



NEW MEXICO
Environmental
Public Health
Tracking + EPHT

New Mexico Department of Health EPHT and Biomonitoring Activities

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TRIBAL ENVIRONMENTAL PUBLIC HEALTH TRACKING
SYMPOSIUM, SEPTEMBER 28



Cultivating Environmental Health Epidemiology

NEW MEXICO
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NM EPHT
Est.

• 2002

Website
Launched

• 2008

New
Website
Launched

• 2016



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Empowering the public and researchers to learn about relationships between environmental exposures and their associated health effects.

Improving health in New Mexico communities.



Environmental Health Resources from NMEPHT

NM EPHT Data Explorer

56 Indicator Reports

Easy-to-use reports provide a snapshot of the health indicator.

Data analysis available in graph, map and table forms.

160 Data Sets

Query the data for health and environmental areas.

Results available in in graph, map and table forms.

33 County EH Profiles

A snapshot of a county's EH status.

A starting point for community health assessments and data searches.



Environmental Health Resources from NMEPHT

NM EPHT Toolkits

Fire, Smoke, Health

What to do when it is smoky outside.

When to cancel/postpone outdoor events.

Handouts you can use.

Drinking Water Quality

Private Well Data.

Community Water Systems Data.

Educational Resources on Drinking Water Quality.

Health Impact Assessment

HIA Procedures, Methods and Tools to Identify:

Potential effects of a proposed project on the health of a population.

On Track



NEW MEXICO
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A New Era of NM EPHT

Environmental data. Health data. Health tips. All in one spot.

We are helping keep New Mexicans on a healthy track.

See New Mexico EPHT's new streamlined look at

<https://nmtracking.org>

Our Team

NM EPHT Staff and EH Partners



Team Member	
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Biomonitoring

- A method of assessing human exposure to chemicals
- Can be used to determine environmental exposure directly rather than relying on testing air or drinking water samples
- Involves measuring environmental chemicals (or their metabolites or reaction products) in human tissues and fluids, such as blood and urine
- Integrates all pathways/routes of exposure (such as ingestion or inhalation) to chemicals from all sources, including chemicals in the air, water, food, soil, dust, and consumer products



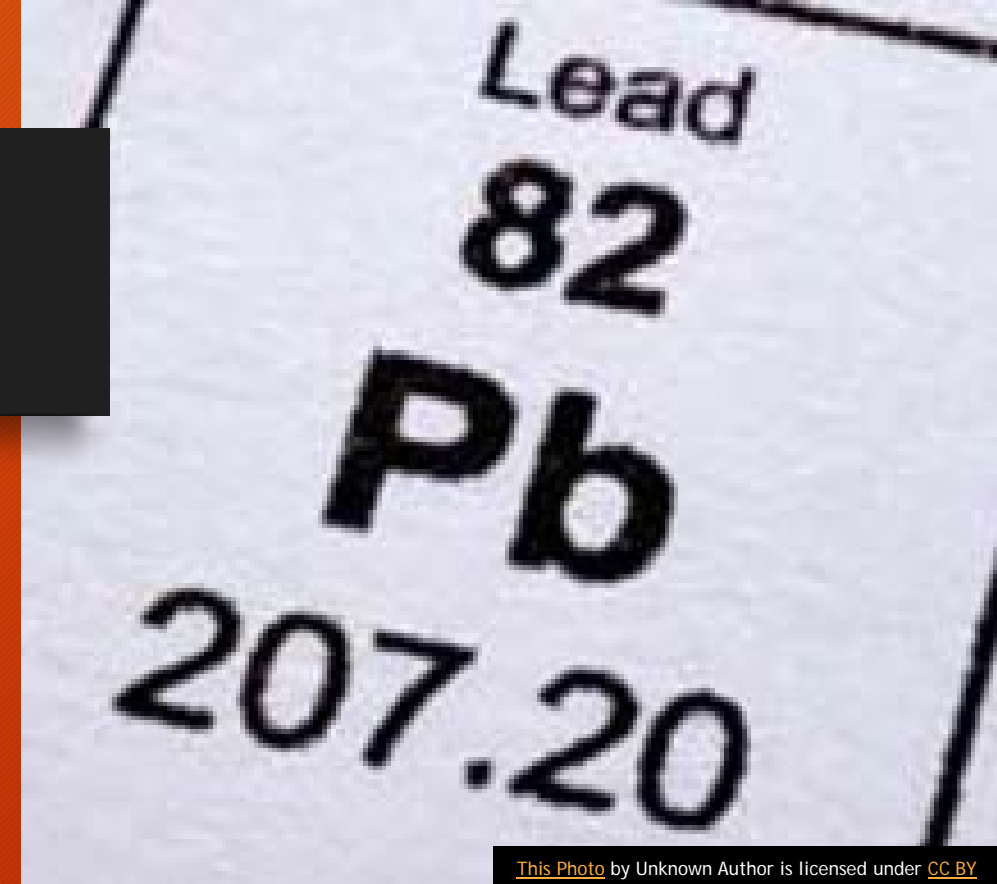
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Biomonitoring

