



National Environmental
Health Association

Lead Poisoning Prevention in Indian Country

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Purpose of Training

- Educate
- Expand awareness
- Support
- Training overview





American Indian and Alaska Natives in the United States

- Number of Tribes
- States
- Communities
- Tribal Sovereignty/
Treaties
- Native Land Digital
<https://native-land.ca/>





Environmental Justice Principles





Social Determinants of Health, Health Disparity & Health Equity





Lead Poisoning and Indian Country

Lead poisoning risks, surveillance practices, and prevention planning



Health Effects of Lead Poisoning

lead poisoned children are



more likely to become involved in the juvenile justice system



more likely to drop out of school

- Neurotoxin
- No safe level of exposure
- Small dose = Poison
- Children & Pregnant People



Childhood Lead Poisoning Prevention

- Federal Childhood Lead Poisoning Prevention Program (CLPPP)
- Aims to reduce childhood lead poisoning
- Primary Prevention
- Secondary Prevention





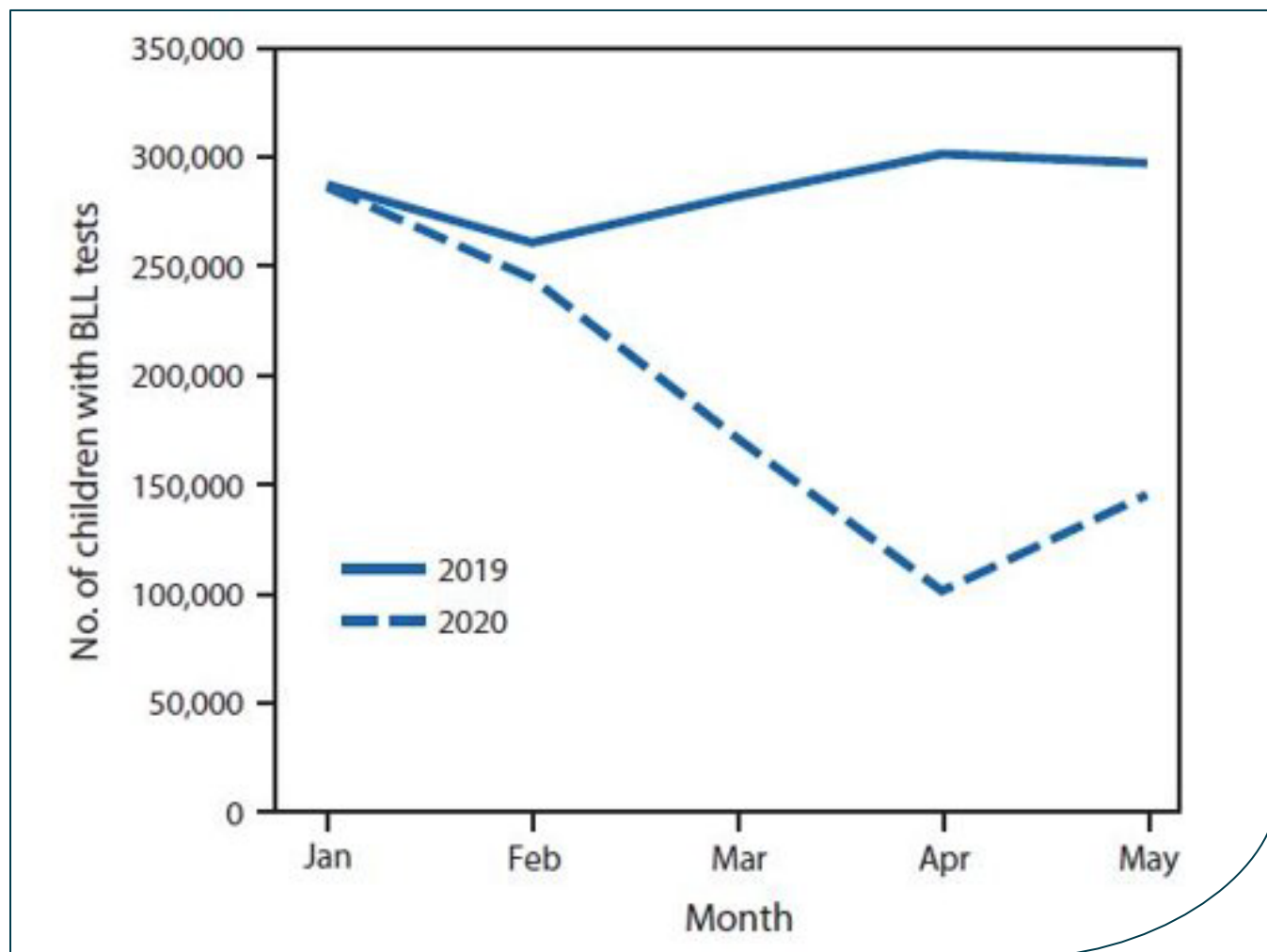
Lead Screening

- Blood lead testing results
- Number of results per year
- Medicaid screening





Lead Screening



2019 – 2020

Number of children aged
<6 years who received
blood lead level (BLL)
tests by month in 34 U.S.
jurisdictions



Lead Poisoning Surveillance

Changes to definitions for interpreting children's blood lead levels over time



"No safe childhood blood lead level threshold can be identified."

