

A Clean Production Action Report

Chemical Footprint of Products Commonly Used in Pediatrics Departments



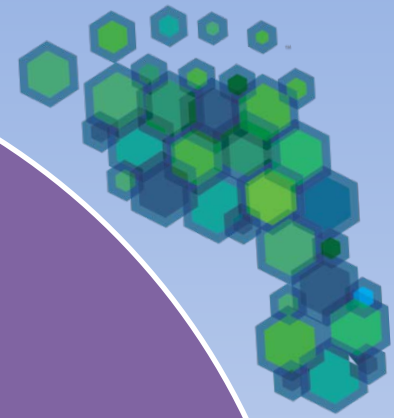
Overview

- From chemical hazards to chemical footprints to Chemical Footprint Project Survey
- Report method & findings: *Chemical Footprint of Products Commonly Used in Pediatric Patient Rooms*



Chemicals of High
Concern (CoHCs):
CMRs, PBTs,
endocrine
disruptors, and
equivalent
compounds

Chemicals:
Hazards



Chemicals of High Concerns (CoHCs):
count
and/or
mass



Products:
• Chemical
Footprint

Chemicals:
Hazards

FIGURE ES-2 Estimated Chemical Footprint of IV Bags Made from PVC/DEHP and Polyolefins



3



PVC



0

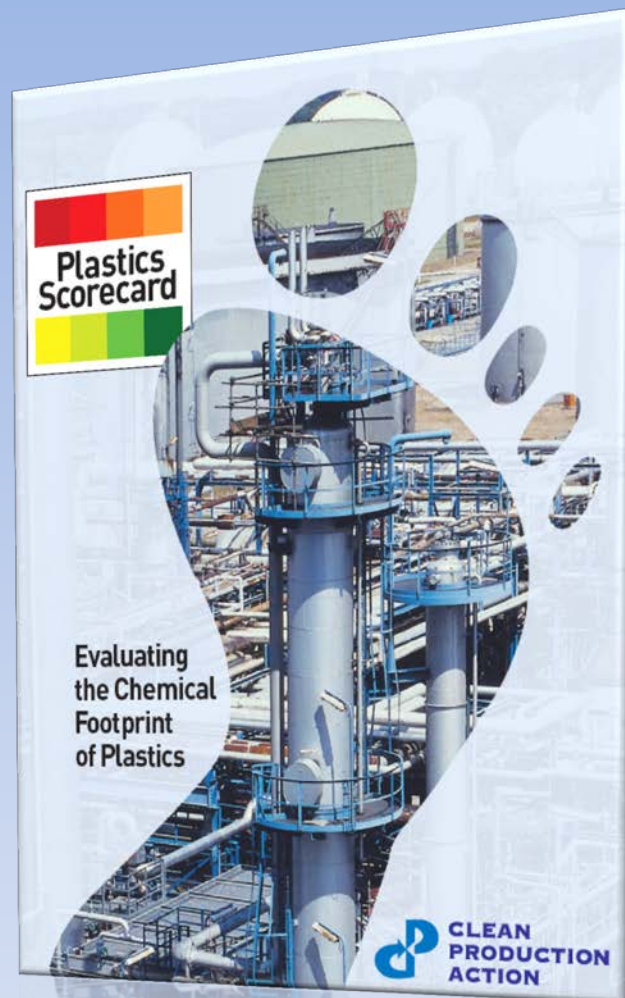


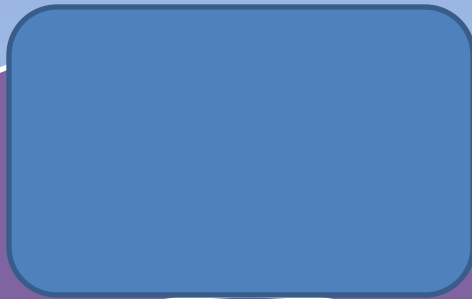
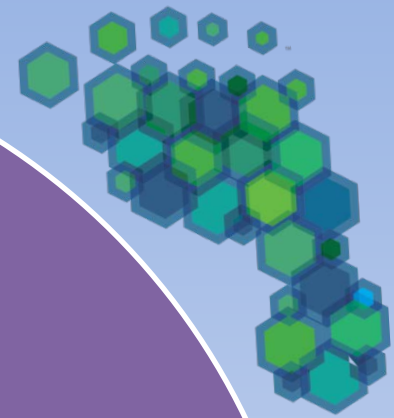
Polyolefins

