....  | 6  |
| Zero Waste.....  | 6  |
| Action Items.....  | 6  |
| Policy.....  | 7  |
| Set up a waste management committee and allocate a dedicated budget for waste management.....                | 7  |
| Case Studies.....  | 10 |
| Additional Resources.....  | 10 |
| Context/Setting the baseline.....  | 11 |
| Conduct waste audits and monitor waste volumes and costs.....  | 11 |
| Case Studies.....  | 12 |
| Additional resources.....  | 13 |
| Segregate waste at source and initiate recycling.....  | 13 |
| Case Studies.....  | 15 |
| Additional resources.....  | 15 |
| Implement a waste management training program.....   | 15 |
| Additional resources.....  | 16 |
| Implement an environmentally friendly waste management system.....   | 17 |
| Introduce non-burn treatment technology.....   | 17 |
| Steps for selecting waste treatment technologies.....  | 20 |
| Case Studies.....  | 21 |
| Additional Resources.....  | 21 |
| Check the treatment process from the hospital to recycling plants, treatment centers and landfill sites..... | 23 |
| Advocate for secure landfills.....   | 23 |
| Additional resources.....  | 23 |
| Reduce waste volume and toxicity.....  | 24 |
| Implement environmentally preferable purchasing procedures.....  | 24 |
| Implement a waste reduction program.....   | 24 |
| Additional resources.....  | 25 |
| About Health Care Without Harm.....  | 26 |



# Overview

Healthcare waste management is often neglected by sectoral leaders, who do not regard it as a priority in comparison to the many other tasks involved in caring for the sick. However, scientists have estimated that over half of the world's population is at risk from environmental, occupational or public health threats deriving from improperly treated healthcare waste<sup>3</sup> and the UN Human Rights Council agree that improper waste treatment often breaches human rights<sup>4</sup>.

The World Health Organization has specified in its Core Principles<sup>5</sup> that "a holistic approach to health-care waste management should include a clear delineation of responsibilities, occupational health and safety programs, waste minimization and segregation, the development and adoption of safe and environmentally-sound technologies, and capacity building."

This guide sets out ways to meet the target of treating waste in the most sustainable way considering that the different situations found in different countries will mean there is no perfect solution that will suit all circumstances. However, among the case studies and other resources, there are examples of diverse methods that have been successful and should provide good models to those trying to tackle this complex issue.

.

---

<sup>3</sup> Harhay, M.O., Halpern, S.D., Harhay, J.S. & Olliaro, P.L. (2009) Health care waste management: a neglected and growing public health problem worldwide. *Tropical Medicine and International Health* 14(11): 1414-1417; <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-3156.2009.02386.x/pdf>

<sup>4</sup> Georgescu, C. (2011) Report of the Special Rapporteur on the adverse effects of the movement and dumping of toxic and dangerous products and wastes on the enjoyment of human rights. Human Rights Council Eighteenth session Agenda item 3, Promotion and protection of all human rights, civil, political, economic, social and cultural rights, including the right to development. Geneva, Human Rights Council: 21 pp, <http://www.ohchr.org/EN/NewsEvents/Pages/MedicalWaste.aspx>

<sup>5</sup> WHO (2007) WHO core principles for achieving safe and sustainable management of health-care waste. [http://www.who.int/water\\_sanitation\\_health/medicalwaste/hcwpprinciples.pdf](http://www.who.int/water_sanitation_health/medicalwaste/hcwpprinciples.pdf)



Healthcare waste at a dump site, East Africa

---

Photos: Ruth Stringer/HCWH



Crow eating pathological waste

---

# Policy framework for national legislation/regulation on health care waste management

It is the responsibility of governments to set up the necessary legal framework for the safe management of healthcare waste and to ensure that health care facility managers take their share of responsibility to manage wastes safely and comply with national regulations. GGHH members can work to advocate for appropriate policy including “zero waste” policies that will reduce the amount of waste generated and enable health systems efforts on sustainability.

