



A PRACTICE GREENHEALTH PROGRAM

Leading communities to a healthier future

Healthier Hospitals Healthy Interiors Goal

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Objectives

1. Healthier Hospitals Background
1. Growing concern - healthy interiors
1. Drivers behind greener furnishings
1. Specifying Healthy Interiors Resources
1. Next Steps and why this is good for your company



Do No Harm



<https://vimeo.com/142891043>



PRACTICE
Greenhealth™

Mission and Goals



Our mission is to **transform health care** worldwide so that it reduces its environmental footprint, becomes a **community anchor** for sustainability and a leader in the global movement for **environmental health and justice.**

1. *Protect Public Health from Climate Change*
2. *Transform the Supply Chain*
3. *Build Leadership for Environmental Health*



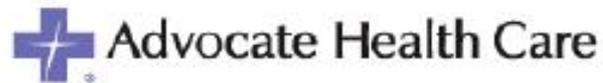
Healthier Hospitals



PRACTICE
Greenhealth



Small Selection of Engaged Health Systems



“Where there is credible evidence that a material might result in harm to the environment or public health, we work to replace it with safer alternatives.”

Kathy Gerwig, Kaiser Permanente



Leading Communities to a Healthier Future

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

PREVIOUS PAUSE NEXT



CHALLENGES

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

The Spark Blog

➔ Archive

Upcoming Events

➔ All Events

21
AUG

Top three Myths About Using Social Media

No upcoming events.

- 1307 hospitals enrolled in U.S. and Canada
- 25% of hospitals committed to Safer Chemicals Challenge

Market Influence

Total Number of Hospitals in the United States	5,686
Practice Greenhealth and HH-enrolled hospitals	1,865
Percentage of total U.S. hospitals in PGH and HH	33%
Hospitals enrolled in Safer Chemicals Challenge	294

Why Safer Chemicals?



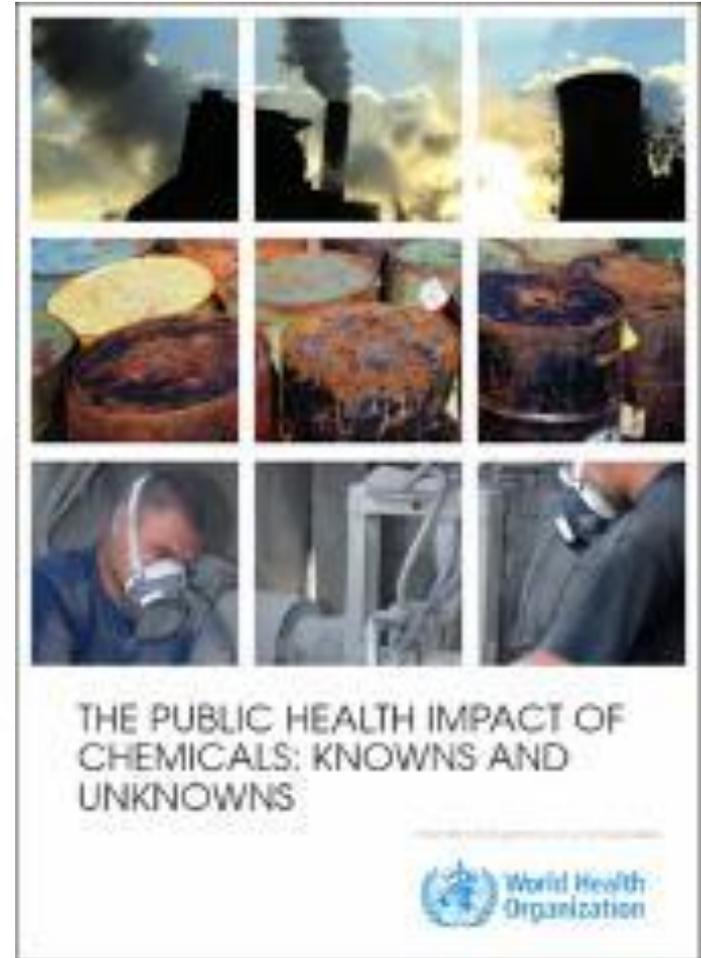
Growing Concern for Healthy Interiors

- Flame retardants
- Formaldehyde
- Perfluorinated chemicals
- PVC
- Antimicrobials

