

Redlining Intersection with Lead Poisoning Prevention

Presented by:
Kelli Dodd, R.E.H.S.

Environmental Health Division
Columbus Public Health
City of Columbus



COLUMBUS
PUBLIC HEALTH

Outline

- What is Redlining?
- Lead Poisoning Information
- Lead Screening and Screening Rates
- The Healthy Children and Safe Homes by 2040 initiative

What is Redlining?

- Largest social engineering policy of the 20th century, it's the discriminatory practice of denying investments in certain neighborhoods because of residents' race
- Resulting in widespread disinvestment in certain neighborhoods
- Affected health outcomes, access to resources, neighborhood services, job opportunities and more



Uncovering the Impact of Redlining In Columbus

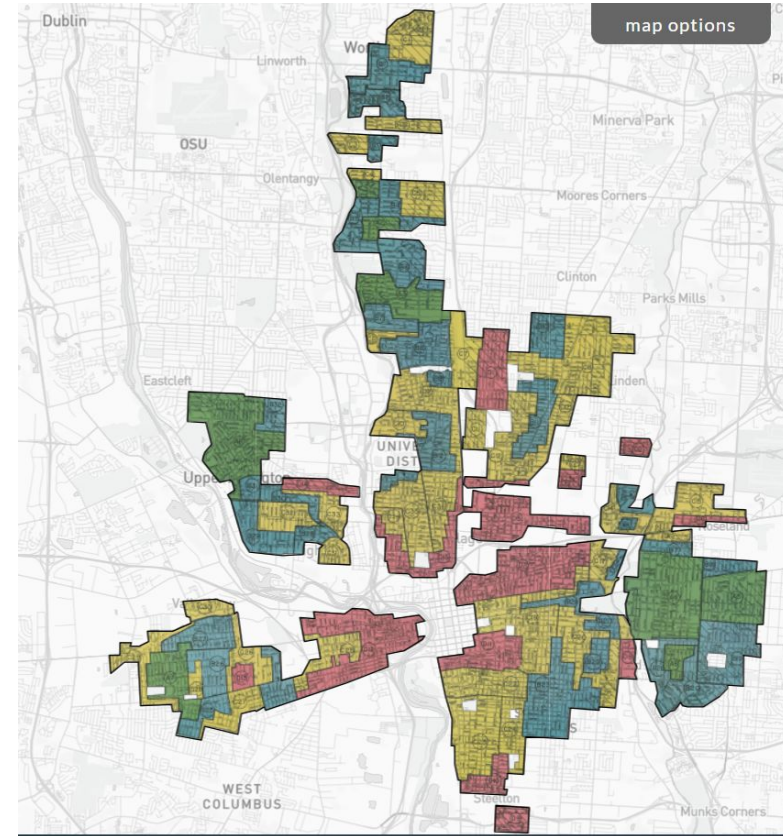
- Neighborhoods rated for mortgage loan risk based on the property AND people.
- Neighborhood disinvestment effects cascade to present day.