- Children exposed to even small amounts of lead can suffer adverse health effects, most notably a lowered IQ, and may develop learning and behavior problems.
- The State of NM has no law that requires all children to be tested for lead.
- But, both Federal and State Medicaid regulations require that all children enrolled in Medicaid be tested at 12 months and again at 24 months of age.
- Children between ages of 36 months and 72 months of age must receive a screening blood lead test if they have not been previously screened for lead poisoning.



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The Four Corners States Biomonitoring Consortium (4CSBC)

- 5-year grant from CDC, 2014 - 2019
- Build capacity
- Desire and experience
 - Rocky Mountain Biomonitoring Consortium, 2001 - 2008
 - Environmental Public Health Tracking Network
- Shared resources
 - Specifically among state public health laboratories
- Similar regional exposure concerns and population compositions
 - Specific studies: metals, phthalates, pesticides



Exposure Concern	Sources of Exposure	Public Health Concern
Heavy Metals (As, Cd, Hg, Mn, Se, U)	Private owned (unregulated) drinking water wells	<ul style="list-style-type: none"> • Cancer • Central & peripheral neuropathy • Cardiovascular disease • Renal damage • Osteomalacia • Electrolyte imbalance
Phthalates	Common household products	<p>MAY:</p> <ul style="list-style-type: none"> • Change way hormones like estrogen and testosterone work in human body • Reduce chance of conception for healthy couples • Change male reproductive organs developing fetus. • Increase chances among children of developing allergies, runny nose, and eczema
2,4-Dichlorophenoxy acetic acid (2,4-D)	Herbicides used near residential areas	<ul style="list-style-type: none"> • Adverse birth outcomes • Possibly linked to cancer
para-Dichlorobenzene (p-DCB)	Common household products	<ul style="list-style-type: none"> • Weight gain and obesity • Chronic fatigue • Linked to type 2 diabetes and insulin resistance • May increase risk of cancer
Pyrethroids	Insecticides used near residential areas (mosquito abatement)	<ul style="list-style-type: none"> • Neurotoxic for some people • Endocrine disruption • May lead to decreased fertility • Immunosuppression (may increase risk of cancer)

Recruitment of Volunteers

- Identify communities with potential exposures
- Work with community groups to determine if there is interest
- Get the word out and get folks signed up
- Organize a testing event (library, county building, etc.)

Narrowing Down Exposure

Private well
water
sample

Survey

Urine
sample

Survey

. In the past 3 days, have you eaten the following:

5a. Fish, including tuna? This does not include shellfish such as shrimp.

1 Yes

2 No

777 Don't know/Not sure

888 Not applicable

999 Refused

5b. Fish caught out of nearby lakes, streams or rivers?

1 Yes

2 No

777 Don't know/Not sure

888 Not applicable

999 Refused

5c. Seafood?(such as crabs, clams or shrimp)

1 Yes

2 No

777 Don't know/Not sure

888 Not applicable

999 Refused

Returning Results

Letter with
interpretation

Website with
resources

Opportunity to
speak with
epidemiologist

Letter

What do these results mean?

- The amount of arsenic in your urine was found to be [less than/higher than] the 95th percentile in a sample of the general U.S. population. This means that the level of arsenic in your urine [is not of concern/suggests that you had recent or ongoing arsenic exposure].

Letter

What can I do?

- Overall, these results suggest that at the time of testing you may have been exposed to, or had ongoing exposure to arsenic. Your drinking water sample had an arsenic concentration higher than the MCL established by the EPA.
- Based on information you provided at the time of the interview, fish and/or other seafood consumption, using natural remedies, and/or tobacco smoking might also be possible sources of your exposure to arsenic.
- We do not know how this exposure might affect a specific individual's health. You can refer to the fact sheet in the pages that follow to learn more about reducing your exposure and potential health effects from excessive exposure in some people.

Year 5 and Beyond

- Final year of grant has started
- New application in 2019: Looking for partnerships with tribes, nations, and pueblos

Funding Disclaimer

Funding for this presentation was made possible (in part) by the Centers for Disease Control and Prevention. The views expressed in written conference materials or publications and by speakers do not necessarily reflect the official policies of the Department of Health and Human Services, nor does the mention of trade names, commercial practices, or organization imply endorsement by the U.S. Government.

Questions?

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