Number of
Chemicals of High
Concern

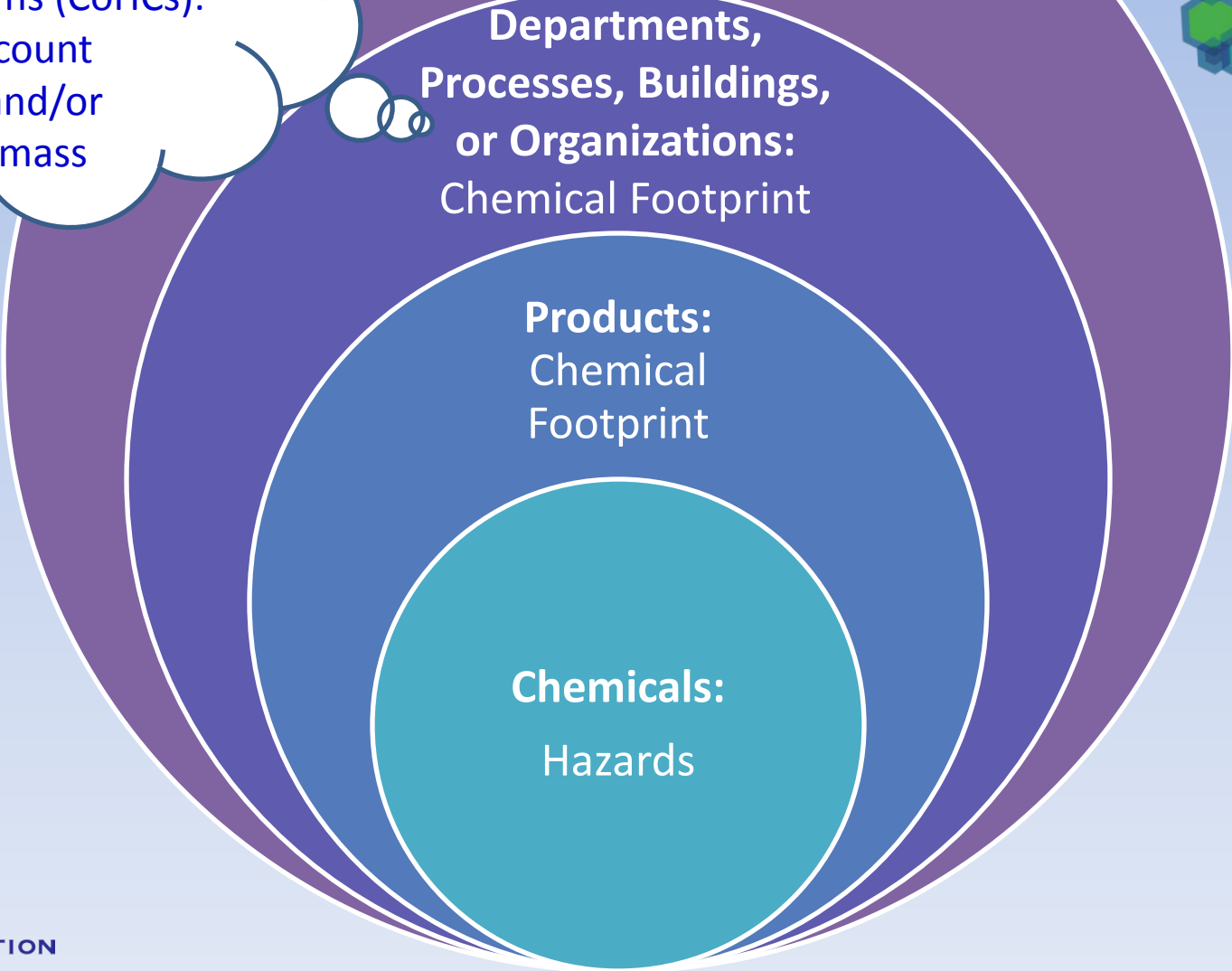
Chemicals of
High Concern
by Weight

PVC = Polyvinyl chloride; DEHP = di(2-ethylhexyl) phthalate





Chemicals of High Concerns (CoHCs):
count
and/or
mass



GOJO: How we pioneered our chemical footprint reduction target

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Nicole Koharik

