



NIEHS Programs in Children's Environmental Health (CEH)

**Gwen W. Collman, Ph.D Acting Deputy Director, NIEHS
Secretary's Advisory Council on Infant Mortality (SACIM)**

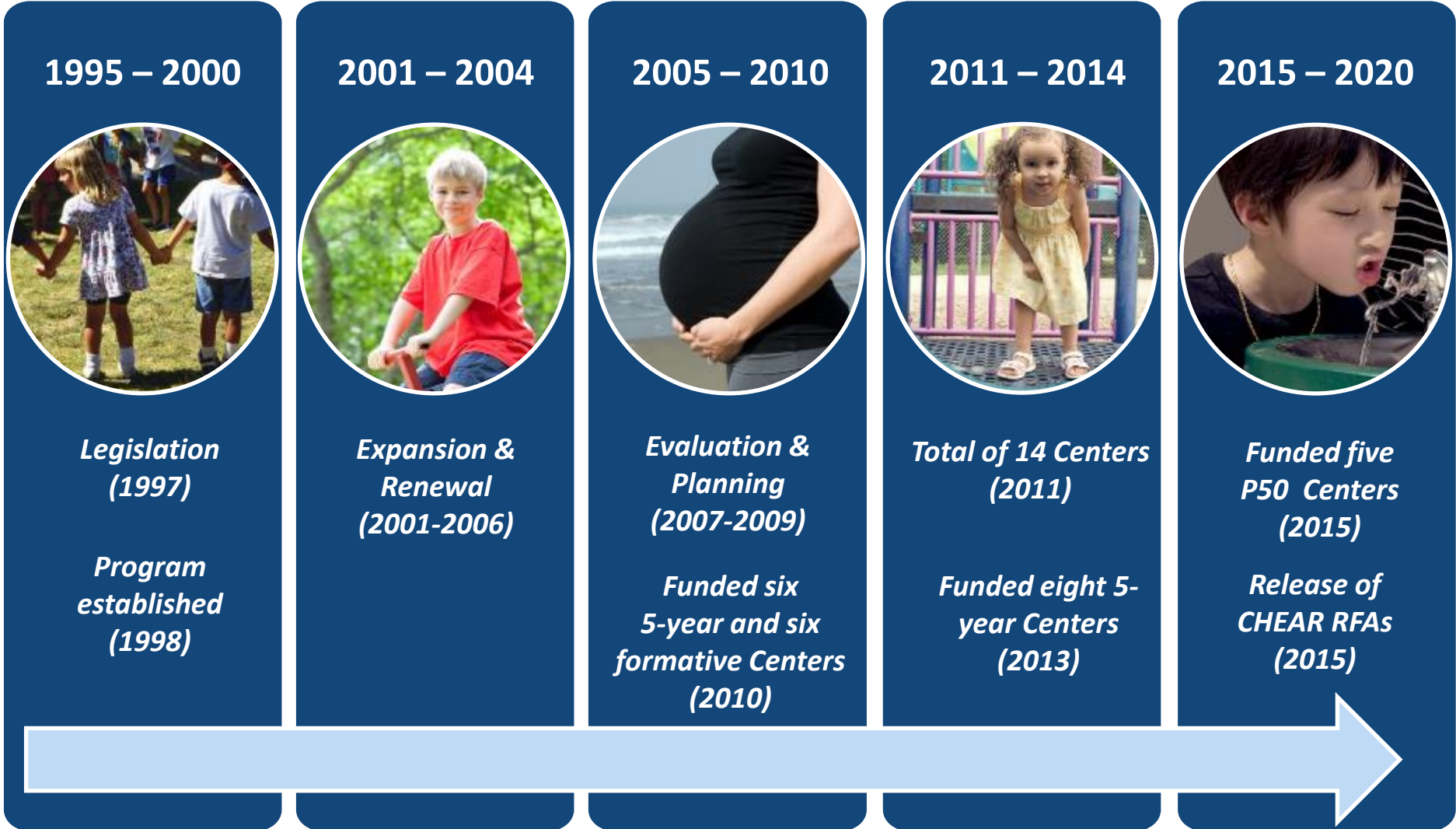
January 26, 2021

The National Institute of Environmental Health Sciences

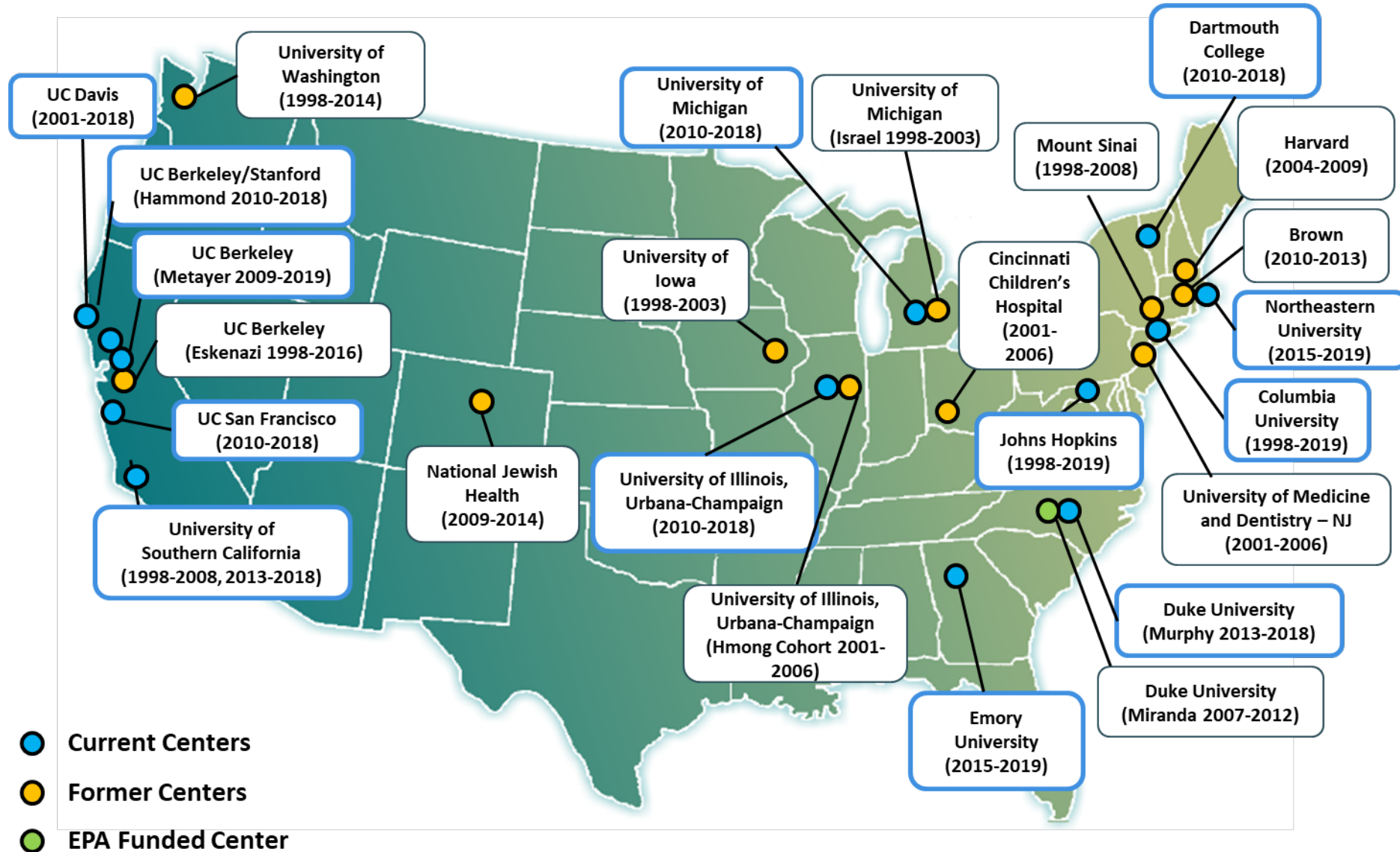
- Located in Research Triangle Park, NC
- Mission: To discover how the environment affects people in order to promote healthier lives
- FY2020 budget of about \$667 million
- Wide variety of programs:
 - Intramural laboratories
 - Extramural funding programs
 - National Toxicology Program
 - Clinical research program



