



New York State
**Centers of Excellence in
Children's Environmental Health**

JANUARY 28, 2015

**THE NEED FOR CENTERS OF EXCELLENCE IN
CHILDREN'S ENVIRONMENTAL HEALTH IN NEW YORK STATE**

The Centers of Excellence in Children's Environmental Health are a coordinated network of diagnostic and referral centers that provide expert care in pediatric environmental medicine for children across New York State who are exposed to toxic hazards or suffer from diseases of suspected environmental origin.

The Centers serve New York's children and families. They offer specialized consultations in pediatric environmental medicine to referring physicians. They are a resource to the New York State Department of Health and to county and local health departments. They offer educational programs in children's environmental health and preventive medicine to physicians, nurses, public health professionals and the public. They train the next generation of leaders in pediatric environmental medicine. Each of the Centers is staffed by a multidisciplinary team that includes physicians, nurses, social workers, nurses, public health educators and industrial hygienists.

Centers of Excellence currently exist in New York City (Icahn School of Medicine at Mount Sinai), Long Island (Stony Brook University School of Medicine), Westchester County (New York Medical College), the Capitol Area (Albany Medical College), Rochester (University of Rochester School of Medicine and Dentistry), Upstate Medical University Hospital at Syracuse and SUNY Buffalo. The Centers are coordinated by the Center for Environmental Health of the New York State Department of Health.

These centers are addressing the major diseases confronting the children of New York today include Asthma, Autism, Allergies, Attention deficit/hyperactivity disorder, Leukemia, Pediatric brain cancer, Birth defects, Obesity and Diabetes. Incidence and prevalence rates of these diseases are high and for many are increasing as per the 3rd Edition of EPA's America's Children and the Environment:

The proportion of children reported to currently have asthma has increased from 8.7% in 2001 to 9.4% in 2010. Asthma rates have risen especially rapidly among inner-city, low income, minority children.

From 1997 to 2010, the proportion of children ages 5 to 17 years reported to have ever been diagnosed with attention-deficit/hyperactivity disorder (ADHD) increased from 6.3% to 9.5%;

Leukemia was the most common cancer diagnosis for children from 2004–2006, representing 28% of total cancer cases. Incidence of acute lymphoblastic (lymphocytic) leukemia increased from 30 cases per million in 1992–1994 to 35 cases per million in 2004–2006;

In 2005–2008, a higher percentage of Mexican-American and Black non-Hispanic children were obese at 22% and 20%, respectively, compared with 14% of White non-Hispanic children.

Synthetic Chemicals in the Environment. Children in New York State are surrounded by unprecedented levels of synthetic chemicals. Most of these chemicals have never been tested for

toxicity.

- Today, there are more than 80,000 synthetic chemicals in commercial use, nearly all developed in the past 50 years.
- 3,000 of these are high-volume chemicals, with annual production exceeding 1 million pounds.
- Fewer than 20% of high-volume chemicals have been tested for toxicity to children.
- National surveys conducted by CDC show measurable levels of high-volume chemicals in the bodies of nearly all Americans, including newborn infants.

Evidence is increasing that toxic chemicals in the environment cause disease in children.

- Air pollutants, mold and cigarette smoke contribute to the causation of asthma.
- Lead, mercury, PCBs and organophosphate pesticides are known to cause mental retardation, attention deficit disorder, autism spectrum disorders and learning disabilities.
- Benzene, other solvents and pesticides have been linked to childhood cancer

Most pediatricians and other health care providers have little training in environmental medicine. More than 90% of New York State pediatricians report that that they commonly see children with diseases of environmental origin, yet only 20% of these pediatricians have received training in pediatric environmental health (please see attached article on pediatricians' knowledge).

Chronic disease of environmental origin in children is extremely costly. A 2005 analysis by the Mount Sinai School of Medicine estimates the annual costs of environmental disease in New York's children to be \$4.65 billion (please see attached article).

The Solution. The statewide network of eight Centers of Excellence in Children's Environmental Health that has been established across New York over the past eight years represents an efficient and cost-effective approach to diagnosing, treating and preventing disease of toxic environmental origin in New York State's children.

These Centers of Excellence:

- increase the accuracy of diagnosis of children's diseases caused by environmental factors;
- improve the treatment of children's diseases caused by environmental factors;
- prevent diseases caused by environmental factors;
- better quantify and describe the burden in the state of children's diseases of environmental origin; and
- strengthen and expand educational programs in children's environmental health for professionals at all levels.

Funding History

2014-15: \$1 million

2008-09: \$800,000

2007-08: \$500,000

2006-07: \$200,000

Current Need

The Centers of Excellence in Children’s Environmental Health have received core funding from New York State since 2005. The Children’s environmental Health Centers of Excellence are now supported by the \$1 million from the State. To maintain the current commitment in ’15-’16, minimum support of \$1 million is required to maintain services at the current level. Most would cease to exist without State funding.

Summary

The Centers of Excellence in Children’s Environmental Health are a unique and highly cost-effective resource. They provide extraordinary care to New York’s children, and they educate doctors, nurses, policy makers, government officials and the public about environmental threats to the health of children. If the Centers can succeed in reducing the \$4.1 billion annual cost of disease of environmental origin in the children of New York by even 1%, they will pay for themselves many times over. Even in these difficult fiscal times, the Centers of Excellence in Children’s Environmental Health represent a wise investment.

