

Child Case Management

Types of Lead Blood Tests:

- **Blood Lead Screening**
(Capillary/finger stick)
(Capillary/heel stick)



- **Blood Lead**
(Venous)



Child Case Management

- What does it involve?
- What is the new reference value: an overview of the current "Requirements and Guidance for Childhood Lead Screening by Health Care Professionals in CT"?
- What are a Local Health Department's Responsibilities?
- Who is supposed to do it?

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BLL Notification to DPH

- All blood lead levels/test results are required to be reported to DPH
 - BLLs $\geq 10\mu\text{g}/\text{dL}$ are to be reported within 48 hours
 - Comprehensive report is to be submitted at least monthly

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BLL Notification to LHD

- Laboratories are be required to report any BLLS ≥ 10 $\mu\text{g}/\text{dL}$ to local health departments
- Primary Care Providers are required to send the State of CT Reportable Disease Confidential Case Report Form (PD-23) for venous BLLS ≥ 15 $\mu\text{g}/\text{dL}$

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**Requirements and Guidance for Childhood Lead Screening
by Health Care Professionals in Connecticut
Lead Poisoning Prevention and Control Program**

Revised April 2013

www.ct.gov/dph

A. Universal Blood Lead Testing is Mandated

Test children:

- Between 9 months and 36 months of age, each year for elevated blood lead levels
 - Most providers test at 12 months and 24 months of age
- Between 36-72 months of age, if not previously been tested, regardless of risk
- < 72 months of age, with developmental delays (especially if associated with pica)

B. Diagnostic Testing and Follow-up

Timetable for Confirming Capillary (Screening) Blood Lead Results with a Venous Blood Lead Test*

If result of screening test ($\mu\text{g}/\text{dl}$) is	Perform Venous Blood test within:
5-19	3 months
20-44	1 month-1 week*
45-59	48 hours
60-69	24 hours
≥ 70	Immediately

*The higher the result on the capillary test, the more urgent the need for venous testing.

Schedule for Follow-up Venous Blood Lead Testing for Children with an Elevated Blood Lead Level³

Blood Lead Level ($\mu\text{g}/\text{dl}$)	Early follow-up (1 st 2-4 tests after identification) test within:	Late follow-up (after BLL begins to decline) test within:
5-14	3 months ^b	6 - 9 months
15-19	1 - 3 months ^b	3 - 6 months
20-24	1 - 3 months ^b	1 - 3 months
25-44	2 weeks - 1 month	1 month
> 45	As soon as possible	Chelation and follow-up

Requirements and Guidance for Childhood Lead Screening by Health Care Professional in CT

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^aSeasonal variations of BLLs exists and may be more apparent in colder climates. Greater exposure in the summer months may necessitate more frequent follow ups.

^b Some case managers or PCPs may choose to repeat blood lead tests on all new patients within a month to ensure that their BLL is not rising more quickly than anticipated.

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B: Diagnostic Testing and Follow-up

- If a capillary blood test is elevated (equal to or greater than 5 µg/dL), confirm with a diagnostic (venous) blood lead test
- Children with an elevated diagnostic blood lead test require additional follow-up blood testing at appropriate intervals
- Children should be tested according to schedule above until BLL is below the reference value of <5µg/dl
- Providers can contact one of Connecticut's Regional Lead Treatment Centers for guidance and assistance with clinical management of a lead poisoned child (see below)

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C: Provide Anticipatory Guidance to Families

- Provide educational information about lead poisoning
- Written materials, along with verbal education should be provided the family's primary language (at an appropriate reading level)
- Resources available at www.ct.gov/dph

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D: Risk Assessment

- In addition to testing children at the recommended time intervals, at each well-child visit, health care providers shall evaluate children 6 months to 72 months of age for risk of lead exposure using the following risk assessment questions

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D: Risk Assessment

Risk Assessment Questions

- Does your child live in or regularly visit a house built before 1978?
- Does your child have a brother or sister, housemate, or playmate being followed or treated for lead poisoning?
- Does your child frequently come in contact with an adult whose job or hobby involves exposure to lead (e.g., construction, welding, automotive repair shop, other trades, stained glass making; using lead solder, artist paints or ceramic glazes; etc.)?
- Has your child been exposed to any imported products (spices, foods/vitamins, ethnic home remedies, or ethnic cosmetics)?
 - Some examples include: azarcon (also known as rueda, Maria Luisa, alarcon, liga); albayalde; greta; pay-loo-ah; ghasard; bala goli;

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D: Risk Assessment

- Ask any additional questions that may be specific to situations that exist in a particular community (e.g. operating or abandoned industrial sources; waste disposal sites; drinking water; has your child ever lived outside the U.S.; does your family use pottery for cooking, eating or drinking; etc.?)
- **If the answer to any of the above questions is YES or UNKNOWN, then the child is considered to be at risk and should be tested**

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D: Risk Assessment

NOTE: Blood lead testing shall also be considered for any child regardless of age, with:

- Unexplained seizures, neurologic symptoms, hyperactivity, behavior disorders, growth failure, abdominal pain, or other symptoms consistent with lead poisoning or associated with lead exposure;
- Recent history of ingesting, or an atypical behavior pattern of inserting, any foreign object (even if the foreign object is unleaded) into a body orifice

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Local Health Departments Case Management Responsibilities

- Initiate management of a BLL:
 - ≥ 5 $\mu\text{g}/\text{dL}$ (venous)
 - ≥ 10 $\mu\text{g}/\text{dL}$ (capillary)
- Manage all BLL increases and decreases
- Notify guardians when testing is due
- Provide education and outreach to guardians and primary care providers

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Capillary BLLs ≥ 5 $\mu\text{g}/\text{dL}$

- A follow-up test reminder must be provided to the guardians of any child that has a capillary BLL between 5 $\mu\text{g}/\text{dL}$ and 9 $\mu\text{g}/\text{dL}$
- Pediatricians are required to provide guardians with anticipatory guidance
 - Although local health departments are not required to send educational materials, they may do so if they would like

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Venous BLLs $\geq 5 \mu\text{g/dL}$ Capillary BLLs $\geq 10 \mu\text{g/dL}$

- Educational materials must be provided to the guardians of any child that has a **venous BLL $\geq 5 \mu\text{g/dL}$ and/or a capillary BLL $\geq 10 \mu\text{g/dL}$**
- Educational information packet can be downloaded from the DPH website
 - Packet materials comply with statute
- Capillary test results $\geq 10 \mu\text{g/dL}$ require a confirmatory venous test

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Venous BLLs $\geq 15-19 \mu\text{g/dL}$

- Two venous BLLs $\geq 15-19 \mu\text{g/dL}$ taken >90 days apart the local health department is responsible for performing a **comprehensive lead inspection**
- Need to initiate contact with the child's family within five working days
- Educational materials must be provided to the guardians
- Although an epidemiological form is not required, it is highly **RECOMMENDED**

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Venous BLLs $\geq 20 \mu\text{g}/\text{dL}$

- Need to initiate the **epidemiological investigation** within five working days
 - Epidemiological investigation consists of a comprehensive lead inspection and completing the epidemiological form
- All related investigation information must be entered in Lead Surveillance System (Maven) within 30 working days of receiving all environmental results

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Confirmatory Test Schedule

If result of screening test ($\mu\text{g}/\text{dL}$) is	Perform Venous Blood test within:
5-19	3 months
20-44	1 month-1 week
45-59	48 hours
60-69	24 hours
≥ 70	Immediately

The higher the BLL on the screening test, the more urgent the need for confirmatory testing

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Venous Re-test Schedule

Blood Lead Level (µg/dl)	Early follow-up (1 st 2-4 tests after identification) test within:
5-14	3 months
15-19	1 - 3 months
20-24	1 - 3 months
25-44	2 weeks - 1 month
> 45	As soon as possible

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Other Medical Testing

- **Zinc Protoporphyrin (ZPP)**
 - Reflects average lead level over the previous 3-4 months
 - Child normal range ZPP usually below 34 µg/dL
 - Can be early indicator of iron deficiency
 - Can indicate chronic lead exposure
- **Abdominal radiograph (X-ray)**
 - Lead foreign bodies in gastrointestinal tract

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Some Important Things to Know and Consider.....

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Child's Individual Case File Should Contain:

- All BLL results
- The Epidemiological Investigation Form
- All Correspondence
 - Letters, contact attempts, notes of telephone conversations
- All child information

*** Child information is CONFIDENTIAL ***

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Key Points in Documentation

- Document dates, times and type of contact made with the PCP & family
- Confirm that educational material provided is understood
- Monitor compliance with follow up care and re-testing
 - Log into Lead Surveillance System (Maven) weekly

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Relocation

If a child relocates: Within your jurisdiction

- Risk assessment at new address prior to child moving

If a child relocates: Out of your jurisdiction

- Notify new local health department prior to child moving

Case can be shared between towns in the Lead Surveillance System (Maven)

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Problems with retesting

- If PCP is not following guidelines, notify the Lead and Healthy Homes Program
 - Request RLTC to contact PCP
- If guardians are refusing to get child re-tested as needed refer case to DCF for medical neglect
 - The DCF referral number is 1-800-842-2288

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Case Closure Criteria

- Environmental case closed and BLL drops < 5 µg/dL
- Child relocates to a different jurisdiction
- Administrative closure – *not to be used often*
 - Three separate unsuccessful documented attempts to locate family, can close case with DPH permission
 - *(MD does not know where family is, no one lives at house, no working phone, mail undeliverable, etc.)*

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Epidemiological Form

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Epidemiological Form

- Questionnaire for an EIBLL case of $>20 \mu\text{g/dL}$
- Identify sources of lead poisoning, review of potential sources of lead, summary of pertinent information
- Confidential health data document
- Must use current version (on our website)

All Epidemiological Form data must be entered into the Lead Surveillance System (Maven)

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