**Grade A
Best**

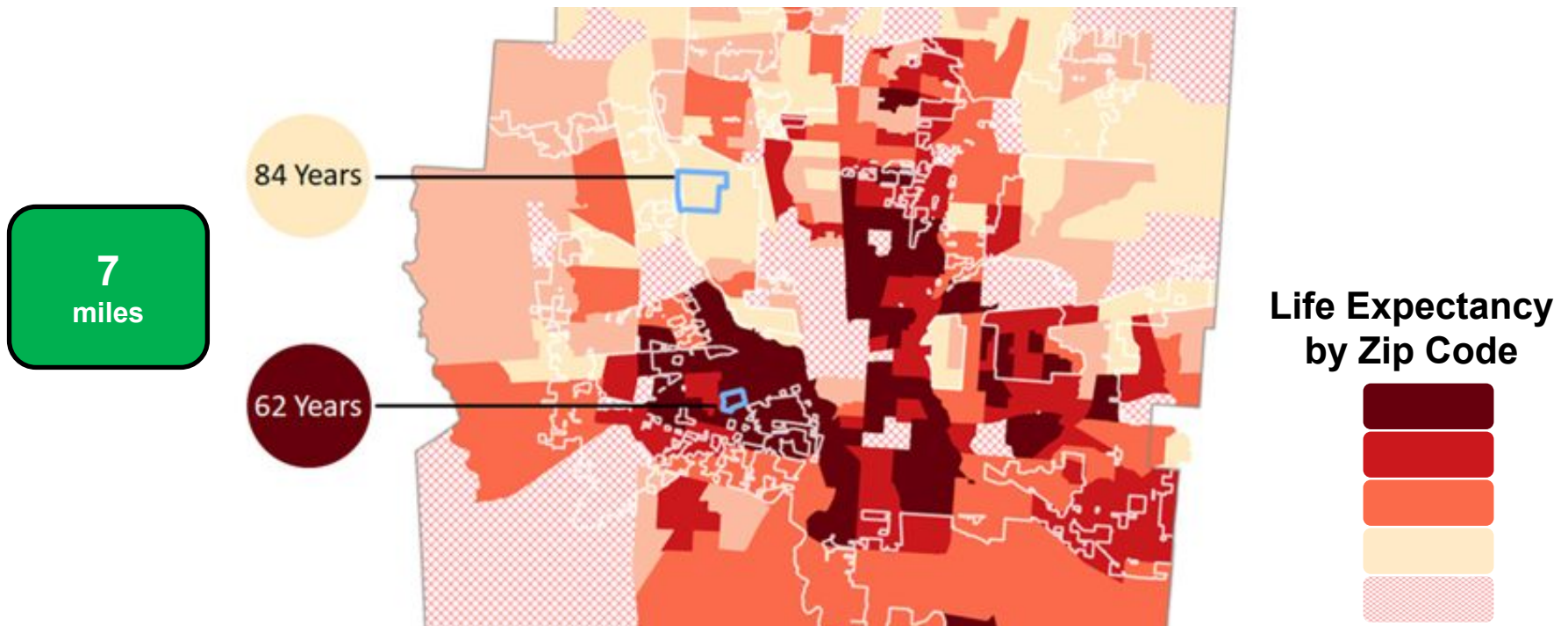
**Grade B
Still Desirable**

**Grade C
Declining**

**Grade D
Hazardous**



Unveiling Redlining's Impact on Disparities



Why Talk About It?

- Columbus Public Health is charged with protecting health and improving lives
- February of 2020 Mayor Ginther charged Columbus Public Health with addressing racism as a public health crisis
- We must know how the past is still impacting our most vulnerable populations



Undesigning the Redline in Columbus

UNDESIGN THE RED LINE

1. WHAT IS REDLINING?
 Redlining maps and new restrictions, both used and later revised in 2010 cities. The underlying intent behind it remained everywhere after the...

2. REDLINING MAPS & MORE
 Redlining maps and new restrictions, both used and later revised in 2010 cities. The underlying intent behind it remained everywhere after the...

3. TIMELINE

ERA 1: SEPARATE AND UNEQUAL (1850-1900)
 SLAVERY, CIVIL WAR, ABOLITION, GREAT RELOCATION, COOPERATIVE MOVEMENT

ERA 2: MORE SEPARATE, MORE UNEQUAL (1900-1960)
 JIM CROW, REDLINING, UPRISINGS

ERA 3: STILL SEPARATE, STILL UNEQUAL (1960-1990)
 CIVIL RIGHTS, UPRISINGS

ERA 4: (HOW WE LEARNED NOTHING) SEPARATE AND UNEQUAL (1990-1999)
 WAR ON DRUGS, INVESTMENT REZONINGS, INCARCERATION, TRAFFIC, TRAUMA

5. HOW CAN WE UNDESIGN REDLINING?
 OVER TIME we have collected many ideas about how to undo redlining. It's all about designing the WE, because some of these ideas are strategies to break things. Others give you new ideas to start, or add yours!

1. RE-FRAME
 RE-DEFINE THE PROBLEM

2. RE-DESIGN
 RE-THINK THE SOLUTION

3. RE-INVEST
 RE-ALLOCATE THE RESOURCES

SECTION 5/5 IDEAS FOR UNDESIGNING

UNDESIGNING THE REDLINE WITH COLUMBUS PUBLIC HEALTH

THRIVING COMMUNITY

CREATING SHARED VALUE

45,985	5
7,453	358

OPPORTUNITY

5	358	45,985	7,453
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EDUCATION

7,453	358
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WELL BEING

2,510	7,803
460	24,384
107	2,508

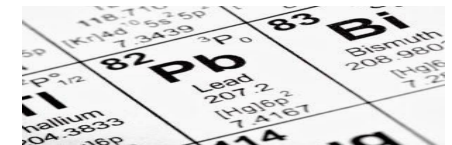
SECURE HOMES

HELP US DESIGN A HEALTHIER COLUMBUS!

COLUMBUS PUBLIC HEALTH

What is Lead (Pb)?

- Naturally occurring element¹
- Was used in gasoline (anti-knocking agent)
- Lead-based paints
- Typically ingested or inhaled
- Toxic to humans (especially the young) affecting almost every organ and system in the body²



