Environmental Health: Emerging Issues and National Priorities

Patrick N. Breysse, PhD, CIH
Director, NCEH/ATSDR

New York State Conference of Environmental Health Directors
May 9-10, 2016
Outline

- Flint Update
- Environmental Health and Zika
- NCEH/ATSDR Priorities
FLINT UPDATE
U.S. Government Objectives in Flint

- Immediate access to safe water (FEMA)
- Long term safety of the water supply (EPA)
- Immediate needs regarding health (HHS and Unified Command Group)
- Community resilience (HHS and Unified Command Group)
NCEH/ATSDR’s Contribution

- Provide guidance and a plan for monitoring children with elevated blood lead levels
- Identify and link community members to case management
- Coordinate health messaging
- Assess chemical exposure on community
- Identify long-term community needs
NCEH/ATSDR Response to Flint

- Mid-January 2016: deployed first team to MI
- Contacted/visited over 360 individuals reporting rashes, referred over 200 to dermatologists
- Tested nearly 80% of children <6 years old for lead
- Contacted and offered case management to 88% of families with children identified as elevated blood lead levels
- Established 3 taskforces: assessment of chemical exposure (ACE), water quality, case management
- Planning Community Assessment for Public Health Emergency Response (CASPER) to begin on May 9
Flint – Challenges and Opportunities

- Environmental health infrastructure and surveillance
- Risk communications
- Long-term monitoring

Photo source: City of Flint website
Lead in Water – A National Issue

- Focus on safe water from all sources
- Ensure that water is sampled as potential source of lead in cities with aging infrastructure
- Implement more robust and sensitive surveillance system
- Revise existing Lead and Copper Rule to include notification of public health agencies
ENVIRONMENTAL HEALTH AND ZIKA
What is Zika virus disease (Zika)?

- Disease spread primarily through the bite of an *Aedes* species mosquito infected with Zika virus.
- Most people infected with Zika virus won’t even know they have the disease because they won’t have symptoms.
- Zika infection in pregnancy can cause microcephaly and other severe fetal brain defects.
Zika and Guillain-Barré Syndrome (GBS)

- GBS is an uncommon sickness of the nervous system in which a person’s own immune system damages nerve cells, causing muscle weakness, and sometimes, paralysis.
- Brazil Ministry of Health has reported an increased number of people who have been infected with Zika virus who also have GBS.
- GBS is very likely triggered by Zika in a small proportion of infections, much as it is after a variety of other infections.
- CDC is investigating the link between Zika and GBS.
Zika Virus in Americas

- In May 2015, first locally-acquired cases in Americas were reported in Brazil.
- Outbreaks are occurring in many countries and territories in Americas.
- Local vector-borne transmission of Zika virus has not been reported in continental U.S.
- Imported cases may result in virus introduction and local spread in some areas of U.S.
Zika Virus Disease in United States, 2015–2016
As of April 27, 2016
Zika Virus Vectors

*Estimated Range in U.S.*

**Aedes aegypti and Aedes albopictus** Mosquitoes
Preventing Zika

- Keep mosquitoes outside
- Create a barrier between you and mosquitoes
- Wear insect repellent
- Protect your family
- Protect your partner
- Do your homework before traveling
CDC’s Top 10 Zika Response Planning Tips for State and Local Health Officials

- Vector control and surveillance
- Public health surveillance and epidemiological investigation
- Laboratory testing and support services
- Prevention of sexually transmitted Zika virus infections
- Prevention of blood transfusion-transmitted Zika virus infections
- Maternal and child health surveillance and response
- Rapid birth defects monitoring and follow-up
- Travel health news
- Clinician outreach and communication
- Risk communication/community education
Vector Control and Surveillance

- **Integrated vector management approach**
  - Planning
  - Surveillance
  - Source reduction
  - Controls: adulticide and larvicide
  - Evaluation
  - Public education
  - Partnerships
What National Environmental Health Association is Doing

- Weekly discussions with CDC around identifying what environmental health (EH) professionals need to prepare for and prevent the spread of the Zika virus
- Providing timely and useful information to EH professionals
- Supplying up-to-date information to support EH programmatic efforts from CDC, PAHO, WHO, and other legitimate sources
Key Points for Environmental Health Professionals

- Integrated vector management approach is essential to controlling Zika virus mosquito vectors.
- Guidance materials are available for environmental health and vector control program planning and improvement.
- Environmental health and vector control professionals can access available training to enhance competencies.
NCEH/ATSDR PRIORITIES
NCEH/ATSDR Mission

- Protect people’s health from environmental hazards that can be present in the air we breathe, the water we drink, and the world that sustains us by
  - Investigating the relationship between environmental factors and health
  - Developing guidance
  - Building partnerships to support healthy decision making
NCEH/ATSDR Priorities

1. Reduce asthma morbidity and mortality
2. Protect children from the health risks of harmful exposures and conditions
3. Ensure safe drinking water
4. Use innovative laboratory methods to detect, diagnose, and prevent environmental disease
NCEH/ATSDR Focus Areas

- Get tough with asthma
- Expand tracking
- Focus on safe water from all sources
- Re-invigorate ATSDR
- Prevent childhood lead poisoning
National Asthma Control Program Approach

- Three-part approach to advance public health – health care collaboration around asthma
  - Funding state programs and national organizations
  - Promoting asthma quality measures
  - Informing policy makers
Aspirational Goal for Asthma

- Prevent 500,000 asthma-related hospitalizations and ED visits among children enrolled in Medicaid/CHIP in funded states over next 5 years
  - Time is right to make a big impact on asthma morbidity
  - Many partners ready to get involved
National Environmental Public Health Tracking Program

- PEW Commission Report 2000
- Referred to “environmental health gap”
- “The fundamental goal ... is to enhance the public health response to environmental health threats through a national strategy for tracking hazards, exposures, and health outcomes.”
  - Vision included a program stretching across all 50 states
Grantees
26
25 states + 1 city

State and Local Practitioners
200+

CDC-ASTHO Tracking Fellowships
34

Partnerships
CDC programs, federal agencies, national organizations

CDC’s National Environmental Public Health Tracking Program

Tracking Grantee State
Tracking Grantee City
ASTHO Fellow State
ASTHO Fellow City

August 2014
Focus on Safe Water from All Sources

- Work with communities to address concerns about exposure to contaminated drinking water
- Reduce exposures to and disease from non-infectious waterborne contaminants
- Support public health agencies during water contamination events
ATSDR Focus

- Congressionally mandated 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
Helping Prevent Childhood Lead Exposure

- Surveillance
- National expertise, guidance, and recommendations
- Collaboration with federal agencies
- Funding of lead poisoning prevention programs and staff in state/local health departments
  - CDC recently awarded $11 million in funding to 29 states, the District of Columbia, and five cities