Unfractionated Heparin Therapy Frequently Asked Questions

Over the past few weeks, information was provided to medical providers regarding the transition from the aPTT to the Unfractionated Heparin Level. Below are some common questions surrounding this transition.

Q1. When is this change going to happen?

Starting at 9:00 AM on Wednesday, November 18, 2015 – during transition, pharmacy will convert all patients on the adult medicine heparin infusion protocol to the updated adult medicine heparin infusion protocol.

The CRRT (dialysis) protocol and surgery/interventional radiology order sets will continue to use the aPTT for monitoring until early December.

Q2. Why is UVMMC making this change in monitoring the unfractionated heparin?

This was a multidisciplinary decision which included input from hematology, pharmacy, and the laboratory. Advantages of using this test for monitoring include:

- Shorter time to reach therapeutic range
- Increased time in therapeutic range
- Fewer blood tests to monitor heparin
- Fewer heparin dose adjustments
- Limited interference by common co-morbid conditions
- No requirement to obtain a baseline UFH level prior to starting therapy
- Same assay methodology for monitoring low molecular weight heparin and fondaparinux levels
- Fully automated assay available 24/7 in the UVMMC Laboratory
- No need to modify heparin dosing treatment protocols with new reagent lot changes in the laboratory
- No significant difference in overall cost for appropriately managing a patient on unfractionated heparin



Dr. Andrew Goodwin
Director of Thrombosis and Hemostatis Laboratory
Phone: 847-2377
Email:
andrew.goodwin@uvmhealth.org

FOR MORE INFORMATION

Contact Laboratory Customer Service or email the Laboratory Ambassadors for clinical questions
labambassador@uvmhealth.org

WEBSITE

www.uvmhealth.org/medcenterlabs

PATHOLOGY AND LABORATORY MEDICINE

111 Colchester Avenue-233MP1
Burlington, Vermont 05401

PHONE CUSTOMER SERVICE

(802) 847-5121
(800) 991-2799

FAX CUSTOMER SERVICE

(802) 847-5905

Unfractionated Heparin Therapy FAQ (Continued from page 1)

Q3. How do I order an unfractionated heparin level?

a. The unfractionated heparin level is available using the Test ID HEPUFH.
b. This test is only available as a stat test because the specimen must be processed within 1 hour of collection.
c. If there is a significant delay (greater than 1 hour) between collection and processing, the specimen will be rejected and a new sample will be requested.

Q4. What is the therapeutic range and critical value unfractionated heparin infusions?

a. The therapeutic heparin range is 0.3-0.7 IU/ml.
b. The critical level is greater than 1.0 IU/ml.

Q5. Why might the heparin level be critically high?

Elevated heparin levels are due to supra-therapeutic heparin in sample. Check the following to confirm result accurately reflects the patient's unfractionated heparin level:

1. Blood sample obtained from a non-heparinized line and/or line was properly flushed.
2. Collection site was distal to heparin infusion.
3. Concentration of heparin infusion is correct.
4. Infusion rate of heparin is correct.

Q6. Have the heparin infusion protocols been updated to reflect this change in testing?

Yes, PRISM and pharmacy identified all protocols which included unfractionated heparin therapy. The clinical owners of these protocols were included in changes for monitoring and dosing unfractionated heparin. The first phase will occur with the adult medicine heparin protocol on Wednesday, November 18. The remaining protocols will go-live in early December.

Q7. Does this assay detect heparin induced thrombocytopenia (HIT)?

No, this assay only detects the presence of heparin. A baseline hemagram and then every other day hemagram is necessary to aid in the monitoring of heparin induced thrombocytopenia (HIT). Every other day hemagram monitoring may be stopped after 15 days of continuous therapy.

Q8. Should a baseline unfractioned heparin level be measured prior to initiation of therapeutic heparin?

No, a baseline level is not required so long as the patient has not received any other heparin medications or direct Xa inhibitor medications (e.g. rivaroxaban, apixaban, edoxaban).

Unfractionated Heparin Therapy FAQ (Continued from page 2)

Q9. Should a baseline aPTT or PT/INR be drawn prior to initiation of therapeutic heparin?

Baseline coagulation studies are useful in the diagnostic work-up of a patient with a coagulopathy. Unless the patient has a history of a thrombotic or hemostatic disorder, these screening assays are not required when monitoring heparin therapy. If there is a clinical indication (i.e. factor deficiency, lupus anticoagulant, etc.), baseline coagulation studies should be considered. If the patient has already received heparin, please contact the laboratory to discuss appropriate diagnostic testing.

Q10. What specimen collection tube is used for measuring the unfractionated heparin level?

The unfractionated heparin level must be collected in a blue top (sodium citrate) tube filled to the appropriate volume (as indicated by the black triangle on the label).

Q11. How long after initiating UFH can an accurate steady state heparin level be drawn?

As with the aPTT, steady state is achieved 6 hours following an UFH bolus dose and infusion initiation. This is in the current protocol and will not change.

Q12. How often should heparin levels be ordered while a patient is on therapeutic heparin?

Frequency of monitoring will depend on the heparin level which is outlined in the heparin protocols.

Q13. Is the unfractionated heparin level the appropriate test for monitoring IV direct thrombin inhibitors?

No, the aPTT is the correct method for monitoring IV direct thrombin inhibitor therapy (e.g. argatroban, bivalirudin, etc.).

Q14. Is there any change to how Low Molecular Weight Heparin levels should be ordered?

No, continue to order using the low molecular weight heparin assay (Test ID HEPLMW, PRISM Code: LAB316).

Q15. Who should I contact with questions?

The following individuals are available via Provider Access Services: 847-2700
Maria Airoldi (Pharmacy)
Wes McMillian (Pharmacy)
Clem Ng (PRISM)
Ray Keller (PRISM)
Neil Zakai (Hematology)
Andrew Goodwin (Laboratory)