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Nicole Koharik

Global Sustainability Marketing Director



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Walmart Aims To Cut 55 Million Pounds Of Chemicals From Store's Products

🕒 10/06/2017 - 9:55am

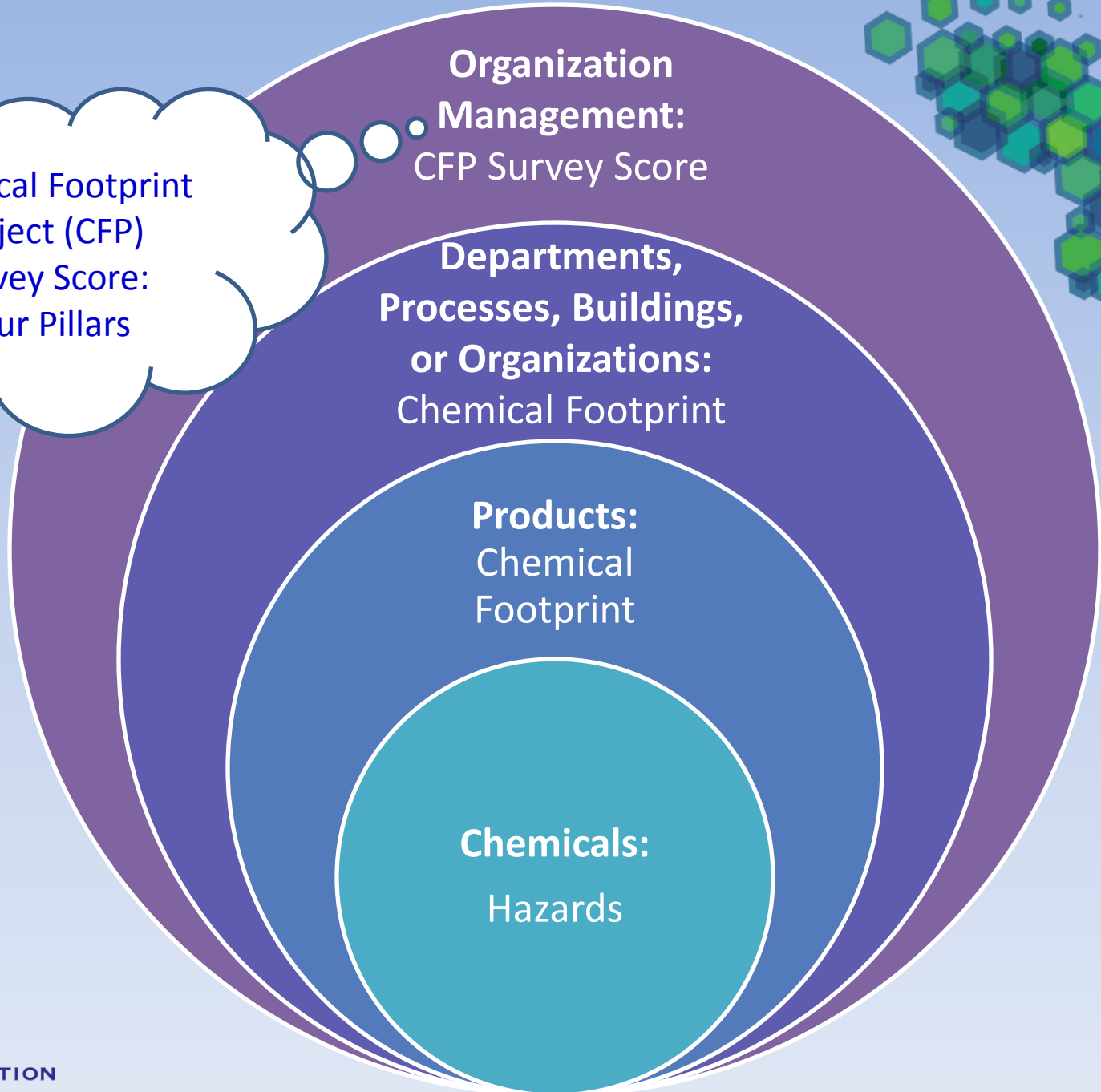
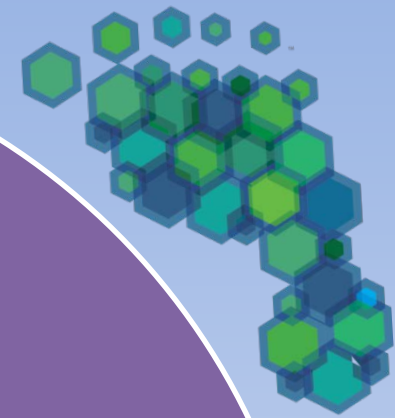
💬 3 Comments