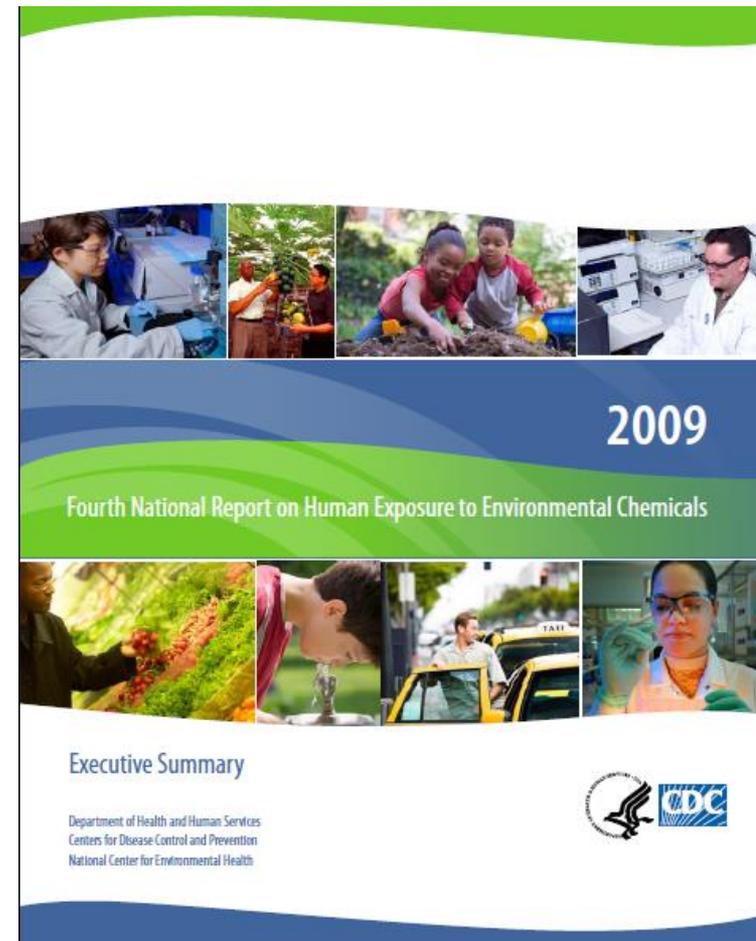
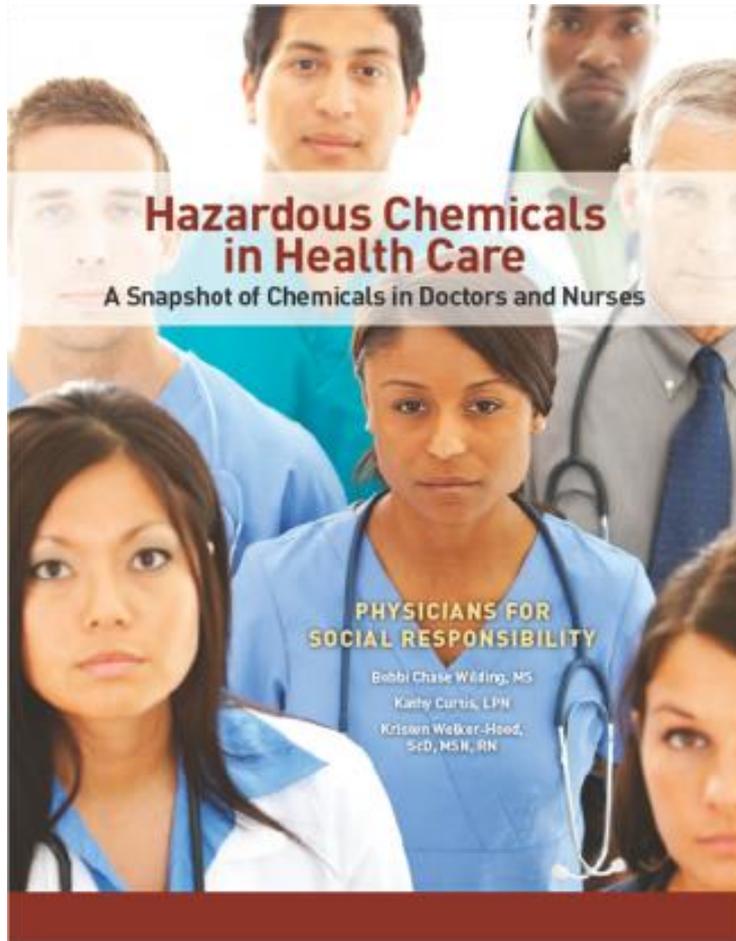


WHO 2016 Report

- 1.3 million lives + 43 million disability adjusted life years
- Report only covers a small number of chemical exposures



