

## VUMC INTRAVENOUS MEDICATION ADMINISTRATION CHART

Approved by Pharmacy and Therapeutics Committee, Revised October 2014

\* Refer to references such as Mosby's for additional information on administration and monitoring. Alternate infusion rates permitted at provider discretion.

\*\* Central Line Preferred indicates that the medication is associated with venous irritation. Certain situations may require that the medication be administered peripherally (e.g., emergency situations, waiting on central line placement, or very short duration of infusion planned). Infusion of these medications/solutions through a peripheral vein may lead to loss of vascular access or damage to the vein and/or surrounding tissue, resulting in chemical phlebitis and thrombus formation. Other factors including vein size, infusion rate, catheter dwell time, catheter size and location also influence the risk of phlebitis. Monitor closely for signs and symptoms of infiltration and/or phlebitis if given peripherally.

DRUG	DRUG CLASS	APPROVED FOR X = Approved for Level of Care Indicated			Guardrails	*IV PUSH CONCENTRATION	*INFUSION CONCENTRATION
		ICU	Step Down	Gen Care			Standard (Std) Maximum (Max)
Adenosine (Adenocard)	Antiarrhythmic	X MD present	X MD present	X MD present		6 mg / 2 mL	Infusion not recommended
Albumin	Blood Product Derivative	X	X	X		Not for IV Push	5% or 25%
Alemtuzumab (Campath)	Monoclonal Antibody	X	X	X		Not for IV Push	30 mg / 100 mL
Alprostadil (Prostin VR)	Prostaglandin	X			GR		<b>Peds:</b> 20 mcg/mL
Alteplase Tissue Plasminogen Activator (t-PA) (Activase)	Thrombolytic	X	X No titration of infusion			1 mg/mL	<b>Adult:</b> 100 mg / 100 mL  <b>Peds:</b> 1 mg/mL
Aminocaproic Acid (Amicar)	Hemostatic Agent	X				Not for IV Push	<b>Adult:</b> 20 Gm / 250 mL  <b>Peds:</b> 20 mcg/mL

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Amiodarone (Cordarone)	Antiarrhythmic	X	X Adult areas only with no titration of infusion		GR	Adult for pulseless VT or VF; 300mg in 30mL NS or D5W  <b>**Central Line Preferred if conc &gt; 2 mg/mL</b>	<b>Adult:</b> Bolus: 150 mg / D5W 100 mL  Infusion: 450 mg / 250 mL (1.8mg/mL) (Std) 900 mg / 250 mL D5W (Max)  <b>Peds:</b> Bolus: 2 mg/mL  Infusion: 2 mg/mL or 6 mg/mL  <b>**Central Line Preferred if conc &gt; 2 mg/mL</b>
Antithymocyte Globulin-Rabbit (Thymoglobulin)	Immunosuppressant	X	X	X	GR	Not for IV Push	500mL (Std)  May be dispensed in 250 mL for concentrated infusion.  0.5 mg/mL (Max)
Argatroban	Anticoagulant	X	X	X	GR		250 mg/250 mL
Atropine	Anticholinergic	X	X MD present	X MD present		1 mg /10 mL 0.4 mg/mL	
Basiliximab (Simulect)	Monoclonal Antibody	X	X	X		Not for IV Push	20 mg/ 50 mL
Bivalirudin (Angiomax)	Anticoagulant	X	X	X			250 mg/50 mL
<u>Blood Factor:</u> <u>Anti-Inhibitor Coagulant</u> <u>Complex</u> (FEIBA®-VH)	Anti-hemophilic agent	X	X	X		Dependent on vial sizes used.	N/A

