

# Clinicians' Role in Greening Healthcare Institutions



**MICHIGAN GREEN HEALTHCARE CONFERENCE**

*Healthy people, planet & the bottom line*

# Presenters

**Aparna Bole, MD**

Sustainability Manager, University Hospitals

Assistant Professor,

Department of Pediatrics

UH Rainbow Babies & Children's Hospital

**Sandy Geller, MSN, RN**

College of Nursing

Michigan State University



# Healthier Hospitals INITIATIVE



PRACTICE  
Greenhealth



THE CENTER FOR  
HEALTH DESIGN®

# Six Challenge Areas

§ Engaged Leadership

§ Healthier Food

§ Leaner Energy

§ Less Waste

§ **Safer Chemicals**

§ Smarter Purchasing



# Leading Communities to a Healthier Future

HHI has a real impact on the health and safety of patients, staff and communities



## HHI CHALLENGES

- + Engaged Leadership
- + Healthier Food
- + Leaner Energy
- + Less Waste
- + Safer Chemicals
- + Smarter Purchasing

## Nationally:

685 HHI health care facilities  
205 Safer Chemicals Challenge



Three organizations  
and Eleven  
Sponsoring Health  
Systems invite you to

join them in leading communities to a healthier future. Enroll in healthier hospitals initiative. [Learn More](#)



# Michigan HHI Enrollees (20)

Ascension Health - Borgess Medical Center  
Beaumont Hospital Grosse Pointe  
Beaumont Hospital Royal Oak  
Beaumont Hospital Troy  
Bronson Methodist Hospital  
McLaren Northern Michigan  
Metro Health Hospital  
Sparrow Hospital  
Sparrow Ionia Hospital  
Sparrow Specialty Hospital  
Spectrum Health - Blodgett Hospital  
Spectrum Health - Butterworth Hospital  
University of Michigan Hospitals and Health Centers  
Vanguard  
    Children's Hospital of Michigan  
    Detroit Receiving Hospital & University Health Center  
    DMC - Huron Valley Sinai Hospital  
    DMC - Sinai - Grace Hospital  
    DMC Surgery Hospital  
    Harper University Hospital/ Hutzel Women's Hospital  
    Rehabilitation Institute of Michigan



# Michigan Safer Chemicals Enrollees (8)

Ascension Health - Borgess Medical Center

Beaumont Hospital Grosse Pointe

Beaumont Hospital Royal Oak

Beaumont Hospital Troy

Metro Health Hospital

Spectrum Health - Blodgett Hospital

Spectrum Health - Butterworth Hospital

University of Michigan Hospitals and Health Centers

# Why Safer Chemicals?



Leading Communities to a Healthier Future



## Safer Chemicals



# Baseline

Achieve virtual mercury elimination status, as per the Practice Greenhealth Making Medicine Mercury-Free Award criteria.

# Safer Chemicals Challenge

## Baseline

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

**Level 1** Commit to **one** of the following: Green cleaning, DEHP/PVC reduction, healthy interiors.

**Level 2** Commit to **two** of the following: Green cleaning, DEHP/PVC reduction, healthy interiors.

**Level 3** Commit to **three** of the following: Green cleaning, DEHP/PVC reduction, healthy interiors.

### Green Cleaning:

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

A

### DEHP/PVC Reduction:

Eliminate DEHP/PVC from at least one product line\*.

B

### 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).

C

## **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\*.

\*Categories include:

1. Breast Pumps
2. Enteral Nutrition Products
3. Parenteral Infusion Devices  
and Sets
4. General Urological
5. Exam Gloves
6. Umbilical Vessel Catheters
7. Vascular Catheters

## 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)."

\*\* Medical furnishings include: exam tables, patient recliners, mattresses, foams, panel fabrics, cubicle curtains, window coverings, fabric upholstery, and built-in or modular casework.

- How-To Guides
- Webinars & Sharing Calls
- Mentor Program
- Discussion Forums
- Case Studies
- Spark Newsletter
- Marketing and Publicity Toolkit

# CleanMed in Cleveland June 2-5, 2014!



GLOBAL CENTER FOR HEALTH INNOVATION  
Cleveland, Ohio | June 2-5

Learn what's  
**POSSIBLE**

INSPIRATION. EDUCATION. INNOVATION.

SPEAK

EXHIBIT

SPONSOR

ABOUT CLEANMED

EXHIBITORS

SPONSORS

SPEAKERS

DESTINATION



GLOBAL CENTER FOR  
HEALTH INNOVATION &  
CLEVELAND CONVENTION CENTER

A groundbreaking space for  
education and innovation in health  
care in a LEED Silver facility.