Widespread Exposure

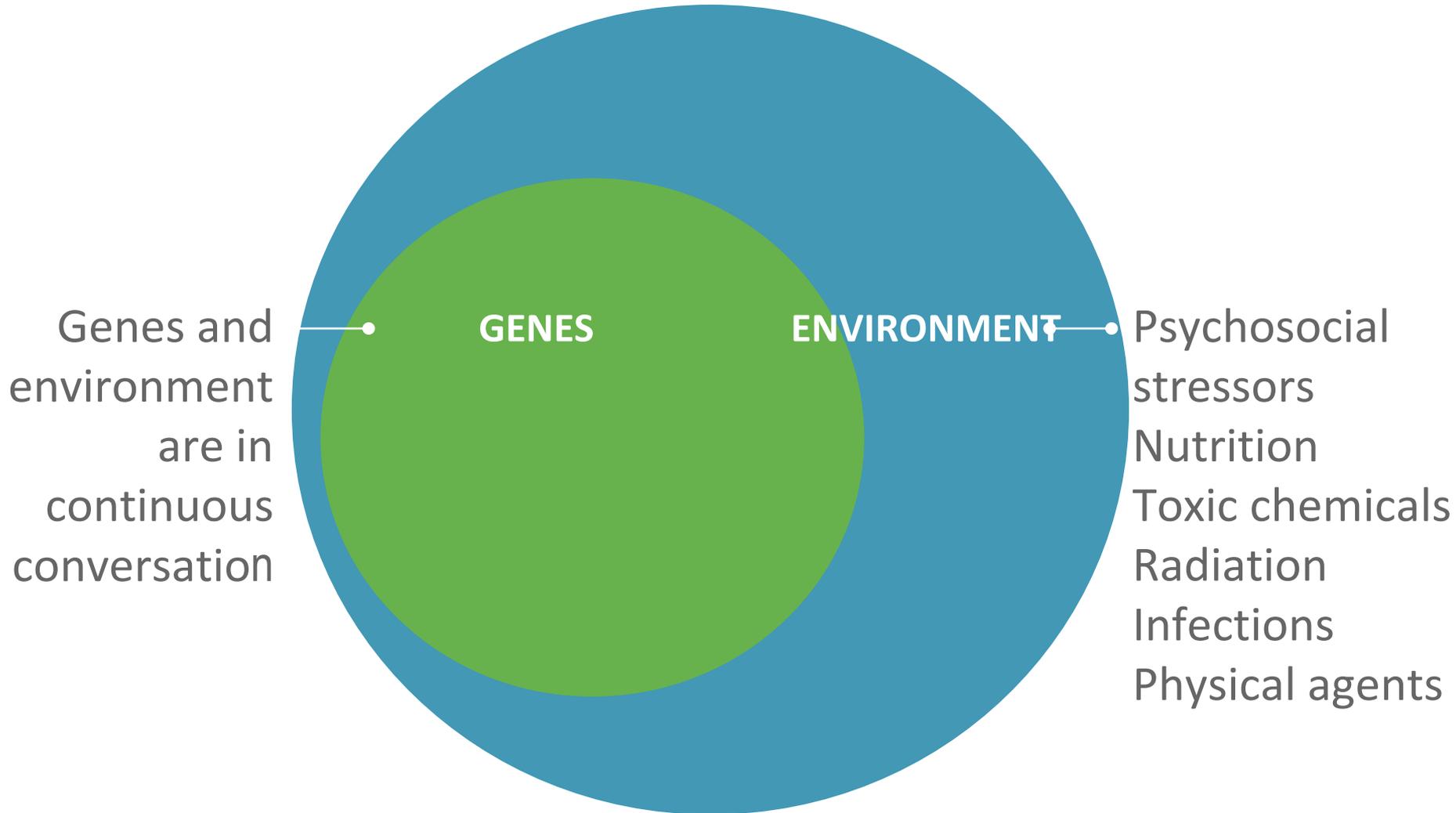


- Inhalation
- Cross placenta transfer
- Breast feeding
- Dermal
- Ingestion

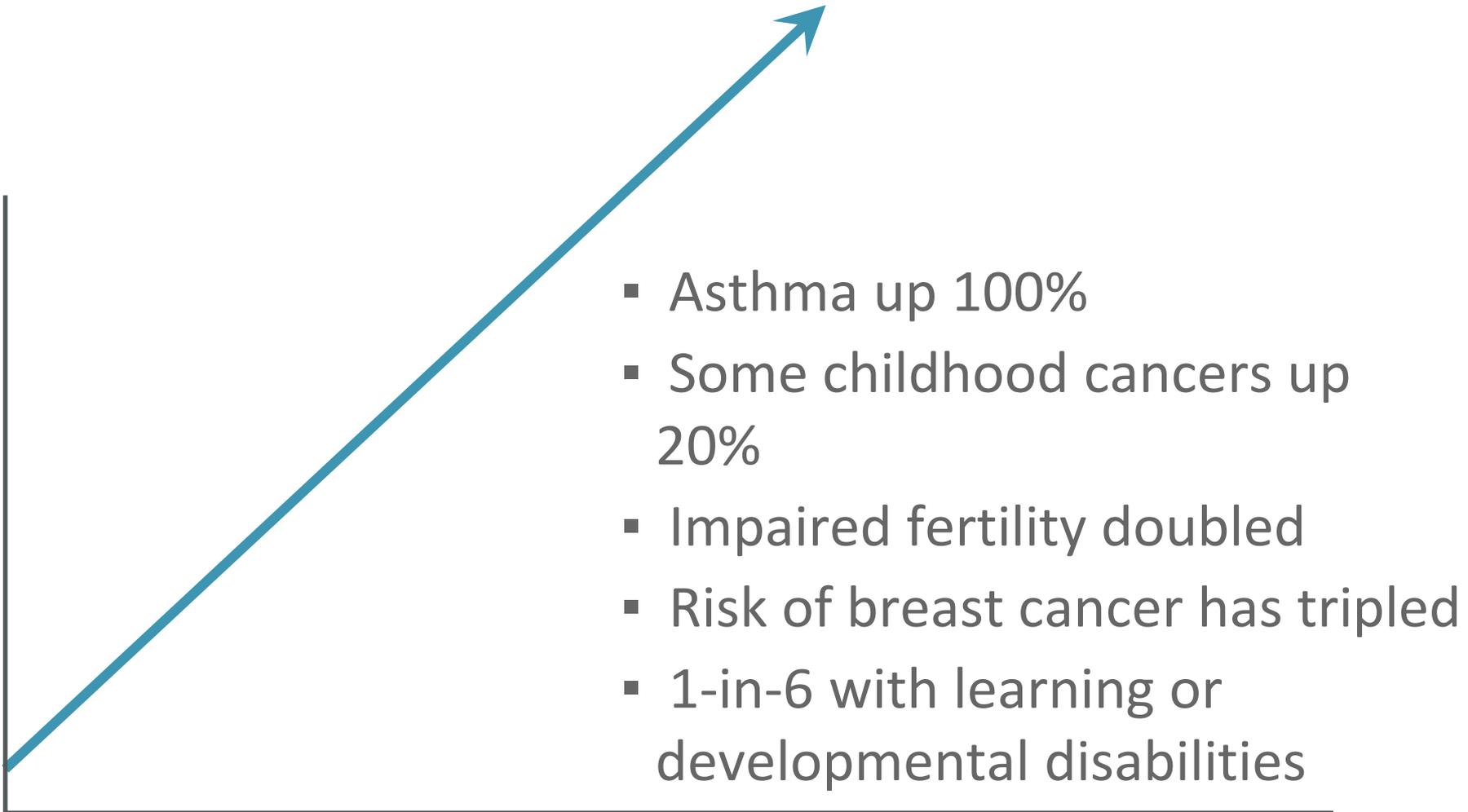


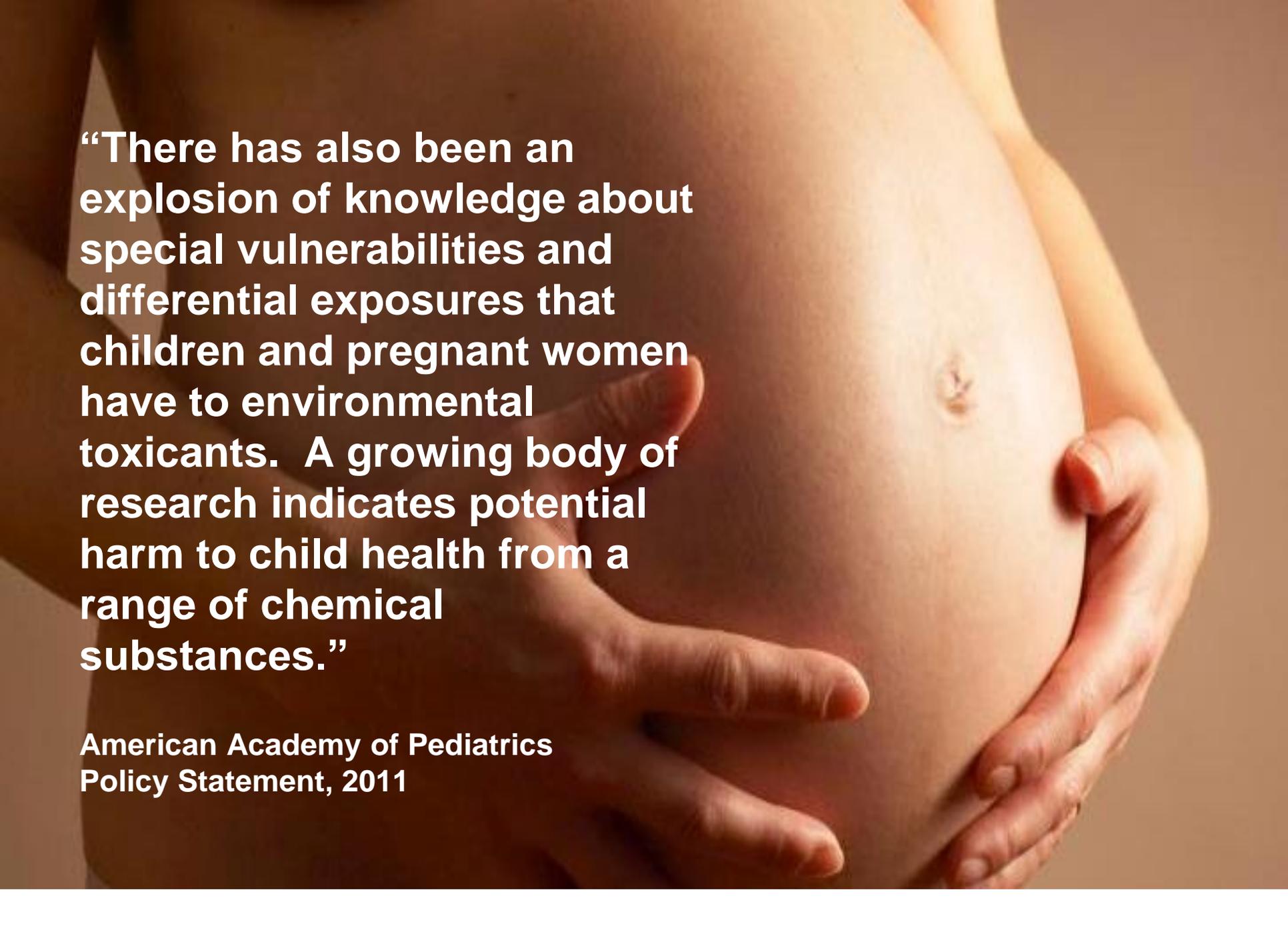
Multiple Routes of Exposure

Genes & Environment Interact



Diseases Linked to Environmental Exposure on the Rise





“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.”

**American Academy of Pediatrics
Policy Statement, 2011**



A first ever **national survey of nurses'**

exposures suggests there are **links between serious health problems** such as cancer, asthma, miscarriages and **birth defects** and these exposures.

The survey included **1,500 nurses** from all 50 states.

Drivers

LEED Materials Credits (MR)

Cradle to Cradle (C2C)

Living Building Challenge – Red List

WELL Building Standard

BIFMA “level”

Perkins + Will “Precautionary List”

GreenScreen

Health Product Declaration



Under the Toxic Substances Control Act (1976), the EPA must prove that a chemical poses an “unreasonable risk” before it can be regulated.



