

# Childhood Lead Poisoning Prevention Program

## City of Milwaukee Health Department

Paul A. Biedrzycki, MPH, MBA

Director of Disease Control and Environmental Health

Lisa Lien, MSM, RN

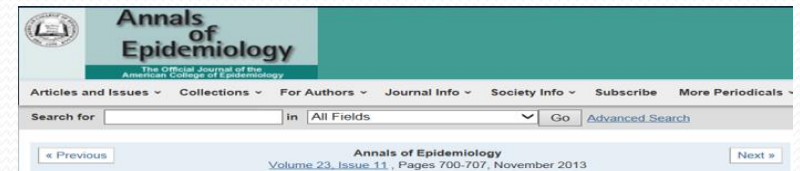
Manager of Home Environmental Health Program

# Childhood Lead Poisoning – A continuing public health threat!

- Lead is a powerful neurotoxin
- Health effects on central and peripheral nervous system, reproductive health, kidney and hematological systems
- Low level exposures significant for infants, toddlers and children < 6 years (developmental stage)
- Primary source of exposure in lead-based paint
- Secondary sources include water, food, air, soil and various household items
- Children exposed to lead hazards inside and outside deteriorating residential units (ingestion of fine dust and particulate on contaminated surfaces)

# Recent Studies and Research

- Early childhood exposure to lead results in 3x more likely to be suspended by 4<sup>th</sup> grade
- Early childhood exposure results in significantly lower scores Wisconsin Knowledge and Concepts Exam at 4<sup>th</sup> grade
- Research suggesting childhood lead exposure and later in life criminal behavior



## Moderate lead exposure and elementary school end-of-grade examination performance

Sheryl Magzamen, PhD, Pamela Inn, MS, Michael S. Amato, MS, Jeffrey A. Havlena, MS, Henry A. Anderson, MD, Colleen F. Moore, PhD, Mary S. Kanarek, PhD

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[Abstract](#) [Full Text](#) [PDF](#) [References](#)

### Abstract

#### Purpose

This study investigated the association between moderate lead poisoning in early childhood with performance on a comprehensive set of end-of-grade examinations at the elementary school level in two urban school districts.

#### Methods

Children born between 1996 and 2000 who resided in Milwaukee or Racine, WI, with a record of a blood lead test before the age of 3 years were considered for the analysis. Children were defined as exposed (blood lead level  $\geq 10$  and  $< 20$   $\mu\text{g/dL}$ ) or not exposed (BLL  $< 5$   $\mu\text{g/dL}$ ). Parents of eligible children were mailed surveys to consent to participation and elicit information on potential confounders. On consent, children were matched to educational records for fourth grade Wisconsin Knowledge and Concepts Examinations. Seemingly unrelated regression was used to evaluate the relation between scaled scores on all sections of the examination (math, reading, language arts, science, and social studies) with exposure status, controlling for demographics, social status indicators, health indicators, and district-based poverty indicators.



