

Reducing Harmful Chemicals in the Health Care Sector



ICCM3, Nairobi

SAICM Health Sector Strategy



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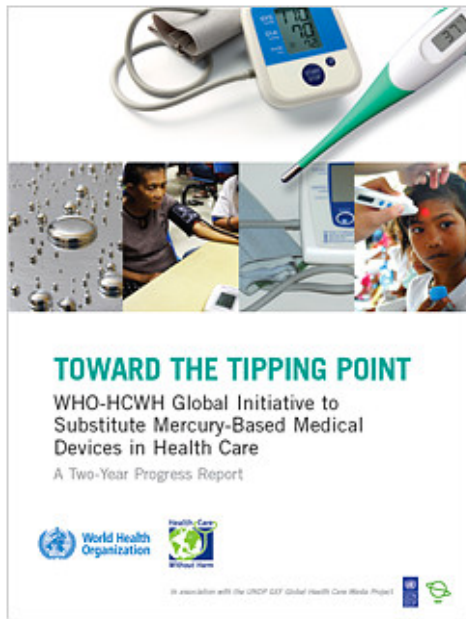
SAICM Health Sector Strategy: In preparation for the third session of the International Conference on Chemicals Management (ICCM3) in Nairobi, Health Care Without Harm has prepared this report on activities that support SAICM's Health Sector strategy on chemicals.

SAICM Health Sector Strategy: The proposed strategy notes:

"The health care sector is a major consumer of chemicals including those well documented to cause serious impacts on health and the environment. Thus, a sector whose mission it is to protect human health is contributing to the burden of disease. Chemicals in products used in health care affect human health throughout the life cycle of these products -- that is, during production, use and disposal. Vulnerable populations include patients, healthcare workers who experience exposure on a daily basis, factory workers who manufacture the products, workers in waste disposal facilities, and people who live near manufacturing plants or waste disposal sites."

Health Care Without Harm is dedicated to addressing these issues and working collaboratively with health ministries that wish to become active in the SAICM Health Sector Strategy.

Health Care Without Harm works to transform the health sector worldwide so that it becomes ecologically sustainable and a leading advocate for environmental health and justice across the globe. An international coalition of more than 500 organizations in 52 countries and offices on four continents, HCWH works with health professionals, hospitals, health systems, ministries of health, NGOs and international organizations.



Mercury Elimination Globally

The **European Union** enacted mercury thermometer ban in 2007

The **European Union** enacted a mercury blood pressure device ban in 2012

Argentina, Chile, Mongolia, Philippines: National policies phasing out mercury thermometers and blood pressure devices in health systems.

Buenos Aires, Delhi, Mexico City, Sao Paulo: Municipal policies phasing out mercury thermometers and blood pressure devices in health systems.

5,000 U.S. health care facilities have pledged to go mercury-free; all major pharmacy chains stop selling mercury thermometers

28 states have passed laws restricting mercury-based products

Mercury Elimination

Mercury is used throughout health care in a wide variety of products. The cumulative usage, spills, breakages and disposal of mercury-containing products has led the World Health Organization to identify the healthcare sector as a significant contributor of mercury pollution.

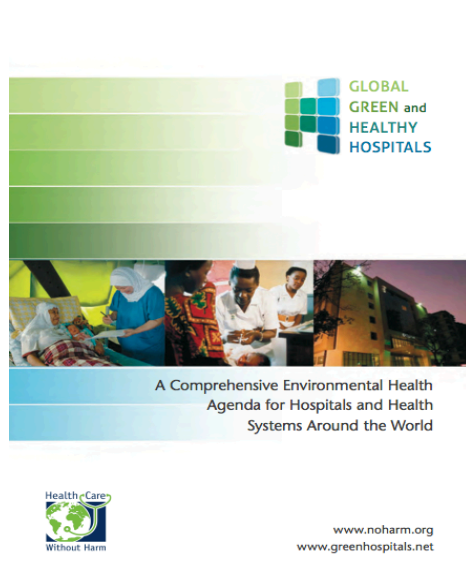
Mercury-Free Health Care

The World Health Organization and Health Care Without Harm are co-leading a global initiative to achieve virtual elimination of mercury-based thermometers and sphygmomanometers over the next decade and their substitution with accurate, economically viable alternatives. The initiative is a component of the UN Environment Programme's Mercury Products Partnership.



