### Universal Blood Lead Testing

# Andrew Smith, SM, ScD State Toxicologist Maine Center for Disease Control and Prevention October 21, 2019

Virtual conference (audio/visual) via zoom:

https://zoom.us/j/8061423002

or by phone: 19292056099,,,8061423002#



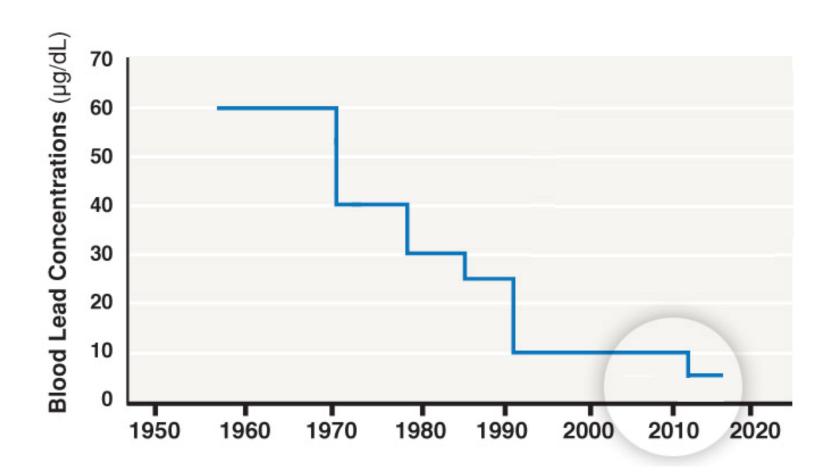
### Welcome and Zoom Tips

- 1. You can get audio and visual through your computer
- 2. You can also call in for audio: 19292056099,,,8061423002#
- 3. We will be recording the call and will send out a link to the recording and slides after the call with follow-up information
- 4. If you hover over the bottom left side of the screen, there will be a menu bar. You can turn on your video and mute yourself with buttons on the screen
- 5. When you are speaking, please turn on your video
- 6. You can put questions into the chat box

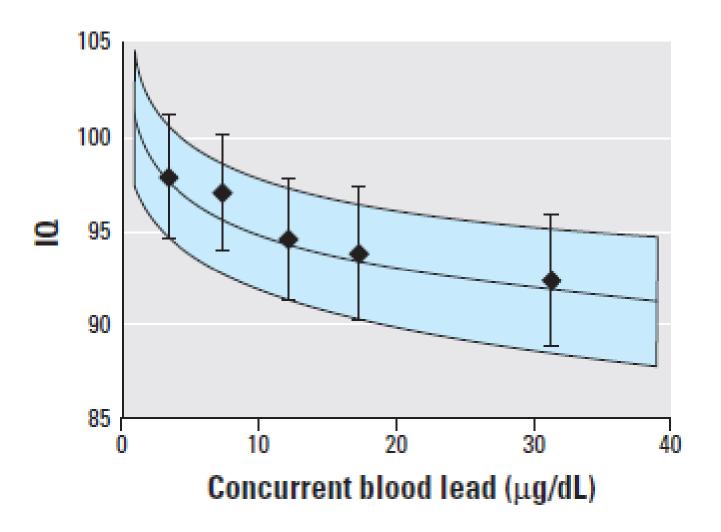
### **Topics**

- Background on lead poisoning
- Universal blood lead testing mandate
- Current blood lead testing rates
- Your questions and our responses

### CDC's Changing Blood Lead Level of Concern



## Low Level Blood Lead and Intellectual Function



Source: Lanphear et al., VOLUME 113 | NUMBER 7 | July 2005 • Environmental Health Perspectives

## Low Level Blood Lead and Reading Readiness



Source: McLaine et al., VOLUME 131 | NUMBER 6 | June 2013 • Pediatrics

Reading readiness at start of kindergarten is associated with blood lead levels below 10 µg/dL.