NIEHS & EPA Children’s EH Centers Program History & Milestones



Current and Former Children's EH Centers



Children's EH Centers Impact Report

NIEHS/EPA CHILDREN'S ENVIRONMENTAL HEALTH AND DISEASE PREVENTION RESEARCH CENTERS

IMPACT REPORT

PROTECTING CHILDREN'S HEALTH WHERE THEY LIVE, LEARN, AND PLAY

Children's Health Matters

- The number of children diagnosed with leukemia has increased by 35% over the past 40 years.¹
- 8.4% of children in the U.S. have asthma.²
- 1 in 42 8-year-old boys have autism.³

Children in the U.S. are at high risk for chronic disease as a result of increasing exposures to environmental toxicants.

- Approximately 100,000 premature deaths per year in the U.S. are attributable to air pollution.⁴
- 60% of acute respiratory infections in children worldwide are related to environmental conditions.⁵
- Air pollution contributes to 600,000 deaths worldwide in children under 5 years old.⁶

Leading the field in research that improves the quality of life for children and adults

Children's Centers have led the field in environmental health research, increasing awareness of environmental health nationally and internationally, and establishing a field of study on the centers for disease prevention and control.

Children's Centers research has identified the critical role environmental toxicants play in the development of asthma, obesity, ADHD, cancer, autism, and other childhood illnesses that may set the trajectory of health throughout adult life.

The centers have led the way in clarifying the relationship between exposures in the earliest stages of human development—including before birth—and the occurrence of disease later in life. Improving understanding of the developmental origins of health and disease is critical for developing effective interventions to reduce health risks and improve quality of life for children and adults.

WANT TO LEARN MORE?

If you are interested in the specific findings, see the [Health Outcomes](#) section.

If you are interested in a specific chemical, see the [Environmental Exposures](#) section.

Children's Centers Publications by Year (as of June 2017)

| Year | Publications |
|------|--------------|
| 1998 | 18 |
| 2000 | 21 |
| 2001 | 22 |
| 2002 | 30 |
| 2003 | 78 |
| 2004 | 74 |
| 2005 | 91 |
| 2006 | 103 |
| 2007 | 101 |
| 2008 | 106 |
| 2009 | 101 |
| 2010 | 110 |
| 2011 | 147 |
| 2012 | 125 |
| 2013 | 119 |
| 2014 | 181 |
| 2015 | 174 |
| 2016 | 120 |

2,544 publications, including journal articles and book chapters

141 publications per year, on average (excluding 1998).

Through their groundbreaking work, the Children's Centers have pushed the boundaries of clinical, field, and laboratory-based research. The research has been disseminated through thousands of publications in peer-reviewed journals. The research findings lay a critical foundation for reducing health risks and improving quality of life for children and adults.