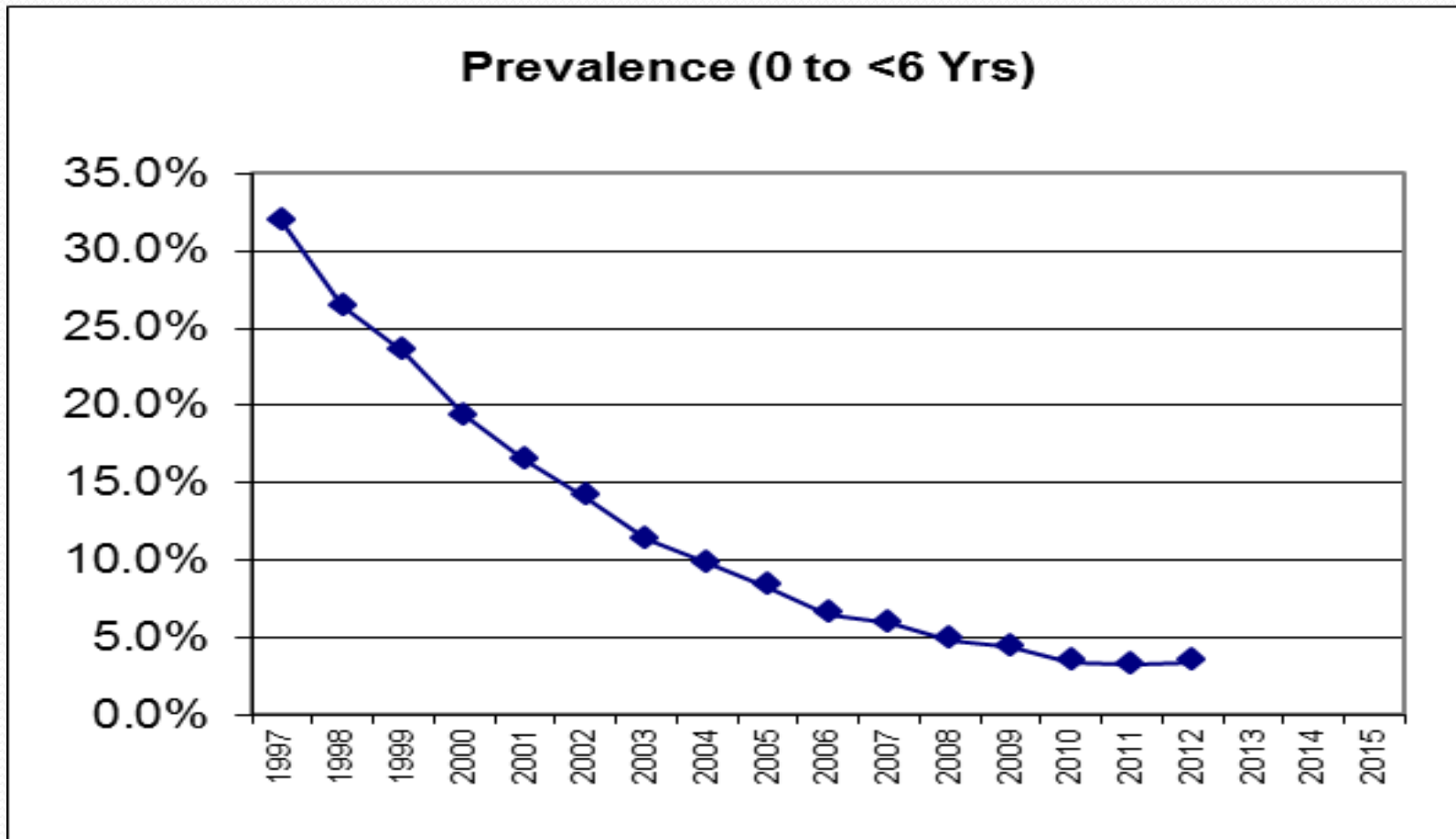
## Children exposed to lead more likely to be suspended from school