## Maine Statutory Definition of "Lead Poisoning"



2015

Lead Poisoning is a <u>confirmed</u>
Blood Lead Level of

 $\geq$  5  $\mu$ g/dL

## If a "lead poisoned" child is identified, DHHS must inspect dwellings for hazards











Test for lead in paint, dust, water, soil

## If inspections find lead hazards, DHHS must:







Post notice of hazards

Relocate family if needed

Order removal of lead hazards

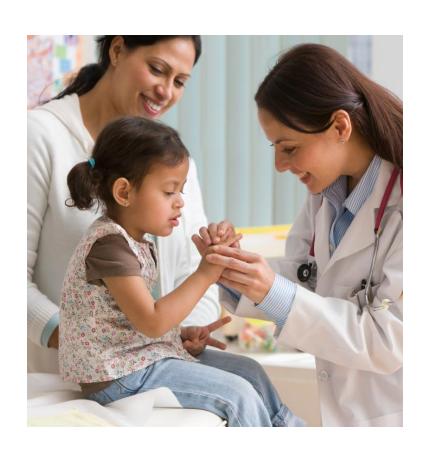
### Role of Providers:

Test for blood lead, confirm elevated capillary results, timely follow-up of elevated venous results





## Testing of 1 and 2 year old's: How are we doing?



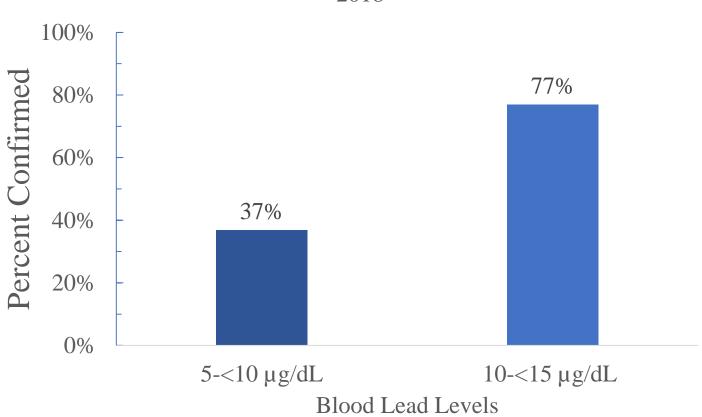
54 % of 1 year old's on MaineCare

35 % of 2 year old's on MaineCare

Statutory mandate to test <u>ALL</u> 1 <u>and</u> 2 year old children enrolled in MaineCare has existed since 2001.

## Confirming Elevated Capillary Results: How are we doing?

Confirmation Rates by Initial Capillary Blood Lead Level - 2018



## When we test, how often do we find a lead poisoned child?



For 1 year old children enrolled in MaineCare:

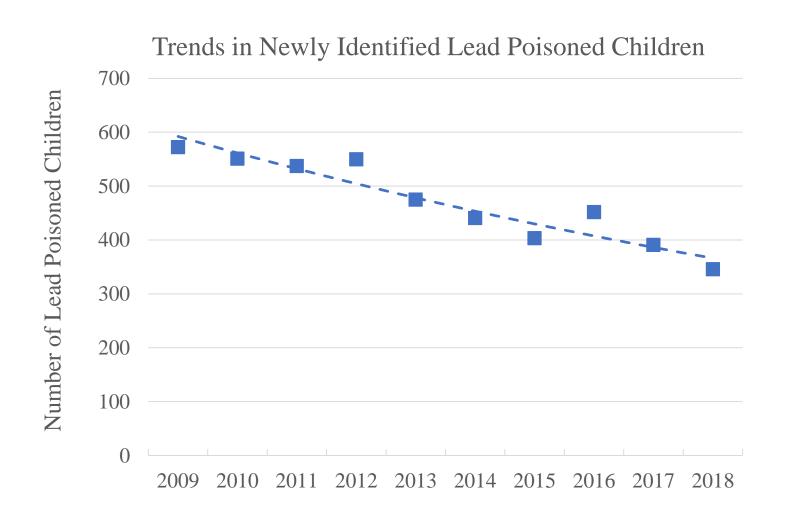
~2 in 50



For 1 year old children not enrolled in MaineCare:

~1 in 50

## Slow Progress on Goal to Eradicate Childhood Lead Poisoning



### Universal Blood Lead Testing Mandate 2019

- Sec. 2. 22 MRSA §1317-D, sub-§4, as enacted by PL 2001, c. 683, §3 and affected by §10, is amended to read:
- 4. Testing of children not covered by MaineCare program. The program must require the testing of blood lead levels of all children not covered by the MaineCare program at one year of age and 2 years of age unless, in the professional judgment of the provider of primary health care, in conjunction with the use of the lead poisoning risk assessment tool, the child's level of risk does not warrant a blood lead level test. The drawing of blood for the testing may be done in the health care provider's office or may be referred to another laboratory.