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Blood Factor: fVIII/vonWillebrand factor complex, plasma derived (Humate®P)	Anti-hemophilic agent	X	X	X		Dependent on vial sizes used.	N/A
Blood Factor: Recombinant fIX (Benefix®)	Anti-hemophilic agent	X	X	X		Dependent on vial sizes used.	N/A
Blood Factor: Recombinant fVIIa (NovoSeven® RT)	Anti-hemophilic agent	X	X	X		1000 mcg/mL	Further dilution not recommended
Blood Factor: Recombinant fVIII (Advate®)	Anti-hemophilic agent	X	X	X		Dependent on vial sizes used.	N/A
Blood Factor: Recombinant fVIII (Recombinate®)	Anti-hemophilic agent	X	X	X		Dependent on vial sizes used.	N/A
Bumetanide (Bumex)	Diuretic	X	X	X		0.25 mg/mL	<b>Adult:</b> 20 mg / 80 mL  <b>Peds:</b> 0.25 mg/mL (Std) 0.02 mg/mL (for patients < 5 kg)
Buprenorphine (Buprenex)	Opioid	X	X	X		0.3 mg/mL	
Butorphenol (Stadol)	Opioid	X	X	X		1 mg/mL	
Calcium Chloride (CaCl)	Electrolyte	X	X Intermittent infusion only	X Intermittent infusion only	GR	1 gm / 10 mL  <b>**Central Line Preferred</b>	<b>Adult:</b> 2 gm /100 mL  Dialysis specific conc: 8 gm / 250mL  <b>Peds:</b> 100 mg/mL  <b>**Central Line Preferred</b>

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Calcium Gluconate	Electrolyte	X	X	X	GR	1 gm / 10 mL	1 gm / 50mL  Dialysis specific conc: 6 gm /100 mL
ChlorproMAZINE (Thorazine)	Antipsychotic	X	X	X		Not for IV Push	25 mg in 100 mL (Std)
Cisatracurium (Nimbex)  <b>HIGH ALERT MEDICATION</b>	Neuromuscular Blocker	X			GR	2 mg / mL	<b>Adult:</b> 200 mg / 250 mL (Std) 400 mg / 250 mL (Max)  <b>Peds:</b> 1 mg / mL 2 mg / mL
CMV Intravenous Immune Globulin (Cytogam)	Blood Product Derivative	X	X	X		Not for IV Push	
CycloSPORINE (SandIMMUNE)	Immunosuppressant	X	X	X	GR	Not for IV Push	<b>Adult:</b> Dose diluted in 250 mL glass (Std)  Dose diluted in 100 mL glass (Max)  <b>Peds:</b> 2.5 mg / mL
Dexamethasone (Decadron)	Corticosteroid	X	X	X		4 mg/mL 10 mg/mL 15 mg/mL	
Dexmedetomidine (Precedex)	Sedative	X				400 mcg /100mL	<b>Adult:</b> 400 mcg/100 mL (Std,Max)  <b>Peds:</b> 4 mcg/mL

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Dextrose in Water	Nutrition Therapy	X	X	X		50% (Max)	<b>Adult:</b> 5% (Std) 10% (Std) 20% (Max) - <b>**Central Line Preferred</b>  <b>Peds:</b> 5% (Std) 10% (Std) - Maximum given peripherally with Calcium additive 12.5% - Maximum given peripherally without Calcium additive Above 12.5% - <b>Central Line Preferred</b>  Note: Above standards to not apply to dextrose in TPN
Diazepam (Valium)	Benzodiazepine	X	X No titration of infusion	X Intermittent Dosing Only	GR	5 mg/mL	5 mg/50 mL (Std) 10 mg/50 mL (Max)
Digoxin(Lanoxin)  <b>HIGH ALERT MEDICATION</b>  <b>Double Check Required</b>	Miscellaneous	X	X Adult areas only	X Adult areas only		<b>Adult:</b> 250 mcg/mL  <b>Peds:</b> 10 mcg/mL, 100 mcg/mL	
Dihydroergotamine (DHE 45)	Antimigraine	X	X	X		1mg/mL	
Diltiazem (Cardizem)	Calcium Channel Blocker	X	X No titration of infusion		GR	5 mg/mL	100 mg/100 mL (Std, Max)

