# **Heparin Drip**

## Ordering

- Nurse entering of Heparin drip orders for physicians **should only occur** in situations when it is not feasible for the physician to enter orders directly
- Select the "Heparin IV Drip Orders" PowerPlan it is also listed as MED Heparin\_KY.
- Select the appropriate infusion protocol (provider must tell you this)
  - o Cardiac Patients- Acute Coronary Syndrome
  - o DVT/PE/A-fib/Bridging Patients
  - o Stroke Patients, or
  - Prescriber Adjusted
- Certain orders will automatically be selected. Do not unselect orders unless instructed by MD.
  - o Discontinue all Heparin like products
  - o No IM injections while on Heparin
  - o Notify MD with signs of hypotension and s/s bleeding
  - Notify MD if HCT <32%, Plts <100,000 or 50%</li>
  - o Stat PTT, PT/INR, CBC
  - PTT Q 6 Hours while on infusion
  - o CBC daily for 3 days then Mon, Wed, Fri after that
- Click Initiate
- If there are Duplications in Therapy, call MD to clarify.
- Click Orders for Signature
- Sign

< 🔸 🖣 Orders		🗇 Full screen 👘 Print ಿ 0 minutes a
🕂 Add   🦨 Document Medication by Hx   1	- aconciliation 🔻   \gg Check Interactions   🛅 External Rx History 🔻   🦑 Rx Plans (0): In Process	Reconciliation Status
Orders Medication List Document In Plan		
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View		
Orders for Signature	Status	
e Plans	YED Heparin_KY (Planned Pending), Urdered as: Heparin IV Drip Urders	
-Document In Plan	A Patient Care	
# Medical	Heparin IV protocols are contraindicated while patient has indwelling epidural catheter	
MED Heparin_KY (Planned Pending) MED Pneumonia_KY (Planned)	Bleeding Precautions	No intramuscular (IM) injections while on Heparin drip
Medicine Smoking Cessation_KY (Pl MED Med-Surg Admission_KY (Planne	Medication Discontinuation Instructions	Discontinue all orders for heparin like products e.g. heparin SubQ e
ED Holding Orders_KY (Planned)	Notify Provider of Change in Patient Condition	Notify Physician immediately for Hypotension with s/sx of Bleeding
- Suggested Plans (0) e Orders	Notify Provider Laboratory Results	First Hct LESS than 32% or Platelets LESS than 100,000 or 5
Admission Discharge Transfer	A TV Solutions	
Code Status	Cardiac Pt's - Acute Coronary Syndrome	
Vital Signs	Active control of the second s	
C Activity	Kound all doses to realest 100 cinits	250 ml TotraVENous Titrato
Patient Care		Bolus 70 upits/kg. (Max 4.000 upi
Communication Orders	DUT/DE/A file/Pavidaine Dakianka	bolds for aniciping (max h)ood anim
Nutrition	DVT/PE/Antib/bridging Patients	
V Solutions		
Medications	heparin 25,000 units/NaCl 0.45% PREMIX 250 mL	250 mL, IntraVENous, Titrate
Laboratory		Bolus 80 units/kg (Max 8,000 uni
🗹 Radiology	Stroke Patients	
Cardiology	Mo Heparin × 48 hours if thrombolytics given. Round all doses to nearest 100 Units. NC	) INITIAL BOLUS.
Other Diagnostic Tests Respiratory	🗌 heparin 25,000 units/NaCl 0.45% PREMIX 250 mL	250 mL, IntraVENous, Routine, Ti Initial Infusion 15 Units/kg/hour (
Therapies	Prescriber Adjusted	
Consults	🐣 Round all doses to nearest 100 Units.	
Non Categorized	🗌 🎽 heparin 25,000 units/NaCl 0.45% PREMIX 250 mL	250 mL, IntraVENous, Titrate
Medical Supplies		Bolus [ ] units/kg (Max 8,000
<ul> <li>Medication History</li> </ul>	∠ Laboratory	
Medication History Snapshot	PTT	Blood, Stat collect
*Reconciliation History	THeparin Protocol	Blood, Timed Study collect, T;N, Q6HInt
	PT/INR Prothrombin Time	Blood, Stat collect
Diagnoses & Problems	Totails	
Related Results Formulary Details	Dx. Trable Orders For Nurse Review Save as My Favorite	🐼 Initiate Sign