👤 by Meagan Parrish

🕒 10/06/2017 - 9:55am

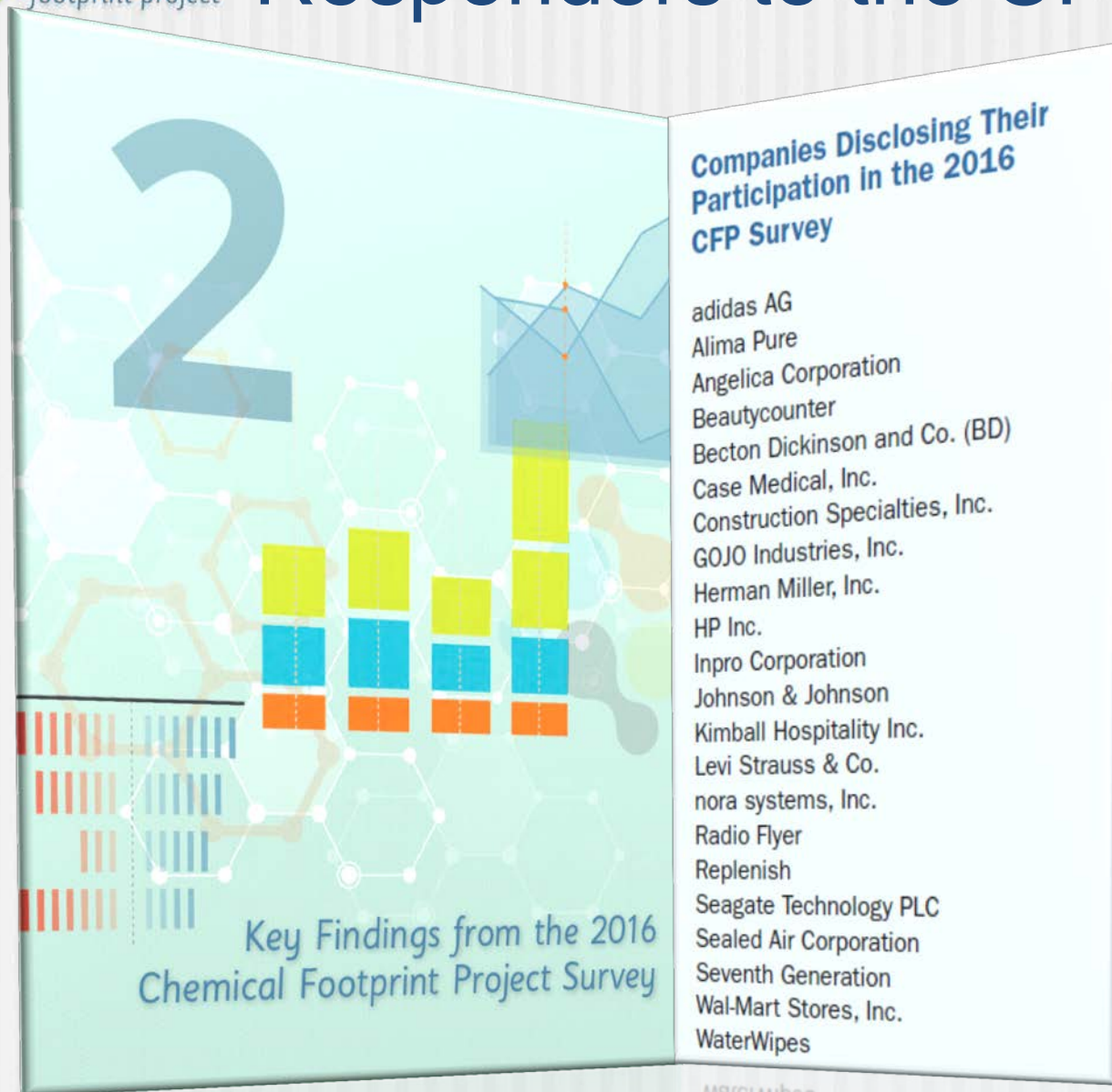
💬 3 Comments

👤 by Meagan Parrish



Chemical Footprint Project (CFP) Survey Score: Four Pillars

Responders to the CFP Survey



- Demonstrate chemical footprinting in health care
- Engage three health care providers at different levels
- Inform purchasing decisions and supplier engagement