## Legal provisions

National legislation is the basis for improving healthcare waste practices in any country. It establishes legal controls and permits the national agency responsible for the disposal of healthcare waste, in most cases the ministry of health, to apply pressure for their implementation. The ministry of environment or national environmental protection agency may also be involved; there should be a clear designation of responsibilities before the law is enacted.

The law should be complemented by a policy document, and by technical guidelines developed for implementation of the law.

This legal “package” should specify regulations on treatment for different waste categories,

segregation, collection, storage, handling, disposal, and transport of waste, responsibilities, technical guidelines and training requirements. It should take into account the resources and facilities available in the country concerned and any cultural aspects linked to waste handling.

A national law on healthcare waste management may stand alone or be part of more comprehensive legislation such as the following:

- law on management of hazardous wastes: application to healthcare waste should be explicitly stated;
- law on hospital hygiene and infection control: a specific chapter or article should be devoted to healthcare waste.

The law should include the following:

- harmonization with legislation on waste from other sectors e.g. color code for waste streams, policies on radioactive waste, dangerous goods transport, etc.
- a clear definition of healthcare waste and of its various categories;
- a precise indication of the legal obligations of the healthcare waste producer regarding safe handling and disposal;
- standards governing the protection of workers' health and safety
- specifications for record-keeping and reporting;
- specifications for an inspection system to ensure enforcement of the law, and for penalties to be imposed for contravention;
- designation of responsibilities for handling disputes arising from enforcement of or non-compliance with the law.

Gradual implementation of the law - for example, requiring the largest facilities to comply first - is recommended in preference to any attempt to introduce all measures simultaneously, particularly where existing practices are inadequate. The government should provide adequate funding for public hospitals to include health care waste management (HCWM).

# About Health Care Without Harm

Health Care Without Harm is an international coalition of more than 500 members in 53 countries that works to transform the health care sector so that it is no longer a source of harm to human health and the environment.

We collaborate with doctors, nurses, hospitals, healthcare systems, professional associations, NGOs, governments and international organizations to promote the development and implementation of safe and environmentally healthy practices, processes and products in the health care sector.

HCWH has regional offices in the United States, Latin America, Europe and South East Asia as well as strategic partners in South Asia and Africa.



## HCWH Asia

Unit 330, Eagle Court Condominium,  
26 Matalino Street, Brgy. Central Diliman,  
Quezon City 1100 Philippines  
ph: +63 2 9287572  
fax: +63 2 9262649  
e: [faye@no-harm.org](mailto:faye@no-harm.org)  
[www.noharm-asia.org](http://www.noharm-asia.org)

## HCWH Latin America

Rafael Hernández 2649  
1428, Buenos Aires, Argentina  
ph: +54-11-4896-0018  
e: [info@saludsindanio.org](mailto:info@saludsindanio.org)  
[www.saludsindanio.org](http://www.saludsindanio.org)

## HCWH International Coordination

Rafael Hernández 2649  
1428 Buenos Aires, Argentina  
ph: +54-11-4896-0018  
e: [alejandra@hcwh.org](mailto:alejandra@hcwh.org)  
[www.noharm-global.org](http://www.noharm-global.org)

## HCWH Europe

Rue de la Pepiniere B1000  
Brussels, Belgium  
ph: +49 6224 994871  
ph: +32 2503 0481  
e: [anja.leetz@hcwh.org](mailto:anja.leetz@hcwh.org)  
[www.noharm-europe.org](http://www.noharm-europe.org)

## HCWH USA and Canada

12355 Sunrise Valley Dr., Suite 680  
Reston, VA 20191  
United States of America  
ph: +1 703 860 9790  
fax: +1 703 860 9795  
e: [cfunkhouser@hcwh.org](mailto:cfunkhouser@hcwh.org)  
[www.noharm-uscanada.org](http://www.noharm-uscanada.org)

# [www.noharm.org](http://www.noharm.org)