### **Drip Initiation**

\*All protocols will have a medication concentration, a starting dose, a starting dose max dose, a bolus dose, and a bolus dose max dose\*

- Collect STAT specimens
- Verify a clinical dosing weight has been documented in Kilograms
- Verify patient using two identifiers
- Access "Heparin Drip Initial Bolus and Infusion Rate Calculator for max bolus and max drip rates
  - Intranet > Clinical > Heparin Resources

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K12 • (* <i>fe</i>		
A	B C D E F G	H.
Saint Joseph Hospital		
Heparin Drip INITIAL Bolus Dose and INITIAL	sion Rate Calculator	
Heparin 25,000 Units/250		
Select Heparin Drip Indication From Drop Down Menu:		
Enter Patient Weight (kg):	kg	
Henoria Dria INITIAL Polys Doce	units = ml	
Userale Dela INIZIAL Jafuelas Deba	ml/hour	
Heparin Drip INITIAL Infusion Rate:	IIII/IIOU	
		_

- Document 2<sup>nd</sup> nurse witness along with pharmacy 3<sup>rd</sup> check for initial bolus and drip rate
- Document infusion start dose and bolus dose in Cerner
- Please review Heparin documentation screen shots for bolus dose, initial start and titration below
- Locate titration flow sheet
  - Intranet > Clinical > Heparin Resources
  - o OR
  - o Intranet
  - o Orders and Forms
  - o Routine Paper Order Sets
  - "Heparin IV Drip Titration Protocol"-For Saint Joseph Hospital Patients Only <u>OR</u> For Saint Joseph East Patients Only



• Assess PTT in 6 hours from initiation and adjust per titration protocol

#### **MAX Doses**

Example: Cardiac Patients- Acute Coronary Syndrome. Order is to bolus 70units/kg with a max bolus of 4000 units and start infusion at 15 units/kg/hr with a max dose of 1000 units/hr.

Infusion: Start infusion at 15 units/kg/hr

Max dose is 1000 units/hr or 10 mL/hr (concentration of the bag is 25000 units in 250mL= 25000/250=100units/mL)

-For an 80kg pt, the dose would calculate to be 15units x 80kg = 1200units/hr but since the max is 1000units/hr, the initial infusion rate would be 10mL/hr or 1000 units/hr.

**Bolus:** Bolus patient 70 units/kg (from the bag using the Alaris pump). Max dose of 4000 units.

-For an 80kg patient, the bolus dose would be 70units x 80kg = 5700 units but the max is 4000, so you would dose the patient at 4000units.

#### Documentation

- Initial Infusion- Scan the Heparin drip into the Medication Administration
- Complete the Witness by, site, and dose and the rate will automatically appear. If you have to change the rate or dose due to max doses, make those changes to reflect what is actually on the order and pump.

Medication Administration			_ 🗆 🗶
		Nurse Review	Last Refresh at 14:51 EDT
KYTrain, Clare15	MRN: 15015 DOB: 1/1/1942 Pheparin/NaCl 0.45% 25,000 Units: KYTrain, Clare15		Loc: ; ** Allergies **
Scheduled	භ්රාලි heparin <b>25,000 Units</b> Inj, IntraVENous, 10/01/15 13:19:00 EDT Refer to Heparin Protocol Dosing Chart for starting dose. Initial rate: 18 units/kg/HR (maximum initi	al dose 1,800	
🗖 🐮 🬗 12/18/2015 22:00 ES	Ves 🔲 No heparin 25,000 Units/250 mL		
<ul> <li>ඕ 12/18/2015 22:00 ES</li> <li>ඕ ෯ € € € 12/18/2015 22:00 ES</li> </ul>	*Performed date / time : 07/24/2017	Comment	
□ & M ( ) PRN □ ( ) PRN	*Witnessed by:		
🗖 🗳 PRN	*Site:		
🗹 😫 🚳 🏈 Continuous	*Volume (mL): 250		lous, <rate>, <site>_</site></rate>
🔲 🍖 🔁 Continuous	*Rate (mL/Hr) :		
Continuous		Begin Bag	
	OK	Cancel	
	2010		
Ready to Scan	2 of 2		Back Sign

