NIEHS Vision for Environmental Health Disparities Research:

Advancing our Understanding of Environmental Contributions to Health Disparities

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The National Institute of Environmental Health Sciences

Mission
The mission of the National Institute of Environmental Health Sciences is to discover how the environment affects people in order to promote healthier lives.

Vision
The vision of the National Institute of Environmental Health Sciences is to provide global leadership for innovative research that improves public health by preventing disease and disability.

http://www.niehs.nih.gov
NIEHS Strategic Plan
Moving EHD Forward: NIEHS Strategic Plan

• **Goal 6: Environmental Health Disparities**
  Establish an environmental health disparities research agenda to understand the disproportionate risks of disease and to define and support public health and prevention solutions in affected populations.

• **Goal 8: Education and training**
  Enhance the teaching of EHS at all levels of education and training — kindergarten through professional — to increase scientific literacy and generate awareness of the health consequences of environmental exposures.

• **Goal 11: Communication**
  Promote bidirectional communication and collaboration between researchers and stakeholders (policy makers, clinicians, intervention/prevention practitioners, and the public) in order to advance research translation in the environmental health sciences.
Health Disparities

- **Healthy People 2020** defines a *health disparity* as “a particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage.

- Federal efforts to eliminate disparities and achieve health equity have focused primarily on diseases or illnesses and on health care services.

- Increasingly, research of HD recognizes the relationships between biological, chemical, environmental, and genetic factors, and social determinants of health such as socioeconomic status, race and ethnicity.

Source: CDC Wonder. DATA2010...the Healthy People 2010 Database. Centers for Disease Control and Prevention, January 2004.
Environmental Health Disparities

• For the NIEHS’ Strategic Plan, we expanded the definition of HD to acknowledge the unique contribution of the environment:

Health disparities often occur as a result of the effects of stressors, including environmental, over time, as well as exposures related to natural and manmade disasters, on especially vulnerable communities when such exposures amplify or increase the existing health disparities in these communities.

Reynolds Co. facility one mile north of Mohawk Reservation
The relation of EHD and EJ

• Environmental health disparities (EHD) and environmental justice (EJ) are distinct approaches to the same underlying issues.

• They lie along a continuum similar to the continuum from outreach to full community-engagement and shared leadership in research ¹.

• The EHD EJ continuum reflects increasing community involvement to address underlying inequities.

Relation of EHD to NIEHS Strategic Plan

In 2012 NIEHS adopted a five-year strategic plan. EHD goals are relevant to many of the ES strategic goals:

• Goal 2 – individual susceptibility across the life span
• Goal 4 - the effect of combined environmental exposures on human health
• Goal 5 – emerging environmental threats to human health
• Goal 6 – establish an environmental health disparities research agenda
• Goal 8 – enhance teaching of EHS to increase scientific literacy

EHD Research can include basic research, population studies, and CBPR and translational research
Environmental Health Disparities

Environmental health disparities are more likely to occur in vulnerable communities with

- Lower Socioeconomic Status (SES)
- Limited or no access to (quality) healthcare
- Greater proximity to multiple sources of pollution
- Ongoing and multiple exposures throughout the life course
- Limited health literacy and environmental health literacy

Examples of EHD communities include tribal nations, rural and inner city communities, and migrant communities
What do we mean by “environment”?

- Outdoor and Indoor air pollution particulate matter (e.g., PM2.5 and PM10)
- Pesticides and other agricultural pollutants
- Metals (e.g., arsenic, lead, manganese, chromium, cadmium, copper, and zinc)
- Endocrine disrupting chemicals (e.g., bisphenol A, phthalates, dioxins, brominated flame retardants)
- Allergens (e.g., cockroaches, dusts, mold);
- Radioactive materials (e.g., uranium)
- Diet and nutrition and other life-style factors (e.g., access to healthy foods; physical activity and the built environment)
Health Impacts Studied, including:

- Respiratory system (e.g. asthma)
- Endocrine system (e.g. physical development)
- Reproductive system (e.g., sexual development)
- Nervous system (e.g., brain development, and other impacts on human senses)
- Urinary system (e.g., kidney failure)
- Digestive system (e.g., obesity)
- Circulatory system (e.g., diabetes)
- Skeletal system (e.g. bone cancer and occupational hazards)
Program Goals to Advance the Field of EHDs

A research agenda that provides the evidence-base to address EHDs through mitigation or reduction of modifiable environmental factors.

• Considers the effects of one or more combinations of harmful exposures.

• Examines the results of the synergistic effect of exposure to multiple environmental hazards in the context of social stressors like poverty, psychosocial stress and discrimination and the built environment.

• Promotes resilience in health disparate communities to improve the ability of minority and economically disadvantaged populations to withstand or mitigate harms.
Program Goals to Advance the Field of EHDs

Collaborative training and capacity building to

- Develop the next generation of EHD researchers
- Increase the diversity of EHD researchers
- Develop a training pipeline for established scientists to enter the field of EHD
- Raise the environmental health literacy of community partners in the research, and
- Train EHD researchers in culturally sensitive methods for community engagement in research and translation of findings.
Current Opportunities: HD-Related

Research to Action: Assessing and Addressing Community Exposures to Environmental Contaminants (R01)
Funding opportunity announcement: PA-12-153

Understanding and Promoting Health Literacy
Funding opportunity announcement: PAR-13-130 (R01)
Funding opportunity announcement: PAR-13-131 (R03)
Funding opportunity announcement: PAR-13-132 (R21)

Behavioral and Social Science Research on Understanding and Reducing Health Disparities
Funding opportunity announcement: PA-13-292 (R01)
Funding opportunity announcement: PA-13-288 (R21)
PA-12-153: Research to Action: Assessing and Addressing Community Exposures to Environmental Contaminants (R01)

The overall goal of this program is to prevent or reduce exposure to harmful environmental exposures and improve the health of a community.

- Uses community-engaged research methods to investigate the potential health risks of environmental exposures of concern to the community
- Implements an environmental public health action plan based on research findings.

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Standard Receipt Dates:
Expiration Date: September 8, 2015
In Summary: Addressing EHDs

• Advance the research agenda
• Strengthen commitment to partnerships
• Bolster youth engagement
• Build the capacity all partners
• Advance use of evaluation tools
Thank you!