

# Integrating Children's Health and Environmental Justice Research Across ORD: *Reducing risk while promoting equity and well-being*



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# National Strategies

## ***EPA Strategic Plan 2011-15, Strategy: “Working for Environmental Justice and Children’s Health”***

*We must include environmental justice principles in all of our decisions...The protection of vulnerable populations is a top priority, especially with regard to children. Lisa P. Jackson, 2010*

## ***HHS Healthy People 2020***

EPA shares in the goals of *Healthy People 2020* which has set the elimination of health disparities\* and achieving health equity as top national priorities. Thus, ORD is supportive of research that will help understand and prevent health disparities from environmental conditions and pollution.

***Coordinated Federal Action Plan to Reduce Racial and Ethnic Asthma Disparities, 2012, HHS, EPA and HUD.***



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**\*Health Disparity:** *a particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage.*

# HOLISTIC APPROACH

Considering diverse factors and stressors that determine health and well-being

## Inherent Factors (Host)

### Determine susceptibility:

- Age/lifestage/gender
- Genetics & epigenetics
- Pre-existing disease  
Diabetes, developmental deficits, cardio-vascular disease



## Environmental Factors

- Exposure to pollution and chemical hazards
- Natural Environment --  
Temperature/Climate
- Built Environment  
Housing/school/workplace,  
Transportation, Land Use, Waste  
Mgmt

## Social & Economic --

### Individual choices/behaviors:

- Diet and exercise
- Habits and lifestyle
- Education

## Social & Economic --

### Community & cultural:

- Family values and lifestyle
- Social stressors: Poverty, racism, crime; discrimination
- Overburdened community setting
- Access to healthy food, medical care, safe workplace

## In addition to providing the science to support EPA's regulatory and enforcement activities, ORD research programs strive to

- Help communities identify environmental contributions to health and find ways to reduce health disparities;

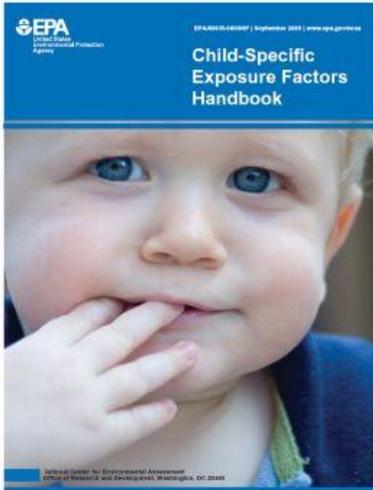


Provide decision support tools to help local governments make decisions that:

- protect the natural environment while maximizing the equitable distribution of its many benefits
- provide built environments which promote health

Provide knowledge to inform personal decisions and public health policies that foster healthy lifestyles.

# EPA Partners tell us they need information about:



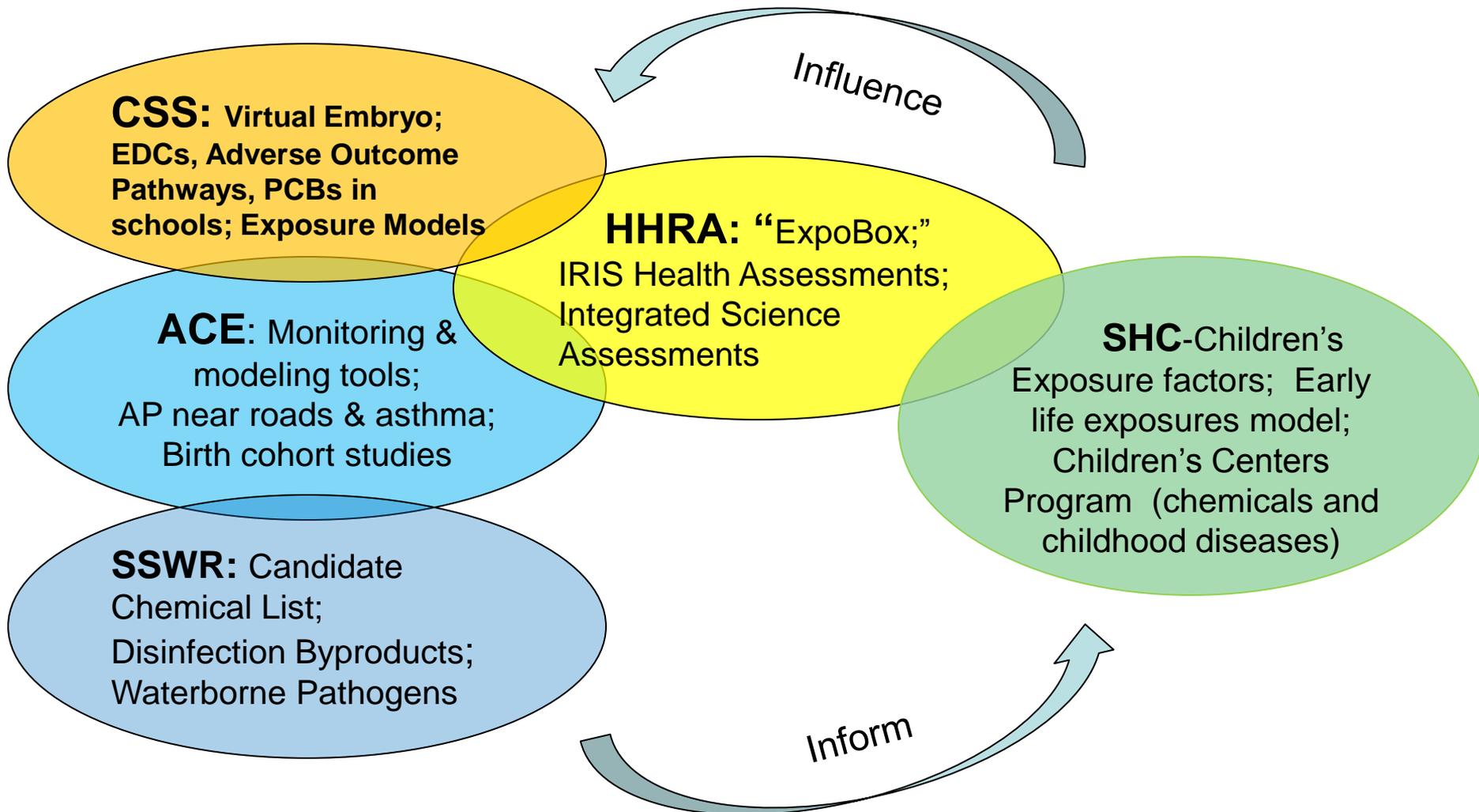
- Exposure factors for EPA-defined lifestages
  - Soil and dust ingestion rates
  - Activity patterns
- Impacts of prenatal (in utero) exposures on future health
- Complex exposures, including non-chemical stressors, and approaches for cumulative risk assessment
- Environmental determinants of asthma, cardiovascular disease, and other prevalent health conditions



