SAFEGUARDING COMMUNITIES FROM HARMFUL CHEMICALS
Part 3
Informing Decision-Making through Health Assessment
CERCLA Legislation—aka Superfund Law
Comprehensive Environmental Response, Compensation, and Liability Act

Gave EPA responsibility for identifying, investigating and cleaning up hazardous waste sites

Created the Agency for Toxic Substances and Disease Registry (ATSDR) to:
- Perform public health assessments at hazardous waste sites
- Develop toxicological profiles on harmful substances
- Conduct epidemiological health studies
- Maintain health registries and conduct medical surveillance
Protecting Communities: What it takes

ATSDR Regional Offices

States Funded by Cooperative Agreement

Pediatric Environmental Health Specialty Units (PEHSUs)
Serving Americans, Community by Community
ATSDR’s 30 Year History
Enabling Data-Driven Decision Making

ATSDR’s Health Assessment Process
ATSDR’s Core Work in Communities: Understanding Exposures

AIR

WATER

FOOD

SOIL

YOU
Protecting Communities

- Request
- Assess
- Collect Data
- Protective Actions
- Studies

Community Engagement and Health Education

Healthy People in Healthy Environments
Public Health Assessment Process

**INPUTS**
- Environmental Data
- Community Characteristics and Issues

**EVALUATION**
- What are contaminant levels?
- How do people contact contaminants? - exposure
- Could exposure lead to illness?
- Are there relevant health data?

**FINDINGS & RECOMMENDATIONS**
- Is the exposure a problem?
- What needs to be done?
## Inputs: Environmental Data

### Data collected by regulatory agencies
- Soil, air, water, and/or food concentration data collected through site investigation
- Releases reported by operating companies to regulatory agencies – TRI, permits, NPDES

### Data collected by others
- Data from company records or reports
- Sample results from individuals, community groups, or other stakeholders

ATSDR assesses quality of data received and discusses data with appropriate caveats.
Inputs: Community Characteristics and Insights

- Gathered throughout our involvement
- E-mail, telephone, public availability sessions, or public meetings

Why?
- Learn community health concerns
- Address community concerns
- Understand potential exposure pathway and perceptions of exposure
- Develop relationships, build trust
Screen contaminants using ATSDR Comparison Values (CVs)
• Use highest values detected for each contaminant
• Use cancer and non-cancer CVs

Calculate estimated dose using conservative exposure assumptions
• Dose: Amount of a substance a person is exposed to per day

Screen dose using Health Guidelines (Minimal Risk Levels)
Evaluation: Exposure Assessment and Toxicological Evaluation

Refine dose to reflect site-specific exposure
- Information from community on exposure frequency, duration
- Knowledge of site demographics
- Account for site-specific environmental characteristics and previous actions taken

Examine toxicological literature to determine potential for harm
- Harmful effect levels in animal or human health studies
- Target organs, sensitive populations, etc.
- Potential mixture effects
Conclusions and Recommendations

**Conclusions**

- Can the exposure cause harm?
- To whom?

**Recommendations**

- Should exposures be reduced?
- Do we need more information?
- Do we need to educate the community about what exposures (past or current) mean to them?
- Are other actions needed?
## Impacts

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<thead>
<tr>
<th>Support need for cleanup actions</th>
<th>Allow <em>early</em> response to public health issues</th>
<th>Identify potential <em>exposure</em> pathways to be characterized</th>
<th>Identify <em>new sites</em> or situations of health concern not under regulatory authority</th>
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</thead>
<tbody>
<tr>
<td><em>Engage</em> local and state health departments</td>
<td>Give <em>advice</em> to residents and community leaders</td>
<td>Provide physician <em>education</em> and community <em>outreach</em></td>
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