APPROVED	CHAPTER
JUNE 27, 2019	479
BY GOVERNOR	PUBLIC LAW

### Question #1

Why did Maine adopt universal blood lead testing?

## Nearly all Northeast States have Universal Blood Lead Testing Mandates

Top 8 States (and NH) based on percent housing built before 1950 and universal blood lead testing status.

	Percent of			
	Housing Built	Universal	Year	
State	before 1950	Screening	Adopted	
New York	41.0%	✓	1992	
Massachusetts	39.5%	✓	1987	
Rhode Island	38.3%	✓	1991	
Pennsylvania	34.4%	*	n/a	
Iowa	31.8%	✓	2008	
Maine	29.8%	*	n/a	<b>√</b> 2019
Connecticut	29.5%	✓	2008	
Vermont	29.2%	✓	2011	
New Hampshire (ranked #14)	24.2%	✓	2018	
United States Median	17.1%	n/a	n/a	

 $Source: Benfer \ and \ McHugh \ 2019. \ Health \ Justice \ Innovations, \ LLC - \underline{https://mainehousingcoalition.org/wp-content/uploads/2019/08/Lead-Screening-Report-Final-Full-Report.pdf}$ 

### Question #2

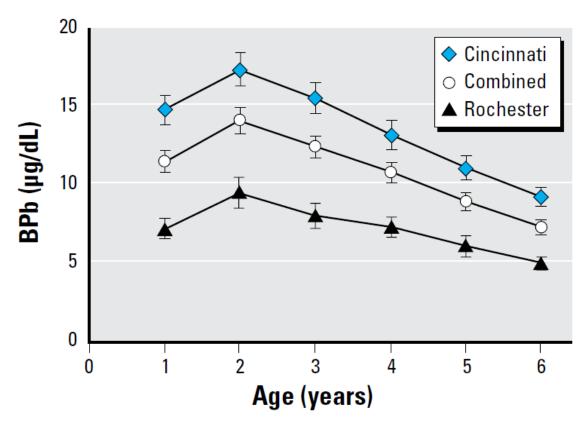
How many <u>more</u> lead poisoned children will we find with universal blood lead testing?

100 – 150 per year

### Question #3

What should we tell a parent who does not want their 2 year old tested because they had a low BLL at 1 year of age and no change in risk factors?

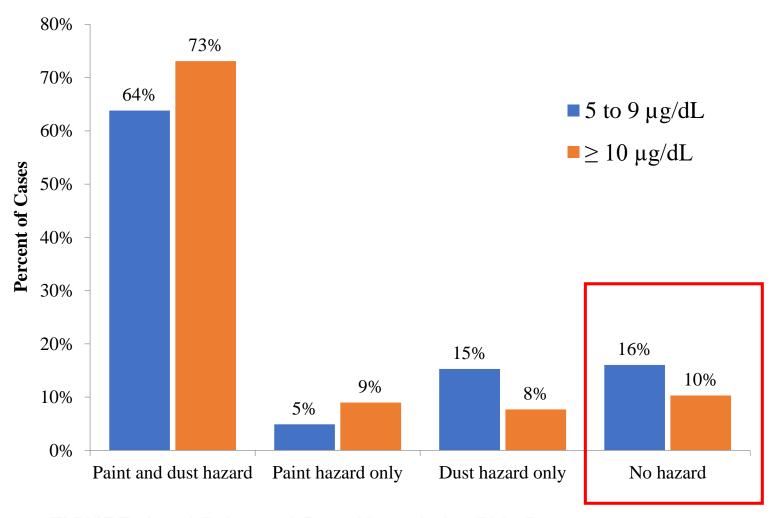
### 2-year old's are at highest risk for having an elevated blood lead



**Figure 1.** Annual BPb levels and 95% confidence intervals for Cincinnati and Rochester cohorts, individually and combined.

Source:

## A child can have an elevated BLL without obvious lead hazards in the home



**FIGURE** Lead Paint and Dust Hazards by BLL Category.

### Question #4

How should we document families that refuse a blood lead test?