*CDC Advisory Committee on
Childhood Lead Poisoning Prevention
(2012)*



Other Federal Partners Addressing Lead Hazards

- Department of Housing and Urban Development (HUD)
- Environmental Protection Agency (EPA)
- Occupational Safety and Health Administration (OSHA)
- Food & Drug Administration (FDA)
- Consumer Product Safety Commission (CPSC)





Exposure Risk: Housing

- Hazardous and common sources
- Pre 1978 housing
- Lead dust





Exposure Risk: Water





Exposure Risk: Land & Soil

- Roads
- Mines and tailings
- Ground water
- Wind erosion





Exposure Risk: Air

- Industrial facilities
- Renovation and demolition
- Aviation fuel





Exposure Risk: Occupations & Other

- Occupational exposure
- Shooting ranges





Exposure Risk: Hunting & Fishing

- Ammunition and fishing sinkers
- Wildlife
- Wild game and fish





Exposure Risk: Consumer Goods & Products

- Cosmetics
- Foods
- Spices and herbal remedies
- Plastic jewelry and toys
- Vinyl mini blinds





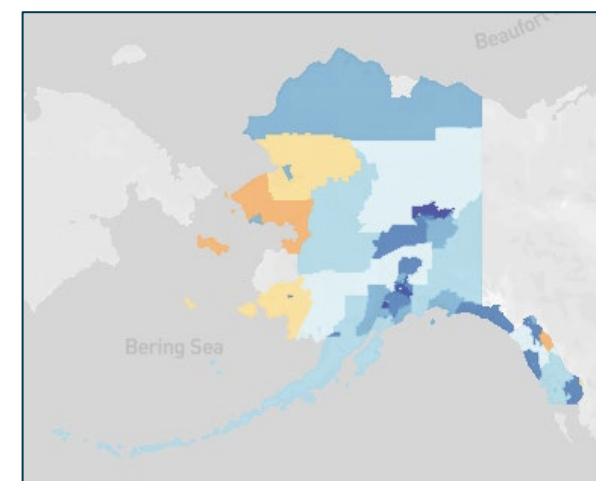
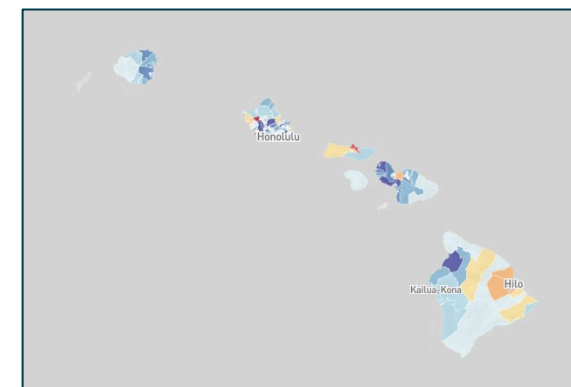
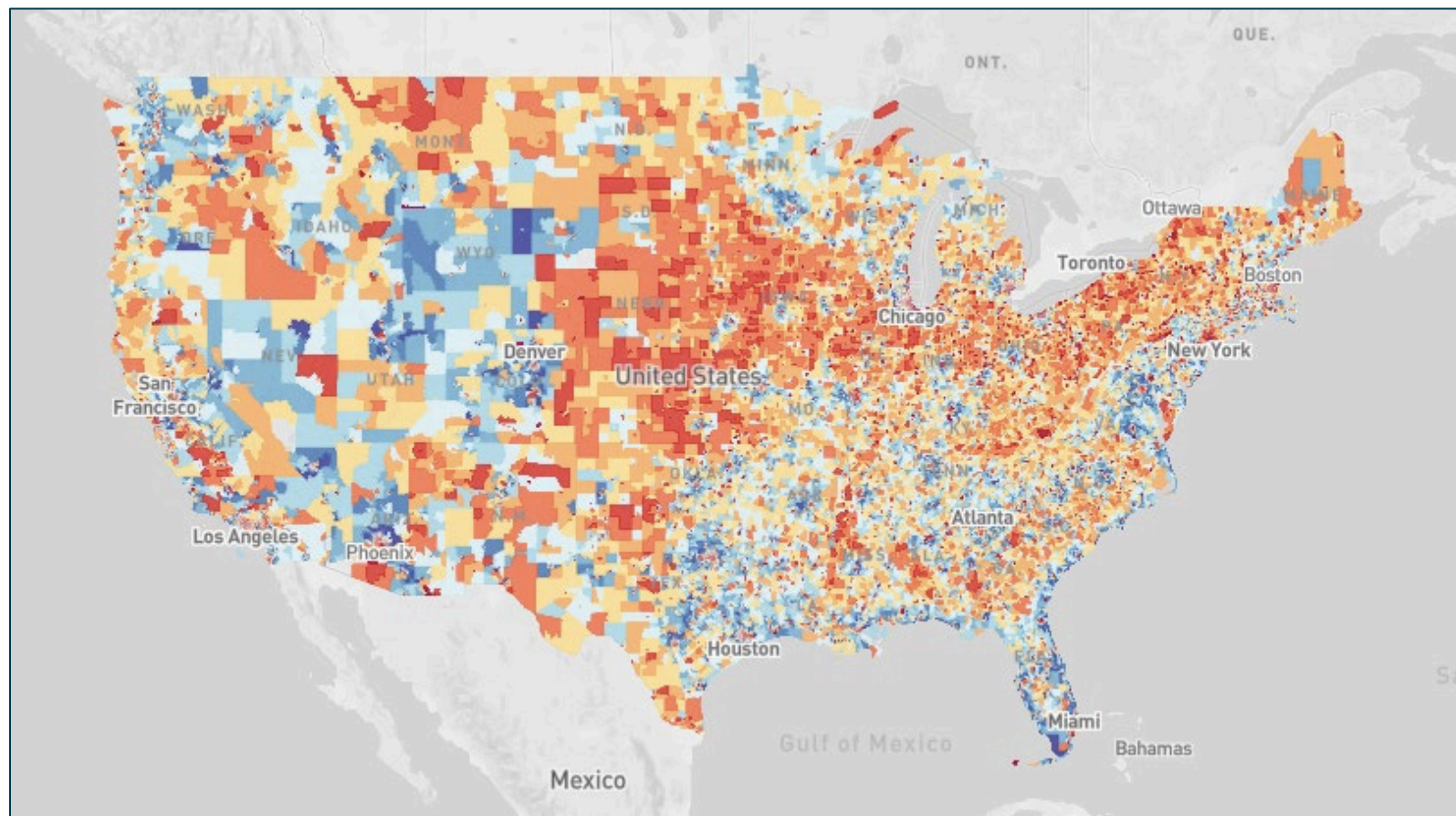
Challenges in Lead Poisoning Prevention

