



STATE OF CONNECTICUT

STATE BOARD OF EDUCATION



TO: Superintendents of Schools
Directors of Special Education
School Nurse Supervisors
School Medical Advisors

FROM: George A. Coleman, Acting Commissioner of Education 

DATE: July 27, 2011

SUBJECT: The Impact of Early Childhood Lead Exposure on Educational Test Performance among Connecticut Schoolchildren, Phase 1 Report

Childhood lead poisoning remains a critical environmental health concern in Connecticut. Childhood lead exposure has been linked to a number of adverse cognitive outcomes, including reduced performance on standardized intelligence quotient tests, decreased performance on cognitive functioning tests, adverse neuropsychological outcomes, neurobehavioral deficits, decreased end-of-grade test scores and classroom attention deficit behaviors.

In response to these health concerns, the Connecticut State Department of Education (CSDE) and the State Department of Public Health (DPH) engaged researchers at Duke University's Children's Environmental Health Initiative to conduct an analysis of the effects of early childhood lead exposure on test performance among Connecticut schoolchildren. Attached is a copy of the report titled, "*The Impact of Early Childhood Lead Exposure on Educational Test Performance among Connecticut Schoolchildren, Phase 1 Report.*"

Results from this study include the following:

- early childhood lead exposure negatively affected Connecticut Mastery Test scores in both reading and mathematics;
- disparate exposures by race suggest that exposure to lead may account for part of the achievement gap among Connecticut schoolchildren; and
- negative associations were statistically significant at blood lead levels well below the current Centers for Disease Control and Prevention's blood lead action level of 10µg/dl.

These results emphasize the continued importance of protecting children from lead exposure as well as the potential implications for Connecticut's students and educators. The study will be used as part of the research base for identifying the systems necessary for improved outcomes for students and the professional development needs of teachers and other educational professionals, including prevention and educational interventions for students.

Considering the importance of these results, the CSDE will develop guidelines to inform the practice within school districts in:

- lead prevention;
- early identification of students exposed and affected by lead; and
- educational programming in response to lead exposure in order to mitigate or eliminate existing or potential deficits.

As these guidelines are being developed, please note that there are two on-line training courses available now for educators:

1. The *Health Education Lead Poisoning (H.E.L.P.) Course Series* provides educators, health professionals, social service professionals and early childhood care providers with research based training that focuses on the neurological, developmental, educational and social implications of childhood lead poisoning. This course is available on the DPH, Public Health Foundation TrainConnecticut's Web site at <http://ct.train.org/DesktopShell.aspx>; and
2. *Lead Poisoning: Limiting the Ability to Learn*, an awareness training course for educators regarding lead poisoning in children. This course was developed for the Lead Action for Medicaid Primary Prevention (LAMPP) project by the University of Connecticut Cooperative Extension System Healthy Environments for Children Initiative and is available on the Connecticut Children's Medical Center's Web site at http://www.connecticutchildrens.org/body_dept.cfm?id=1483.

For additional information regarding lead prevention programs and a wide range of lead poisoning prevention strategies, please access the DPH Lead Poisoning Prevention and Control Program's Web site at <http://www.ct.gov/dph/cwp/view.asp?a=3140&q=387550>.

GAC:sgk
cc: Charlene Russell-Tucker, Associate Commissioner

Attachment