### Maine State Law

### §1317-D. LEAD POISONING RISK ASSESSMENT AND BLOOD LEAD LEVEL TESTING PROGRAM

7. Exception. This section does not apply to a child whose parent or guardian objects to that child's participation in the program on the grounds that the assessment or testing is contrary to the parent's or guardian's sincerely held religious or philosophical beliefs.

```
[ 2001, c. 683, §3 (NEW); 2001, c. 683, §10 (AFF) .]
```

### New Hampshire 'Opt Out' Form

Your Logo Here

#### Choose Not to Have Your Child Tested for Elevated Blood Lead Level

 $\square$  | choose not to have my child tested for elevated blood lead.

I understand that by not testing my child's blood that neither I nor my physician will know if my child has an elevated blood lead. I understand that young children exposed to lead often look health and act healthy, demonstrating no outward signs or symptoms. I understand that young children are especially vulnerable to lead exposure due to their developmentally appropriate behaviors, and that the lead can accumulate in their body over time. As children grow, I understand that elevated blood lead can affect my child's ability to pay attention, speech and language development, hearing, executive functions, visual-spatial skills, and large and fine muscle motor skills and can result in increased impulsivity, and aggression. If high enough, lead exposure can induce convulsions and cause the loss of muscle control and even death.

I understand that I may reverse my decision at any time and have my child tested for elevated blood lead levels through a simple test.

PATIENT NAME (printed):

PARENT OF GUARDIAN NAME (printed):

PARENT OR GUARDIAN NAME (signature):

WITNESS by current health care provider:

Parents who choose to not have their children tested for elevated blood lead are required by law to sign this document in accordance with RSA 130-A.

Signed paper statement or scanned electronic copy to be maintained in child's medical record.

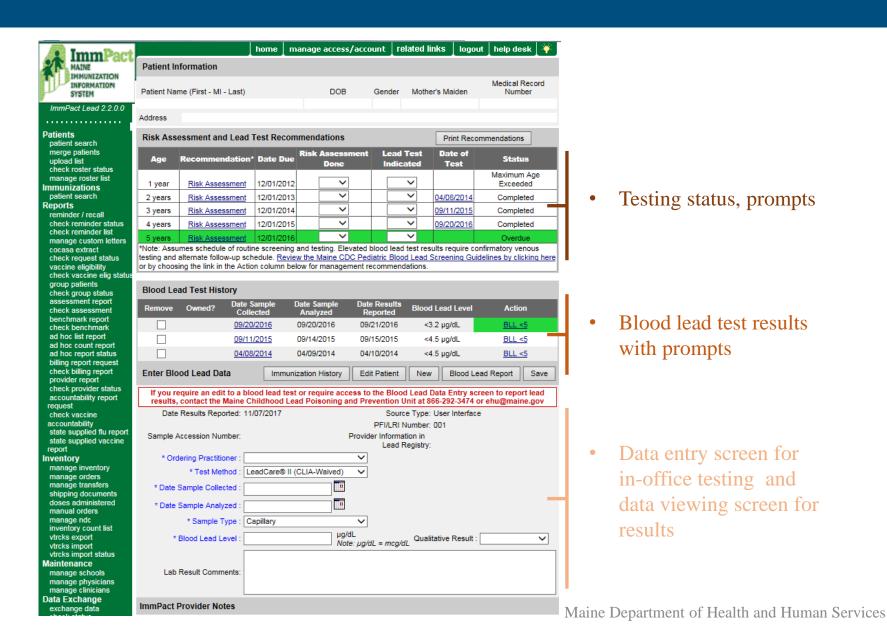
NH State Law requires parents to sign an opt out form.

### Question #5

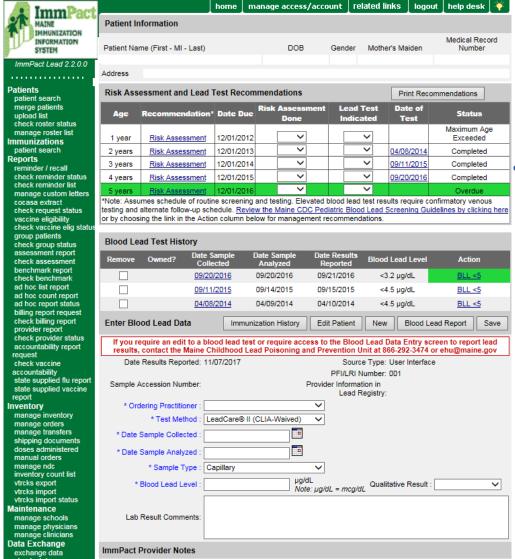
When will the Blood Lead Module for ImmPact become available?