Lead Poisoning – The Source

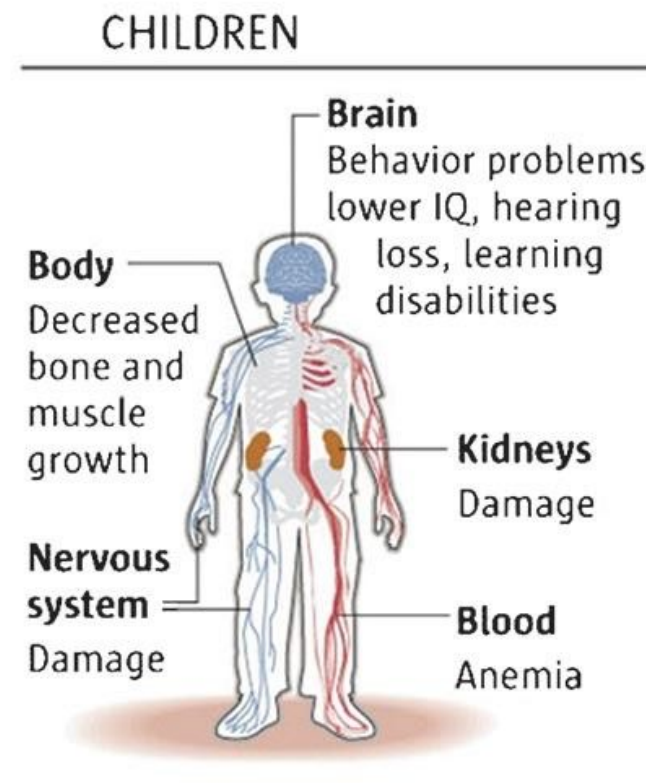
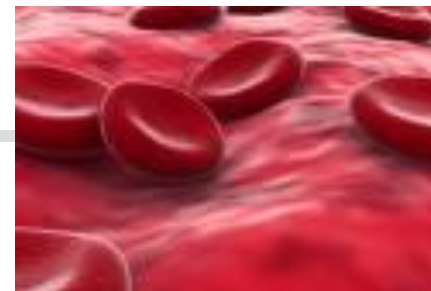
Environmentally, where does lead exposure come from?

- Homes built before 1978 are likely to contain lead-based paint
 - 80% of Ohio's lead poisoning cases result from paint chips/dust
- Other sources: water, food, occupational exposure, soil, toys, cosmetics, herbs/spices, and cookware



Health Effects of Lead Poisoning (BLL) in Children

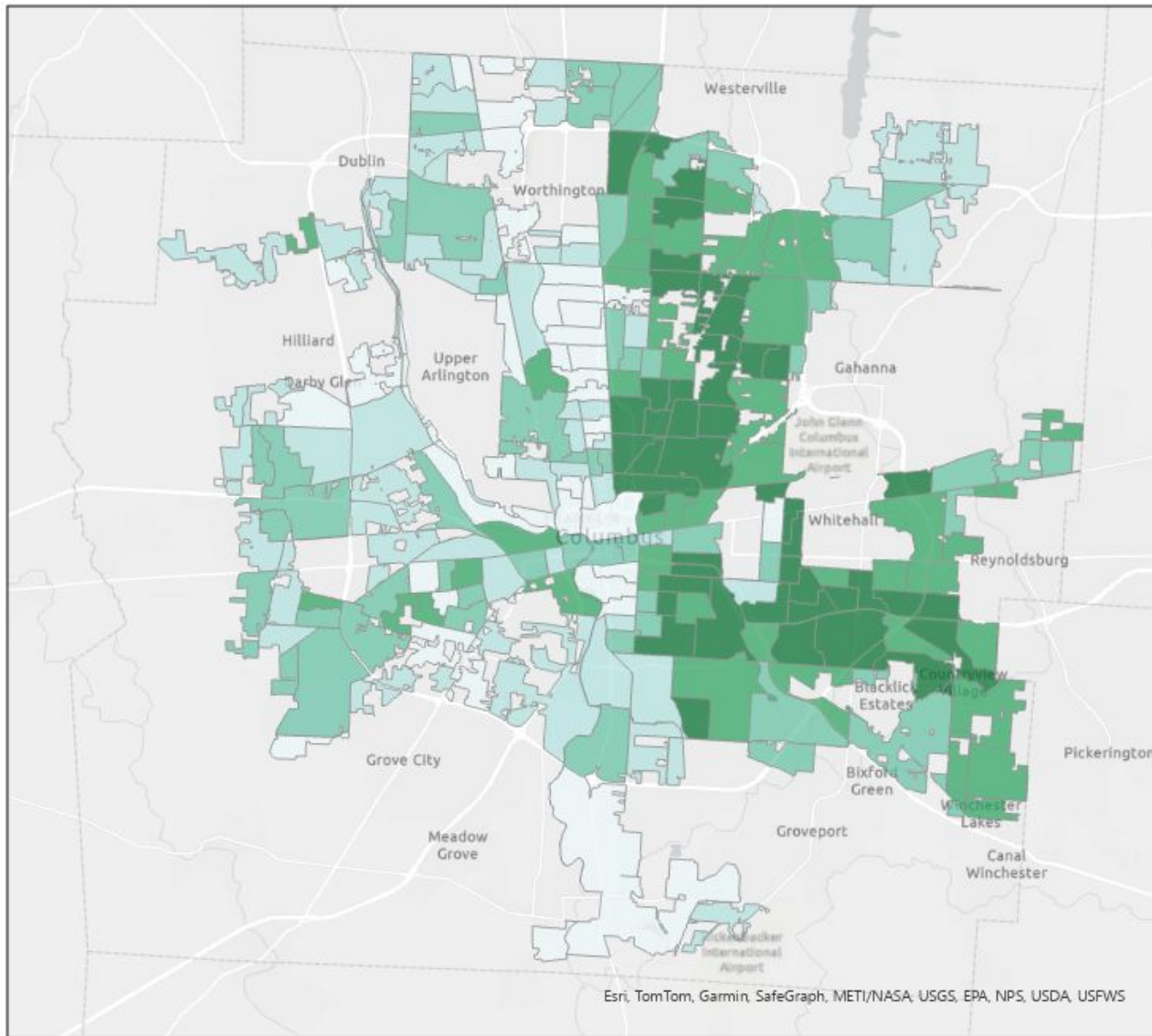
- Behavior problems
- Reduction in IQ
- Hyperactivity
- Slowed growth
- Hearing problems
- Delayed speech
- Anemia
- In rare cases, seizures, coma and even death



A close-up photograph of a young girl with dark hair, her eyes closed in a state of concentration or rest. She is holding a yellow pencil vertically against her chin. She is seated at a desk, and a clear plastic tray containing several colorful beads is visible in the lower right corner. The background is softly blurred, suggesting an indoor setting like a classroom or home.