registered in the United States



monitored through EPA's Toxic Release Inventory



tested for threats to human health + safety



banned

CSI WATERGATE: NIXON TAPE GAP SOLVED?
OBAMA VS. ISRAEL LOBBY • MEET THE GOP'S NEW PIT BULL • PINK BRAIN SYNDROME

Mother Jones

October 2009

SMART, FEARLESS JOURNALISM
Motherjones.com

THE SPIN

PURE
FANCIED BY
CELEBS*

EVERY DROP IS
GREEN

UNTOUCHED BY
MAN

LIVING
WATER



THE FACTS

**TWICE THE
PLASTIC**
PUTS LIPSTICK ON A
JUNTA

**DIESEL
POWERED**

**HIDES
IN TAX HAVENS**

**LOCALS DRINK DIRTY
WATER**

From the island of
FIJI
VAINUAPU
PURE WATER

500mL (1.05PT)

100% NATURAL SWEETENED
FRUIT FLAVORED WATER

0 00000 00000 0

BARCODE



WINNER OF THE 2007 PULITZER PRIZE FOR GENERAL INVESTIGATIVE REPORTING

Chicago Tribune

CHICAGO, ILL. • 2009

WEDNESDAY, MAY 6, 2002

50¢

TRIBUNE WATCHDOG

Playing with fire

A deceptive campaign by industry brought toxic flame retardants into our homes and into our bodies. And the chemicals don't even work as promised.

