POLICY
A hematological test for anemia will be performed or obtained following the screening guidelines for the participant category. Appropriate procedures and equipment will be used when performing hemoglobin or hematocrit tests in WIC clinics.

PURPOSE
To ensure a measurement of hemoglobin or hematocrit is part of the full WIC assessment in order to determine appropriate nutrition risk; and is also used to provide nutrition education and appropriate referrals. To protect the safety of applicants and personnel performing the tests and to ensure accurate test results.

RELEVANT REGULATIONS
§246.7 ¶(e)(1)(i)(A) and (B)—Required nutritional risk data
§246.7 ¶(e)(1)(ii)(B)—Hematological test for anemia
42 CFR Part 493 and OAR 333-024-0005 thru 0055 – CLIA Requirements for a Certificate of Waiver

OREGON WIC PPM REFERENCES
♦ 440—Staff Training Requirements
♦ 625—Risk Assessment
♦ 627—Procedures for Ordering HemoCue Supplies
♦ 640 – Documentation Requirements for Certification and 640, Appendix B661—CPA: Appropriate Counseling for Risk Levels
♦ 675—Risk Criteria Codes and Descriptions
♦ Oregon WIC Training: Nutrition Risk Module

APPENDICES
626.6 Appendix A Standing Orders: Hemoglobin Screening in WIC
626.9 Appendix B Sample Maintenance, Cleaning and Temperature Log

BACKGROUND
N/A

DEFINITIONS
Applicant: An individual who comes to the WIC clinic requesting WIC services
CLIA: Clinical Laboratory Improvement Amendments. Congress passed the Clinical Laboratory Improvement Amendments (CLIA) in 1988 establishing quality standards for all
laboratory testing to ensure the accuracy, reliability and timeliness of patient test results regardless of where the test was performed.

**CLIA-waived:** Some laboratory tests may be CLIA waived because they are simple laboratory procedures or pose no reasonable risk of harm to the patient if the test is performed incorrectly.

**Standing Orders:** Oregon Revised Statutes, ORS 438.430 – Laboratories must have an authorized provider ordering all tests. For WIC to comply with this requirement, a written physician’s orders, or standing orders, have been established. The Standing Orders: Hemoglobin Screening in WIC (Appendix A), stipulates who can perform the test, the protocol and the plan of care to assure all participants who meet the criteria for the order receive the same treatment.

**PROCEDURE**

**Screening Guidelines for Biochemical Assessment**

1.0 Obtain hemoglobin or hematocrit data at certification or follow up appointments according to the appropriate guidelines for the participant category.

1.1. **Infants:** test at age 9 to 12 months. Bloodwork data taken at 6 to 8 months of age may be used in special circumstances on a case-by-case basis when it may be very difficult to obtain bloodwork at 9 to 12 months of age. This is not to be routine practice.

1.2. **Children age 1 to 2 years:** test at age 15 to 18 months, ideally 6 months after the infant screen. At least one blood test must be performed between 12 and 24 months of age

1.3. **Children age 2 to 5 years:** test once every 12 months if previous results are within normal range, test every 6 months if results are below approved hematological standards.

   A child screened at 18 months whose results were within the normal range would not be required to be retested until 30 months of age. A child whose blood test at 18 months was below the normal range would be required to be retested at 24 months.

1.4. **Pregnant Women:** test at the time of the initial certification appointment for current pregnancy, or at a minimum within 90 days of enrollment.

1.5. **Postpartum Women:** test at the first certification appointment after delivery or before

1.6. **Breastfeeding women 6-12 months postpartum:** no test is required if test results after delivery were normal. Recheck during this timeframe if previous blood tests were below hematological standards.

**Blood collecting exceptions**

2.0 Do not do a blood test in the following situations:

- Participants whose religious beliefs will not allow him or her to have blood drawn.
- Participants with a medical condition such as, hemophilia, fragile bones (Osteogenesis imperfecta), or a serious skin disease, where the blood collection procedure could cause harm to the participant.
2.1 When one of these situations arise, document the situation in the Medical Notes on the Medical tab in the WIC data system.

**Interpreting results**

3.0 See ◆675—Risk Criteria Codes and Descriptions for hemoglobin and hematocrit criteria, and adjusted values to use for altitude and smoking.

