### Warfarin (Coumadin)

#### Indications
- Anticoagulation Therapy Guidelines for Medical Indications
- Reversal of Warfarin with Vitamin K (Phytonadione)

#### Monitoring
- Lab Monitoring: CBC and PT/INR within 24 hours prior to first dose, then CBC daily.

#### Dosing
- **Maintenance Dose Adjustments Based on aPTT**
  - **Recommended Action**
    - **When aPTT < 60 seconds**
      - **Initial Bolus (Optional)**
        - 60 units/kg, Rounded to nearest 100 units
      - **Initial Infusion**
        - 16 units/kg/hr, Rounded to nearest 50 units x 24 hours
      - **Maximum initial bolus 5000 units**
      - **Maximum initial dose 10000 units/hr
        - aPTT target 60 – 80 seconds

#### Anticoagulation Therapy Guidelines for Medical Indications

#### Heparin Protocol for Medical Indications

**NOT for STROKE or Cardiothoracic Surgery Patients**

#### Lab Monitoring:
- CBC, PT/aPTT within 24 hours prior to start of IV heparin, then
- CBC daily.

#### Initiation of Heparin IV Infusion
- **Recommended Action**
  - Start heparin infusion in 6 hours
  - **Maximum initial dose 1000 units/hr**
  - **Maximum initial bolus 5000 units**

#### Maintenance Dose Adjustments Based on aPTT

<table>
<thead>
<tr>
<th>aPTT (sec)</th>
<th>REPEAT BOLUS (if ordered)</th>
<th>Maintenance Infusion Dosage Change</th>
<th>NEXT aPTT After Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 60</td>
<td>by 2 units/kg/hr</td>
<td>NO CHANGE</td>
<td>6 hours</td>
</tr>
<tr>
<td>60-80 (Goal)</td>
<td>NONE</td>
<td>6 hours until therapeutic x 2 values, then every 24 hrs</td>
<td></td>
</tr>
<tr>
<td>&gt; 90</td>
<td>by 3 units/kg/hr</td>
<td>STOP x 1 hour, then</td>
<td>6 hours</td>
</tr>
</tbody>
</table>

#### Transitions:
- Heparin to Enoxaparin: Give 1st dose enoxaparin in 2-4 hours after discontinuation of heparin infusion.
- Enoxaparin to Heparin: Start heparin infusion in 6-12 hours after last dose of enoxaparin.
- Heparin/Enoxaparin to Warfarin: Give 1st dose warfarin 12-24 hrs after start heparin/enoxaparin.

#### Warfarin (Coumadin) - Recommendations for Management of Supratherapeutic INRs.
- NO significant bleeding
  - **Recommended Action**
    - Hold warfarin and administer 10 mg vitamin K by slow IV infusion; or recombinant human factor VIIa, depending on clinical urgency. Con-