NEW Heparin Anti-Xa Protocols Provider Update
Heparin Protocol Update

• Heparin infusions will now be monitored via anti-Xa instead of PTT levels across all UW Medicine hospitals

• Go live date: early November
Rationale for Changing to Anti-Xa

• Increased accuracy
  – Anti-Xa levels are not affected by liver disease, consumptive coagulopathy, lupus anticoagulant

• Shorter time to reach therapeutic target

• Greater time spent in therapeutic range

• Fewer dose adjustments needed
Update to Heparin Protocols

• Anti-Xa protocol will now be the default nurse managed protocol

• PTT-based heparin dosing can be ordered via the “provider-managed” powerplan (order sets at NWH), in the rare circumstances where needed
  – Lab medicine provider available for questions if needed

• Lab turnaround time for anti-Xa level: ~15-30 min
Goal Anti-Xa Levels

• Regular Intensity Protocol
  – Goal PTT 60-100 sec $\rightarrow$ Anti-Xa 0.3-0.7 units/mL

• Low Intensity Protocol
  – Goal PTT 60-80 sec $\rightarrow$ Anti-Xa 0.3-0.5 units/mL

• Reference level for an undetectable anti-Xa: $<0.1$ units/mL
Potential Lab Interference

• Anti-Xa test results may be affected by:
  – Hyperbilirubinemia, hemolysis or hypertriglyceridemia

• In these cases, the lab will contact provider if anti-Xa level cannot be accurately reported
  – Consider transitioning to PTT-based (provider managed) heparin dosing and/or consulting hematology
Drug-Lab Interactions

- Heparin anti-Xa levels will also detect the presence of other factor-Xa inhibitors, if present
  - e.g. LMWH, fondaparinux, rivaroxaban, apixaban
  - **NOT** affected by presence of dabigatran or warfarin

- This means the anti-Xa level may be elevated (reflecting some degree of anticoagulation) even when heparin is NOT present
Drug-Lab Interactions

• If there is reason to suspect a patient is using a medication that inhibits factor Xa (e.g. enoxaparin, apixaban, rivaroxaban, fondaparinux, or edoxaban), the clinician should consider ordering a baseline drug level (talk to lab medicine provider) and/or adjust their approach to IV heparin dosing and measurement (call pharmacy and/or hematology as needed)
Resources

- OCCAM (for link to UW Anticoagulation website)