

# Pollution Prevention in the Health Care Industry

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## An Introduction

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# What is Pollution Prevention (P2)?

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"Pollution prevention (P2) is reducing or eliminating waste at the source by modifying production processes, promoting the use of non-toxic or less-toxic substances, implementing conservation techniques, and re-using materials rather than putting them into the waste stream."

-- U.S. Environmental Protection Agency  
(<http://www.epa.gov/p2/>)

# Background

"In 1998, the American Hospital Association and EPA signed a landmark agreement that launched the Hospitals for a Healthy Environment (H2E) partnership to advance pollution prevention efforts in U.S. hospitals. The memorandum of understanding that served as the cornerstone of the original H2E set out three main goals:

- Virtually eliminating mercury-containing waste from the health care waste stream
- Reducing the overall volume of waste (both regulated and non-regulated waste)
- Identifying hazardous substances for pollution prevention and waste reduction opportunities, especially hazardous substances

In February 2006, the original EPA partnership became a fully independent non profit organization."

-- U.S. EPA Partnership for Sustainable Healthcare  
(<http://www.epa.gov/p2/pubs/psh.htm>)

# Environmental Considerations

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## Hazardous Materials

- Mercury
- Pharmaceuticals
- Radiologicals
- Sterilants and disinfectants
- Cleaning chemicals
- Laboratory chemicals
- Pesticides

## Regulated Medical Waste

- Liquid medical waste
- Isolation wastes
- Microbiological waste
- Pathological & anatomical waste
- Sharps
- Animal waste

# Pollution Prevention Opportunities

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## Waste Reduction

- Green purchasing
- Recycling
- Solid waste disposal
- Waste minimization
  - Source reduction and reuse
  - Donation and surplus programs
  - Composting
  - Minimizing generation of pharmaceutical waste
  - Single-use device reprocessing

# Pollution Prevention Opportunities

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## Facilities Management

- Energy efficiency
- Green building
- Green cleaning
- Landscaping
- Wastewater treatment
- Water conservation
- Managing materials of concern
  - Asbestos
  - Paint
  - PCBs
- Air emissions
- Utilities & equipment
- Stormwater management

# Case Study -- Sarah Bush Lincoln Health System, Mattoon IL

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- Conducted building waste and energy audits to identify areas for improvement
- Installed upgraded lighting bulbs and fixtures to more efficient models
- Instituted recycling program for cardboard, plastic, and paper
- Installed a geothermal heating/cooling system in their Regional Cancer Center
- Began vermicomposting program (composting with worms) to dispose of food waste
- Winner of Illinois Governor's Pollution Prevention Awards in 2005 and 2006

# Case Study -- St. Joseph's Hospital, Breese, IL

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- Transitioned medical imaging from film to digital
- Worked with vendor to recycle over 50,000 pounds of cardboard and nearly 3,000 pounds of junk mail and office paper
- Reduced medical waste by purchasing a special washer for surgical suction canister content disposal and through employee education
- Reduced styrofoam use by 83% by switching to reusable products
- Donates used or outdated medical equipment to mission programs
- Screens new products for mercury content prior to purchase
- Winner of Illinois Governor's Pollution Prevention Awards in 2002 and 2006

# Case Study -- St. Elizabeth's Hospital, Belleville, IL

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- Implemented program to replace medical instruments that contain mercury, including thermometers and sphygmomanometers
- Replaced mercury-containing fluorescent lamp and electronic ballasts
- Started a sharps retrieval program that has kept over 42,600 pounds of plastics and sharps from being incinerated
- Developed recycling programs for cardboard, office paper and batteries
- Winner of Illinois Governor's Pollution Prevention Award in 2002

# Where To Go For More Information

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Hospitals for a Healthy Environment (H2E)

<http://www.h2e-online.org/>

H2E was jointly founded by the American Hospital Association, the U.S. Environmental Protection Agency, Health Care Without Harm, and the American Nurses Association. H2E offers continuing education, teleconferences and information on all aspects of environmental excellence in the health care industry, including regulatory compliance tools. 38 Illinois health care facilities are H2E partners.

# Where To Go For More Information

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Health Care Without Harm

<http://www.noharm.org/us>

Health Care Without Harm is a global coalition of 443 organizations in 52 countries working to protect health by reducing pollution in the health care industry.

Resources include publications, partnership opportunities, and advocacy information.

# Where To Go For More Information

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## Teleosis Institute

<http://www.teleosis.org/>

The Teleosis Institute is devoted to developing effective, sustainable health care provided by professionals who serve as environmental stewards. Their focus includes green pharmacy and green health care. Resources include *Symbiosis: The Journal of Ecologically Sustainable Medicine*, a three-times yearly publication focusing on health care and the environment.

# Where To Go For More Information

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Great Lakes Regional Pollution Prevention Roundtable  
(GLRPPR)

<http://www.glrppr.org/>

GLRPPR is a professional organization dedicated to promoting information exchange and networking to P2 professionals in the Great Lakes regions of the United States and Canada. GLRPPR offers a help desk librarian service, environmental news, a quarterly newsletter, and links to resources in over 60 different topical areas, including hospitals and health services.

# Bibliography

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