[Learn More »](#)

Follow us on



## Why CleanMed?

CleanMed is THE premier national environmental conference for leaders in health care sustainability who are on the leading edge of greening the health care sector. It's the one time each year for businesses with environmentally preferable products and services or nutritious, sustainable foods to connect with the health care leaders who make purchasing decisions for their facilities. No other conference will connect you with the leaders at the forefront of implementing sustainability projects, green building design and environmentally preferable purchasing.

HOST SPONSOR



**Tracey Easthope, MPH**

Director, Environmental Health Project  
Ecology Center

Coordinator

Safer Materials Workgroup  
Health Care Without Harm

[tracey@ecocenter.org](mailto:tracey@ecocenter.org)

734-369-9268

Additional slides

# Chemicals of Concern Calculation

Haworth Product List	Free of Chemicals of Concern (list)	Contains Chemicals of Concern (list)
Adaptable Comps - <u>Wksr</u> , <u>Up Stor</u> , <u>Lehtng</u>		\$ 148,898
<u>Improv</u> , <u>Comforto 12</u>		\$ 393,516
Jump Stuff		\$ 754
Kinetics, Tempo, Tactics, Planes, Compose	\$ 18,977	
Wood Casegoods & Wood Seating	\$ 72,994	
Premise & X-Series Files	\$ 186,674	
Premise Systems		\$ 206,674
Seating Fabric	\$ 554	
Systems Fabric	\$ 4,794	
Very Seating Line	\$ 173,599	
X-Series <u>Peds</u> & 950 Files	\$ 109,860	
<u>Zody</u>	\$ 2,151	
<b>Total</b>	\$ 569,603	\$ 749,842
<b>Percentage of List Sales</b>	<b>43%</b>	<b>57%</b>

# Data Submission Support

- Data submission guidelines will vary by challenge
- How-To data submission guides are available on the HHI website for each challenge
- Support is also available through our Data Coordinator

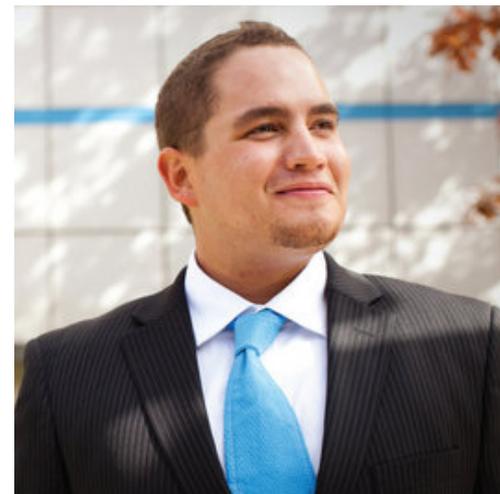
Christopher Bodkin

603-491-6106

Monday- Friday, 9:00am-5:00pm ET

[cbodkin@healthierhospitals.org](mailto:cbodkin@healthierhospitals.org)

OR [help@healthierhospitals.org](mailto:help@healthierhospitals.org)



# Healthier Hospitals Initiative

Goal is to enroll **2000 hospitals**

**FREE** for all enrollees



Modeled after IHI 100,000 Lives Campaign

- Acceleration strategy at the intersection of sustainability, patient and worker safety
- Using proven strategies to drive success

**Milestone Report**

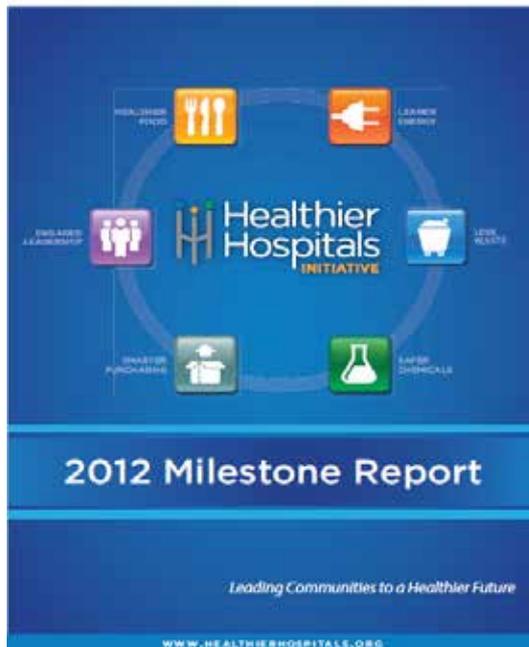
a POWERFUL evidence-based story to tell



# Strength in Numbers

The 2012 HHI Milestone Report summarizes the initiative's first year of progress, with over 700 hospitals committed to HHI and more than 350 contributing to the data pool.