Aug. 14, 2013 | by Meghan Lepisto

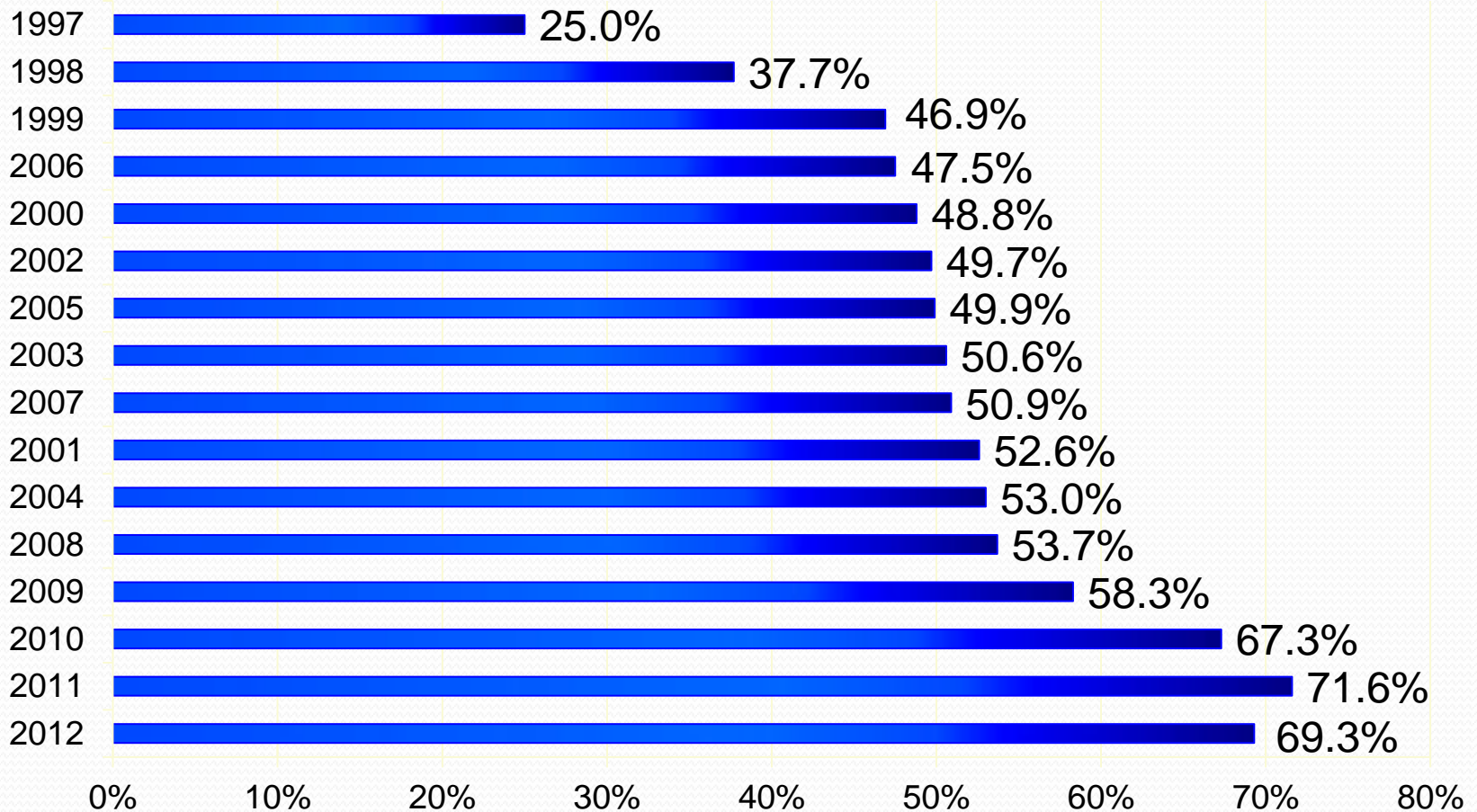
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Children who are exposed to lead are nearly three times more likely to be suspended from school by the 4th grade than children who are not exposed, according to a new University of Wisconsin-Madison study funded jointly by the Robert Wood Johnson Foundation and the Wisconsin Partnership Program Education and Research Committee.

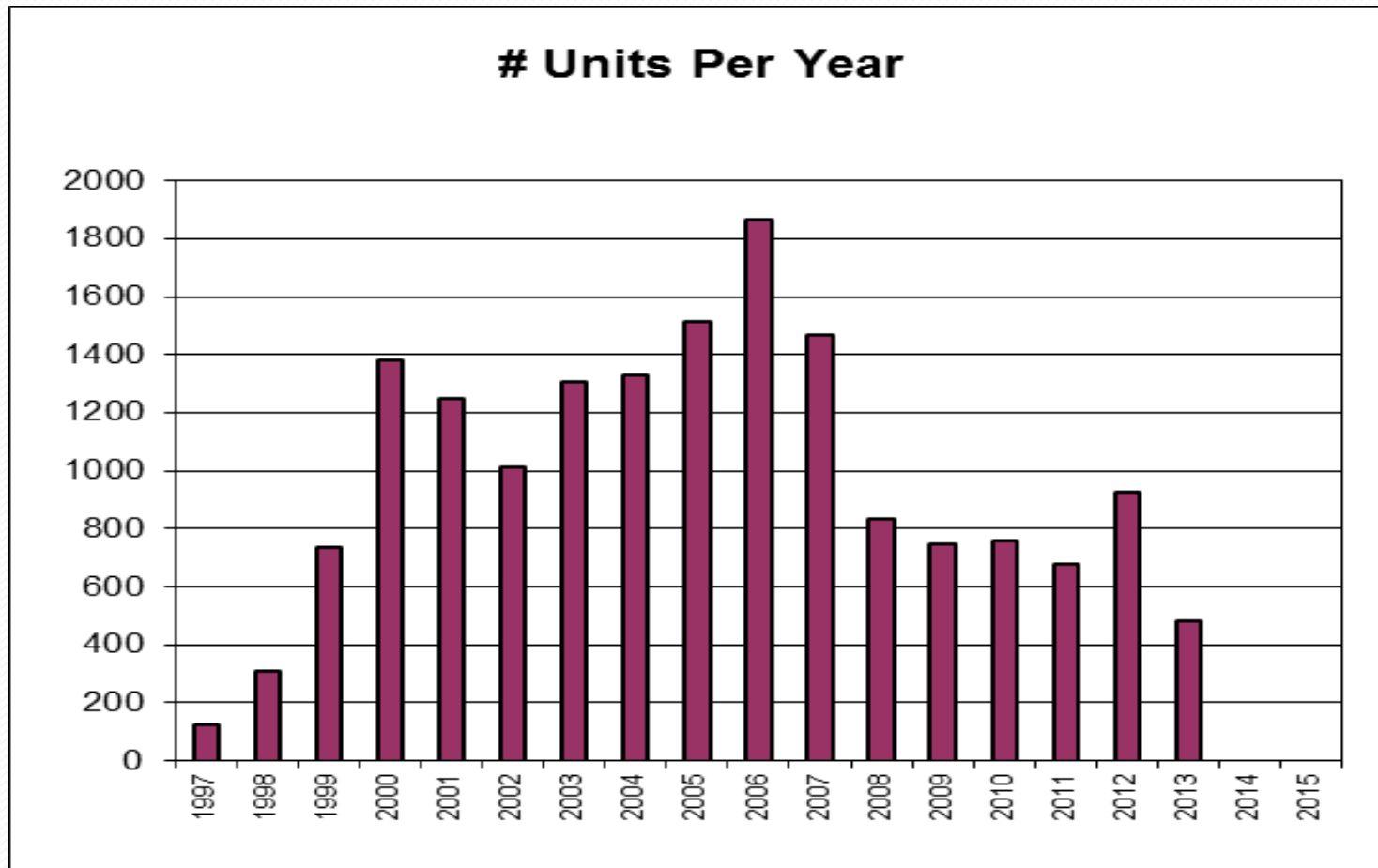
# Percent Lead Poisoning Prevalence – City of Milwaukee (children <6 yrs)