3.1. If bloodwork value is more than one point below normal, recheck to confirm value.

3.2. See “Oregon WIC Training: Nutrition Risk Module” for information about iron deficiency anemia.

**Documentation**

4.0 Record all results in TWIST according to ◆640—Documentation Requirements for Certification in TWIST.

4.1. If there was difficulty when taking the blood test, enter the reason in the Medical Notes on the Medical tab for the potential inaccuracy.

4.2. If the blood test value meets the specific criteria in Policy 661 for high risk, change the participant risk level from medium to high.

**Actions based on test results**

5.0 Actions taken depend upon the hemoglobin values:

A. If hemoglobin values are in the high-risk range, provide nutrition counseling on food sources of iron and ways to increase iron absorption, refer participant to the primary care provider and schedule a follow-up with the RDN/WIC nutritionist for a recheck, assessment and nutrition counseling within 1-2 months.

B. If hemoglobin values fall within the medium risk range, provide nutrition counseling to the participant or parent/caregiver on food sources of iron and ways to increase iron absorption. If value is due to another type of anemia, for example sickle cell anemia, document details in progress notes and refer to RDN/WIC nutritionist for appropriate nutrition counseling. Schedule for follow-up recheck in 6 months.

C. If hemoglobin values are within normal range, follow schedule above for next required testing in WIC based on the participant’s age/category.

**Tests performed outside of WIC**

6.0 If the participant, parent or caregiver has a documented result of a hemoglobin or hematocrit performed by a medical provider within 90 days of the WIC appointment, enter value in the WIC data system, change date to the date the test was performed, and identify in Medical Notes on the Medical tab the source of the bloodwork. It is not necessary to repeat the hematological test. If the value from the medical provider is outside of the normal range, ask if the participant is receiving follow-up care from the provider and provide nutrition counseling on food sources of iron and ways to increase iron absorption.
Standing orders

7.0 All WIC staff employed by a contracted local WIC agency in Oregon shall follow the Standing Orders: Hemoglobin Screening in WIC in Appendix A.

Unable to complete bloodwork during visit

8.0 Measurement of hemoglobin or hematocrit status is part of a full assessment to determine program eligibility. This information is critical for assignment of risk and provision of nutrition education. During the certification, the process of obtaining blood tests should be described as a routine program service as outlined in the participant rights and responsibilities.

An applicant or parent/caregiver has the right to refuse to participate in any of the health procedures, such as blood tests. If the individual opts out of a blood test, review the importance of this data with them and identify a plan for obtaining the information at a later date at the WIC office or from their health care provider according to 625 Risk Assessment. The form, ‘Request to Collect Hemoglobin Blood Test Values’, designed to assist local agencies in obtaining the test result from the health care provider can be found here: https://www.oregon.gov/oha/PH/HEALTHYPEOPLEFAMILIES/WIC/Documents/57-682-hemoglobin-levels.pdf

The reason for refusal and plan for obtaining the blood value must be documented in the medical tab notes. See 640 – Documentation Requirements for Certification, Appendix B. Continue to follow-up with participants at future visits until the blood test result is obtained.

CLIA Certificate of Compliance

9.0 A current CLIA Certificate of Compliance must be appropriately posted in each WIC clinic. While hemoglobin testing is “CLIA-waived”, WIC clinics still need to have a copy of one of two types of CLIA certificates posted in the clinic for the public to see. This is a federal requirement for laboratories.

9.1 In each WIC clinic, post a copy of the CLIA Certificate of Compliance in the WIC lab room where hemoglobin testing is performed. If hemoglobin testing is performed in each certifier office, then just one copy of the certificate needs to be posted by the front desk in a location all can see.

9.1.1 Obtain a copy of certificate from county or agency lab director. If agency does not have a lab director or “full” lab, obtain a Certificate of Waiver using application at state Public Health Laboratory website, then post copies of the form, keeping original in your main WIC Office.

Apply for a Certificate of Waiver at the state Public Health Laboratory website: www.healthoregon.org/ll. Under “Certificate of Waiver”, fill out CLIA CMS 116 application form and fax to the state lab at 503-693-5602 or scan and email to LC.info@state.or.us. The state lab will send the application to a federal office for processing. Once approved, a “fee coupon” (i.e. invoice for the fee) will be issued by CMS (Centers for Medicare & Medicaid Services) following processing of your application. The current fee is $150 every two years. CMS will send renewal fee coupon notices starting a year before expiration.
Equipment Requirements

10.0 Equipment used to measure hemoglobin or hematocrit values must be CLIA-waived.

Allowable equipment – hemoglobin tests

11.0 When performing hemoglobin tests, use the following equipment:

- Hemoglobinometer or photometer;
- Reagent cuvettes or microcuvettes (for performing tests when using the Hemocue photometer).

