Chemical Policy Reform: Market Signals and Incentives

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PREVENT HARM & ENVIRONMENTAL HEALTH STRATEGY CENTER
SAFER CHEMICALS, HEALTHY FAMILIES
SAFER STATES

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U.S. Chemical Production (1947 – 2007)

74 billion pounds of chemicals are produced or imported every day in the United States.

SOURCE: Federal Reserve G.17
Called for a federal chemical policy 50+ years ago:

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“The choice, after all, is ours to make. If, having endured much, we have at last asserted our ‘right to know,’ and if knowing, we have concluded that we are being asked to take senseless and frightening risks, then we should no longer accept the counsel of those who tell us that we must fill our worlds with poisonous chemicals; we should look about and see what other course is open to us.” (pp. 277-78)
THE BOTTOM LINE

• Our chemical safety system is badly broken
• People are sick and dying from chemical exposures – disease, disability, early death
• The chemical industry, which has stalled federal chemical policy reform, wants to preempt the states and avoid regulation
• Leadership still falls on state policymakers, European regulators & market leaders

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1976 TOXICS SUBSTANCES CONTROL ACT (TSCA)

The law that regulates industrial chemicals was passed 30 years ago and has never been updated.

It does not require health and safety studies for new chemicals. 63,000 chemicals were “grandfathered in” when TSCA was passed, presumed safe.
• **DATA**: Few data call-ins are issued, even fewer chemicals are required to be tested and no minimum data set is required even for new chemicals.

• **BURDEN OF PROOF**: EPA is required to prove harm before it can regulate a chemical.

• **SAFETY ASSESSMENT**: No mandate exists to assess the safety of existing chemicals. New chemicals undergo a severely time-limited and highly data-constrained review.
• **SCOPE OF ASSESSMENT:** Where the rare chemical assessment is undertaken, there is no requirement to assess exposure to all sources of exposure to a chemical, or to assess risk to vulnerable populations.

• **REGULATORY ACTION:** Even chemicals of highest concern, such as asbestos, have not been able to be regulated under TSCA’s “unreasonable risk” cost-benefit standard. Instead, assessments often drag on indefinitely without conclusion or decision.
• **INFORMATION ACCESS:** Companies are free to claim, often without providing any justification, most information they submit to EPA to be confidential business information (CBI), denying access to the public and even to state and local government. EPA is not required to review such claims, and the claims never expire.

• **RULEMAKING REQUIREMENTS:** To require testing or take other actions, EPA must promulgate regulations that take many years and resources to develop.
A Badly Broken Safety System

- 60,000 Existing Chemicals
- 200 Chemicals Tested
- 5 Chemicals Restricted

[Diagram showing the number of chemicals in different categories.]
### TSCA: 38 years of Failure

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing chemicals in commerce in 1979</td>
<td>62,000</td>
</tr>
<tr>
<td># of potential concern due to use &amp; design</td>
<td>26,000 (26%)</td>
</tr>
<tr>
<td># with risks reviewed</td>
<td>1,200 (2%)</td>
</tr>
<tr>
<td># with testing required</td>
<td>&lt; 200 (&lt;0.3%)</td>
</tr>
<tr>
<td># with bans or restrictions on use</td>
<td>5</td>
</tr>
</tbody>
</table>
EPA couldn’t even ban asbestos

Joe Darabant, Johns-Manville Plant in H Building
from Breath Taken: The Landscape & Biography of Asbestos
Bill Ravanesi 1990 & Center for Visual Arts in the Public Interest, Inc.
20,000 New Chemicals Introduced

• After undergoing only a review by EPA that is time-limited and data-constrained

*Example*: Firemaster 550 replaced PentaBDE:

TBB now known to be:

• Persistent
• Bioaccumulative
• Toxic

TBB, 183658-27-7

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## OCCUPATIONAL HEALTH IMPACTS

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Annual Incidence, Occupat. Disease</th>
<th>Attributable to Chemical Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deaths</td>
<td>&gt; 60,000 (US)</td>
<td>6,566 (CA)</td>
</tr>
<tr>
<td>Asthma (EU)</td>
<td>80,000</td>
<td>40,000</td>
</tr>
<tr>
<td>Dermatitis (EU)</td>
<td></td>
<td>40,000</td>
</tr>
<tr>
<td>COPD (EU)</td>
<td></td>
<td>10,000</td>
</tr>
<tr>
<td>Cancer (EU)</td>
<td></td>
<td>4,300</td>
</tr>
</tbody>
</table>

Wilson et al. (2006) Green Chemistry in California, Cal Policy Research Center
ENVIRONMENTAL HEALTH IMPACTS

<table>
<thead>
<tr>
<th>Disease / Disorder in Children</th>
<th>Attributable to Chemical Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asthma</td>
<td>10% to 35%</td>
</tr>
<tr>
<td>Cancer</td>
<td>2% to 10%</td>
</tr>
<tr>
<td>Neurobehavioral</td>
<td>5% to 20%</td>
</tr>
</tbody>
</table>


• Impaired fertility and reproductive harm


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Sen. Frank Lautenberg (1924 - 2013)

“Our children should not be used as guinea pigs. It’s time to update the law to protect them.”