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DiphenhydrAMINE (Benadryl)	Antihistamine	X	X	X		50 mg/mL	
DOBUTamine (Dobutrex)	Adrenergic agonist	X	X No titration of infusion		GR		<b>Adult:</b> 250 mg/250 mL (Std) 1000 mg/250 mL (Max)  <b>Peds: ≤ 5 kg</b> 800 mcg/mL 1600 mcg/mL (Std) 3200 mcg/mL <b>&gt;5 kg</b> 1600 mcg/mL (Std) 3200 mcg/mL
DOPamine (Intropin)	Adrenergic agonist	X	X No titration of infusion	Exception: 7T3 kidney &/or pancreas transplants may receive in 1st 24hrs post-op while on 1:1 RN care	GR		<b>Adult:</b> 400 mg/250 mL (Std) 1600 mg/250 mL (Max)  <b>Peds:</b> <b>≤ 5 kg</b> 800 mcg/mL 1600 mcg/mL (Std) 3200 mcg/mL <b>&gt;5 kg</b> 1600 mcg/mL (Std) 3200 mcg/mL 6400 mcg/mL  <b>**Central Line Preferred</b>
Droperidol (Inapsine)	Antiemetic	X	X	X		2.5 mg/mL	
Enalaprilat (Vasotec)	ACE Inhibitor	X	X Adult areas only	X Adult areas only		<b>Adult:</b> 1.25 mg/mL  <b>Peds:</b> 25 mcg/mL	

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EPINEPHrine (Adrenalin)	Adrenergic agonist	X			GR	1:10,000 (0.1 mg/mL)  1:1,000 (1 mg/mL)  <b>Central Line Preferred</b>	<b>Adult:</b> 4 mg/250 mL (Std) 8 mg/250 mL (Max)  <b>Adult Emergency Dept Only:</b> 1 mg/1000 mL (not prepared by the pharmacy; not utilized outside the Adult ED)  <b>Peds:</b> <b>≤ 5 kg:</b> 16 mcg/mL (Std) 32 mcg/mL <b>&gt; 5 kg:</b> 32 mcg/mL (Std) 64 mcg/mL  <b>**Central Line Preferred</b>
Eptifibatide (Integrilin)	Antiplatelet	X	X No titration of infusion			200 mcg/mL bolus	750 mcg/mL infusion
Esmolol (Brevibloc)	Beta-blocker	X			GR	10 mg/mL	<b>Adult:</b> 2500 mg /250 mL (Std) 2000 mg/100 mL (Max)  <b>Peds:</b> 10 mg/mL 20 mg/mL (premix) Note concentration of vial
Etomidate (Amidate)	Sedative	X				2 mg/mL	
Famotidine (Pepcid)	Antihistamine	X	X	X		10 mg/mL	

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FentaNYL (Sublimaze)	Opioid	X	X PCA; Epidural – VUH only	X PCA; Epidural – VUH only	GR	50 mcg/mL  <b>Peds:</b> 5 mcg/mL 50 mcg/mL	<b>Adult:</b> 50 mcg/mL 100mL  <b>Peds:</b> 2.5 mcg/mL 10 mcg/mL 25 mcg/mL 50 mcg/mL
Flumazenil (Romazicon)	Antidote	X	X	X		1 mg/10 mL	
Fosphenytoin (Cerebyx)	Anticonvulsant	X	X	X	GR	50 mg PE /mL	Doses greater than 300 mg PE will be mixed by pharmacy.  1000 mg PE/ 250 mL
Furosemide (Lasix)	Diuretic	X	X	X Infusions allowed in VUH only	GR	10 mg/mL	<b>Adult:</b> 200 mg/100 mL (Std) 10 mg/mL (Max)  <b>Peds:</b> 1 mg/mL 2 mg/mL 4 mg/mL
Glucagon	Antidote	X	X	X		1 mg/1mL bolus	10 mg/50 mL infusion
Glycopyrrolate (Robinul)	Anticholinergic	X	X	X		0.2 mg/mL	
Haloperidol (Haldol)	Antipsychotic	X	X	X		5 mg/mL	
HBIG (Hepagam B)	Blood Product Derivative	X	X	X		Not for IV Push	<b>Adult:</b> 5000-10,000 units/250 mLs in NS