Maintenance of hematologic equipment and documentation requirements

12.0 Follow the manufacturer’s guidelines for routine maintenance of hematologic equipment and proper storage of microcuvettes.

12.1. Routine maintenance and cleaning of the blood testing equipment based on industry standards must be followed and documented to ensure accuracy in measurements and risk evaluation.

12.2. Supplies of reagent cuvettes and microcuvettes must be monitored closely due to expiration dates. Rotate stock to ensure that oldest supplies are used first. See 627—Procedures for Ordering HemoCue Supplies for more information on managing supply stock.

12.3. Microcuvettes must be handled properly to ensure quality.

12.3.1. Microcuvettes must be used by expiration date. Once a vial is opened, it must be used within the number of days specified by the manufacturer. Discard microcuvettes that exceed expiration dates.

12.3.2. Maintain microcuvettes within the temperature range specified on the package insert and the record the room temperature each day the microcuvettes are used.

12.3.3. Only remove microcuvettes from vial just prior to use. Immediately reclose vial securing cap tightly on the container.

12.4. Documentation of equipment maintenance and cleaning and the room temperature where microcuvettes are stored must be kept on file for six months. See Appendix B for a sample maintenance, cleaning and temperature log. Local programs may use their own log as long as documentation of routine maintenance, cleaning and room temperature where the microcuvettes are stored is recorded.

Appropriate blood collecting

13.0 Refer to the “Oregon Online Hematology Course” for appropriate blood collecting procedures and equipment use. Staff must complete this module prior to performing blood tests (440—Staff Training Requirements.)

Cleansing hands

14.0 Prior to performing a finger stick, cleanse hands with soap and water, antimicrobial gel or antibacterial hand wipes.
Allowable equipment for finger or toe sticks

15.0 Use the following equipment when performing finger or toe sticks:
   - Disposable gloves on both hands;
   - Alcohol (70% isopropyl) or alcohol prep pads;
   - Gauze squares or cotton balls;
   - Single use, spring-loaded and retractable sterile lancets;
   - Capillary tubes or microcuvettes stored in a closed vial (check equipment manufacturer’s instructions);
   - Adhesive bandages (when needed);
   - Puncture-resistant disposal container designed for contaminated materials (“sharps” container).

Appropriate puncture sites

16.0 The best locations for collecting capillary samples are the side of the 3rd and 4th finger pad of the non-dominant hand for adults and children. Puncturing the fingers of infants younger than 1 year of age is not recommended. Puncturing the edges of the heel or big toe may be more suitable for this WIC category.

Disposal of blood collecting supplies

17.0 After the blood test, throw away any paper wrappers, alcohol prep pads, gauze, tissues, gloves and any other supplies which are not contaminated with blood in a wastebasket.

   17.1. Dispose of lancets and cuvettes in “sharps” container.

   17.2. Dispose of supplies contaminated with blood in biohazard bag or “sharps” container.

Local procedure

18.0 If a program has a different local policy and procedure for screening hemoglobin or hematocrit, such as not using the state provided hematology equipment or clinic/Health Department lab, for example non-invasive screening equipment, they must submit their policy and procedure to the state WIC office for review and approval.

   18.1. Follow your agency’s “Exposure Control Plan” in the event staff are exposed to blood or bodily fluids while performing a finger stick.

If you need this in large print or an alternate format, please call 971-673-0040.

This institution is an equal opportunity provider.
**APPENDIX A**

**Standing Orders: Hemoglobin Screening in WIC**

Oregon Health Authority  
Public Health Division  
Nutrition & Health Screening Program (WIC)  
Standing Order: Hemoglobin Screening in WIC  
Issue Date: October 5, 2018

**Standing order:** All WIC staff employed by a contracted local WIC agency in Oregon and who have successfully completed the required WIC Hematology Course may order and perform a hemoglobin screening test for anemia according to the criteria below. All hemoglobin test results shall be recorded in TWIST, the WIC data system.

