



Laboratory Communiqué

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The Laboratory Communiqué is a quarterly publication released by Billings Clinic Laboratory Services as an informational tool for medical staff and laboratorians.

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Chemistry Department Update

Siemens Atellica Instrumentation Go-Live

The complete Go-Live of the Siemens Atellica instruments was April 4th. The last phase of the project was connecting the new instruments to the existing lab automation system. The automation system includes the Input/Output Module, Decapper, Centrifuges, Recapper, Storage module and all the necessary track and software. This was a huge undertaking for the staff while at the same time they were maintaining the current testing on the older instrumentation.

- A. There have been some specimen type changes for some assays as well as some changes to specimen stabilities. This information was shared in previous emails to providers. Refer to the **Billings Clinic Test Catalog** for updated specimen requirements and stabilities.
- B. As a result of methodology changes, several reference ranges for the adult patient population have been updated. A list of impacted assays is listed below.

Estradiol	Follicle-Stimulating Hormone (FSH)	Homocysteine
Lipase	Luteinizing Hormone (LH)	Progesterone
Prolactin	Thyroid-Stimulating Hormone (TSH)	Total HCG

Please review patient results obtained after March 17th for noted updates to reference ranges. The updated reference ranges will be charted with each patient result.

- C. The Unit of Measurement (UOM) for the following assays also changed effective March 17th. Those changes are listed below.

Coagulation Dept. Update

Von Willebrand Factor Activity (Ristocetin Cofactor)

Test # 2015

CPT: 85245

LOINC: 6014-5

Blood Bank Dept. Update

Kleihauer-Betke Test Replacement

Recognition

National Laboratory Professionals Week April 19-25

Assay	Old UOM	New UOM
Creatinine Kinase (CK)	IU/L	U/L
GGT	IU/L	U/L
High-Sensitive CRP	mg/dL	mg/L

- D. The new Chemistry instrumentation utilizes a new **High-Sensitive Troponin I (hs-cTnI)** assay, which does not demonstrate interference by high doses of Biotin. Effective March 17th, the new hs-cTnI is being performed in parallel with the conventional Cardiac Troponin I (cTnI). Plans to discontinue the conventional Cardiac troponin (cTnI) will be communicated at a later date by email and also, additional information will be released in a Laboratory New Test Letter. The basic understanding of how hs-cTnI testing differs from the conventional cTnI testing is discussed below:
1. Reporting of hs-cTnI is in whole numbers using ng/L without decimal points.
 2. Age-specific Cut-Off values with the new troponin assay. The 99th Percentile Cut-Off for adult female is 34 ng/L and adult male is 53 ng/L using the new assay.
 3. The current POC troponin assay will not be as sensitive as lab-performed hs-cTnI assay; hence POC troponin will not offer great correlation compared to lab performed high sensitive testing.
- E. Effective March 17th, Billings Clinic Laboratory also discontinued in-house testing of these assays: Amylase Urine, ETOH Urine and Lactate CSF. These tests are no longer available to order and will be sent to Mayo Medical Laboratories (MML) for testing.
- F. New Tests to be implemented and made available to our clients as in-house testing versus send outs will be: Cyclosporine and Tacrolimus. Further information will be provided as those tests are implemented. In addition to an email announcing the availability of these tests, New Test Letters will also be distributed. A date for each Go-Live has not been determined.

Coagulation Department Update

Von Willebrand Factor Activity (Ristocetin Cofactor)

The Coagulation Department will go-live with this test on May 4th. The test is used in the determination of Ristocetin cofactor activity

as an aid in the diagnosis of von Willebrand Syndrome and disorders involving changes in Ristocetin cofactor activity such as lesions and inflammations of the vascular endothelium, as well as for pre-operative screening of bleeding tendencies.

Von Willebrand Syndrome is the most frequent congenital human blood disorder and is caused by defective synthesis or functioning of von Willebrand factor multimers. Von Willebrand factor (vWF) is present in plasma in the form of a complex with factor VIII. Von Willebrand Syndrome is an autosomal dominant inherited disorder of three types, Type I (partial, quantitative decrease), Type II (partial loss of activity, several sub-types) and Type III (complete absence of vWF). These variants are differentiated on the basis of a series of laboratory tests such as Ristocetin cofactor activity, vWF antigen, closure time for PFA-100®, bleeding time, partial thromboplastin time, factor VIII activity, platelet count and von Willebrand multimer analysis.

Method: Platelet agglutination

Specimen: 3.2% sodium citrate blood, centrifuged immediately and Supernatant plasma removed.

Storage: Plasma stored at 15-25°C or frozen at $\leq -20^{\circ}\text{C}$. If plasma has not been separated from the cells, testing must be started within 15 minutes of spinning the sample.

Reference

Range: Results are reported as a percent of Normal Activity

Note: Individuals of blood group “O” have been shown to have lower plasma von Willebrand factor activity than that of other ABO blood groups.

Type O: 49% - >150%

Non-O: 65% - >150%

Blood Bank Department Update

Kleihauer-Betke Test

The Kleihauer-Betke (KB) test that we have been sending to St. Vincent's has been permanently retired. The new test is “Fetal Hgb Flow” which will be sent to Yellowstone Pathology Institute (YPI). This test is performed during business hours and once on Saturday, so there will be no middle of the night resulting. If we receive a sample in the evening, we need to make sure we have it ready to go first thing in the morning to get it on YPI's morning run.

Recognition



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National Laboratory Professionals Week Happened April 19-25



Our Cool Professionals!

- Pathologists
- Pathology Assistants
- Histo Technologists
- Histo Technicians
- Cyto Technologists
- Medical Technologists
- Medical Lab Technicians
- Laboratory Aides
- Phlebotomists
- Specimen Processors to Computer Support

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