January 2020

#### New Blood Lead Module for ImmPact

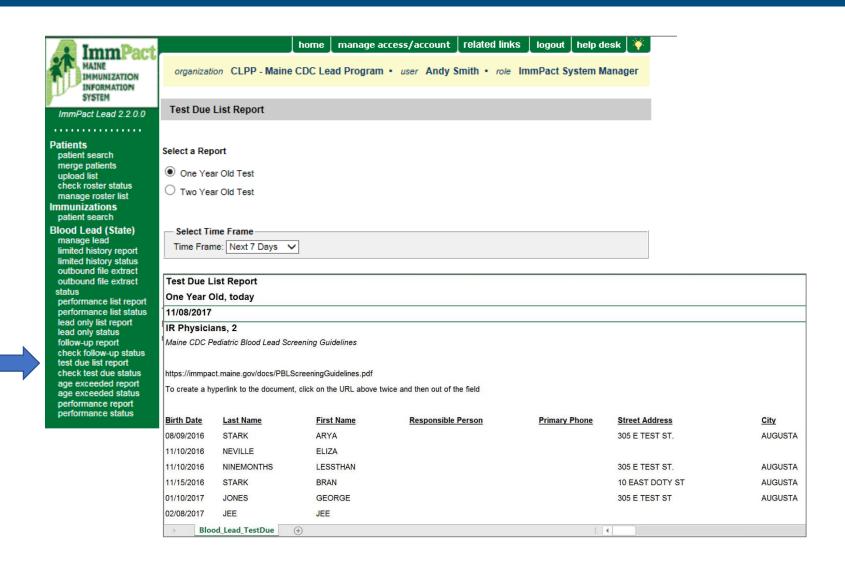


## Using the Blood Lead Module to record declination of blood lead tests



Add declination field here?

### Ability to run queries to generate reports



### Report Cards Coming Soon!

#### 2019 Blood Lead Testing Report

Practice Name

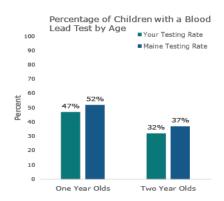


#### State law requires that all children receive a blood lead test at 1 and 2 years of age.

- · There is no safe level of exposure to lead.
- Lead poisoning remains a significant, and entirely preventable, public health problem in Maine.
- Always confirm capillary tests ≥ 5 µg/dL with a venous blood lead test.
- The State of Maine will perform home inspections for lead hazards based on venous test results ≥ 5 μg/dL.

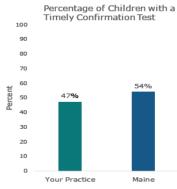
#### Your Practice's Testing Rate:

47% of One-Year-Olds, 32% of Two-Year-Olds



#### Your Practice's Confirmation Rate:

47% (59/127)



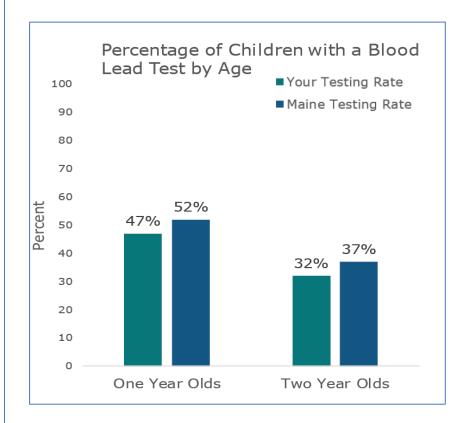
#### **About the Data**

- Testing rates: Percentages of children who had a blood lead test as one-year-olds and two-year-olds.
- One-year-olds: Children born in 20xx.
- Two-year-olds: Children born in 20xx.
- Rates: Calculated for children with records in ImmPact, Maine's Immunization Informatin System.
- Timely confirmation rate: Percentage of all children < 6 years old with a capillary test ≥ 5 μg/dL who received a venous blood lead test within the recommended confirmation timeframe. Children with a prior venous blood lead test ≥ 5 μg/dL are not included.</p>

#### Test children for lead poisoning.

- Use the Blood Lead Module in ImmPact to run additional reports.
- Call 866-292-3474 or visit maine.gov/healthyhomes for more information on blood lead testing guidlines.