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The Drivers for TSCA Reform

• State-based chemical regulation
• National health-based campaign
• Consumer market demand
• Downstream corporate policies
• International policy leadership
Discussion Questions

• What’s the market signal sent by the current federal chemical policy, i.e., the Toxics Substances Control Act (TSCA)?

• What market incentives are enhanced or diminished by federal chemical policy?
States as Laboratories for Reform

Healthy States

Protecting Families from Toxic Chemicals While Congress Lags Behind

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• Modern chemical policy reform in the U.S. developed at the state level

• State actions harkened back to effective national strategies of the 1970s, before U.S. lost its global lead
**Lead Air Quality, 1980 - 2010**
(Based on Annual Maximum 3-Month Average)
National Trend based on 31 Sites

1980 to 2010: 89% decrease in National Average

[Graph showing the decrease in lead air quality from 1980 to 2010, with a national standard line and data points indicating a significant decline over the years.]
## The Quickening Pace of State Action on Toxic Chemicals

<table>
<thead>
<tr>
<th>Year</th>
<th># of State Laws Passed</th>
<th>Number of States Acting (cumulative)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>by Session</td>
<td>by Legislature</td>
</tr>
<tr>
<td>2003</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>2004</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>2006</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>10</td>
<td>25</td>
</tr>
<tr>
<td>2008</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>15</td>
<td>31</td>
</tr>
<tr>
<td>2010</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>In 8 years</strong></td>
<td><strong>71 state laws passed</strong></td>
</tr>
</tbody>
</table>

**Source:** [www.preventharm.org](http://www.preventharm.org)
States have made great strides

30 states are considering toxic chemicals legislation right now.

162 bills have been adopted by states to ban toxic chemicals from products.

120 bills to regulate toxic chemicals were introduced in 2014.
PBDEs

Trends in Chemicals in Breast Milk, Sweden

Source: NRDC

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BPA in baby bottles, sippy cups

AVOID

CHOOSE

Receipt?
No
Thanks!

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Prenatal exposure to phthalates

- Interference with development of the male reproductive organs
- Decreased intellectual function, poorer social behavior, and increased impulsive behavior in children; feminized behavior in boys
- Sensitization of the immune system (associated with increased allergies and asthma)

Phthalate levels were measured in the mothers and the offspring tested later (sometimes years)
Maine passes chemical policy reform
KID SAFE PRODUCTS ACT of 2008
Declaration of State Policy

• To reduce exposure of children and other vulnerable populations to chemicals of high concern by substituting safer alternatives when feasible
Summary of Maine Law

- Many consumer products covered
- List of “Chemicals of High Concern”
- Identify “Priority Chemicals”
- Manufacturers must disclose use
- Authority to require safer alternatives
- Participation in Interstate Clearinghouse

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Kid Safe Products Act (Maine)

- 1,385 Chemicals of Concern
- 46 Chemicals of High Concern
- 5 Priority Chemicals (BPA & NPEs)

Hasbro ended use of polycarbonate in toys to avoid reporting BPA.

BPA phased out in baby food packaging due to alternatives assessment.
POISON IN PAINT, TOXICS IN TOYS

An exclusive report on household products that contain two chemicals that wreak hormone havoc:

**NPEs** (nonylphenol ethoxylates)

**BPA** (bisphenol A)
2011 Failure of Tea Party Rollbacks

• Maine Governor Paul LePage on BPA:
  “The worse that could happen is that women would get little beards.”

BPA rule *upheld* by a 180–3 vote of Legislature

Chemical industry attack on Maine law *stopped*
Children’s Safe Products Act (WA)

- Lead, cadmium and phthalates banned
- 66 Chemicals of High Concern to Children
- Children’s product manufacturers must report use annually, phased in over 7 years
Three Priority Products named that contain Chemicals of Concern (COCs)

- Methylene chloride in paint strippers
- TDCPP (flame retardant) in foam nap mats
- Unreacted diisocyanates in spray foam insulation
## Comprehensive State Chemical Laws

<table>
<thead>
<tr>
<th>Policy</th>
<th>CA</th>
<th>ME</th>
<th>WA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Products</td>
<td>consumer</td>
<td>consumer</td>
<td>children’s</td>
</tr>
<tr>
<td>List chems.</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Report use</td>
<td>(YES)</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Assess alts.</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Prohibit sale</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Fees</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
</tr>
</tbody>
</table>
Discussion Questions

• What market signal is being sent by the wave of state chemical policy in the last decade?
• What market incentives are enhanced or diminished by state chemical policy?
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