- Sign the form and have the witness sign the administration using their credentials
- **BOLUS** To document the bolus, go into the MAR within Powerchart and right click on the administration icon under continuous infusion and select "Chart Details"

	23 July 2017 14	:10 EDT - 25 Ju	ily 2017 14:10	EDT (C
Time View	Medications	7/24/2017 14:29 EDT	7/24/2017 14:23 EDT	
Unscheduled	PRN sodium chloride (sodium chloride 0.9% i	10 mL Not given within		
₩ PRN	10 mL, IV Push, Inj, Q8H, PRN for IV Use, Start 10/01/15 13:27:00 EDT	5 days.		
	Continuous Infusions	Dending		
Discontinued Scheduled	00 (m) heparin 25,000 Units Jai Johrs VENaus 10/01/15 13:19:00 EDT	Not given within 5 days.		
Discontinued Unscheduled	Refer to Heparin Protocol Dosing Chart for star		Chart Details	
Discontinued DDM	bonarin			

• Once in "Chart Details", you will need to select the "Bolus" option, fourth from the top. Next, fill in the correct documentation for the bolus given.

heparin/NaCl 0.45% 25,000 Units: KYTrain, Clare15
ස්ත්ර heparin 25,000 Units Inj, IntraVENous, 10/01/15 13:19:00 EDT Refer to Heparin Protocol Dosing Chart for starting dose. Initial rate: 18 units/kg/HR (maximum initial dose 1,800
▼ 7/24/2017 2:39 EDT - 7/25/2017 2:39 EDT
 Begin Bag         Site Change         Infuse       No results found         Bolus         Waste         Rate Change         heparin/NaCl 0.45%
heparin 25,000 Units Inj, IntraVENous, 10/01/15 13:19:00 EDT
Ves 📕 No heparin 25,000 Units/250 mL
*Infuse volume (mL): Bolus
*From: xx /xx /xxxx 🔄 🗐 💭
*To: 07/24/2017 1439 EDT Apply
Infused Over: 0 Hours 0 Minutes
*Performed by: KYNURSERN, Cindy
*Witnessed by : 🙀
*Bag #:
*Site :
Bolu
In Progress

- Calculate the infusion volume in milliliters and then enter.
  - Example: Bolus 70units/kg for ACS protocol. Pt weight is 80kg.
     70x80=5600 but the max bolus dose is 4000, so their bolus is 4000units.
     The concentration is 100units/mL so 4000 units will be given with 40mL of fluids. You will put **40mL** in the infuse volume.
- Complete the rest of the form and sign.
- The witness will then enter their credentials to witness the administration.

## Titration

- After a PTT result is received (after 6 hours of infusion and then every 6 hours from any change made), refer to the titration protocol
- Example: PTT result is 100 seconds
  - The protocol says to stop the drip for 60 minutes, decrease the drip by 3 units/kg/hr and then recheck the PTT in 6 hours
  - The Alaris pump will allow you to change the drip rate down by 3 units/kg/hr and immediately suspend the pump for 60 minutes.
    - To do this
      - Select Heparin channel
      - Select the bottom left option, delay options.
      - Delay for
      - 60 minutes
      - Confirm
    - This will delay the pump for 60 minutes and then turn on to the dose selected prior to adding the delay.
- To Document the titration change
  - O IView/I&O → Adult Quick View → IV Drips → Add new drip rate into grid under the Heparin label→ save documentation → 2<sup>nd</sup> nurse will witness the change in drip information.
- Recheck PTT in 6 hours