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Heparin  <b>HIGH ALERT MEDICATION</b>  <b>Double Check Required</b>	Anticoagulant	X	X	X	GR	5,000 unit / 1 mL	<b>Adult:</b> 25,000 units/250 mL (Std) No concentrated infusion  <b>Peds:</b> 100 units/mL
HydrALAZINE (Apresoline)	Vasodilator	X	X (IVP Only) in the Step Down area	Exception: 7T3 kidney &/or pancreas transplants may receive in 1st 24hrs post-op while on 1:1 RN care		20 mg/mL	<b>Adult:</b> 100 mg / 100 mL (Std)
Hydrocortisone sodium succinate (Solu-CORTEF)	Corticosteroid	X	X	X		50 mg/mL	
HYDRomorphone (Dilaudid)	Opioid	X	X Intermittent Dosing;  PCA;  Epidural- VUH Only  Infusions (no titration permitted)	X Intermittent Dosing;  PCA;  Epidural-VUH Only		1mg/mL	<b>Adult:</b> 50 mg/50 mL (Std) 500 mg/50 mL (Max)  30 mg/30 mL PCA (Std) 300 mg/30 mL PCA (Max)  <b>Peds:</b> 50 mcg/mL 100 mcg/mL 1000 mcg/mL
Ibandronate (Boniva)	Bisphosphonate	X	X	X		3 mg/ 3 mL	

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Ibutilide (Corvert)	Antiarrhythmic	X	X No titration of infusion				1 mg/50 mL
Immune Globulin Intravenous -- IVIG (GAMMAGARD liquid)	Blood Product Derivative	X	X	X		Not for IV Push	
Immune Globulin Intravenous -- IVIG (GAMMAGARD S/D)	Blood Product Derivative	X	X	X		Not for IV Push	
Immune Globulin Intravenous -- IVIG (GAMUNEX)  *** This is the product of choice in patients with/ OR at risk of RENAL INSUFFICIENCY or RENAL FAILURE***	Blood Product Derivative	X	X	X		Not for IV Push	
Immune Globulin Intravenous -- IVIG (CARIMUNE NF)  *Products containing sucrose have been associated with acute renal failure*	Blood Product Derivative	X	X	X		Not for IV Push	

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Insulin  <b>HIGH ALERT MEDICATION</b>  <b>Double Check Required</b>	Insulin	X	X No titration of infusion: requires Q2hr BG checks- must switch to sliding scale within 8 hrs: charge nurse must agree to therapy  Exception: 4N, 4SMC, and 5S have ICU privileges for insulin drips.	X No titration of infusion: requires Q2hr BG checks- must switch to sliding scale within 8 hrs: charge nurse must agree to therapy	GR		<b>Adult:</b> 150 units / 150 mL  <b>Peds:</b> 0.1 units/mL 0.5 units/mL 1 unit/mL  Pharmacy will prepare all doses of U-500 concentration
Isoproterenol (Isuprel)	Adrenergic agonist	X	X No titration of infusion		GR	4 mcg/mL	<b>Adult:</b> 1 mg/250 mL (Std) 4 mg/250 mL (Max)  <b>Peds (All weights):</b> 16 mcg/mL (Std) 32 mcg/mL
Ketamine (Ketalar)	Sedative	X			GR	10 mg/mL (Std) 50 mg/mL (Max)	1 mg/mL (Std) 5 mg/mL (Max)
Ketorolac (Toradol)	NSAID	X	X	X		15 mg/mL	

