

A Collaborative Model for Addressing a Lead Crisis Affecting a City's Children

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Disclaimers

- **None of the participants in this project have any financial interests or other conflicts of interest related to this project.**

Objectives

- **Define Lead Problem in Cleveland**
- **Highlight impact of lead on children**
- **Describe the Collaborative Partners in Health Model**
- **Preliminary Data**



Scope of the Problem

Challenge of Lead in Cleveland

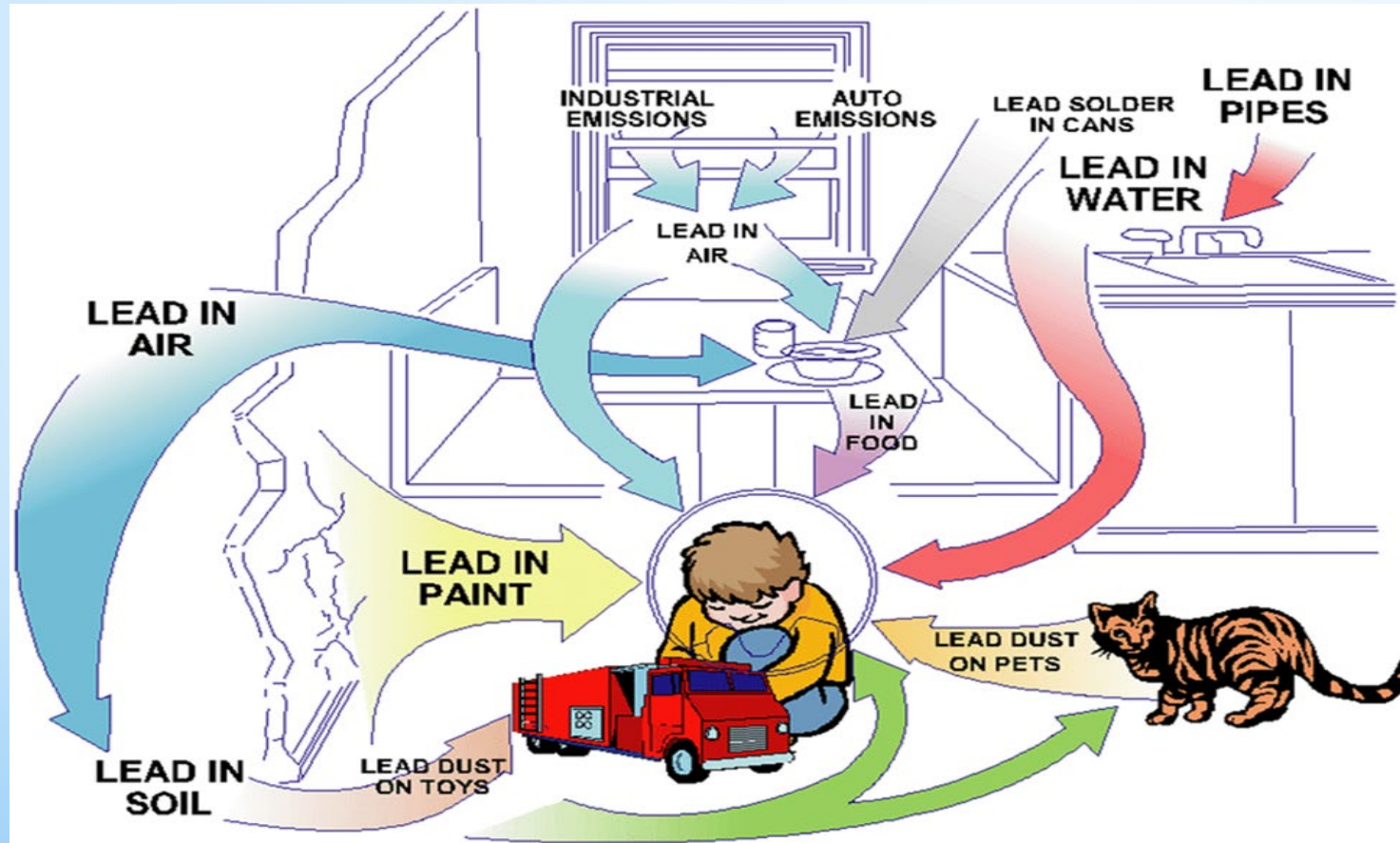