Lead exposure
disproportionally
impacts children of
color in **redlined**
neighborhoods

Redlining is the discriminatory practice of denying services (typically financial) to residents of certain areas based on their race or ethnicity



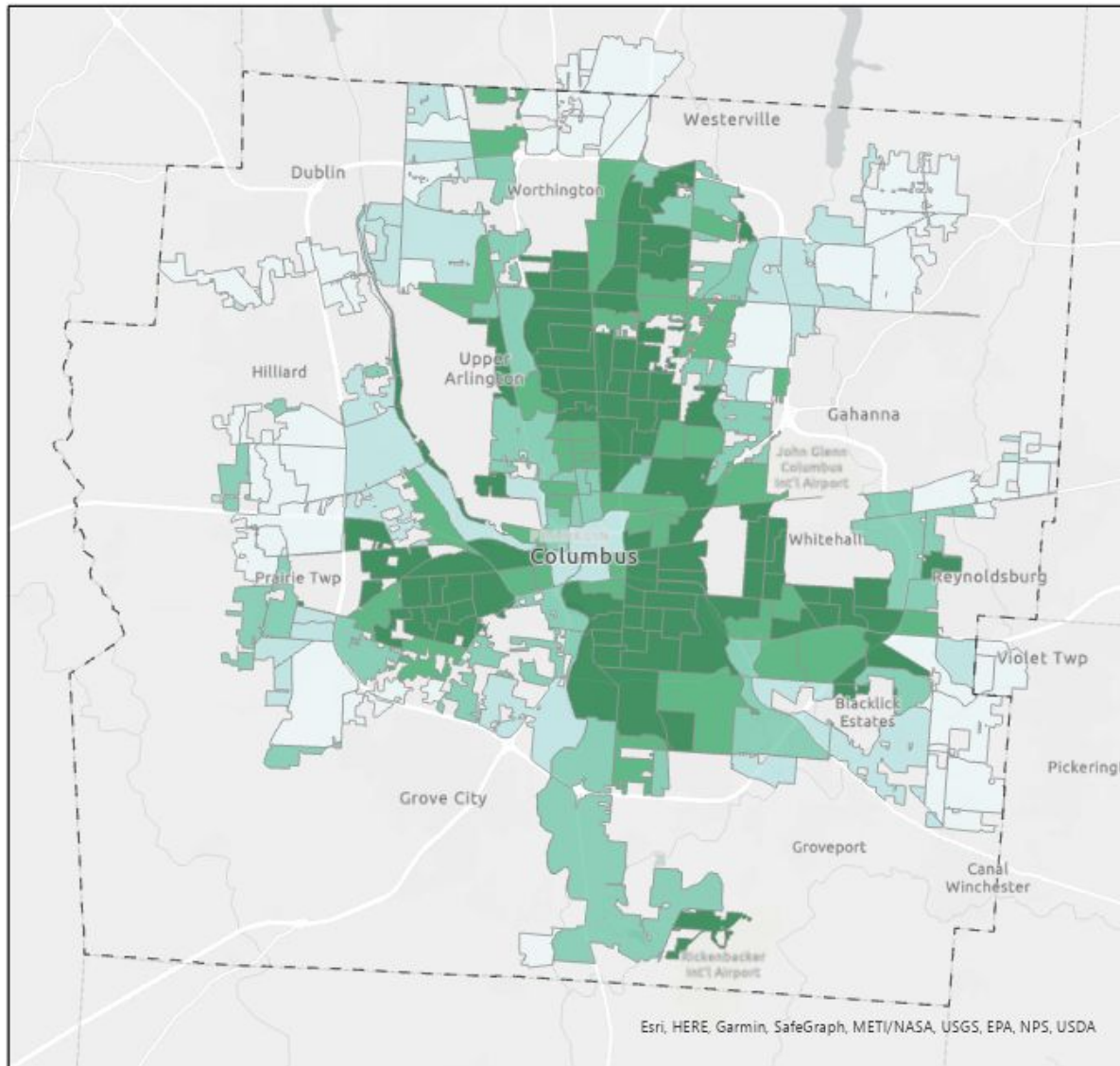
Percent of population that are People of Color, by Columbus clipped Census Tracts

- 5.1% - 19.6%
- 19.7% - 33%
- 33.1% - 50.4%
- 50.5% - 72.2%
- 72.3% - 97.1%



Source: U.S. Census Bureau. 2018-2022 American Community Survey 5-Year Estimates, Table B03002

Esri, TomTom, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, USFWS



% of Columbus Housing Units Built before 1980, by Census Tract

- 0.0% - 20.0%
- 20.1% - 40.0%
- 40.1% - 60.0%
- 60.1% - 80.0%
- 80.1% - 100.0%



Source: U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates, Table B25034, Year Structure Built.

Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA

Blood Lead Level Screenings

- Lead levels can only be identified through a venous or capillary blood test
- Children **ages 1 and 2** and up to age 6 (if they have not had both tests) for children that:
 - Receive Medicaid
 - Lives in or visits a house built before 1978
 - In a high-risk zip code designated by ODH (inside I-270)



Lead Poisoning

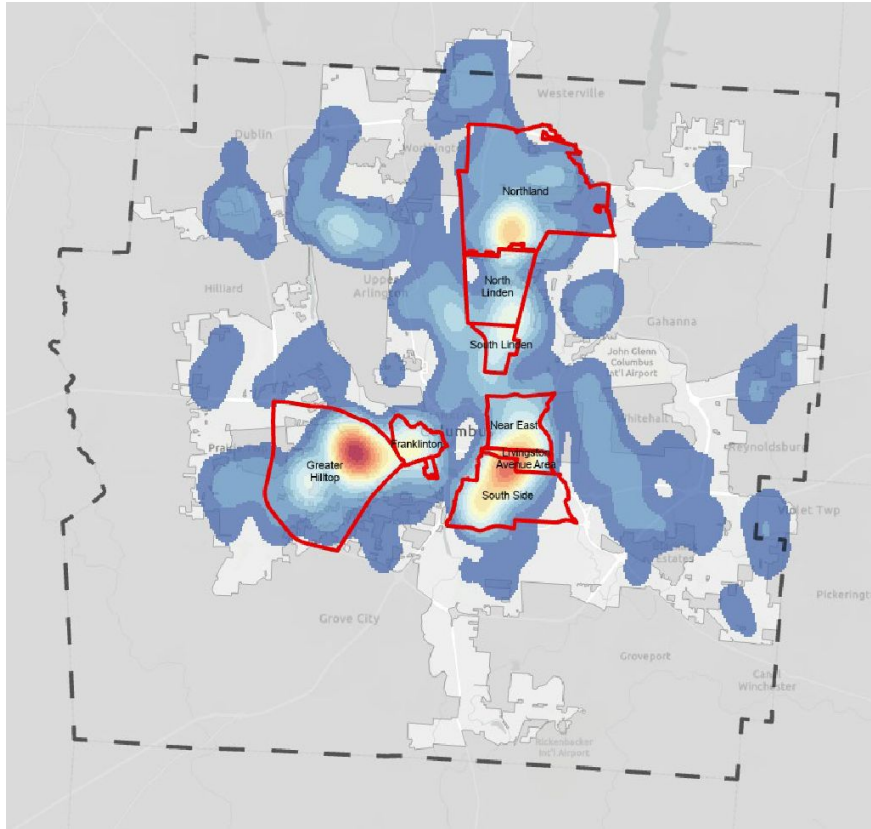
The Problem



Every year in Columbus, an average of 500 children have an elevated blood lead level screening (Becky Zwickl, MPH, e-mail communication, April 25, 2024).