Key Barriers to acknowledge in strategic planning
to address lead poisoning in Indian Country



Overview Risk Factors: Social Determinants

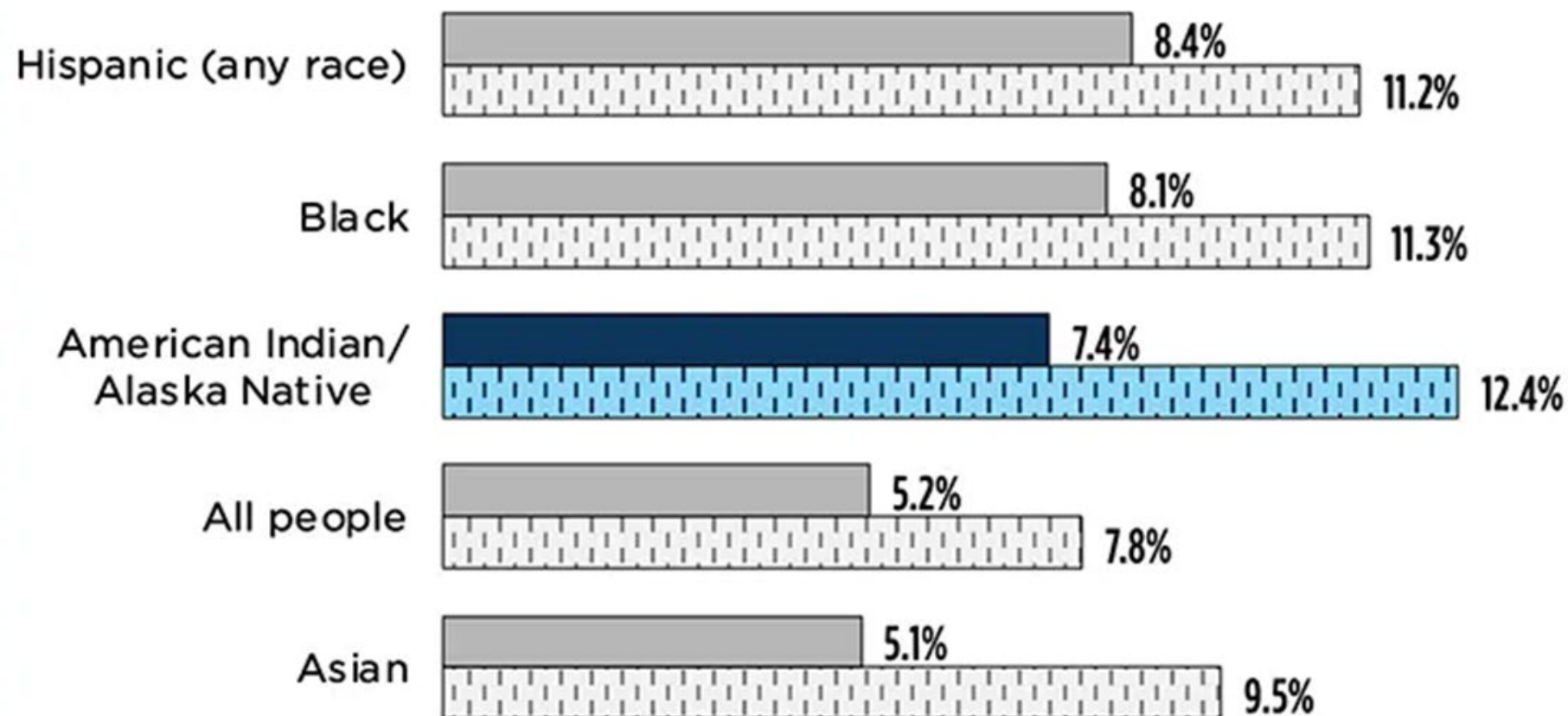
Estimated Lead Exposure Risk by Census Tract





