Product(s)	Administration**	Storage/Stability	
Humate-P	**Humate P** given over 3-20 min (Max 4mL/min)	Prior to reconstitution: 2-8˚C or room temp (≤25C), do not freeze.	Reconstitution: Bring to room temperature and reconstitute with provided diluent. Swirl, do not shake or filter. After reconstitution: Room temp (≤25˚C), use within 3hr
FEIBA NH	**FEIBA** max rate of 2 units/kg/min		
BeneFix	**Benefix** given at a rate of 2-4mL/min over several minutes	Prior to reconstitution: 2-8˚C, do not freeze. May be stored at room temp (≤25C) for up to 6 months	
Helixate FS	Over 1 to 15 minutes IVP unless ordered as Continuous Infusion	Prior to reconstitution: 2-8˚C, do not freeze, **Helixate FS** may be stored at room temp ≤ 25C, up to 12 months.	After reconstitution: Room temp (≤25˚C), use within 3hr Continuous infusion of **Helixate FS** 10 IU/mL dilution in NS. Dose based on replacement requirements. Infuse within 12hrs
NovoSeven RT	Given as IVP over 2-5 minutes (can also be ordered as Continuous Infusion)	Prior to reconstitution: <25˚C	After reconstitution: Room temp (≤25˚C) of refrigerated IVP: Use within 3hr; do not freeze; do not store in syringes CI: Do not dilute. Infuse within 12 hours (stability questionable beyond 12-24 hours)
KCentra	0.12 mL/kg/min or approx. 3 units/kg/min. NTE 8.4mL/min	Prior to reconstitution: 2-25˚C, do not freeze	After reconstitution: Can be stored at 2-25˚C, solution should be warmed to 20-25˚C prior to administration, use within 4 hr, do not freeze

**Refer to JDH/UConn IV Guidelines for further information. Do not use an inline filter. Flush with Normal Saline, Store all products in original packaging

Humate-P Dosing for VWD Hemorrhage DOSED IN VWF:RCo ONLY		
VWD Type	Severity	Dosage (IU **VWF:RCo**/kg)
Type 1 – Mild (VWF:RCo >30%)	Minor	Use DDAVP IV 0.3mcg/kg by slow infusion
	Minor w/o DDAVP or Major	Load 40-60 IU/kg then 40-50IU/kg q8-12hr x3 days[1], then 40-50IU/kg qday[2]
Type 1 – Moderate/ Severe (VWF:RCo <30%)	Minor	40-50 IU/kg (x1-2 doses)
	Major	Load 50-75 IU/kg then 40-60 IU/kg q8-12hr x3 days[1], then 40-60 IU/kg qday[2]
Type 2 and 3 (all)	Minor	40-50 IU/kg (x1-2 doses)
	Major	Load 60-80 IU/kg then 40-60 IU/kg q8-12hr x3 days[1], then 40-60 IU/kg qday[2]

[1]To maintain VWF:RCo trough level >50%
[2]For up to 7 days

References: LexiComp, NovoSeven RT (NovoNordisk) package insert http://www.novo-pi.com/novosevenrt.pdf
Recombinate (Baxter) package insert http://factorviia.com/pi.pdf
BeneFix (Wyeth) package insert http://www.pfizerpro.com/resources/minisites/hemophilia/docs/BeneFIX-PI.pdf
FEIBA (Baxter) package insert http://www.feiba.com/us/forms/feiba_nf_pi.pdf
Humate-P (CSLBehring) package insert http://www.humate-p.com/Professional/Prescribing-Information.aspx
Thigpen and Limdi, Reversal of Oral Anticoagulation. *Pharmacotherapy*, vol 33, issue 11, pp. 1199-1213, *November, 2013*
KCentra package insert, http://www.kcentra.com/Kcentra-resources.aspx