1st or 2nd in
child Poverty

3rd in % of
children with
elevated blood
lead levels

90% of the
housing built
before 1978

35% of
children
screened
ODH 2016

Understanding the Biology of Exposure: Sources



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Where Does Cleveland's Lead Come From?



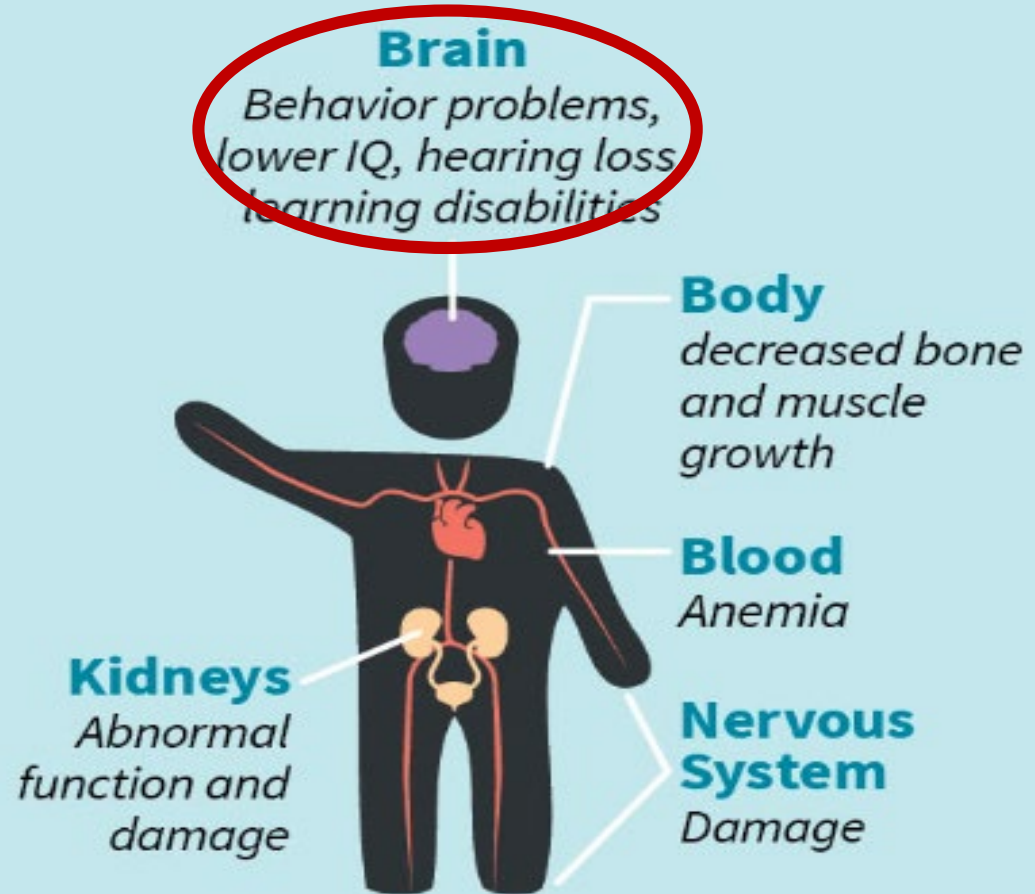
Lead Effects in Children's Bodies

Dosage Matters

Amount of lead

X

Length of exposure



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Societal Cost of Childhood Lead Poisoning Pew Foundation per birth cohort