## These needs are addressed across ORD programs:

Identify Exposures and Risks Considering Susceptibility and Exposure Factors	SHC	CSS	ACE	HHRA	SSWR
Lifestage specific susceptibility to contaminants and mixtures for risk assessment	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
Lifestage specific exposure factors	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
Promote Health and Eliminate Disparities in Community Settings					
Cumulative Risk of chemicals by place/setting	<b>X</b>		<b>X</b>	<b>X</b>	<b>X</b>
Public Health Interventions	<b>X</b>		<b>X</b>		<b>X</b>
Benefits of Built Environment & Ecosystem Goods and Services	<b>X</b>		<b>X</b>		<b>X</b>
Social, Economic & Environ. Determinants of Health Disparities	<b>X</b>		<b>X</b>	<b>X</b>	
Public health indicators & Health Impact Assessment Approaches	<b>X</b>		<b>X</b>	<b>X</b>	

# Identify Exposures & Risks Considering Susceptibility & Exposure Factors



# Promote Health and Eliminate Disparities in Community Settings

**HHRA:** Cumulative Risk  
Guidance; Tech support  
for at-risk populations

**ACE:** Cumulative risk for  
near road-rail-ports;  
wildfires; asthma & CVD  
interventions

**SSWR:** Birth defects in  
TX; Gray Water in PR;  
Leachate in AL

**SHC:** Health Impact Assessments;  
Asthma cohorts & indoor air;  
**Web-based Tools:** Community-Focused  
(C-FERST), Geospatial (Atlas),  
Cumulative Community Assessment  
**Grants:** Childcare & School Environment;  
Tribal Science; Children's Centers (rural  
urban), Health Disparities with NIMHD;  
Public Health Indicators;  
Non-chemical Stressors

Influence

Inform

**Media-specific in  
community settings**

**Complex assessments  
& community decisions**

# Integration Approaches & Activities

- Workgroups on CH and EJ with SHC leads
  - Include scientists from all ORD programs and selected EPA partners
  - Identify linkages and enhancing cross program collaborations
  - Build capacity, especially for EJ
- Work with advisory groups:
  - Children’s Health Protection Advisory Committee workgroups:
    - Prenatal exposures
    - Social determinants of health
  - National Environmental Justice Advisory Committee
    - Research workgroup (part of EJ 2014)
- Facilitate ORD contributions to Federal initiatives, e.g. Children’s Health Federal Taskforce (...Asthma Disparities; Chemicals in Products; and Healthy Homes); Healthy People 2020; National Prevention Strategy.

# Impacts of EJ/CH Research Integration

- Increases likelihood of finding solutions that prevent risk and improve well-being, and that minimize risk while reducing disparities
- Fosters sharing of tools and knowledge across ORD and with partners
- Guides and sustains efficient use of ORD expertise and resources over time
- Improves engagement with and communication of findings to diverse stakeholders (e.g. Agency partners, Federal partners, Congress, advocacy groups, public)
- Clarifies ORD's commitment to and support for EPA's cross-cutting goals

# Conclusion

ORD's integrated CH and EJ research will not only enrich and improve EPA's regulatory and enforcement capabilities, it will but also help decision-makers to:

- actively promote health and eliminate health disparities in communities where people live, work, learn, and play
- foster equitable access to the many healthful benefits provided by natural environments



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