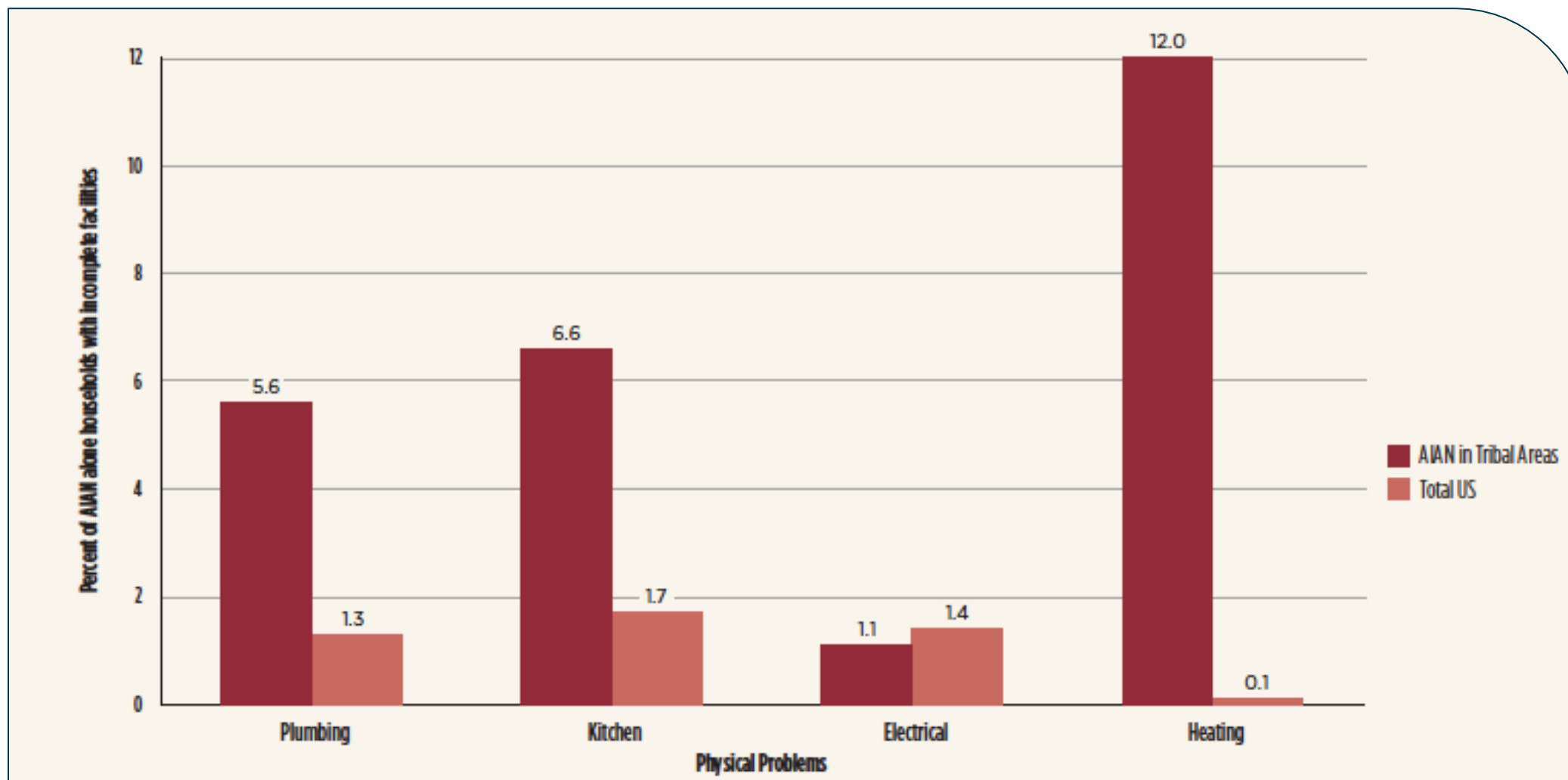
Unique Risk Factors for Indian Country

■ % in poverty for children under age 18 ▨ % in poverty for total population





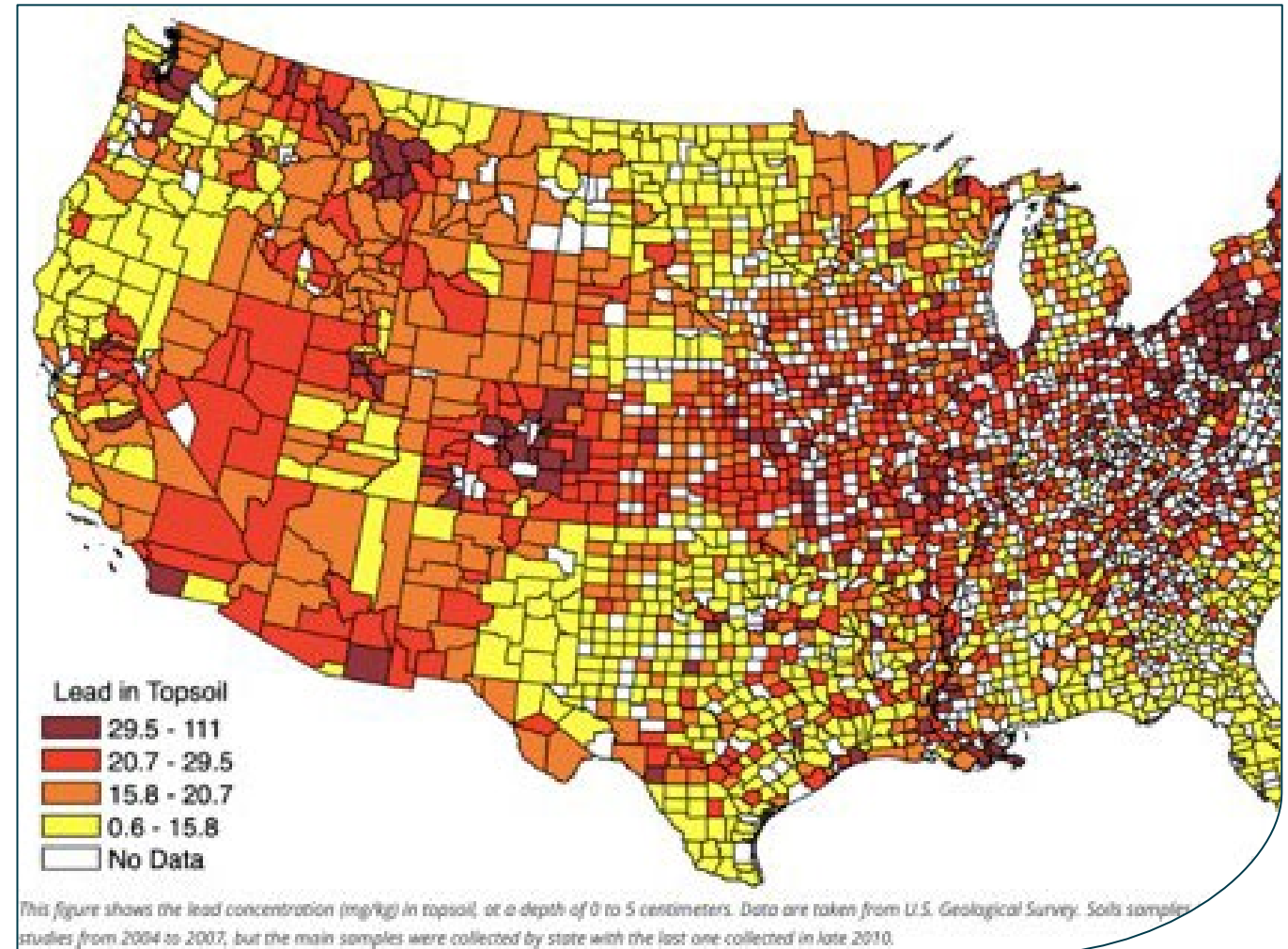
Unique Risk Factors for Indian Country





Unique Risk Factors for Indian Country

- Multiple exposure pathways
- Outdoor exposure





Healthcare Funding & Access

- Indian Health Service (IHS)
- Uninsured rate
- Medicaid expansion





Health Disparities for Children and Pregnant People

- Maternal mortality
- Adverse Childhood Experiences (ACEs)
- Limited access to care





Capacity for Lead Hazard Reduction

- Housing repair and environmental services
- Workforce
- Housing programming
- Enrollment





Compliance with Lead Regulations

Regulations designed to reduce lead hazards through housing, air, water, consumer materials, and workplaces are not enforced equitably.

Regulation	Purpose
Residential Lead Based Paint Hazard Reduction Act of 1992 (EPA & HUD)	Required disclosure of information on lead- based paint in real estate transactions
Renovation, Repair and Painting Rule (EPA)	Worker who may disturb lead-based paint must be certified
Safe Drinking Water Act (EPA)	Drinking Water Systems must monitor lead in public water systems



Compliance with Lead Regulations

Regulation	Action
Clean Water Act	EPA prohibits discharging pollutants into water without permit
Occupational Health and Safety	OSHA enforces lead standards for general industry