### Report Cards Coming Soon!

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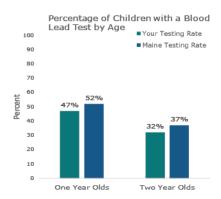


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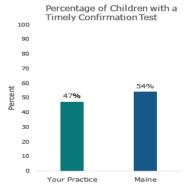
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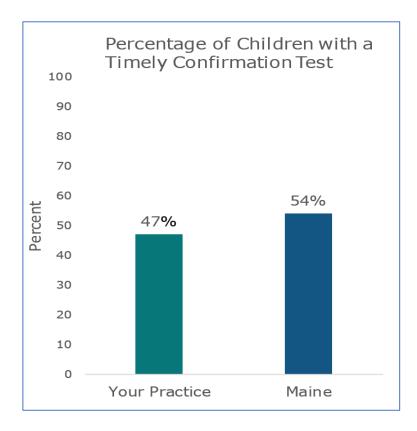
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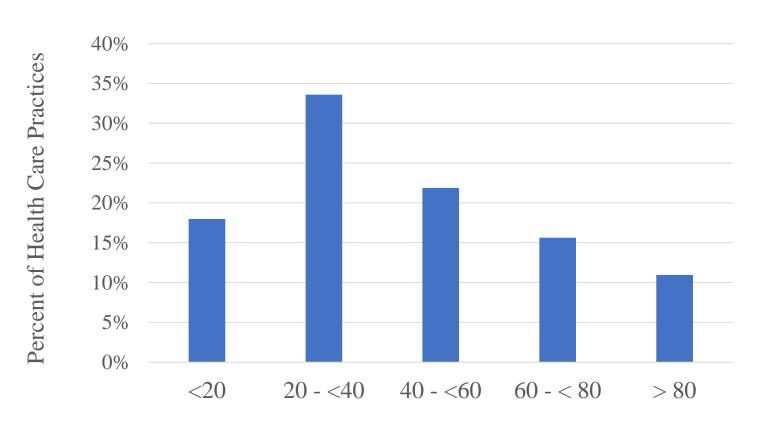




### Report Cards Coming Soon!

#### - PRELIMINARY RESULTS -

2018 Testing Performance among practices with at least 20 1-year-old's



Percent of 1 year old's Tested for Blood Lead

### Question #6

What are the economics of inoffice blood lead testing?

## Why Consider In-Office Testing



- Needs a smaller blood volume (50 μL vs 300 μL)
- Family informed of result during visit and can be referred to laboratory for confirmation

## Maryland Task Force on In-Office Blood Lead Testing - 2014

Table 1. Estimated operational costs for point of care testing for lead in Maryland.

		- J
Program Component	Cost	Comments
LeadCare II device	\$1,850 - \$2,059	
CLIA waiver registration	\$150.00	Every 2 years
Maryland fee for lead testing	\$200.00	Every 2 years
Maryland application fee for	\$100.00	Every 2 years
lead test		
Test kits	\$2,928	Based on 144 tests free with
		machine purchase, then 366
		tests at \$8/test
Staff time	\$893	Based on 2 tests/day/provider,
		or 510 tests/year
Proficiency testing (if	\$460.00	Based on data from Wisconsin
required)		
Total costs	\$6,581 - \$6,790	

Based on these assumptions, the Task Force estimates that with current Medicaid reimbursement rates of \$12.52 per test, a practice would break even with 434 tests in the first year and 429 tests in the second year. With either a higher reimbursement rate or additional reimbursement for the sample collection, the breakeven point would occur even sooner.

Source: https://phpa.health.maryland.gov/Documents/Final%20Report\_Lead%20Poisoning%20Point%20of%20Care%20Testing.pdf

### Question #7

What support is there for getting started with in-office blood lead testing?

## In-office blood lead testing

- The vendor for the in-office blood lead testing device (LeadCareII) provides training
- MECDC provides assistance with the application process to become approved in-office testing and provides training on use of the ImmPact BLM for required electronic reporting of test results
- MECDC does not provide any funding for the purchase of a LeadCareII instrument or the specimen kits, but will reimburse costs for uninsured patients
- Practice will need to obtain a CLIA Waiver (may already have if performing in-office hemoglobin)

Should we continue to use the risk assessment questionnaire as recommended by Bright Futures?