The goal is to substitute 70% of all mercury-based medical devices with safe and affordable alternatives by 2017

Activities in: Argentina, Costa Rica, Chile, Mexico, Brazil, Tanzania, Senegal, South Africa, Lebanon, Vietnam, India, Nepal, Philippines



Global Green and Healthy Hospitals Network

The GGHH is a global network of hospitals, health systems and healthy organizations committed to achieving the Global Green and Healthy Hospitals Agenda's goals. Already, more than **10,000 hospitals** from five continents have joined the Network. These include Thailand's Department of Health, England's National Health Service, Mexico City's municipal health system, national hospital associations from Australia, China and Indonesia and the Healthier Hospitals Initiative in the United States.

The Network builds on the Global Green and Healthy Hospitals Agenda launched in October, 2011 by Health Care Without Harm. The Agenda provides a comprehensive framework for hospitals and health systems everywhere in the world to achieve greater sustainability and to contribute to improved public environmental health.

This framework consists of ten interconnected goals. Each contains a series of Action Items that hospitals and health systems can implement. Tools and resources to support implementation are available on www.greenhospitals.net.

At least six of the GGHH goals (see box) have a harmful chemical reduction focus.

WWW.GREENHOSPITALS.NET

GGHH Goals Related to Safer Chemicals

Goal #2 : Safer Chemicals

Substitute Harmful Chemicals with Safer Alternatives

Goal #3: Waste

Protect public health by reducing the volume and toxicity of waste produced by the health sector, while implementing the most environmentally sound waste management and disposal options.

Goal #7 Healthy Food

Purchase and serve sustainably grown, healthy food.

Goal 8: Pharmaceuticals

Prescribe appropriately, safely manage and properly dispose of pharmaceuticals.

Goal 9: Green Buildings

Support green and healthy hospital design and construction.

Goal 10: Purchasing

Buy safer and more sustainable products and materials





SAICM Quick-Start Health Sector Project

SAICM Quick Start Programme

The International Conference on Chemicals Management (ICCM) decided in *resolution 1/4* to establish the “Quick Start Programme for the implementation of SAICM objectives, building upon the outcomes of the ICCM and the Bali Strategic Plan for Technology Support and Capacity building. In June, 2012, Health Care Without Harm received funding to launch two pilot projects on chemicals reduction in health care in hospitals in Argentina and the Philippines.

Argentina and The Philippines: Pilot Projects

The recently launched innovative pilot programs to reduce the use of chemicals of concern in health care in Argentina and The Philippines have the following components:

- Two pilot hospitals have been selected and will test a model for substitution/management of dangerous chemicals after discussion with relevant stakeholders
- Based on a consultation process, the project will select specific chemicals from a matrix of chemicals of concern referencing relevant international agreements for substitution/management in each hospital.
- Four case studies will result, including an exploration of specific questions relating to the business case and/or fiscal benefits/liabilities that may occur.
- Training workshops on the safe uses of, and alternatives to, hazardous chemicals will be organized and may include control banding or fiscal arguments.

Results of the pilot will be distributed to stakeholders in the health care sector regionally in Latin America and Southeast Asia.

International Agreements set the stage

The Philippines has signed and ratified the Basel Convention, Rotterdam Convention, Stockholm Convention, Montreal Protocol and other important treaties on chemical, health and environmental concerns. In addition, national law supports these international commitments, including the Philippine Clean Air Act of 1999 or Republic Act 8749. Article 3, Section 20 is the Ban on Incineration, which covers municipal, bio-medical, and hazardous wastes, including chemicals.