Here are some of the incredible accomplishments:



- **50 million** pounds of materials recycled
- **\$32,089,776** in savings resulting from single-use medical device reprocessing
- **\$9 million** spent on local/sustainable food options
- **\$19,029,640** spent on DEHP/PVC free medical products

# Why prioritize these challenges?

## PVC- associated compounds

### Dioxin

- US EPA PBT
- IARC Cancer
- Prop 65 Developmental

EU Endocrine

Lancet – Neurotoxicity

US EPA HAP

### Ethylene Dichloride

Prop 65 Cancer - Known

EU Risk Phrases – eyes, skin, respiratory,

ChemSec SIN list: CMR

### Vinyl chloride monomer

IARC Cancer

Lancet, Neurotoxicity

ChemSec SIN list: CMR

### DEHP

- FDA notification
- Prop 65
- OSPAR PBT and ED
- NTP Developmental
- NIH Reproductive
- Chem Sec SIN list

### Mercury

- USEPA PBT + states
- Rotterdam Convention
- Prop 65 – Developmental
- USEPA IRIS Carcinogen

### Formaldehyde

- EU Risk Phrases, Skin
- IARC Cancer and ED
- NTP Cancer
- Prop 65 Cancer
- NIOSH Cancer
- EU Risk Phrases

### Halogenated flame retardants

- US GBC LEED restrictions
- Living building red list
- Concerns with individual flame retardants including developmental

### Long chain per-flourinated chemicals

US EPA Chemical Action Plans – Development and Reproductive

Living Future Red List

P+W Precautionary List

# Pregnant Women Awash in Chemicals. Is That Bad for Baby?

By **BONNIE ROCHMAN** Friday, January 14, 2011 | **139 COMMENTS**

« **PREVIOUS POST**

[An Antidote for Choke Artists—Write Away Your Fears](#)

**NEXT POST** »

[Doctors Call Giffords' Progress a "Miracle"](#)



## January 2011

The bodies of virtually all U.S. pregnant women carry multiple chemicals, including some banned since the 1970s and others used in common products such as non-stick cookware, processed foods



“ [T]he U.S. chemical industry produces or imports a total of **42 billion pounds of chemical substances per day** for use in industrial processes and commercial products; and...many of these substances that are useful to society are also known to be hazardous to human biology and ecological systems.”

“Whereas, these conditions in the chemicals market are reflected in chemistry teaching and research in the United States and **have produced an array of problems for workers, the public, ecosystems, government, businesses, and industry** that will broaden and deepen in coming years, concomitant with expanding global chemical production; and

Whereas, these problems include the projected **need for over 600 new hazardous waste sites each month** in the United States leading up to 2033, with estimated clean-up costs of \$250 billion; the appearance of hundreds of industrial chemicals in human tissues and fluids, including those of infants; the **development of chronic diseases and premature death among thousands of Americans as a consequence of chemical exposures** in the workplace; and disproportionate risks due to chemical exposures among members of minority, immigrant, and low-income communities, both as residents and workers.

APHA calls on Congress to “**fundamentally restructure the Toxic Substances Control Act**”  
*Resolution, 2007*



# American Academy of Pediatrics

“Over the past several decades, tens of thousands of chemicals have entered commerce and the environment, often in extremely large quantities (e.g., multiple millions of pounds per year). There has also been an explosion of knowledge about special vulnerabilities and differential exposures that children and pregnant women have to environmental toxicants. A growing body of research indicates potential harm to child health from a range of chemical substances.”

“As children grow and mature, their bodies may be especially vulnerable to certain chemical exposures during critical windows of development. Neurologic and endocrine systems have demonstrated particular sensitivity to environmental toxicants at certain stages of growth. These differences in biological susceptibility and exposures in children versus adults support the need for strong consideration of children in chemicals policies. This principle must underpin all chemical-management legislation and regulation.”

It is because of the inadequacies of the TSCA that parents and pediatricians have been subjected to multiple high-profile media blitzes about specific chemicals, such as phthalates in toys and bisphenol A in infant bottles, that create anxiety without solving the problems of risky chemical exposures.”

# American Medical Association



“Many chemicals that are useful to society are also known to be hazardous to human biology, particularly in utero and in developing children.”