- **Medical Costs: \$10.8-53.1 Million**
- **Special Education/ADHD \$297-413 Million**
- **Behavioral problems & crime \$1.7 Billion**
- **Loss of IQ & Earning Power \$190-268 Billion**

Cost of Prevention and Early Treatment vs Savings gained

- **Cost of Prevention and Early Treatment**

\$1.2-11 Billion

VS

- **What you save in costs: \$192-270 Billion**



Partners in Health Lead Screening Program

How we started

What we do

Partners in Health



Frances Payne Bolton School of Nursing



Cleveland Metropolitan Schools District



Cleveland Department of Public Health



MetroHealth School Health Program

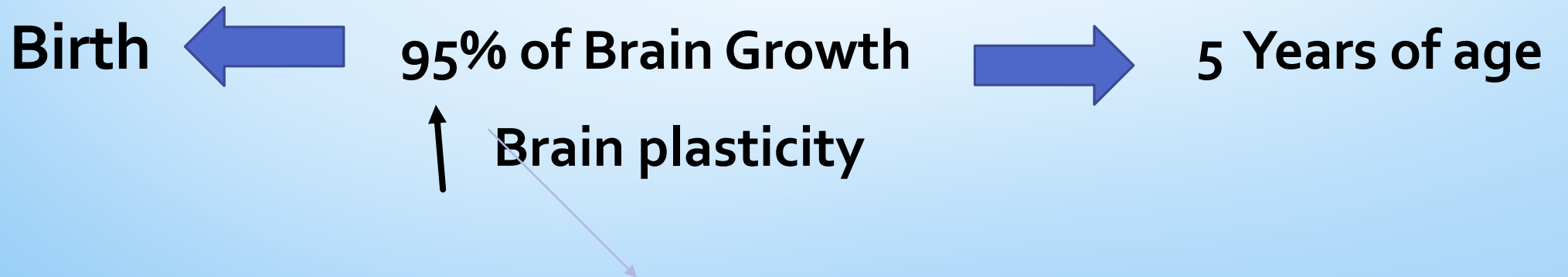


Cleveland Office of the Mayor

Project's Purposes

- 1. Provide community education on lead, lead screening for all 3-5 Year olds in the CMSD and follow up for families of children with elevated lead levels**
- 2. Provide inter-professional student community based clinical experiences through participation in a significant public health initiative.**

