Public Health Division

Oregon State Public Health Laboratory
Northwest Regional Newborn Bloodspot Screening

Date: December 5, 2024

To: Oregon birth facilities and health care providers

From: Northwest Regional Newborn Bloodspot Screening (NWRNBS) Program

Subject: Updated testing algorithm for primary congenital hypothyroidism (CH)

Effective: January 6, 2025

On January 6, 2025, the NWRNBS program will implement a change to the testing algorithm for primary congenital hypothyroidism (CH). Please share this notice with staff and review for changes that may need to be made to your medical records or electronic health records.

Currently, the NWRNBS program uses T4 as the primary marker for detecting primary CH. Babies with a low T4 value receive a second test to measure TSH. The risk for disease is based upon these two values.

Beginning January 6, 2025, the NWRNBS program will use only TSH as the indicator for CH. TSH levels will be measured on every baby and the risk assessment will be determined by its concentration. T4 testing will be discontinued. The analyte result section of the report for primary CH will only list a TSH value.

Current Report

Normal Result:

Screening Test	Analyte Result	Disorder Evaluation	Reference
Congenital Hypothyroidism	T4= 12.79 TSH= 15.5	T4 and TSH Normal	T4= 5.0- 35.0 ug/dL TSH <= 35 µIU/mL

New Report (beginning January 6th)

Normal Result:

Screening Test	Analyte Result	Disorder Evaluation	Reference
Congenital Hypothyroidism	TSH= 15.5	TSH Normal	TSH <= 35 µIU/mL

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Normal test results are provided in the samples above. Abnormal test results will be indicated in the Disorder Evaluation column and the comments section of the report will detail action steps for the provider.

Why is this change happening?

The NWRNBS program is making this change to provide greater specificity in the testing algorithm for primary CH.

How do birth facilities and health care providers implement this change?

Changes may need to be implemented in your organization's medical records or electronic health records.

There is no change to the collection of newborn bloodspot specimens. Birth facilities and health care providers should continue to collect specimens and review result reports for each infant.

What is Congenital Hypothyroidism?

Refer to the American College of Medical Genetics and Genomics (ACMG) primary congenital hypothyroidism fact sheet (pdf)* for more information about newborn screening for primary congenital hypothyroidism.

For more information about the Oregon Newborn Bloodspot Screening Program, visit www.healthoregon.org/nbs

Reach out to the newborn screening program with any questions. We can be reached at (503) 693-4174 or NWRegional.NBS@dhsoha.state.or.us