PROTOCOL FOR ENOXAPARIN THERAPY

- Enoxaparin is the only low molecular weight heparin (LMWH) on formulary at C & W
- Obtain baseline INR, aPTT, fibrinogen, CBC and renal function.

Dosing: Use with caution and dose may need to be adjusted in renal failure.

	Age ≤ 2 months	**Age > 2 months**
Enoxaparin treatment dose	1.5 mg/kg/dose SC Q12H	1 mg/kg/dose SC Q12H

Monitoring

- Therapeutic range of low molecular weight heparin level (anti Xa): 0.5 – 1 unit/mL
- Low molecular weight heparin (anti Xa) levels should be drawn 4 hours after the second dose, or the second new dose, if changed. Thereafter weekly for inpatients, monthly for outpatients, or as clinically indicated.
- Draw level via venous sample
- If a venous draw is not feasible and sample is drawn from a heparinized line, draw a PTT to rule out contamination. If patient is well and PTT is prolonged, redraw Anti XA via peripheral route
- If the patient is unwell (febrile, new infection <within two weeks> or MD discretion), draw an INR & fibrinogen along with the PTT as an increase in PTT might be due to coagulopathy and not heparin contamination.
- 30 unit insulin syringes can be used to measure small doses;
- **In insulin syringes 1 mg = 1 unit (order whole numbers of mg ie 5 mg NOT 5.5 mg)**
- Prior to invasive procedures such as lumbar punctures, omit 2 previous doses of enoxaparin

LMWH (anti Xa) level at 4 hours (units/mL)	Dose change	Obtain Next Level
< 0.35	Increase by 25%	4 hours post 2 doses after change
0.35 - 0.49	Increase by 10%	4 hours post 2 doses after change
0.5 - 1.0	0	4 hours post am dose once weekly
1.1 - 1.5	Decrease by 20%	4 hours post 2 doses after change
1.6 – 2.0	Hold dose for 3hr; decrease by 30%	Trough level before next dose, then 4 hours post 2 doses after change
> 2.0.	Hold until heparin level 0.5 then decrease by 40%	Trough level before next dose and if not <0.5 U/mL continue to hold and repeat before each dose is due

Conversion between low molecular weight heparin (LMWH) and unfractionated heparin (UFH)

1. LMWH to UFH
    - No heparin bolus
    - Start UFH infusion 8 - 12 hours after last LMWH dose
    - Measure aPTT 6 hours after start of UFH infusion and monitor as per unfractionated heparin guidelines

2. UFH to LMWH
    - Stop UFH infusion
    - Give LMWH at the same time as stopping infusion.