**Regulations:**

- Federal Regulations 7CFR 246.7 (e)(1)(ii)(B)
- Oregon Revised Statutes 438.430
- Oregon WIC Policy and Procedure Manual
  - Policy 626 Hemoglobin and Hematocrit Screening in WIC  
  - Policy 675 Risk Criteria Codes and Descriptions  

**Protocol:** Criteria used to determine the situation or condition for which the standing order may be carried out:

a. All infants 9–12 months old must have one hemoglobin screening test for anemia performed between 9 and 12 months of age.

b. All children 12–24 months must have one hemoglobin screening test for anemia performed, preferably 6 months after the infant test.

c. A hemoglobin screening test for anemia should be performed on all children 25–60 months old at least once every 12 months.

d. For pregnant women, a hemoglobin screening test for anemia must be performed at the time of the initial certification appointment, or at a minimum within 90 days of enrollment.

e. For postpartum women, a hemoglobin screening test for anemia must be performed at their first postpartum week appointment (usually at 6 weeks postpartum.)
### Table 1: Hemoglobin values – Normal and abnormal ranges

<table>
<thead>
<tr>
<th>Category</th>
<th>High risk</th>
<th>Medium risk</th>
<th>Normal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infants 9–12 months</td>
<td>Below 10.0</td>
<td>10.0–10.9</td>
<td>11.0 and higher</td>
</tr>
<tr>
<td>Children 12–24 months</td>
<td>Below 10.0</td>
<td>10.0–10.9</td>
<td>11.0 and higher</td>
</tr>
<tr>
<td>Children 2–5 years</td>
<td>Below 10.1</td>
<td>10.1–11.0</td>
<td>11.1 and higher</td>
</tr>
<tr>
<td>Pregnant women 0–13 weeks gestation</td>
<td>Below 10.0</td>
<td>10.0–10.9</td>
<td>11.0 and higher</td>
</tr>
<tr>
<td>Pregnant women 14–26 weeks gestation</td>
<td>Below 9.5</td>
<td>9.5–10.4</td>
<td>10.5 and higher</td>
</tr>
<tr>
<td>Pregnant women 27–40 weeks gestation</td>
<td>Below 10.0</td>
<td>10.0–10.9</td>
<td>11.0 and higher</td>
</tr>
<tr>
<td>Postpartum women</td>
<td>Below 11.0</td>
<td>11.0–11.9</td>
<td>12.0 and higher</td>
</tr>
</tbody>
</table>

*Adjust for altitude and smoking per Policy 675 Risk Criteria Codes and Descriptions and use medium risk ≤ 1 point below and high risk is > 1 point below normal value.*

#### Plan of care:

1) **Test results outside of normal parameters:**
   
   A. If hemoglobin value is in the high-risk range, provide nutrition counseling to the participant or parent/caregiver on food sources of iron and ways to increase iron absorption, refer participant to their primary care provider and schedule a follow-up with the WIC nutritionist for hemoglobin retest, assessment and nutrition counseling within 2 months.
   
   B. If hemoglobin value is in the medium-risk range, provide nutrition counseling to the participant or parent/caregiver on food sources of iron and ways to increase iron absorption. Schedule for follow-up and hemoglobin retest in 6 months.
   
   C. If hemoglobin value is normal, follow schedule above for next required testing in WIC based on the participant’s age/category.

2) **Tests performed outside of WIC:** If the participant, parent or caregiver has a documented result of a hemoglobin or hematocrit performed by a medical provider within 90 days of the WIC appointment, WIC staff may enter that value in the WIC data system and do not need to repeat the hematological test. If that value is outside of the normal range, assess that the participant is receiving follow-up care from the provider and provide nutrition counseling to the participant or parent/caregiver on food sources of iron and ways to increase iron absorption.

#### Review of this standing order: This standing order will be reviewed by the State Health Officer or their designee every 3 years.

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**Signature:**

[Signature]

**Date:** October 5, 2018

Thomas L. Jeanne, MD, MPH
Deputy State Health Officer
## APPENDIX B

Sample Maintenance, Cleaning and Temperature Log

### WIC Anthropometric & Biochemical Equipment Maintenance; Cleaning & Room Temperature Log

<table>
<thead>
<tr>
<th>Date</th>
<th>Site:</th>
<th>Room:</th>
<th>Month/Year:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HemoCue Machine Internal Check Pass or Fail</td>
<td>Clean HemoCue Cuvette Holder</td>
<td>Clean HemoCue Optronic Unit</td>
</tr>
</tbody>
</table>

Use this form to record documentation for routine maintenance and cleaning of anthropometric and biochemical equipment and the temperature of the room where the HemoCue microcuvettes are stored.