Lead in Food	FDA regulates lead exposure through food products Consumer Product Safety Commission to issue recalls



Unregulated Sources of Exposure

Potential Source	Details
Private Wells	13% of households use unregulated private wells for water
Ammunition and Fishing Lures	Lead is a primary metal used in ammunition and fishing sinkers
Aviation Fuel (Avgas)	Fleet of 170,000 piston-engine airplanes and helicopters use leaded aviation fuel
Consumer Products	Certain consumer products imported into the U.S.



Building Pathways for Lead Poisoning Prevention

Strategic Planning Considerations



Review: Federal Guidance on Lead Poisoning Prevention Practices

CDC recommends:

- Primary and secondary lead poisoning prevention practices
- Risk assessment and intervention practices should reflect community characteristics



Centers for Disease
Control and Prevention



Primary Lead Poisoning Prevention

- Lead hazard reduction & Healthy Housing programs
- Home Inspection Programs
- Hazard reduction and abatement
- Renovation, Repair, and Painting Rule
- Residential Lead Based Paint Hazard Reduction Act





Housing Intervention Services & Capacity

- Key Partners:
 - Tribally designated housing entities
 - National Indian Health Board
 - State and local public health agencies
 - Related community-based organizations
- Capacity





Housing Repair/Renovation Worker Messaging

- EPA *Renovate Right* Program
- Certified for lead work:
 - Repair
 - Inspector/Assessor
 - Workers
 - Supervisor