# Percent Blood Lead Testing, City of Milwaukee (children <24 months)



# Housing Units made Lead Safe City of Milwaukee (16, 721 units)



# Key Program Strategies

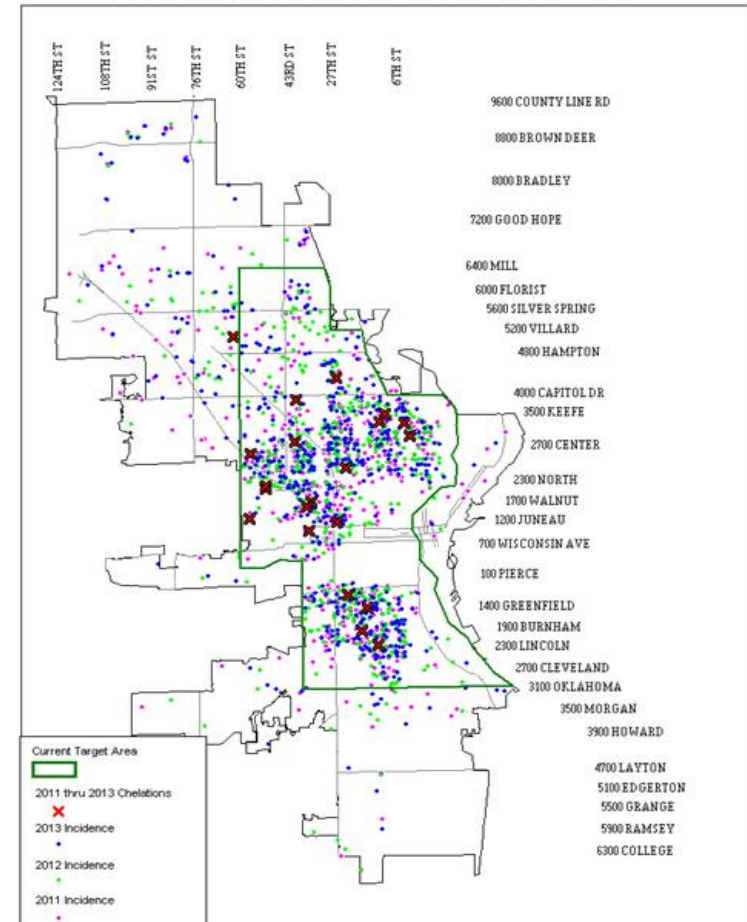
- Follow-up on all reported cases of elevated blood lead levels ( $> 5$  ug/dL).
- Administer primary prevention program.
- Assure lead safe work practices for lead abatement activity.
- Provide education and outreach to property owners and parents.