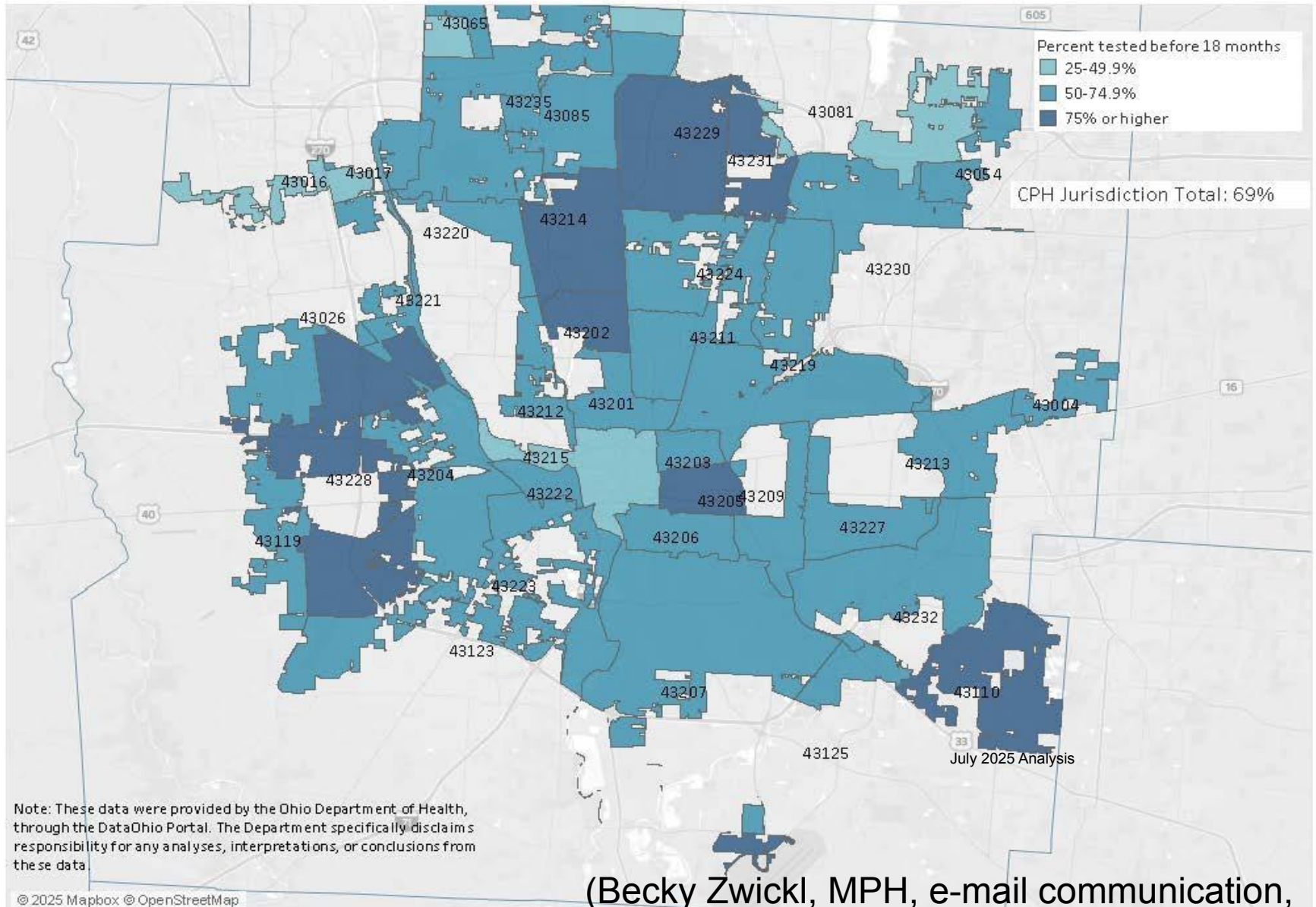
Ohio has the 3rd highest percentage of children <6 years with elevated blood levels of lead.³

Children with Elevated Blood Lead levels (2015-2022)



- Greater Hilltop
- Franklinton
- Northland
- Near East/ Livingston
- South Side
- Linden

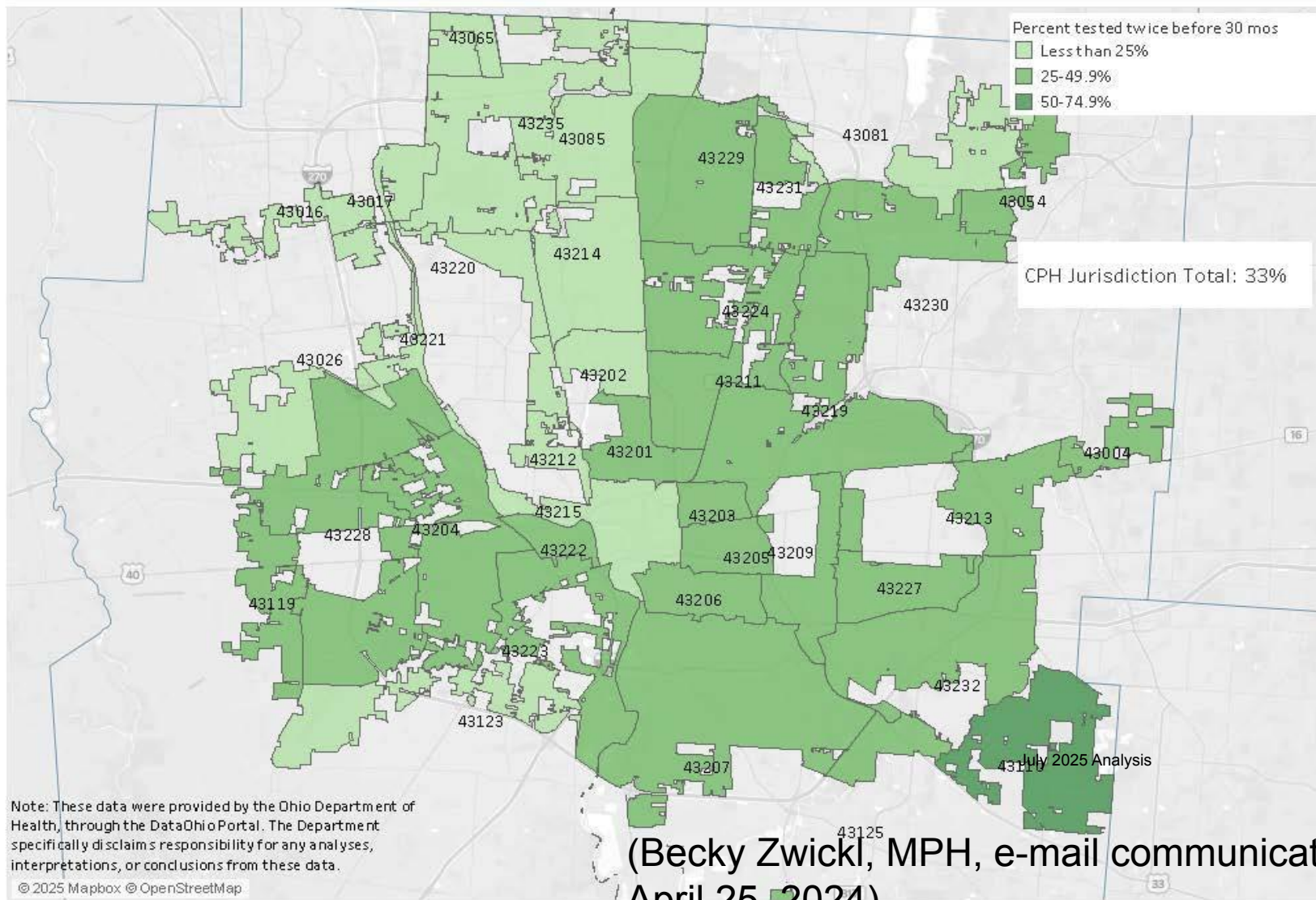
Estimated percentage of children born in 2021 tested for lead at least once before 18 months of age
Geography: Columbus Public Health Jurisdiction within Franklin County