By PATRICIA CALAHAN AND SAM BUE
Tribune reporter

David Heinrich knows how to tell a story.

Before California lawmakers last year, he described a 3-year-old baby girl who was burned in a fire started by a candle while sleeping on a pillow that held flame-retardant chemicals.

"Now this is a tiny little person, no bigger than my index fingernail or base," said Heinrich, gesturing to approximate the baby's size. "Half of her body was severely burned. She ultimately died after about three weeks of pain and misery in the hospital."

Heinrich's passionate testimony about the baby's death made the long-term health concerns about flame retardants raised by doctors, environmentalists and even firefighters sound dramatic and petty.

But there was a problem with his testimony: It wasn't true. Research shows there was no dangerous pillow or candle fire. The baby he described didn't exist.

Neither did the 3-year-old patient who Heinrich told California lawmakers died in a candle fire in 2000. Nor did the 3-year-old patient who he told child lawmakers was fatally burned in her crib in 2000.

Heinrich is not just a politician from down the line in a new version for the manufacturers of flame retardants.

He, too, once was a fire investigator, a part of a decades-long campaign of deception that has lured the families and children in American homes with promises of more chemicals linked to cancer, neurological deficits, developmental problems and impaired fertility.

The tactics started with the tobacco, which wanted to shield from any ban cigarettes as the cause of fire deaths, and continued as chemical manufacturers worked to improve a lucrative market for their products, according to a Tribune review of thousands of government, scientific and internal industry documents.

These powerful industries distorted science to ways that obscured the benefits of the chemicals they wanted to sell.

They also helped create and spread the public's fear of fire and helped create and steer an association of top fire officials that spent more than a decade campaigning for their cause.

Today, scientists know that some flame retardants escape their household products and settle in dust. That's why toddlers who play on the floor and put things in their mouths, generally have far higher levels of these chemicals in their bodies than their parents.

They've found, controversially, most flame retardants double in adults over even to five years between 2000 and 2001. More recent studies show levels have not declined in the U.S. even though some of the chemicals have been pulled from the market. A typical American baby is born with the highest recorded concentrations of flame retardants among infants in the world.

People might be willing to accept the health risks of the flame retardants packed into sofas and mattresses if they were persuaded they'd die.

