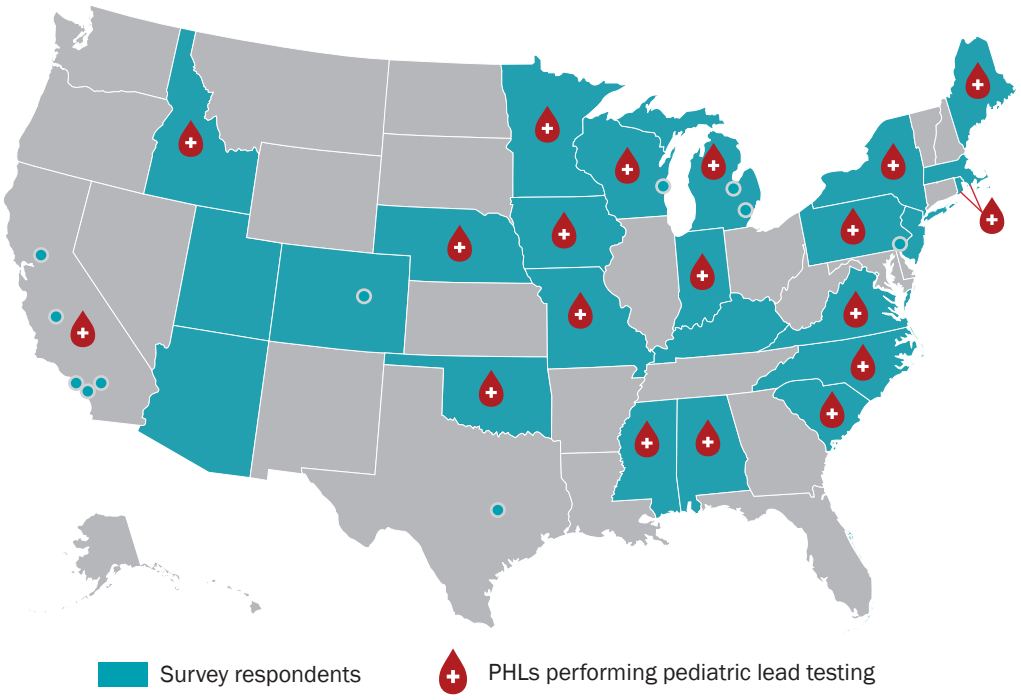
BLOOD LEAD TESTING IN PUBLIC HEALTH LABORATORIES
AN APHL SURVEY REPORT

In February 2019, APHL distributed a survey on the pediatric blood lead testing programs at US public health laboratories (PHLs). Distributed as an electronic questionnaire, the survey informed APHL and its members on current pediatric lead testing programs, as well as determined interest among public health laboratories to create or strengthen pediatric lead testing programs, if additional resources become available. Thirty-five laboratories from 26 states participated in the survey.



69% of PHLs currently perform blood lead testing for pediatric surveillance or emergency response (24 of 35 PHLs)
31% do not perform testing

67% of samples come from medical providers* (16 of 24 PHLs)
38% from public health collection event, 38% from other source, 13% from research studies, 8% from contracts w/other states/cities, 4% from tribal agreements.

83% analyze venipuncture samples* (20 of 24 PHLs)
73% analyze finger sticks, 17% analyze dried blood spots

50% of PHLs fund their testing program from medical billing* (12 of 24 PHLs)
46% from state, county or municipal appropriation, 33% from fee-for-service, 21% from a federal cooperative agreement, 8% from contracts, 4% from other sources.

Most popular testing methods of 24 PHLs:*

- Inductively coupled plasma mass spectrometry (ICP/MS) (17 PHLs)
- Graphite furnace atomic absorption spectrometry (GFAAS) (14 PHLs)
- Lead Care II (waived point-of-care) (12 PHLs)
- Lead Care Plus, Ultra (bench-top) (10 PHLs)

**PHLs could select more than one answer on these questions.*

A large majority of respondents showed interest in expanding (92%, 24) or reestablishing (63%, 8) their testing programs.

ADDITIONAL INFORMATION

TESTING

Twenty-one of the 35 participating laboratories (60%) performed routine pediatric lead testing, 9% (3) performed emergency pediatric lead testing and 31% (11) laboratories did not perform pediatric lead testing.

SOURCE OF SAMPLES

The blood specimens received by these laboratories are sourced from a variety of settings, and survey participants were asked to indicate all applicable responses. Approximately 67% (16) receive blood specimens from medical providers, 38% (9) from public health collection events, 13% (3) from research studies, 8% (2) from contractual agreements such as partnerships between states and cities, 4% (1) from tribal agreements, and 38% (9) from other sources. Other sources include WIC, childhood lead poisoning prevention programs, LRN-C outreach with another state while testing in the home laboratory was down, partnership with a connected hospital, on-site clinics, emergency response personnel, and county health departments.

COLLECTION METHOD

Approximately 83% (20) reported performing tests on blood collected through venipuncture, 79% (19) performed testing on blood collected by finger stick, and 17% (4) performed testing on dried blood spots. (The laboratories that performed routine or emergency pediatric lead tests reported significant overlap in their blood specimen collection methods. Survey participants were asked to indicate all applicable responses.)

FUNDING

Of the 24 laboratories that reported performing pediatric lead tests, 50% (12) reported receiving funding from medical insurers, Medicaid and first-party payers. Approximately 46% (11) reported receiving funding from state, country, or municipal appropriation while another 33% (8) reported receiving fee-for-service funding. Another 21% (5) reported receiving funding from federal cooperative agreements while 8% (2) reported receiving funding from contracts. Finally, 4% (1) reported receiving funding from other sources including state general funds, Women, Infants, and Children (WIC) and childhood lead poisoning programs from the health department.

In April 2019, with funding support from CDC, APHL awarded two $60,000 grants to one state laboratory and one local laboratory to enhance their pediatric lead testing programs. Given the significant interest shown by participating laboratories to expand their testing programs, APHL hopes to offer more grant opportunities.

For more information on this survey, the summary data, or pediatric lead testing, please contact APHL's Environmental Health program at eh@aphl.org.

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