(Becky Zwickl, MPH, e-mail communication, April 25, 2024).

Estimated percentage of children born in 2021 tested for lead at least twice before 30 months with the first test before 18 months

Geography: Columbus Public Health Jurisdiction within Franklin County



(Becky Zwickl, MPH, e-mail communication, April 25, 2024).

Columbus Public Health Involvement

- Provide outreach and presentations to various stakeholders
- Work with Columbus Dept. of Development Lead Safe Columbus (HUD Grant) to control lead hazards in housing throughout the city
- Loan HEPA vacuums to control lead chips and do intensive cleaning



Family Education and Outreach

- Investigate elevated blood lead levels (BLL) cases referred from the Ohio Department of Health
- Conduct one-on-one education
- Determine potential lead sources including behavior, household goods, housing conditions, and occupational exposures (3.5-9.9ug/dL BLL)
- Conduct an environmental investigation testing surfaces for lead paint and issue orders on lead hazards (10ug/dL+ BLL)
- Provide referrals for WIC and developmental services



Lead Poisoning Prevention

Prevention recommendations include:

- Removing, abating, or minimizing lead items in the home
- Frequent hand washing
- Eat in a safe location—no walking and eating (kids)
- Frequent dusting and wet mopping using “two bucket” method
- Wash toys often and discourage playing in bare dirt
- Nutritious diet rich in calcium, iron and vitamin C
 - Whole foods, enriched foods, not fast foods



Call to Action Meeting

- Interactive Undesign the Redline Exhibit
- Engaging talks about lead poisoning in our community



The “2040” project

- Healthy Children and Safe Homes by 2040 is a health equity initiative to prevent all children in Columbus from being lead exposed by the year 2040
- Columbus Public Health and its partners will increase outreach and education, screening and testing, workforce development, and repairs and remediation as part of the project



Priority Areas for Pilot

- Formally Redlined Areas
- Cases of Lead Poisoned Children
- Housing Stock (Kirwan Institute for the Study of Race and Ethnicity)
- Current Population Demographics
- Areas also have lower screening rates

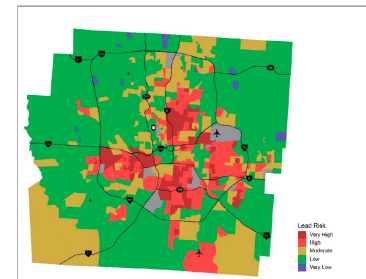
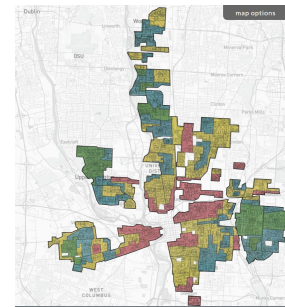
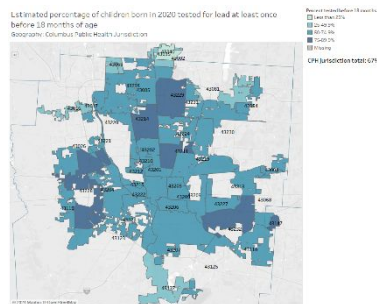
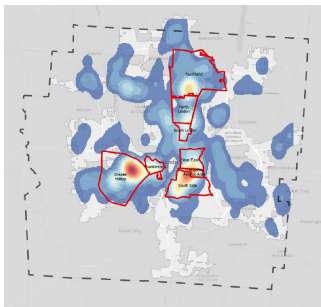


Figure 4. Lead risk by census block group—Franklin County, Ohio.