Argentina has signed and ratified the Basel Convention (supported by National Law 23922), Rotterdam Convention (supported by NL 25 278), Montreal Protocol (supported by NL 23778) and Stockholm Convention (supported by NL 26011). Argentina also hosts the South American Regional Center for Capacity Building and Technology Transfer (BCRCs) of the Basel Convention.

Global Healthcare Waste Project



Expected Results: Reducing Release of Pollutants

If replicated nationally and sustained, the best practices and techniques initiated during the Global Healthcare Waste Project are expected to avoid the creation and release of an estimated 187 g TEQ (toxic equivalency) of dioxins and 2,910 kg of mercury to the environment each year from participating countries' healthcare sectors.

Pharmaceuticals

Waste pharmaceuticals are often flushed or incinerated, polluting air and waterways. Both HCWH and the Global Healthcare Waste Project are also developing and promoting ways to neutralize chemotherapeutic drugs through simple chemical reactions. This will allow healthcare facilities to detoxify the small residues after treating patients and can also be used by manufacturers and central treatment agencies for larger quantities of unwanted or expired

Healthcare waste disposal can both create and disperse toxic chemicals, with incineration being one of the largest sources of atmospheric dioxins and furans. The Stockholm Convention requires the 177 countries that are parties to the convention to give priority consideration to waste treatment processes, techniques and practices that avoid the unintentional formation and release of persistent organic pollutants (POPs), such as dioxins. However, many countries lack the ability or resources to comply with these obligations. Other toxic chemicals in healthcare waste include mercury and pharmaceuticals.

The Global Healthcare Waste Project (gefmedwaste.org) is working to address these problems. This project is assisting seven countries - Argentina, India, Latvia, Lebanon, Philippines, Senegal and Vietnam – to develop and promote healthcare waste management best practices in a way that is both locally appropriate and globally replicable. The project focuses primarily on activities such as waste minimization, promoting the use of non-burn technologies, improved waste segregation practices and appropriate alternatives to mercury-containing devices.

In Tanzania, the Global Healthcare Waste Project will develop, test and disseminate affordable and effective alternative healthcare waste treatment technologies optimized for conditions in sub-Saharan Africa. Elsewhere, HCWH is piloting bio-digestion and small-scale autoclave techniques that will help clinics and healthcare centers deal with infectious and pathological waste safely and economically and without creating dioxins.

Recommendations from the “wise list” in Stockholm

- Always take cost- effectiveness and environmental impact into account when comparing medications that are equally safe and suitable for the purpose
- Prescribe starter packs
- Prescribe refill packs if available
- Encourage patients to return unused medications to the pharmacy
- Inform patients of the importance of also returning used estrogen patches to the pharmacy and avoiding flushing them down the toilet, since most of the estrogen remains in the patch after use
- Do not prescribe more medications than can be used; if in doubt, repeating the prescription is preferable
- Review and regularly reassess the patient’s total consumption of medication in order to reduce waste
- Learn more about which ones of “your” drugs have the largest environmental impact. Can they be replaced?
- Please contact the representatives of the pharmaceutical manufacturers, if you do not find a certain substance in the table

Case Study: Pharmaceuticals in the European Union

Pharmaceutical residues have been found in aquatic systems worldwide and constitute a well-documented health and environmental concern that is likely to rise in the future.

HCWH Europe is working for the reduction of prescribed pharmaceuticals, endorsing take back schemes of unused pharmaceuticals and supporting the adoption of innovative wastewater treatment methods and green pharmacies.