The chemical industry often



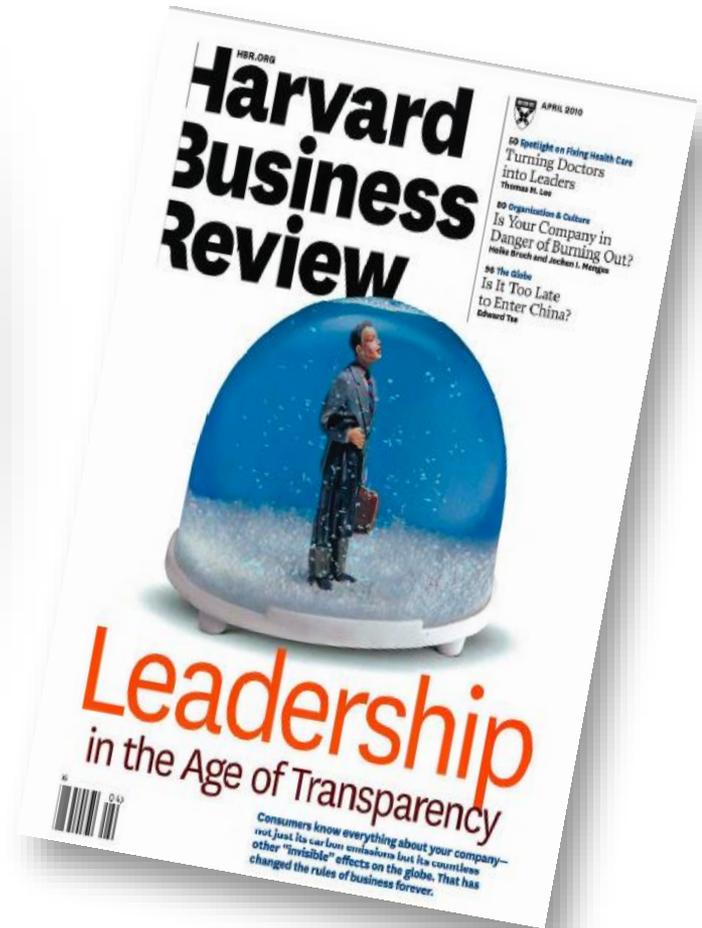
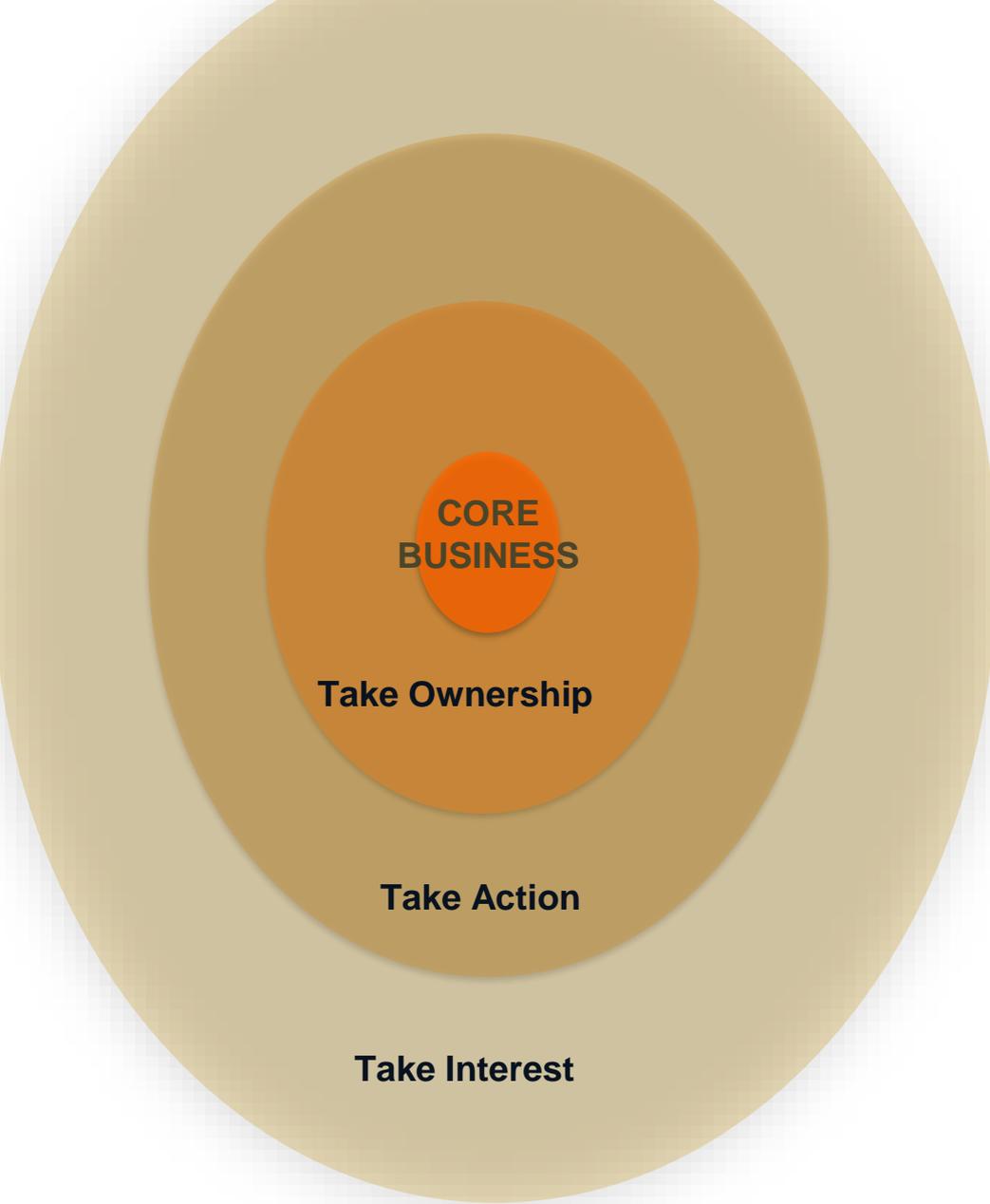
CONSUMER PRODUCT SAFETY COMMISSION REPORT

UP IN FLAMES: Government scientists found that chairs containing flame retardants, like the one shown here, are often



Being a green company
also means being held
to the highest degree of
corporate transparency.”

– Steve Wasik, CEO of Sigg Switzerland



- 
- A young child in a floral dress stands by a large window, looking out at a green lawn and a modern building. The interior features a dark leather bench and a wall with horizontal wood paneling. The scene is brightly lit, suggesting a sunny day.
- Formaldehyde
 - PFCs
 - PVC
 - Flame Retardants
 - Antimicrobials

Why Healthy Interiors?

Healthy Interiors Goal

Ensure that 30 percent of the annual volume of furnishings and furniture purchases (based on cost) eliminate the use of formaldehyde, perfluorinated compounds, polyvinyl chloride (PVC), antimicrobials, and all flame retardants

Furniture and Furnishings

- Seating (chairs, stools, sofas, benches, etc.)
 - Beds (including mattresses)
 - Surfaces (tables, desks, etc.)
 - Built-in and modular casework
 - Storage (cabinets, filing cabinets, dressers, drawers, etc.)
 - Shelving (bookshelves, built-in shelves, etc.)
 - Systems (walled desks with seating)
 - Cubicle curtains and window coverings
 - Panels and partitions
- * Electronic components of furniture are exempt from the goal