Other Research Programs of Interest

Infant mortality, Maternal and Child Health, Maternal Morbidity & Mortality

- Environmental Health Disparities Centers with NIMHD
- Environmental Children's Health Outcomes (NIH/OD; trans-NIH effort)
- Household Air Pollution Clinical Trial (NHLBI, NIEHS, FIC)
- NIEHS Superfund Research Program
- NIEHS IRP Perinatal and Early Life Research Group in the Epidemiology Branch
- Birth Defects research program (NICHD, NIEHS)
- Human Health Exposure Resource (NIEHS)
- ORWH trans-NIH efforts in MMM
- Pregnancy as a vulnerable window for Maternal Health
- Environmental Influences on Placental Origins of Development (ePOD)
- Environmental factors in Autism
- INCLUDE - Downs Syndrome Research Program

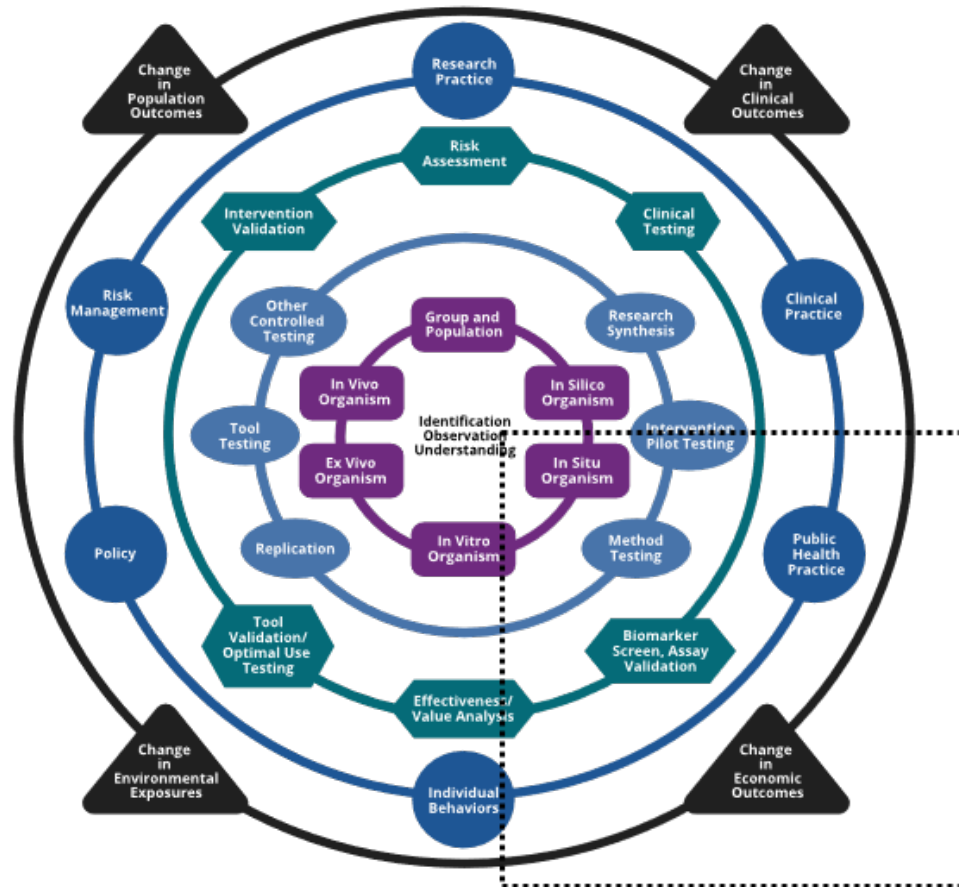


Training Programs of Interest

Infant Mortality, Maternal and Child Health and Maternal Mortality & Morbidity

- Pediatric & Reproductive Environmental Health Scholars Program
- Pediatric Environmental Health Specialty Units (CDC & EPA)
- Early Career Investigator program in the NIEHS & EPA Children's EH Centers
- Post-doc trainees in the Intramural Programs at NIEHS and NICHD

Research Translation



- NIEHS CEH Research Translation Centers (FOA ES 20-001)
- DNTP Systematic review of hypertensive heart disease during pregnancy and TRAP
- Pediatric Environmental Health Specialty Units (CDC & EPA)
- Community Engagement Cores
- Partnerships in Environmental Public Health