The AMA calls on “Congress to craft and implement a modern, comprehensive chemicals policy” that would “improve the flow of information regarding toxicity from chemical producers to businesses, consumers, workers, and government agencies,” “reduc[e] the commercial circulation of the most hazardous chemicals,” and “introduc[e] a range of other incentives to encourage businesses to invest in green chemistry innovation.” *Resolution 404 (A-08), 2008*

# American Nurses Association



“...[M]ost workers, including nurses and other healthcare workers, **still do not have sufficient knowledge about the health risks associated with the chemicals** that they use or are exposed to in the workplace.”

“[T]he American Nurses Association **endorses efforts to ensure that nurses have full access to information** and the right-to-know about the potentially hazardous chemicals to which nurses, other healthcare workers, patients, and communities in general are exposed.” *Resolution, 2006*

Chemicals policy is **health protection ...**  
**and cost reduction**

- Cancer
- Reproductive health and fertility
- Learning and development diseases
- Asthma

Safer Chemicals Healthy Families

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



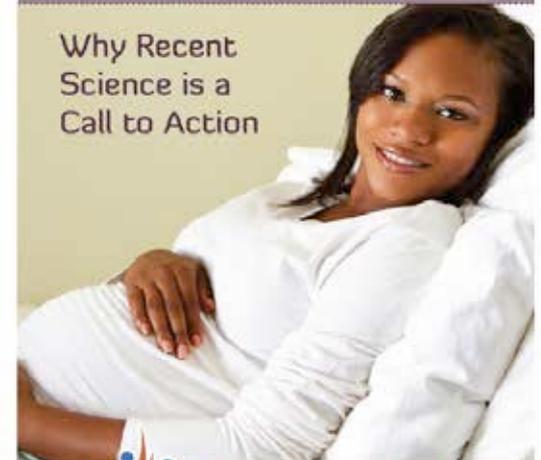
## The Health Case for Reforming the Toxic Substances Control Act

By reforming the Toxic Substances Control Act of 1976, we have the potential to reduce Americans' exposure to toxic chemicals, improve health, and lower health care costs.

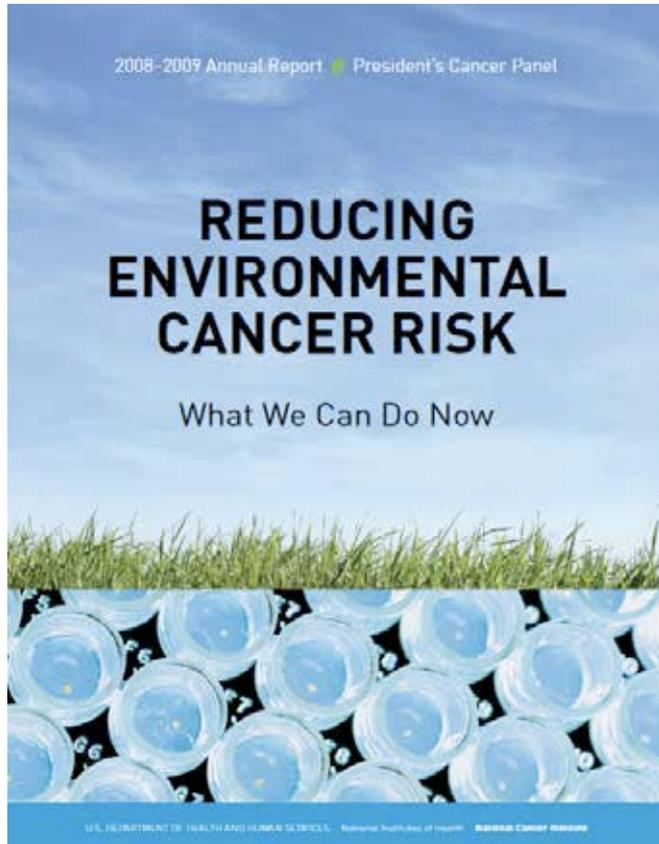


### Chemicals and Our Health:

Why Recent Science is a Call to Action



# Why Safer Chemicals?



In the report, the panel noted that:

- 41% of all Americans will be diagnosed with cancer during lifetime
- 21% will die from it

• **“The grievous harm from this group of [environmental] carcinogens has not been addressed adequately by the National Cancer Program. “**

• **“The true burden of environmentally induced cancer has been grossly underestimated”**

• **“The American people—even before they are born—are bombarded continually with myriad combinations of these dangerous exposures.”**

• **President Obama should “use the power of [his] office to remove the carcinogens and other toxins from our food, water, and air that needlessly increase healthcare costs, cripple our nation's productivity, and devastate American lives.”**