Community-based Education & Screening

Community Education

- Multi-generational engagement
- Culturally relevant programming

Community Health Workers

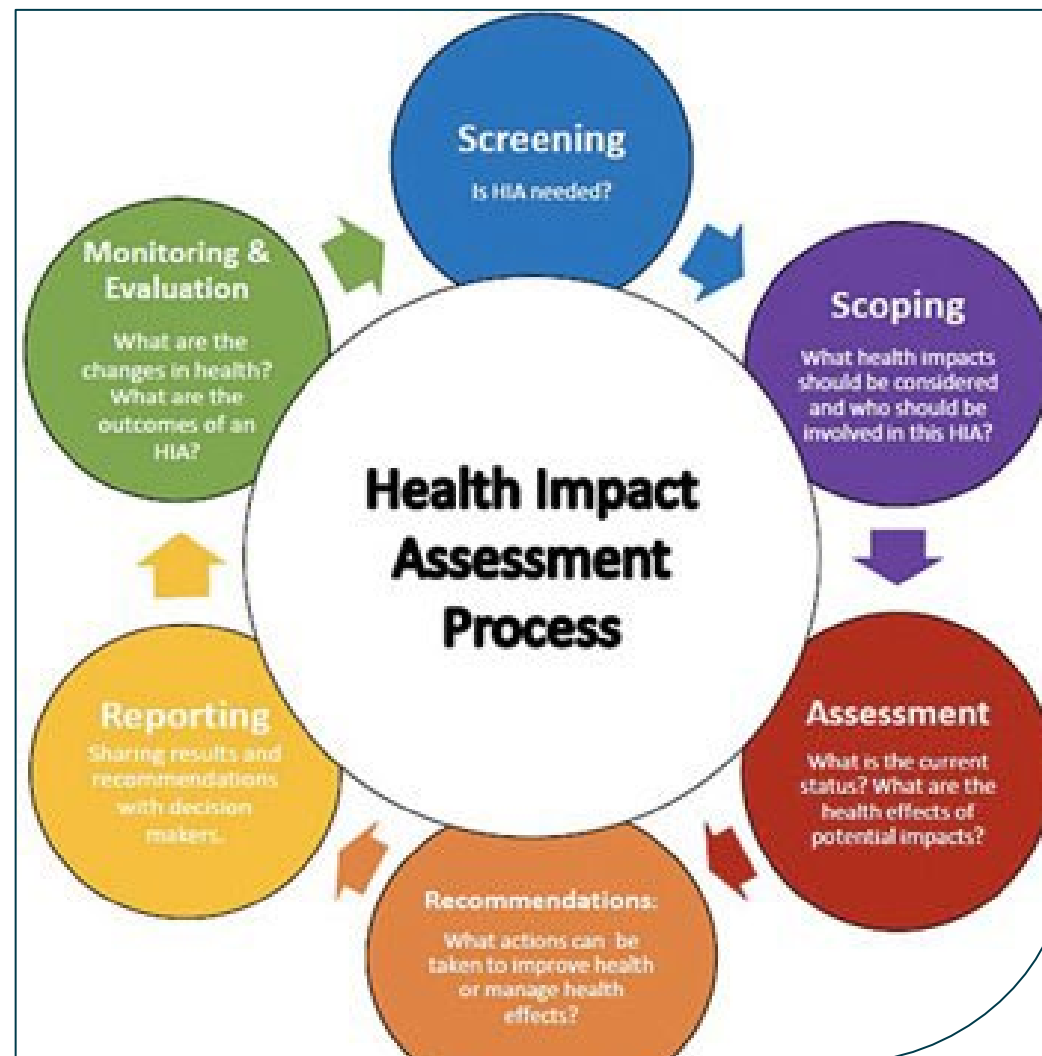
- Parents and caregivers
- Identify potential sources





Data Collection, Evaluation, and Strategic Planning

- Key data metrics
- Community Needs Assessments
- Health Impact Assessment





Parent and Caregiver Lead Screening Messaging

- When?
- What?
- Who?
- Questions or concerns?





Parent and Caregiver Poisoning Prevention Messaging

- Guidance
- Remediation resources
- Interim controls





Case Study: Wellness through Traditional Foods

- Traditional Foods Program
- Traditional and sustainable
- Stories
- Community



Seven Arrows Garden and beautiful New Mexico sky. Photo courtesy of Kori Marmon.



Support Resources



Ongoing Engagement Opportunities

- Programming
- Recognition and awareness
- Comments and input
- Collaboration





Grant Programs for Lead Poisoning Prevention

HUD	EPA	CDC	Others
Lead Hazard Reduction Grant Program	Environmental Justice Grant Program	Supporting Communities to Reduce Lead Poisoning Program	Closing the Gap with Social Determinants of Health Accelerator Plan Program
Healthy Homes Production Grant Program	Healthy Communities Grant Program		

Search <https://www.grants.gov/> for key terms and eligibility details



Grant Program Resources for Rural Areas

- Rural Partners Network
 - Access
 - Technical Assistance
 - Local capacity
 - <https://www.rural.gov/>





Education and Engagement Resources

HUD

<https://www.hud.gov/lead>

EPA

<https://www.epa.gov/lead>

- Renovate Right
- Tribal Lead Curriculum

CDC

<https://www.cdc.gov/nceh/lead/>



Upcoming Lead Screening & Prevention Resources

- *Lead Poisoning Prevention in Tribal Country Factsheet*
- *Access to Lead Screening & Hazard Control Factsheet*
- *Lead Poisoning Risk in Tribal Country Infographic*

LEAD POISONING PREVENTION IN TRIBAL COUNTRY



EFFECTS OF LEAD POISONING

- Children who are lead poisoned are 7 times more likely to drop out of school and 6 times more likely to become involved in the juvenile justice system.[1]
- Learning disabilities that can affect children who have been lead poisoned include: violent, aggressive behavior; speech delays; Attention Deficit Disorder; hyperactivity; diminished IQ; hearing and memory problems; and reduced motor control and balance.
- At extreme levels, lead poisoning can create severe developmental disabilities, coma, convulsions, and death.
- Lead poisoning effects on adults include: 46 percent increased rate of early mortality; 16 to 19 percent increased risk of cardiovascular disease; hypertension; depression; reproductive problems; and complications related to osteoporosis.[2]