Currently, European Union Member States are required by law to establish collection systems for unused or expired pharmaceuticals. For example, in France the government has launched campaigns to raise awareness about the proper disposal of medicines and pharmacies are collecting unused medicines. Several similar programs have successfully reduced the introduction of pharmaceuticals to the environment. However, their establishment and efficiency varies greatly between Member States. Furthermore, EU legislation does not establish how pharmaceuticals are to be disposed. HCWH is endorsing the implementation of take back schemes as well as demanding greater regulation guiding the disposal of pharmaceuticals.

HCWH has also been advocating for more effective monitoring, control and reformulation of pharmaceuticals. In 2010 the EU passed Pharmacovigilance -- legislation that requires the monitoring and evaluation of adverse environmental and human health effects of medicinal products. The Commission is directed to use that data to produce a report detailing the scale of the problem, along with an assessment on whether amendments to EU legislation on medicinal

International Society for Doctors and Environment (ISDE) Report on Pharmaceuticals

In June 2010, ISDE published a report on the public health impacts of pharmaceuticals in the environment. The report: "Pharmaceuticals – Permanent Pollutants in Environment," reviewed the evidence for concern, and recommended action steps to protect health and the environment. Among the conclusions:

- *"Pharmaceuticals used in humans and for the production of food pose an environmental problem that is still not properly recognized."*
- *"As doctors, we must demand that pharmaceuticals are recognized as chemicals, with negative effects on environment, and possible indirect negative effects on human health. Pharmaceuticals should be managed as organic and persistent pollutants."*

Case Study: Pharmaceuticals

Recently, the EU Commission has proposed an update to the priority list of substances to be assessed under the Water Framework Directive (WFD). For the first time, the list includes three pharmaceuticals: 17-alpha-ethinylestradiol (EE2), 17-beta-estradiol (E2) and diclofenac. The inclusion and the setting of environmental quality standards for pharmaceuticals has stirred an intense debate and received strong opposition from Member States. HCWH is advocating for the acceptance of the Commission proposal and encouraging the inclusion of other pharmaceuticals.

HCWH Europe and allies have also been advocating for the classification of pharmaceuticals based on their environmental risks and



hazards and for their inclusion in other EU directives related with Good Manufacturing Practices.

The Stockholm City Council together with pharmaceutical producers and health care providers introduced an [initiative](#) to classify medicines according to their impact on the environment and trained Swedish doctors to use the environmental hazard classification in their prescription practices. The goal of this successful initiative is to protect the aquatic environment from pharmaceutical pollution and reduce pharmaceutical residues in water.

The International Society for Doctors and Environment (ISDE) published a report on detailing the issues with pharmaceuticals and proposed measures to protect public health and the environment (see sidebar).

Case Study: Chemicals of Concern in Products

Chemicals of concern in products contribute significantly to the overall chemical footprint of healthcare. Chemicals in products have impacts at the resource extraction phase, through manufacture, assembly, transport, use and disposal. Health Care Without Harm has been working to reduce chemicals in products since its' founding.

There is significant work in the health care sector in the United States and globally to eliminate the use of hazardous chemicals in products.

Health Care Without Harm is engaged globally in work to reduce chemicals of concern in health care. Areas of focus include: Mercury; PVC /Phthalates; Flame Retardants; Cleaning Chemicals; Disinfectants; Pesticides; Hazardous chemicals in building materials and furnishings; Pharmaceuticals; and CMR's among others.

Broader Chemicals Policies

Many environmental purchasing programs target specific chemicals of concern for reduction, like mercury and DEHP, to name a few.

Although this is a critical first step, addressing chemicals of concern on a chemical-by-chemical basis has proven insufficient. Because of inadequate laws in many countries, there is a lack of transparency about the chemical and material constituents in products; a lack of information about the extent of safety testing of those ingredients; and insufficient information on both the availability and safety of alternatives.

As a result, many health care institutions are adopting **comprehensive chemicals policies** to address these shortcomings. Examples of healthcare institutions or purchasing organizations in the United States that have adopted broader policies or practices include:

Kaiser Permanente
Dignity Health
Premier
Novation
VHA



Standardized Disclosure Questions

The following questions are now routinely asked on contracts for medical products by purchasing groups in the United States

Questions include:

Is this product packaged without polystyrene?