# 2013 Elevated Blood Level (EBL) Investigations

- Public Health Nurses visit children/family
- Conduct investigations at primary and supplemental addresses
- 2093 children poisoned 2011-2013 74% residing in north side zip codes
- In 2012 CDC lowered the level of concern to  $>5$  ug/dL

2011-2013 Incidence & Chelations  
City of Milwaukee Childhood Lead Poisoning Prevention Program

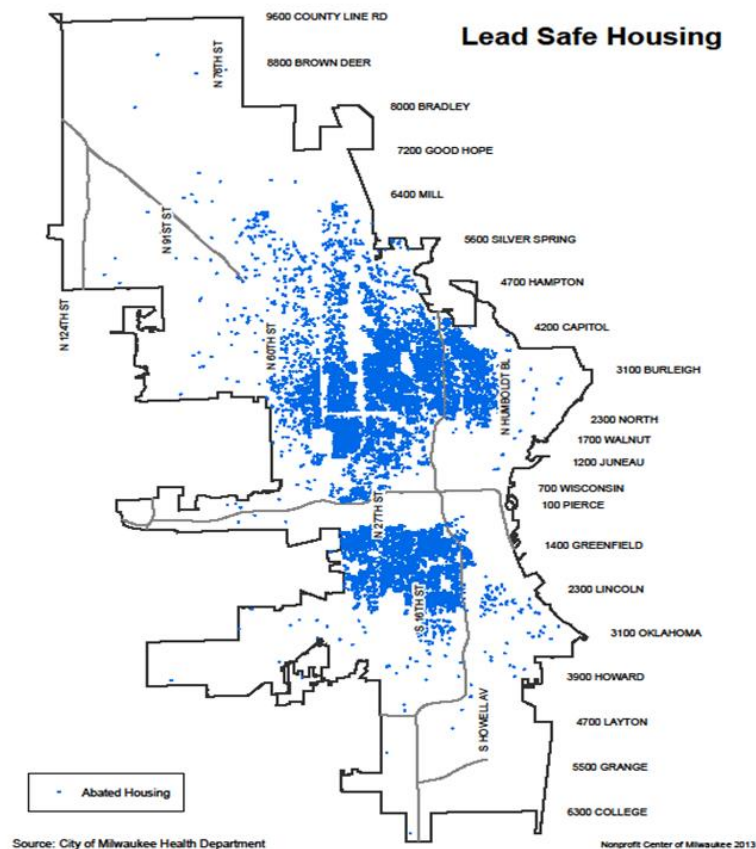


Milwaukee Health Department, January 2014



# Primary Prevention

- Average window abatement MHD subsidy is \$3820 (2013)
- Average owner match/contribution is about \$880 per housing unit. (2013)
- 14% are owner occupied and 86% are rental properties
- Average Milwaukee housing unit has 13 windows (primary source of lead exposure)



# Contractors and Permits

- Certified Lead Abatement Contractors perform lead abatement work on residential properties.
- Developed new Contractor list in 2013 with 11 certified Contractors
- Residential property owners select a contractor from the MHD Certified Lead Abatement list
- Issuance of permits for lead abatement work to be monitored and cleared by MHD
- Funding workforce development with Lead Worker, Lead Supervisor and Window Installation training.

# Education and Outreach

- Coordinate and fund property owner participation in the required USEPA “Renovation, Repair and Painting Rule”
- Outreach to community organizations to provide lead information (e.g. testing, home maintenance practices, etc.)
- Conduct lead testing of children in homes and clinics
- Work with healthcare providers to build awareness and appropriate medical follow-up

# Working with the Community!

- Dominican Center
- Sixteenth Street Community Health Center
- Sherman Park Neighborhood Association
- Social Development Commission
- Hmong American Friendship Association
- Lisbon Area Neighborhood Development
- Layton Boulevard West Neighborhood
- Southside Organizing Committee

# Strategies For Future!

- Continue to pursue available state and federal funding to support MHD lead poisoning prevention activities.
- Continue to identify and leverage existing networks and housing rehabilitation initiatives for integration of lead abatement activities.
- Continue to explore and strengthen partnerships with community organizations and private healthcare systems to improve screening and testing of children and promote public awareness.
- Continue to collaborate with property owners, landlords and contractors on implementing cost-effective lead abatement models.



# Thank you!