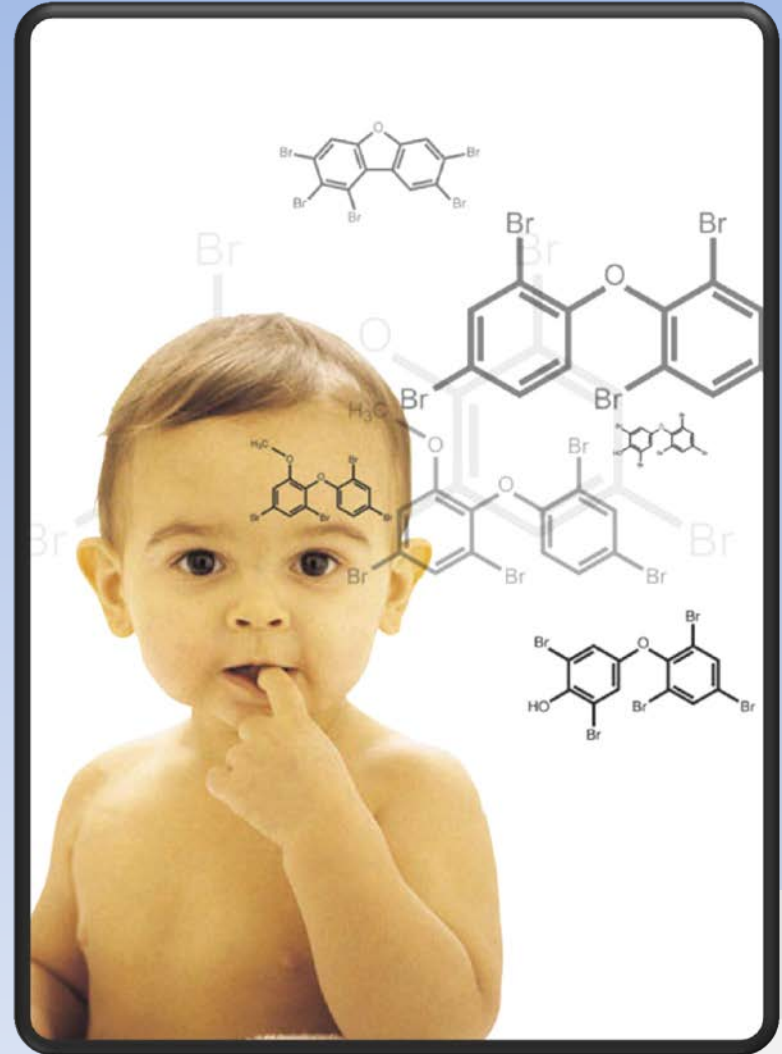


Chronic Disease Burden from Chemicals

- 5% of childhood cancer*
- 10% of children's neurodevelopmental disorders* (e.g., ADHD, autism -- 1 in 6 children diagnosed with neurodevelopmental disorder)
- 30% of childhood asthma**

* Mt. Sinai School of Medicine Center for Children's Health and the Environment

** European Commission



Pediatric Product Survey: Priority Products



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Method for Chemical
Footprinting Products
Used in Health Care

Moderate to high potential for exposure:

- “In” patients: endotracheal tubes, nasogastric tubes, catheters, etc.
- “On” patients: personal care products (lotions, shampoos), beds, chairs, etc.
- “Around” patients: cleaning / disinfecting products

Products in Pediatric Patient Rooms: Suppliers Contacted & Replied

- Contacted
 - 62 suppliers
 - 358 products
- Replied
 - 50 suppliers
 - 253 products
 - Medical supplies (185)
 - Personal care products (50)
 - Furnishings (11)
 - Cleaning & disinfecting products (7)



Pediatrics Report: Chemicals of High Concern (CoHCs)



1. Antimicrobials and antibacterials
2. Bisphenol A (BPA)
3. Bromine- and chlorine-based compounds
4. EU RoHS
5. Latex
6. Metals: lead, cadmium, mercury, and organotin compounds
7. Non-halogenated flame retardants
8. Perfluorinated chemicals (PFCs)
9. Persistent, Bioaccumulative and Toxic substances (PBTs)
10. Polyvinyl chloride (PVC)
11. Phthalates
12. Proposition 65 chemicals



Executive Summary



Pediatrics Report: Products with no CoHCs



Bringing
Chemical Footprinting
to Healthcare

- Most needles & syringes (25 out of 28)
- Baby bottles & nipples (15 products)
- Exam gloves (6 products)
- Lotions, ointments, and lip balm (11 products)
- Most oral care products (6 out of 7)
- Diapers (5 products)
- Most skin wipes (4 out of 5)

Pediatrics Report: Medical Supplies

FIGURE ES-2. Number of Medical Supplies Commonly Used in Pediatric Patient Rooms that Contained and Did Not Contain Chemicals of High Concern (CoHCs)