YES

# Lead Exposure Behavior and Mobility and Hazard





# Revised Blood Lead Testing Requirements

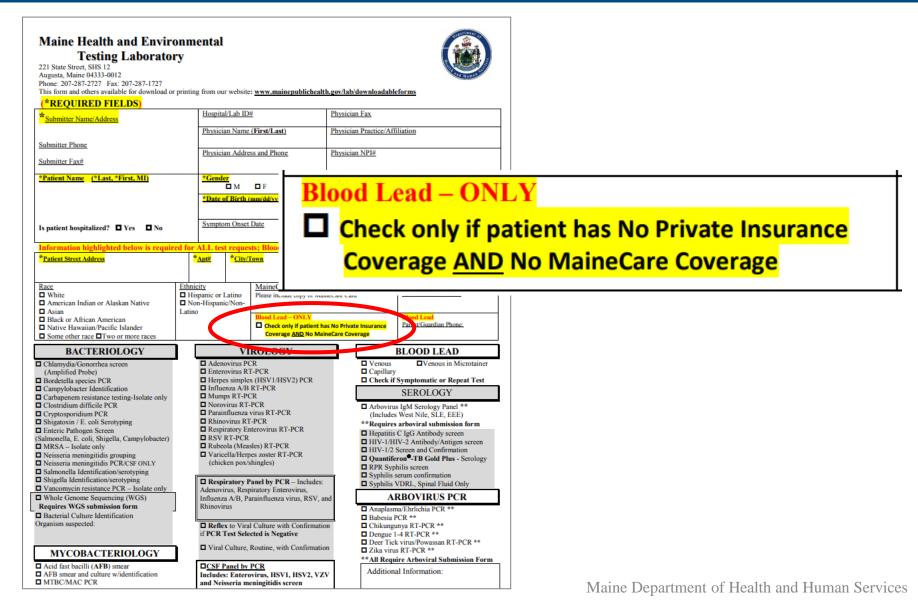
### **Blood Lead Testing Requirements**

Age	Children Covered by MaineCare	Children Not Covered by MaineCare
1 year (9 to <18 months)	Blood lead test mandatory under Maine and federal law	Blood lead test mandatory under Maine law
2 years (18 to <36 months)	Blood lead test mandatory under Maine and federal law	Blood lead test mandatory under Maine law
3-5 years (36-72 months)	<ol> <li>If not previously tested: Mandatory blood lead test</li> <li>If previously tested: Recommend blood lead test yearly unless risk assessment questionnaire is negative.</li> </ol>	Recommend blood lead test yearly unless risk assessment questionnaire is negative.

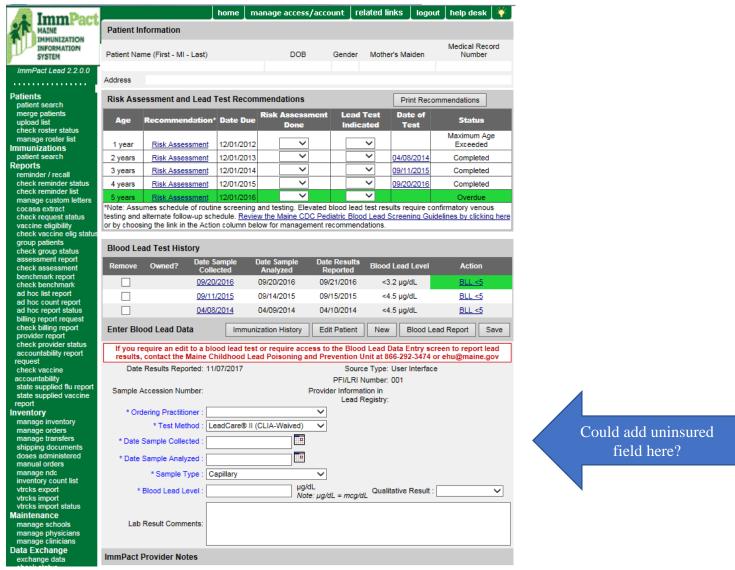
Is there a way to get the costs of blood lead tests covered for uninsured kids?