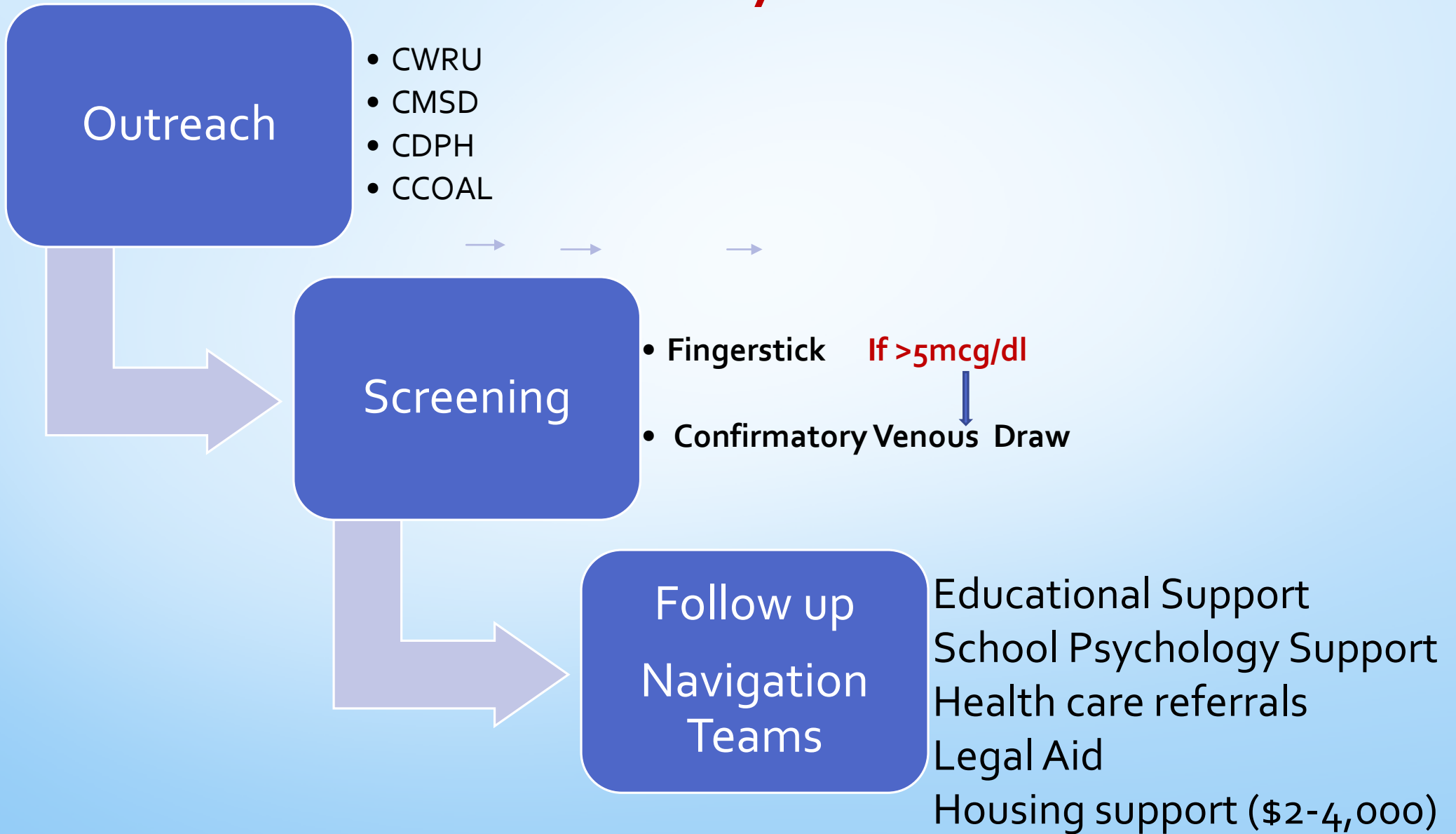
Impact of Lead on Neurobehavioral Development



Project Design Issues

- **Community Education is essential**
- **Take the service to the family rather than ask them to come to us.**
- **At least 80% of eligible children in each school will be screened.**
- **Extensive Follow up**

Lead Advocacy Model



Community Outreach

4-6 Events/ month through:

- School District Community Events
- City Council Community Events
- Other Grass Root Organizations
Community Events

Screening

- **Students from our BSN, PNP and Physicians Assistant students are trained in finger stick procedure**
- **On scheduled screening day we go in with a team of students and all of our equipment.**
- **All children get a sticker, toy and ice cream**

Confirmatory Venous Draws

All finger stick results of 5.0 mcg/dl must be confirmed by venous draw.

Some PA students were phlebotomists and do our venous draws

Should be done within two weeks of initial test and done at the schools.

Follow up for children who test high

- **Navigation Teams:**

Community Member(s)

+

**Health care Graduate Student or
Project Staff who is an RN**

**Make home visits/ provide education, support, advocacy
and referrals.**

Work To Date

Over 300 students trained in finger stick procedure

- **25 schools have been screened**
- **Over 1400 children screened**
- **All children with confirmed highs are being assigned to Navigation Teams**

Elizabeth Severance Prentiss Foundation Funding

- **Three year grant:**

Year 3: Screen all 68 elementary schools in the CMSD

Year 4: Expand beyond the CMSD to other schools and day care facilities in Cleveland.



QUESTIONS?