**ANTICOAGULATION DISCERN RULES**

**SITUATION:** Last summer, STHe standardized to one anticoagulation policy. At that time, a request was made to standardize the pop-ups in MedManager.

**BACKGROUND:** STW, STM, and STR all had different pop-ups for different medications with variation in pop-up content.

**ASSESSMENT:** With the frequency of anticoagulation orders, it was determined by Pharmacy Collaborative that pop-ups could result in alert fatigue. Therefore, a recommendation was made to design discern rules so the verifying pharmacist would only be presented with a pop-up when action was required for that specific patient. After further discussion, it was determined that some of these discern alerts should move upstream to the ordering provider.

**RECOMMENDATION:**

- Discern rules have been built and passed through all applicable committees (see below for examples).
- For changes that can be made by a pharmacist per pharmacy protocol, alerts will not go to the ordering provider, only the pharmacist.
- For changes that cannot be made per pharmacy protocol, the discern alert will be presented to the ordering provider.
  - If the provider overrides the alert, it will still be presented to the pharmacist to make sure it is appropriate.
- Go live is August 8th, 2017

<table>
<thead>
<tr>
<th>Medication</th>
<th>Rule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apixaban</td>
<td>• Appropriate dose based on age, weight, SCr</td>
</tr>
<tr>
<td></td>
<td>• Safe transitioning from warfarin</td>
</tr>
<tr>
<td>Enoxaparin</td>
<td>• Appropriate use and dose in low (&lt;45kg) and high (&gt;150kg) weight patients</td>
</tr>
<tr>
<td></td>
<td>• Appropriate use and dose in patients with renal impairment</td>
</tr>
<tr>
<td>Dabigatran</td>
<td>• Safe transitioning from warfarin</td>
</tr>
<tr>
<td></td>
<td>• Appropriate route of administration</td>
</tr>
<tr>
<td></td>
<td>• Appropriate use and dose in renal impairment</td>
</tr>
<tr>
<td>Rivaroxaban</td>
<td>• Appropriate route of administration</td>
</tr>
<tr>
<td></td>
<td>• Appropriate use and dose in renal impairment</td>
</tr>
<tr>
<td></td>
<td>• Safe transitioning from warfarin</td>
</tr>
<tr>
<td>Fondaparinux</td>
<td>• Appropriate use in renal impairment</td>
</tr>
<tr>
<td></td>
<td>• Appropriate use in low weight patients</td>
</tr>
<tr>
<td>All above</td>
<td>• Appropriate baseline labs per Anticoagulation policy (SCr, CBC/Platelet)</td>
</tr>
</tbody>
</table>
Trigger: Order being verified for Apixaban
Condition: INR >1.9

Apixaban INR Transition Alert

Current INR is 3.2

If transitioning from warfarin, do not start apixaban until INR < 2.

Choose: Cancel Order

Trigger: Order being verified for Enoxaparin
Condition: If dose = 30 mg or 40 mg and Patient Weight < 45 Kg

Enoxaparin Low Patient Weight

Patient's weight is 43 kg. If enoxaparin is being ordered for Prophylaxis, consider a change to subcutaneous Heparin.

If for treatment, no change is necessary.

Alert Action

© Cancel Enoxaparin Order
© Continue with current Order

Add Order for:
- Enoxaparin subcutaneous inj > 5,000 unit, sq, Subcutaneous, q12hrs
- Enoxaparin subcutaneous inj > 5,000 unit, sq, Subcutaneous, q12hrs
Trigger: Order being verified for Enoxaparin
Condition: If Patient Weight > 150 Kg and Dose > 100 mg

Patient's weight is 166 kg. Patients weighing more than 150kg should not receive treatment doses of enoxaparin.

Consider a change to IV heparin infusion therapy.

Alert Action
- Cancel
- Override
- Modify

Trigger: Order being verified for Enoxaparin
Condition: CrCl < 10mL/min

Patient's CrCl is 9 mL/min. Enoxaparin is contraindicated when CrCl is < 10mL/min.

For prophylaxis, recommend subQ heparin order listed below. For treatment, recommend heparin drip using the Heparin Drip PowerPlan.
Trigger: Order for dabigatran
Condition: INR > 1.9

If transitioning from warfarin, do not start dabigatran until INR < 2.

Trigger: Order for dabigatran
Condition: Ordered with route of Per Tube, Dobhoff-tube, G-tube, J-tube, NG-tube, OG-tube, PEG-tube

Dabigatran should not be crushed or chewed. Current order indicates administration route of per tube. If per tube is required, use alternative anticoagulant.
Trigger: Order for dabigatran
Condition: Dose = 150mg, 110mg, or 220mg and CrCl 15 - 30ml/min

Patient's CrCl is 28 ml/min.

If indication is still, adjust to 75mg BID. If VTE treatment or prophylaxis, use alternative agent.

Trigger: Order for dabigatran
Condition: CrCl <15 ml/min

Patient's CrCl is 9 ml/min. Dabigatran is contraindicated when CrCl is less than 15 ml/min. Use alternative agent.
Trigger: Order for rivaroxaban  
Condition: INR > 2.9

Rivaroxaban INR Transition Alert

Current INR is 3.2

If transitioning from warfarin, do not start rivaroxaban until INR < 3.

Trigger: Order for rivaroxaban  
Condition: Ordered with route of Per Tube, Dobhoff-tube or J-tube

Rivaroxaban Route

LAB: WESTB  DOB: 03/08/1925

Verify administration route. Rivaroxaban should not be administered distal to the stomach.

Alert Action

- Cancel
- Override
- Modify

OK
Trigger: Order for rivaroxaban
Condition: CrCl < 15 ml/min

Patient's CrCl is 9 ml/min. Rivaroxaban is contraindicated when CrCl < 15 ml/min. Use alternative agent.

Trigger: Order for rivaroxaban
Condition: Dose = 15mg and frequency = Qday or Q24hr and CrCl > 50 ml/min

Current order is 15 mg QDay. Determine indication. Dose should be 15mg BID for DVT/PE treatment, 20mg daily for prevention of DVT/PE and for antb. or 10mg daily for post op prophylaxis.

Add Order for:
- rivaroxaban → 15 mg, tablet, PO, bid Meals
- rivaroxaban → 20 mg, tablet, PO, q6hr Dinner
- rivaroxaban → 10 mg, tablet, PO, QDay
Trigger: Order for fondaparinux
Condition: CrCl < 30 ml/min

Patient's CrCl is 24 ml/min. Fondaparinux is contraindicated when CrCl is < 30 ml/min. Use alternative agent.

---

Trigger: Order for fondaparinux
Condition: Dose = 2.5 mg + Weight < 50 kg

Patient's weight is 45.5 kg. Fondaparinux is contraindicated for VTE prophylaxis when weight is < 50 kg. Use alternative agent.