YES

# Indicate No Insurance on HETL Requisition Form



## Modify ImmPact Blood Lead Module to indicate uninsured



Since testing is a State mandate, should we attach the mod.33 to the billing code make sure costs are not incurred by families?

# Good Question Looking into this...

- Under the ACA, private insurers are not allowed to charge copays for certain preventive health services.
- Modifier 33 can be appended to codes for services described in HRSA guidelines for children, adolescents, and women
- Bright Futures appears to be a HRSA preventative health services guideline and addresses blood lead testing
- The question is whether the universal testing mandate makes the entire state "high prevalence area" of lead poisoning

Do you have materials in non-English languages?

#### How to Clean Up Lead Dust



While lead paint can be found in houses and buildings built before 1978, most lead paint is found in homes built before 1950. Lead paint that is peeling or chipping can be a hazard. Areas where lead paint rubs, such as door frames, windows, or even floors where you walk, can produce lead dust. Lead dust can also come from home repairs and renovations. If you sand, scrape or disturb lead paint you can make lead dust.

#### If You Live in an Old Building or Have Sanded or Scraped Lead Paint

Follow these directions to give your home a deep cleaning to remove lead dust. Once you have cleaned in this way, clean your floors, windowsills, door trim and baseboards with a damp rag or mop once a week.

#### Step 1: Prepare before you clean.

Look around the room. Put on gloves and pick up any paint chips on the floor or around windows. A damp rag, paper towel or baby wipe may help you pick up these pieces. Throw away the chips and dirty rags in a plastic bag. Vacuum the floor - vacuums with HEPA filters work best. "Allergen" vacuum bags are the next best choice if you don't have a HEPA vacuum. Do not use a broom as these will spread lead dust around



Fill a wash bucket half full with warm water. Mix in a household detergent, following the directions on the bottle

#### Step 3: Wash the woodwork and floors.

Start by washing the woodwork around windows, doors and baseboards with rags wet with the wash water. Be sure to work from top to bottom. Once a rag is dirty, throw it out. Change the water when it becomes dirty. Dump dirty water into the toilet.

#### Step 4: Wash the floors.

Using a new mixture of wash water, wash the floors with a mop or clean rags. When finished, discard wash rags and dump the dirty water into the

#### Step 5: Rinse and clean up.

Fill a clean bucket with water. Dip clean rags into the water and wipe all the woodwork that you washed. Using new rinse water, mop or wipe the floors. When you are finished, dump the rinse water into the toilet and clean the mop and bucket. Throw away your gloves, rags, and place the garbage bag in the trash

#### Protect your family.

- . Check this website: maine.gov/healthyhomes
- . Call for advice: 866-292-3474 TTY: Call Maine Relay 711



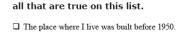






### If your child is younger than 6 years, check

Lead Poisoning: Do I need to worry?

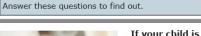


☐ The place where I live was built before 1978, and has had repairs, painting or renovations done recently.

Lead Tipsheet #10

- ☐ Someone who lives with me may work with lead. Examples: house painters, contractors, metal recyclers
- ☐ My child has a brother, sister or neighbor who has had lead poisoning
- My child or I were born in another country.
- ☐ My child puts lots of things that are not food in his/her mouth.

- Arabic
- French
- Kinyarwanda
- Lingala
- Portuguese
- Russian
- Somali
- Spanish
- Swahili
- Vietnamese





If you checked any box, ask your child's doctor about a blood test for your child.

## For More Information

### Childhood Lead Poisoning Prevention Website:

https://www.maine.gov/dhhs/mecdc/environmental-health/eohp/lead/providers.shtml

### Latest Data on Blood Lead Testing Rates and Poisonings

https://data.mainepublichealth.gov/tracking/

### **Questions?**

Andrew Smith, SM, ScD
State Toxicologist
Maine Center for Disease
Control and Prevention
andy.e.smith@maine.gov

Leslie Walleigh, MD, MPH
Public Health Physician
Maine Center for Disease
Control and Prevention
Leslie. Walleigh@maine.gov

Karyn Butts, MPH
Senior Health Program Manager
Childhood Lead Poisoning
Prevention Unit
Maine Center for Disease
Control and Prevention
karyn.butts@maine.gov