HH Chemicals Found in Health Care

Flame retardants: Electronics, Building insulation, Furniture, Wires/Cabling

PVC: Mattress coverings, Furniture, Fabrics, Flooring, Wall coverings

Formaldehyde: Furniture, Fabrics, Adhesives for multiple wood products

PFCs: Furniture, Fabrics, Carpeting

Antimicrobials: Furniture, Fabrics, Bedside tables, Flooring, Door handles



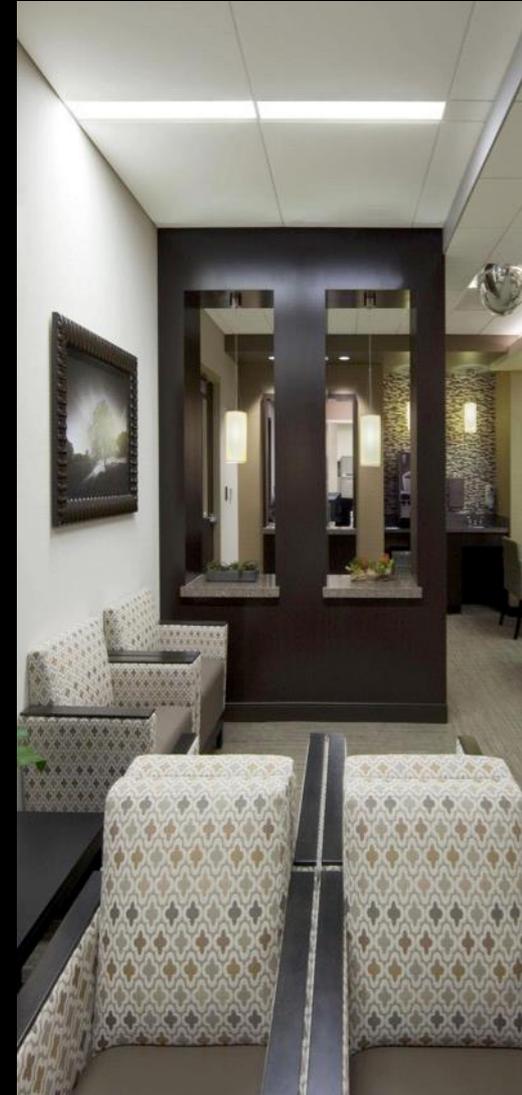
Flame Retardants

Rationale

- Known health effects of well-studied flame retardants:
 - Reproductive, neurocognitive, and immune system impacts
- Persistence, bioaccumulation, toxicity throughout life cycle
- Emerging health and safety concerns about alternatives
- Very significant data gaps
- Flame retardants showing up in dust

Guidance

- Must contain less than 1000 ppm of intentionally added flame retardants by weight of homogenous material where code permits



Polyvinyl Chloride (PVC) or Vinyl

Rationale

- Can create persistent, bioaccumulative, and toxic byproducts in manufacture and at end of life
- Carcinogenic and highly toxic chemicals in manufacture
- Requires use of additives (lead, phthalates)

Guidance

- Products must not contain PVC
- Small components exemption: $> 1\%$ of product by weight



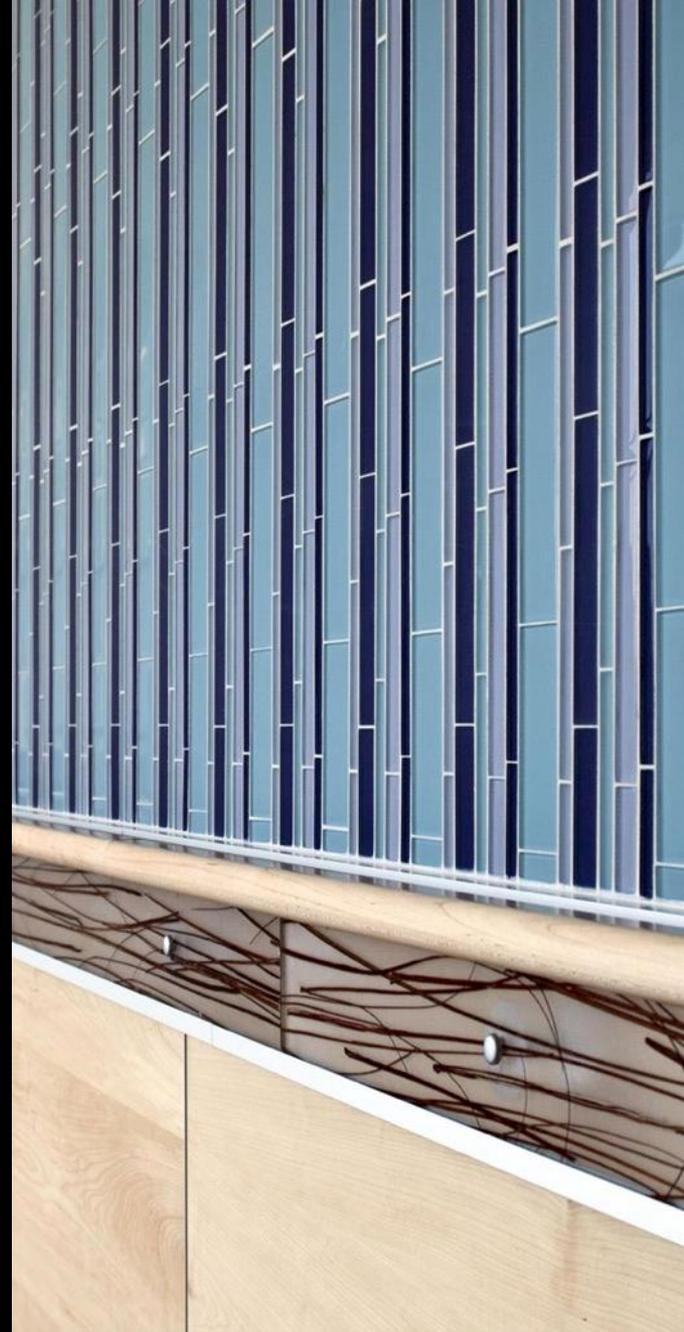
Formaldehyde

Rationale

- Known human carcinogen
- Gastrointestinal or liver toxicant
- Reproductive toxicant
- Respiratory toxicant, asthma trigger
- Prop 65 carcinogen

Guidance

- Products must meet CA Section 01350 (*CA Department of Public Health (CDPH): Standard Method for Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources using Environmental Chambers*) or an equivalent standard



Perfluorinated Compounds (PFCs)

Rationale

- Most manufactures moved from C8 to C6 chemistry (Shorter-Chain PFCs)
- Persistent in environment and bioaccumulative in people and wildlife
- Long half-life in animals (some less than C8s but they differ), not known for humans
- Adverse outcomes include kidney and testicular cancer, thyroid disruption, elevated total cholesterol, obesity
- Emerging Health Information
 - Endocrine disruptors
 - Carcinogenic
 - Reproductive and developmental toxicant