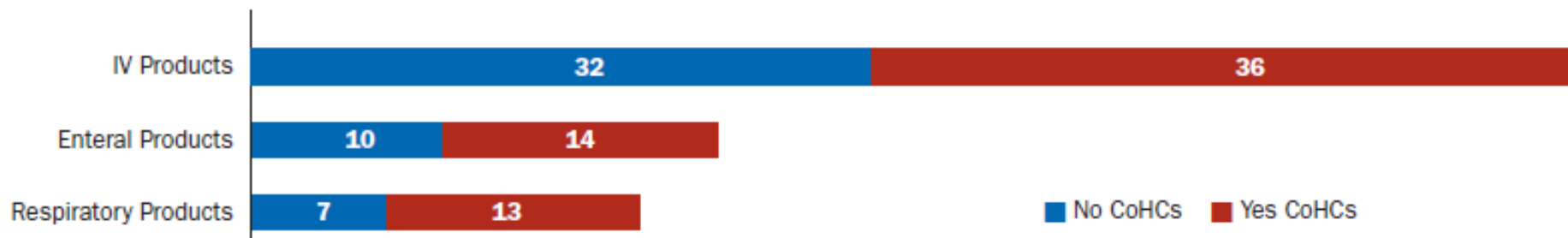
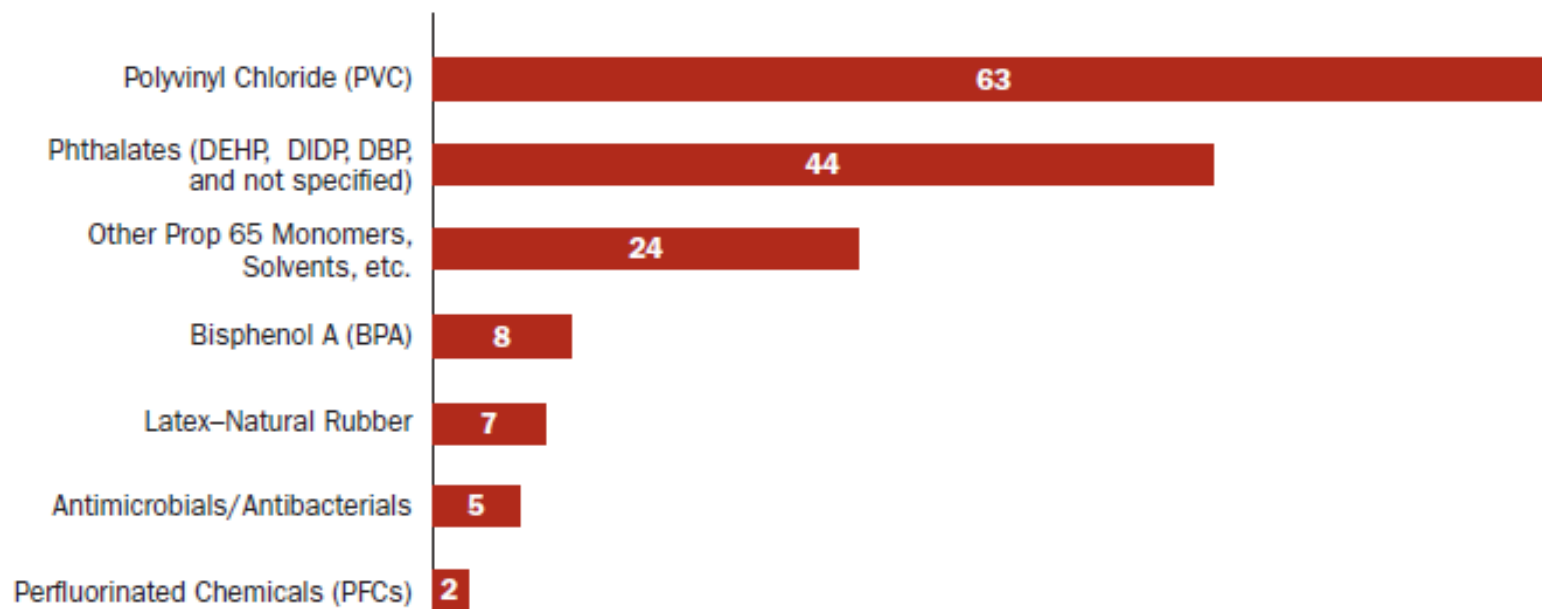
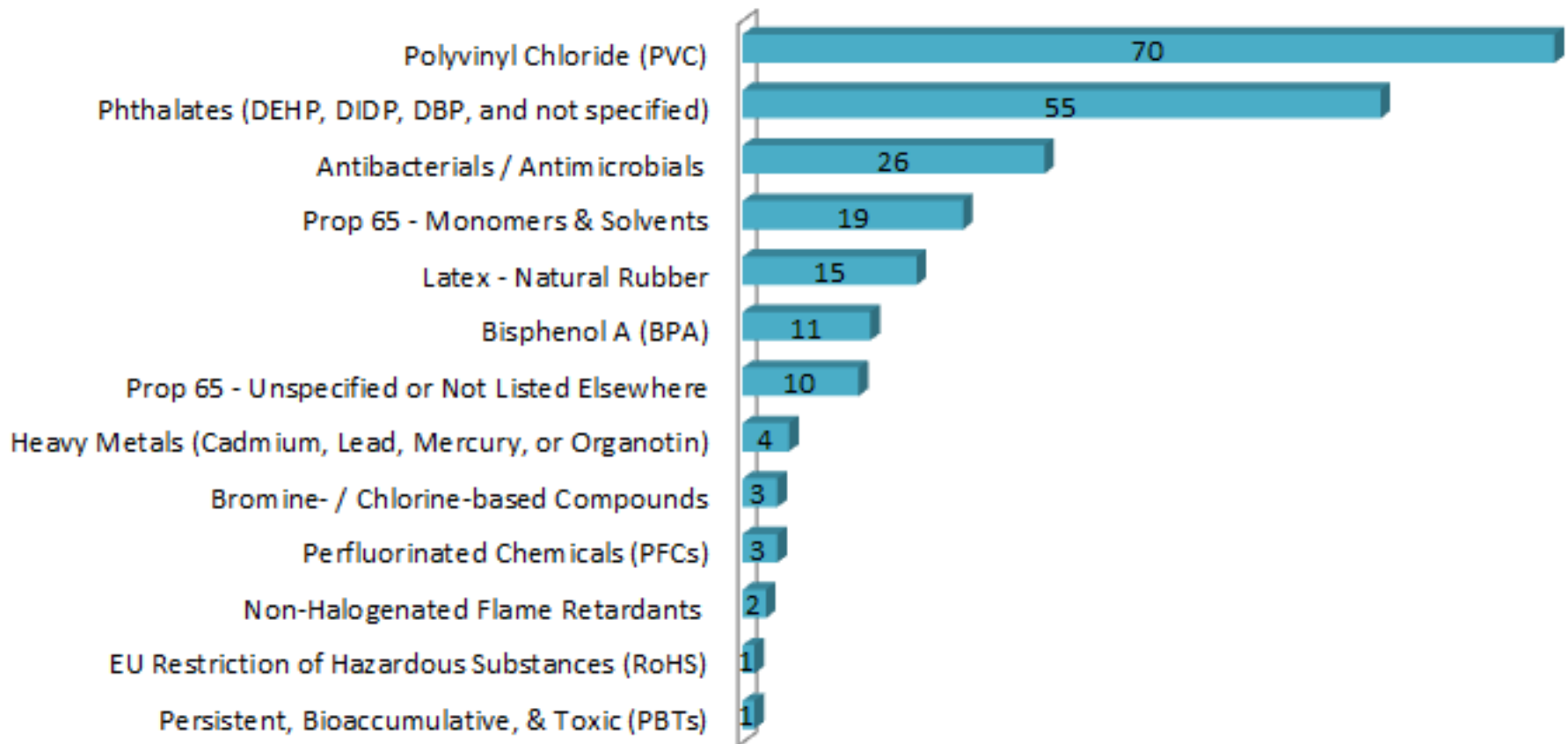


FIGURE ES-3. Chemicals of High Concern (CoHCs) in Medical Supplies Commonly Used in Pediatric Patient Rooms and the Number of Products that Contained Them



Pediatrics Report: CoHCs in Products

Table 12. Chemicals of High Concern (CoHCs) and the Number of Products in Pediatric Patient Rooms that Contained Them



Pediatrics Report: Findings



Results

- **By eliminating PVC and associated CoHCs in medical supplies**, would reduce 75% of the CoHCs in medical supplies
- **Products in contact with skin** likely to contain antibacterials / antimicrobials (id bracelets, IV arm restraints, wash cloths, cribs)
- **For every personal care product** (soap, body wash, hand sanitizers, etc.) with a CoHC, there was an equivalent product with no CoHCs
- **Other products with and without CoHCs:** enteral feeding tubes, IV arm restraints, and IV catheters

Recommendations

- Measure chemical footprint
- Identify safer alternatives
- Reduce chemical footprint
- Systemic changes
 - Align to CoHCs
 - Use common reporting template (eg, HPD)
 - Certification

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Recommendations:
Where do we go from here?





Thank You!

Questions?

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