

Clinical Case Management from a Nursing Perspective

Oliver Grimsley

Public Health Nurse

New Hanover County- Health and Human Services



Rule of Thumb

Wherever you work, clinical case management is an important role for ALL CLINICIANS.

Case management involves:

- Medical provider/Medical Home
- Other Services (*WIC/Early Intervention/Environmental Health*)
- Client/Parents/Guardians



Step by Step Case Management

- Screening
- Follow-up with medical home/parents
- Establish Plan of Care based on diagnostic results
- Emphasize that Plan of Care Involves ALL
- Identifying Risks
 - Environmental exposure history (*form 3651*)
 - Assessments:
 - *Nutritional*
 - *Developmental*
 - *Medical*



Step by Step - continued

- Parent Education
 - Lead exposure: sources and risks
 - Nutrition counseling
 - Importance of follow-up testing
- Know your community contacts for referrals and resources
 - WIC program
 - Local health department (*EH specialists, nurses*)
 - Early Intervention Services (*CMARC, CDSA, public schools, preschools*)
 - County Social Services
 - Other partners (*Legal Aid of NC*)



FOLLOW-UP SCHEDULE

Blood Lead Levels for Children Under the Age of Six

All diagnostic (i.e., confirmation) tests should be performed as soon as possible (ASAP), but at a minimum within specified time periods.

- Diagnostic tests should be venous; however, capillary tests are accepted if a venous cannot be obtained.
- Diagnostic specimens *must* be sent to an outside reference laboratory for analysis.
- Point of care (POC) blood lead analyzers (i.e., LeadCare) should *NOT* be used for diagnostic tests.
- Follow-up (post-diagnostic) testing can be capillary.
- CDC protocol for collecting capillary specimens should be followed (see first link below).

See <https://nchealthyhomes.com/clinical-lead-resources/> for a list of clinical resources.

Users should contact [Children's Environmental Health](#) for further assistance.



Division of Public Health • <https://publichealth.nc.gov>
NCDHHS is an equal opportunity employer and provider. • 3/2022

For each initial blood lead level range, follow the steps under the corresponding category. If diagnostic test result falls within a lower category, follow the steps within that category; if diagnostic or follow up test result falls within a higher category, conduct another diagnostic test.

INITIAL BLOOD LEAD LEVEL AND RESPONSE *Children's Developmental Service Agency **Care Management for At-Risk Children

< 3.50 µg/dL

- Report blood lead test results to parents and document notification
- Educate family about lead sources and prevention of lead exposure
 - Retest at age 2, earlier if risk of exposure increases.

3.50 - 4.99 µg/dL Perform diagnostic test ASAP (but at the latest within 3 months)

If diagnostic test result is 3.50 - 4.99 µg/dL, take same action as previous category AND

- Provide clinical management
- Conduct **nutritional assessment** and refer child to the WIC Program
- Test other children under the age of six in same household
- Conduct follow-up testing every 3 months until 2 consecutive tests are < 3.50 µg/dL

5.00 - 9.99 µg/dL Perform diagnostic test ASAP (but at the latest within 3 months)

If diagnostic test result is 5.00 - 9.99 µg/dL, take same action as previous category AND

- Complete Form 3651: **Exposure History of Child with Elevated Blood Lead Level** to identify possible lead sources and fax a copy to (919) 841-4015
- Refer case to local health department to offer an environmental investigation
- Conduct follow-up testing every 3 months until 2 consecutive tests are < 3.50 µg/dL

10.00 - 44.99 µg/dL Perform diagnostic test ASAP (but at the latest within 1 month at 10.00 - 19.99 µg/dL and within 1 week at 20.00 - 44.99 µg/dL)

If diagnostic test result is 10.00 - 44.99 µg/dL, take same action as previous category AND

- Refer to local health department for required environmental investigation
- Refer child to CDSA* Early Intervention or CMARC** as appropriate
- Refer to Social Services as needed for housing or additional assistance
- For 10.00 - 24.99 µg/dL: Conduct follow-up testing every 1-3 months until 2 consecutive tests are < 3.50 µg/dL
- For 25.00 - 44.99 µg/dL: Conduct follow-up testing every 2 weeks to 1 month until 2 consecutive tests are < 3.50 µg/dL

45.00 - 69.99 µg/dL Perform diagnostic test ASAP (but at the latest within 48 hours at 45.00 - 69.99 µg/dL and within 24 hours at 60.00 - 69.99 µg/dL)

If diagnostic test result is 45.00 - 69.99 µg/dL, take same action as previous category AND

- Consult with North Carolina Poison Control (800) 222-1222 for advice on chelation and/or hospitalization
- Consider an abdominal X-ray check for ingested object
- Alert NC CLPPP by calling (919) 707-5854
- Conduct follow-up testing every 2 weeks to 1 month until 2 consecutive tests are < 3.50 µg/dL

≥ 70.00 µg/dL Perform emergency diagnostic test immediately

If diagnostic test result is ≥ 70.00 µg/dL, take same action as previous category AND

- Hospitalize child and begin medical treatment immediately
- Conduct follow-up testing every 2 weeks to 1 month until 2 consecutive tests are < 3.50 µg/dL

Don't Reinvent the Wheel

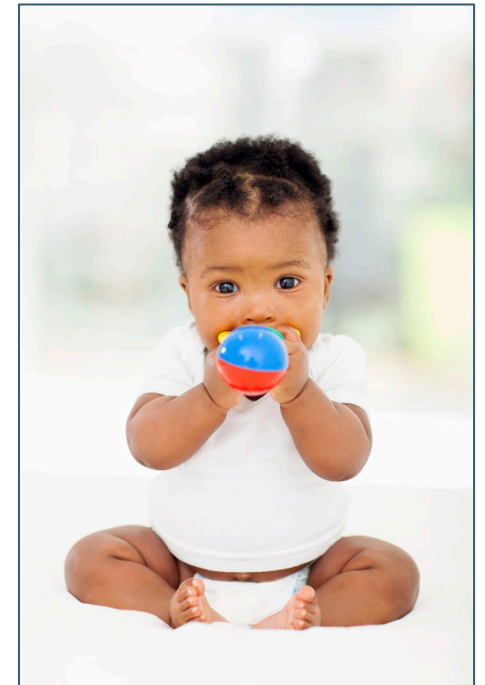
NC Follow Up Schedule for Diagnostic and Confirmed Blood Lead Levels

Final Steps and Tips

- Test other children under 6 in the home or child care setting
- Arrange for follow up testing to reduce BLL below 3.5 $\mu\text{g}/\text{dL}$ (*including needed interventions*)

Other Considerations

- Public health: Consider and discuss ways you can support the medical home.
- **Think of ways to convince providers that testing is important.**



Case study: “Ahana”

Background Information

- 13-month-old girl
- Capillary 31.7 $\mu\text{g}/\text{dL}$; Venus 5 days later 28 $\mu\text{g}/\text{dL}$
- Family emigrated from India
- Challenges discovering source of lead exposure
 - Multiple home visits/phone calls
- Multiple agency input helped!! (*Referrals*)
- 2 years of persistence: Latest BLL = 3.1 $\mu\text{g}/\text{dL}$

-*Environmental history*



Even though it took time to assist the family, following the Follow-up Chart for Diagnostic/Confirmed BLLs worked!