Guidance

- Must not use stain or water repellent treatments that contain PFCs



Antimicrobials

Rationale

- Based on current research, very limited evidence that the addition of antimicrobials to furnishings reduces rate of hospital-acquired infections (HAIs)
 - Emerging research on the efficacy of copper on high-touch surfaces
- Antimicrobials can have toxic properties without adequate data on health impacts
- Can lead to development of antimicrobial resistant organisms that may pose greater hazards

Guidance

- Must not contain triclosan, triclocarban, or antimicrobials without evidence of demonstrated efficacy in a clinical setting
- Requires evidence in a clinical setting of a reduction in HAIs



HH Chemicals Found in Institutional Furnishings



Guidance



Guidance to Achieve HH Safer Chemicals Challenge for Healthy Interiors

Version 2.0

December 2015

This document provides guidance for institutions and suppliers wishing to meet the requirements for the Healthy Interiors goal of the Healthier Hospitals Safer Chemicals Challenge, Version 2.0.



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Carnegie

DESIGNTEX

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 Herman Miller



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SitOnIt • Seating®

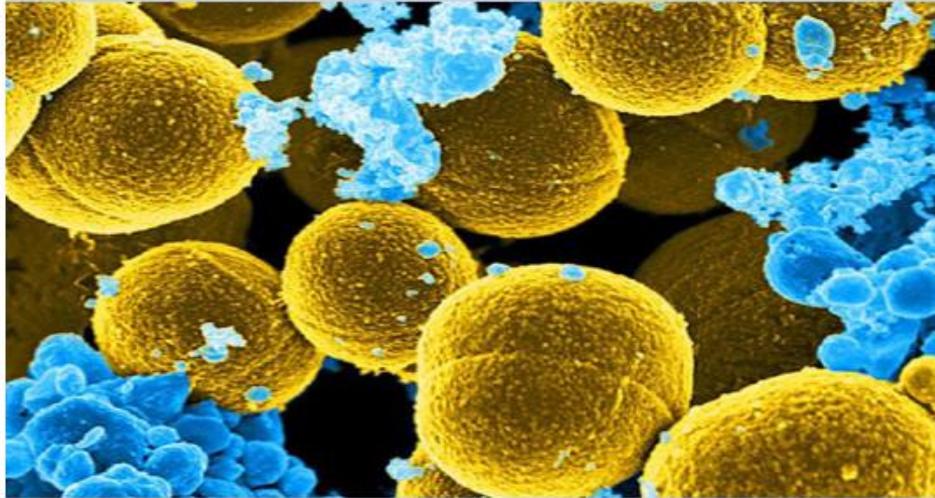
 STANCE | HEALTHCARE
Symbol of Strength

Steelcase

Stinson

stryker®

Antimicrobials in Hospital Furnishings: Do They Help Reduce Healthcare-Associated Infections?

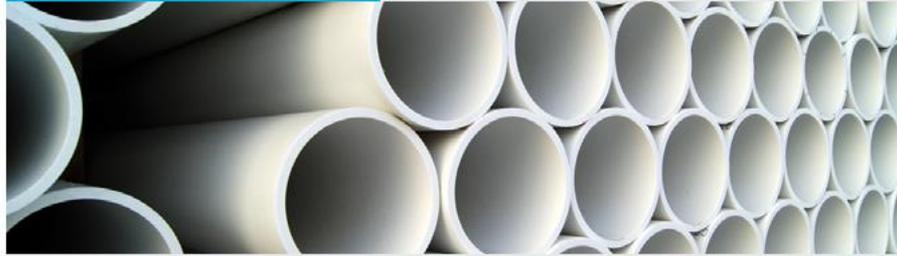


Ted Schettler MD, MPH

March 2016



A PERKINS+WILL WHITE PAPER /



Healthy Environments: What's New (and What's Not) With PVC

NOVEMBER 16, 2015

Healthy Building Network
Perkins+Will

PERKINS+WILL



Healthier
Hospitals



Best Practices for Creating High Performance Healing Environments™

**Imagine Cancer treatment centers
built without
materials linked to cancer**



**265 hospital
pilots
Basis for LEED**

**Pediatric clinics free of chemicals
that trigger asthma**

**Hospitals with healthy
food, fresh air, sunlight**

Why?

- Hospitals/businesses are making **purchasing decisions with new considerations.**
- Businesses are having to operate in a new era of **radical transparency.**
- **People matter.**



Next Steps: Join us!

Safer Chemicals

HHI Admin - Date: 12/3/2015 - 12:05 pm



Photo courtesy of HDR; © 2010 Farshid Assassi

<http://healthierhospitals.org/hhi-challenges/safer-chemicals>

Connect with HH



HH Challenges

- Engaged Leadership
- Healthier Food
- Leaner Energy
- Less Waste
- **Safer Chemicals**
 - Webinars and Sharing Calls
 - **List of Furniture and Materials that Meet the HH Healthy Interiors Goal**



Questions?

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Appendix

TB 133 vs. TB 117-2013

TECHNICAL BULLETIN 133	TECHNICAL BULLETIN 117- 2013
Addresses public buildings or public assembly areas	Non- public occupancy or assembly buildings <u>OR</u> those public occupancy buildings that are fully sprinklered
Large open flame test	Smolder test
Typically met with FRs in fabric, foam, and/or barrier materials	Can be met without FRs
20%-30% more expensive to meet than TB 117-2013	Less expensive to meet than TB 133 