PRIMARY POPULATION AT RISK

- Children under the age of 6
- Pregnant Women [3]

RISK FACTORS FOR LEAD POISONING

- Poverty - rate for Native Americans is 25.4%, the highest of any race/ethnicity.[4]
- Older housing (built before 1978) with deferred maintenance, poor plumbing, and heating, and overcrowding.
- History of housing discrimination, environmental racism, and disinvestment.[5]
- Lack of access to or underfunded healthcare [6]

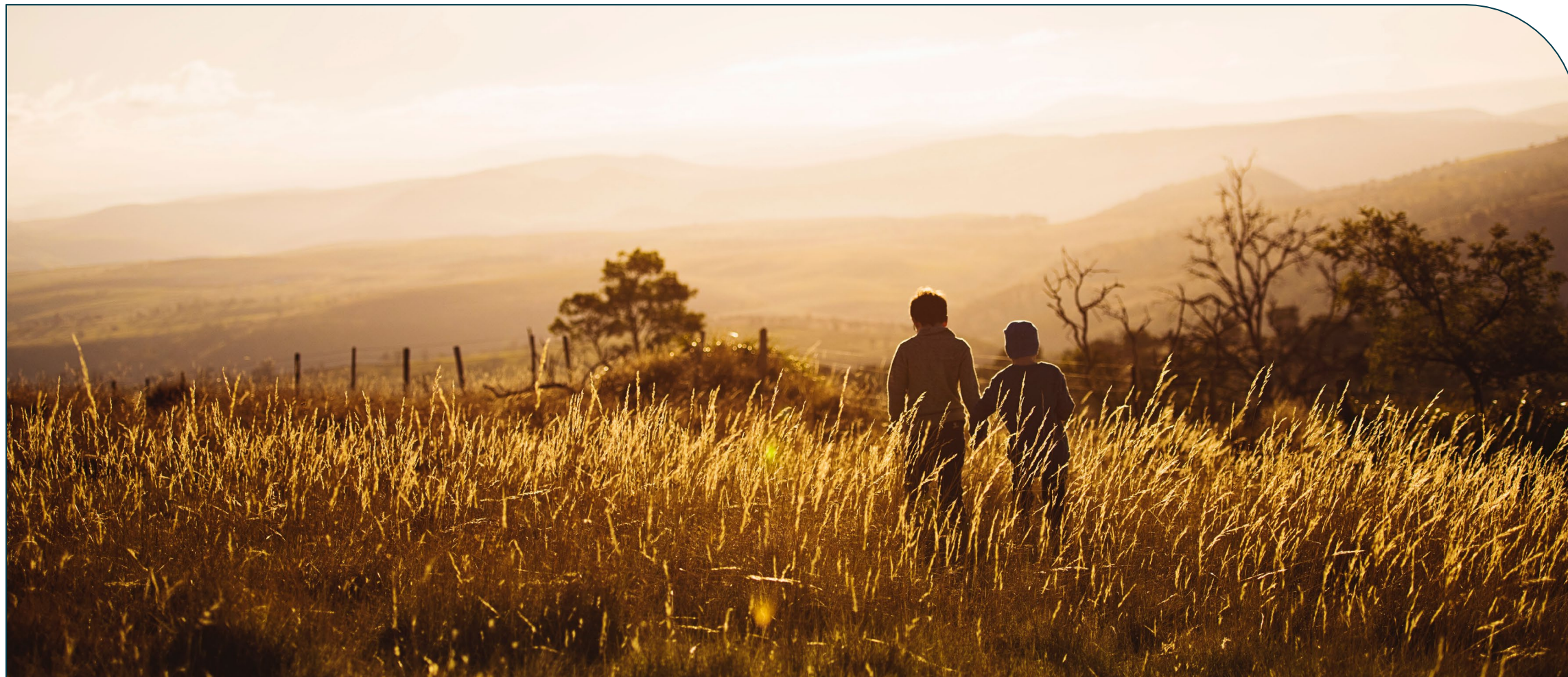
SOURCES OF LEAD POISONING

- Paint in homes built before 1978 (when lead-based paints were banned for residential use)
- Water from leaded pipes, plumbing, and private wells with lead
- Some products such as plastic toys and toy jewelry
- Lead-glazed ceramics and pottery
- Some imported candies and spices or traditional home remedies[7]
- Lead hunting and fishing materials
- Game hunted with lead bullets
- Fish caught with lead sinkers[8]
- Soil and dust from mining waste[9]

FOR MORE INFORMATION



Take Opportunities to Reduce Lead Risk





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Questions



Your Community is Waiting for You!

- Education
- Community
- Credentials
- Advocacy
- *Journal of Environmental Health*
- Practice Resources
- Discounts

<https://www.neha.org/membership>



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