Will this product be classified as a non-hazardous waste at disposal?

Is this product free of intentionally added polyvinyl chloride (PVC)?

Does this product contain carcinogens or reproductive toxicants, as listed under Prop 65 below Prop 65 Safe Harbor levels?

Is this product free of intentionally added phthalates: DEHP, BBP, DnHP, DIDP and DBP?

Is this product free of intentionally added Bisphenol A (BPA) or BPA derived plastics (such as polycarbonate plastic and resins)?

Does this product contain less than 1000 ppm halogenated organic flame retardants?

Possible future questions:

Do you know the chemical and material ingredients in this product?

Has there been basic safety testing on each of the ingredients in this product?



Safer Chemicals



How to Guide

This guide is designed to provide a step-by-step approach to implementing the HHI Challenges and submitting data for this initiative.



HHI Safer Chemicals Challenge

Baseline

Achieve mercury-free status or develop and implement mercury elimination plan.

Green Cleaning:

Purchase 90 percent Green Seal or Ecologo certified cleaning products in these four categories: carpet, window, all purpose, and bathroom.

DEHP/PVC Reduction:

Eliminate DEHP/PVC from at least one product line.

Healthy Interiors:

Ensure that 25 percent of the annual volume of freestanding furniture and medical furnishings purchases based on cost, eliminate the intentional use of halogenated flame retardants, formaldehyde, perfluorinated compounds and PVC (also known as vinyl).

Case Study: U.S. Initiatives

Healthier Hospitals Initiative

The Healthier Hospitals Initiative is a Founding Member of the Global Green and Healthy Hospitals Network. The Healthier Hospitals Initiative is providing global leadership in many areas including in providing guidance in implementing safer chemicals policies (see box for a description of the HHI Safer Chemicals Challenge).



Eleven of the largest U.S. health systems -- with over 490 hospitals and more than \$20 billion in purchasing power -- worked with Health Care Without Harm, the Center for Health Design and Practice Greenhealth to create the Healthier Hospitals Initiative to accelerate the health care sector's move toward sustainability.

Greening the Supply Chain and Practice Greenhealth



Practice Greenhealth (PGH) is a nonprofit membership organization founded to advance environmental stewardship and promote best practices in the healthcare community with 1,100 hospital members in the United States and Canada.

In 2011, PGH launched its Greening the Supply Chain Initiative to provide tools for manufacturers in order to further green products offered to the sector. The effort includes the development of standardized chemical disclosure questions for the sector that creates an industry standard for evaluating the sustainability of medical products (see sidebar, page 9). The participating Group Purchasing Organizations represent over \$135 billion annually in purchasing volume. EPP resources, product databases and other tools have been created. Product-specific environmental criteria for dozens of health care products through the EPP Supporter Program have also been created to help guide green purchasing.

CleanMed Conferences

CleanMed is the world's leading conference focusing on sustainable health care.

CleanMed Europe will be 26-28 September 2012 in Malmö, the most continental city of Sweden. CleanMed Europe 2012 will provide a holistic view on the impact of healthcare on society — at both global and local levels.. Visit www.CleanMedEurope.org for

CleanMed in the United States will be April 24 to 26, 2013, in Boston. The conference attracts key decision makers from across the health care supply chain, including health care providers, hospital CEOs, product vendors and manufacturers, major health care systems and the top Group Purchasing Organizations. Visit www.CleanMed.org for more information.



JOIN US!

Health Care Without Harm is dedicated to reducing harmful chemical exposures in the health care sector and working collaboratively with agencies and health ministries that want to become active in the SAICM Health Sector Strategy. For more information, contact Josh Karliner (josh@hcwh.org) or Tracey Easthope (tracey@ecocenter.org)