BILLING INFO

- **EVERY bolus and IV factor dispensed including Kcentra must be entered in the Cubbixx written log clearly and neatly and initialed by the dispensing Pharmacist. The initials must be clear to determine who had dispensed the product.**
- **All** bolus and continuous IV factors must be entered into Siemens even if for ED or OR for the exact dose to be administered.
- **REMINDER**: Rounding up to the nearest vial size is preferred to minimize waste. Pharmacy can adjust dose within +/- 10% based on current dosage vial size. **Note**: Kcentra already has an approved P&T dosing table that can be found on the JDH IV med guidelines.
- Entering pharmacists must physically enter in the number of labels needed to ensure doses are sent, using **…** labels for inpatients.
- Because the billing people are doing the actual billing, the DU and initial supply must be zero (0) for boluses.
- Billing personnel will verify all factor billing with the log, and MAK or the MAR. Billing personnel can be contacted for notification of a factor product dispensed.
- Bolus doses in excess of 3 vials should be drawn up in a syringe for IVP and labeled by Pharmacy once need of dose is verified.

UCONN HEALTH

Department of Pharmacy, October 2016
Revised by Kaitlyn Elliot 2015 Pharm D Candidate and
Ruth LaCasse Kalish, RPh

UConn Health
Department of Pharmacy

Procoagulant (Factor) Agent Brochure

Helpful Hints

For Factors VIII and IX, IU/kg dose is a general guideline, as dosage should be based on desired/expected goal factor concentration.

For Factor VIII, 1 IU/kg can be expected to raise the factor levels by 2 percentage points. For Factor IX, 1 IU/kg can be expected to raise factor levels by 0.75 percentage points

Humate P is the only product available for patients with von Willebrand Disease (VWD). Dose is based on VWF:RCo units only for VWD. VWF units varies in ratio to Factor VIII units with an average of 2.4:1.

* Per Pharmacy & Therapeutics committee, Pharmacy can adjust dose within +/- 10% based on current dosage vial sizes in pharmacy to prevent waste. Rounding up to the nearest vial size is preferred.

ASD Healthcare has provided a Cubixx refrigerator (back of pharmacy near freezer) to store the consignment product in.

The pharmacy will be billed for the product when it has been removed from the Cubixx unit for more than 180 minutes or if the packaging has been opened.

Do not deface any packaging for all factor agents (e.g. write on or label the box, remove the filter, remove the package insert) or JDH Pharmacy will be required to pay for the product. Store products in the original package to protect from light.

When the inventory falls below the designated par levels, the Cubixx unit will automatically generate an order. The turnaround time for system generated orders is 2 days.

Pharmacists ONLY: If an order needs to be placed urgently off hours, call 1-877-428-2499. The operator will have an associate call back. Identify yourself as John Dempsey Hospital, acct. # 206267.

If there is a mechanical issue with the refrigerator contact Mike Loucel (Card taped to the unit)