Increase Lead Screening Rates

- One goal is to increase lead screenings in Columbus
- Piloting lead screenings for Columbus Public Health customers in high risk/ redlined areas
 - More likely to have issues with access to care
 - Immediate access to children
 - Connect these high needs clients with resources



Increase Lead Screening Rates

- WIC Clinics, Head Starts, Community Events
- Strategic Nursing Team
- HHLPSS Access
- Lead Care Analyzer II
- Immediate Results
- Immediate Confirmatory Test



Healthcare Provider Outreach

A photograph of a city skyline, likely Columbus, Ohio, featuring a prominent bridge with multiple arches spanning a river. The skyline includes several skyscrapers, including the Columbus Gas & Oil building on the right. The sky is blue with light clouds.

Goal:

Increase healthcare provider awareness, knowledge, and adherence to childhood lead screening guidelines to improve early detection and intervention.

Target:

Healthcare providers, including pediatricians, family physicians, nurse practitioners, nurses, and other relevant medical professionals.

Healthcare Provider Outreach

- Conduct training sessions for healthcare providers to enhance their understanding of lead screening protocols
- Offer CME's and CEU's
- Create webpage for resources
- Establish feedback mechanism
- Assess and reduce barriers
- Increase cultural competency



Healthcare Provider Education Sessions

- Provided general outreach materials to all pediatric and family-medicine practices in Franklin County
- Held education sessions for pediatric and family health practices to promote lead testing of children:
 - 16 trainings were provided for 215 medical staff*
 - An additional 42 Columbus Public Health staff received this training

*As of 12/05/2025



Lead Hazard Repairs

- Window and door replacement in pre-1978 homes within the pilot communities
- Lead paint is considered high-risk if chipping, peeling or on a “friction or impact” surface



Workforce Development

- Provide Renovation, Repair and Painting Program (RRP) Training
- Increase lead abatement contractors to remediate homes



Community Engagement

- Health literacy, translations, and cultural competency integrated in the initiative
- Outreach directly to impacted communities
 - 90+ outreach events



Focus Groups

- 10 community groups in Liden, Near East, Southside, Hilltop
 - One African American focused group
 - One Somali speaking group
 - One Spanish speaking group
- One additional focus group for community leaders



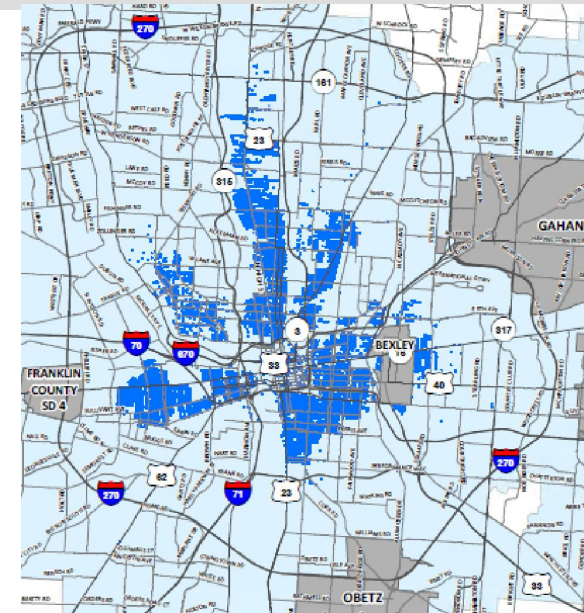
CPH Divisional Collaboration

- CPHI
 - Outreach events
 - Community engagement
- Population Health
- Clinical Operations
- HCO
- OPQI- Office of Planning and Quality Improvement
- Policy
- Family Health
- Environmental Health



Department of Public Utilities Collaboration

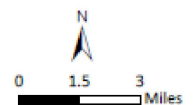
- Great corrosion control in Columbus
- Take water samples for lead cases
- Service line identification
 - Lead and galvanized service line replacement
- Media campaigns and combined outreach
- Citywide Lead website



The City of Columbus, Ohio and Suburbs
Publicly Owned Lead Services - 2022 Map

- Area Likely to Contain Publicly Owned Lead Services
- City of Columbus Water Service Area
- Other Public Water System (contact your provider for supply information)

THE CITY OF
COLUMBUS
ANDREW J. GINTHER, MAYOR
DEPARTMENT OF
PUBLIC UTILITIES



Next Steps



Continued collaboration amongst City of Columbus Departments



Continued implementation of the “2040” project



Expanding community engagement strategies



Data analysis, internal and external surveys

Next Steps

- Finalizing an additional presentation for healthcare providers to discuss the importance of screening pregnant and lactating women for lead exposure
 - 1 CME will be offered
- Offering free outreach materials for healthcare providers and residents
 - Translated in many languages on our website

Scan Here for Outreach Materials



Conclusion

- We don't want to see children used as 'lead detectors'
- We want to be proactive and prevent lead poisonings within our community by 2040



All Children Deserve a Safe House



**Kelli Dodd,
R.E.H.S.**

krdodd@columbus.gov

614-724-2866

Any Questions?

Local Resources

- CPH Healthy Homes Program: 614-724-6000
- Healthy Homes and Safe Children by 2040 website:
 - <https://www.columbus.gov/leadfreekids/>
- Lead Safe Columbus:
 - www.columbus.gov/lead
 - https://www.columbus.gov/development/housing-division/Lead-Safe-Columbus_M/
- Ohio Department of Health: 1-877-LEADSAFE (532-3723)