



AT THE FOREFRONT

**UChicago
Medicine**

Clinical Laboratories

Date: 4/14/2023

To: UCM Medical Staff, House staff, Nursing Staff, Patient Care Centers, and Outpatient Clinics

From: KT Jerry Yeo, PhD, DABCC, FAACC
Medical Director, Clinical Chemistry Laboratories

Subject: Implementation of In-house Testing for Blood Lead (Pb) by ICP-MS

Effective Date: 4/18/2023

Laboratory Section: Clinical Chemistry

Summary:

The CDC has recommended lowering the blood lead reference value to **<3.5 mcg/dL** for children ages 1-5 years (<https://www.cdc.gov/nceh/lead/prevention/blood-lead-levels.htm>). We have now completed our development and validation of the Pb whole blood assay on an Inductively Coupled Plasma Mass Spectrometer (ICP-MS) analyzer for clinical implementation.

Details of the test are as follows:

- Reference Ranges
0-5 years: <3.5 mcg/dL
≥6 years: <5.0 mcg/dL
- Critical Values:
>19 mcg/dL for 0-15 years
>69 mcg/dL for ≥16 years.

*Please note that capillary blood Pb >3.5 mcg/dL may be due to contamination from the finger surface and should be confirmed with retesting using a venous blood sample.

- Test Codes
PBB: Venous whole blood
PBBC: Capillary whole blood
- Container: Venous: Tan-top tubes; Capillary: Capillary (lavender-top) tube
- Days Performed: Tuesday & Friday

Questions: If there are any questions regarding this change, please contact:

- Dr. Jerry Yeo from Clinical Chemistry (jyeo@bsd.uchicago.edu)