UCONN HEALTH Department of Pharmacy

Product	Half-Life (h)	How Supplied	Indications: **FDA-Approved** (*Unapproved*)	Type of Bleed	Dose	Interval	Duration	Goal Factor Concentration
BeneFIX * Factor IX (recombinant) Pfizer 1-800-505-4426	11-36	250, 500, 1000, and 2000 IU vials w/ 5ml diluent Final conc: 50, 100, 200, 400IU/mL	**Hemophilia B** Number of factor IX IU required = patient weight (kg) x desired factor IX level increase (as % normal or IU/dL) x 1.3 (as units/kg or units/dL)	Minor	Up to 40 IU/kg	12-24hr	Until resolved	20-30%
				Moderate	Up to 65 IU/kg	12-24hr	up to 7 days	25-50%
				Major	Up to 130 IU/kg	12-24hr	7-10 days or until resolved	50-100%
				Surgery	Up to 130 IU/kg pre-op, then less	12-24hr PRN to Keep ≤50%	7-14 day or until resolved	**Pre-op: 100% Post-op ≤ 50%**
FEIBA NF* Activated Prothrombin Complex Concentrate (plasma-derived) Baxter Healthcare (800) 422-9837	4-7 Duration = 8-12h	approx. 500IU or 1000 IU/ 20ml and approx. 2500 IU/50ml vials	**Hemophilia A/B with inhibitors** (*acquired hemophilia with factor VIII or factor IX inhibitor titers >5 Bethesda units (BU) Treatment of life threatening bleeds associated with dabigatran*)	Joint	50-100 Feiba units/kg	12hr DIC or thrombosis may occur if 200unit max dose exceeded	Consult specialist if ineffective or >3 doses in 24hr 50 unit/kg dose can be q6h	NA
				Mucous membrane	50-100 Feiba units/kg			
				Soft tissue				
				Severe (CNS)	100 Feiba units/kg Max of 200 units/kg	12hr		
NovoSeven RT Factor VIIa (recombinant) Novo Nordisk (800) 727-6500	1.7-3.1	1mg, 2mg, 5mg, 8mg vials as 1mg/mL	**Hemophilia A or B with inhibitors to factor VIII or factor IX, acquired hemophilia, or congenital factor VII deficiency** (*warfarin-related intracerebral hemorrhage; treatment of refractory bleeding after cardiac surgery in nonhemophiliac patients*) CI = 1 mg/ml FVIIa diluent	Hemophilia A or B	90 mcg/kg	q2hr initially. Cont. Post-op until healed Q2h up to 5 days, then 2-6 hrs.	Until hemostasis achieved Consult specialist if >3 doses or inadequate response	NA Treat until bleeding stopped, surgery healed or judged ineffective
				Acquired hemoph.	70-90 mcg/kg			
				Congenital factor VII deficiency	IV Push: 15-30mcg/kg	IVP q4-6hr until hemostasis,		
					Continuous: undiluted 12-50mcg/kg/hr	then CI based on levels		
Helixate FS * Factor VIII (recombinant) CSL Behring (800) 504-5434	11-15	250, 500, 1000, 2000 units/ 2.5ml Final conc: 100IU/mL, 200IU/mL, 400IU/mL, 800IU/ml	**Hemophilia A (bleeding/surgery) Also prophylaxis of joint bleeding and to reduce risk of joint damage in children with hemophilia A with no pre-existing joint damage** Wt (kg) x desired % increase/2 = dose Continuous infusion = 10 units/ml NS JDH does not carry Recombinate*, but dosing guidelines are similar	Minor	10-20 IU/kg	12-24hr	Until resolved	20-40%
				Moderate/minor surg	15-30 IU/kg	12-24hr	3 days or until-resolved	30-60%
				Major	40-50 IU/kg f/b 20-25IU/kg	8-12hr	3-7 days or until bleed resolved	80-100%
				Major Surgery	50 IU/kg load CI dose based on levels	6-24hr	10-14 days or until healed	Pre-op: 100% Monitor levels
Humate-P * Factor VIII (plasma-derived) CSL Behring (800) 504-5434 **See Guidelines for Von Willebrand's Ds on reverse**	8-28 (HA) 3-34 (VWD)	250/600IU/5ml 500/1200IU/10 ml 1000/2400IU/15 ml VIII/VWF:RCo Ratio Approx 2.4:1	**Hemophilia A (classical hemophilia) (this table);** Not preferred agent. **See Reverse for Severe VWD,** including mild or moderate disease where use of desmopressin is known or suspected to be inadequate **Note:** *Not indicated for the prophylaxis of spontaneous bleeding episodes.*	Minor	15 IU FVIII/kg f/b 7.5 IU FVIII/kg	12-24hr	Until resolved	30%
				Moderate	25 IU FVIII/kg f/b 15 IU FVIII/kg	8-24hr	3-7 days or until resolved	30-50%
				Surgery or Major	40-50 IU FVIII/kg f/b 20-25 IU FVIII/kg	8-24hr	7-14days or until resolved	Pre-op + initial Post-op: 80-100% x7days f/b 30-50% x7d

KCentra*	**Indication**	**PreTx INR**	**Dose** (in Factor IX content)	**Caution**	**Monitoring**
Prothrombin complex concentrate, heat treated, (Factors II, VII, IX, X)	**Urgent reversal of Vit K antagonist induced coagulation factor deficiency in patient with acute major bleed or urgent invasive procedure/surgery.** Approx. 500 Units Factor IX activity per vial	2 - <4	25 units/kg **max** 2500 units	Do not let blood enter syringe to avoid clot formation. Monitor for clotting	INR declines within minutes, duration 6-8hrs May affect aPTT
		4 - 6	35 units/kg **max** 3500 units		
		> 6	50 units/kg **max** 5000 units Do not exceed max dose		