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Labetalol (Normodyne, Trandate)	Beta-blocker	X	X No titration of infusion	Exception: 7T3 kidney &/or pancreas transplants may receive in 1st 24hrs post-op while on 1:1 RN care	GR	5 mg/mL	<b>Adult:</b> 400 mg/500 mL (Std) 800 mg/250 mL (Max)  <b>Peds:</b> 0.8 mg/mL 3.2 mg/mL
Levothyroxine (Synthroid)	Thyroid Hormone	X	X	X		100 mcg/mL (intermittent dosing)	500 mg/500 mL infusion used for TDS Donor Protocol only
Lidocaine (Xylocaine)	Antiarrhythmic	X	X No titration of infusion	X Adult patients only; No titration of infusion	GR	10 or 20 mg/mL	<b>Adult:</b> 2000 mg/250 mL (Std) 4000 mg/250 mL (Max)  <b>Peds:</b> 8 mg/mL
Liothyronine (Triostat)	Thyroid Hormone	X					0.2 mcg/mL
LORazepam (Ativan)	Benzodiazepine	X	X No titration of infusion  Intermittent dosing only	X B.A.D. syringe only, otherwise intermittent dosing only	GR	2 mg or 4 mg/mL	<b>Adult:</b> 50 mg/50 mL (Std, Max))  <b>Peds:</b> 0.5 mg/mL 1 mg/mL
Lymphocyte immune globulin; Antithymocyte Globulin –Equine (Atgam)	Immunosuppressant	X	X	X	GR	Not for IV Push	Dose diluted in 250 mL (Std) Dose diluted in 500 mL (Max)
Magnesium Sulfate	Electrolyte	X	X	X	GR	1000 mg / 2 mL	2 gm / 50 mL (Std)
Mannitol (Osmitrol)	Osmotic agent	X	X	X		20% or 25%	

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Meperidine (Demerol)	Opioid	X	X	X		10 mg/mL  Dilute dose to 10mg/mL concentration with NS	300 mg / 30 mL PCA (Std)
Methyldopa (Aldomet)	Antihypertensive	X	X No titration			50 mg/mL	Add dose to 100 mL D5W or NS
Methylergonovine (Methergine)	Miscellaneous	X				0.2 mg/mL	
Methylprednisolone sodium succinate (Solu-MEDROL)  Methylprednisolone <b>acetate</b> is for IM use only.	Corticosteroid	X	X	X		Varies by vial size	
Metoclopramide (Reglan)	Antiemetic	X	X	X		5 mg/mL	
Metoprolol (Lopressor)	Beta-blocker	X	X No titration of infusion	Exception: 7T3 kidney &/or pancreas transplants may receive in 1st 24hrs post-op while on 1:1 RN care		1 mg/mL	

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Midazolam (Versed)	Benzodiazepine	X	X No titration of infusion	X Moderate sedation with MD present;  6A patients receiving MIBG therapy may receive per MIBG Anxiolysis Protocol	GR	1 mg/mL 5 mg/mL	<b>Adult:</b> 70 mg/70 mL (Std, Max)  <b>Peds:</b> 0.25 mg/mL 0.5 mg/mL 1 mg/mL 5 mg/mL
Milrinone (Primacor)	Inotropic agent	X	X No titration of infusion	6C only - refer to policy CL 30-19.32, Milrinone Infusion at Children's Hospital	GR	200 mcg/mL bolus	<b>Adult:</b> 40 mg/200 mL (Std) 80 mg/200 mL (Max)  <b>Peds:</b> 100 mcg/mL 200 mcg/mL 800 mcg/mL
Morphine Sulfate	Opioid	X	X	X	GR	4 mg/mL 10 mg/mL 15 mg/mL	<b>Adult:</b> 30 mg/30 mL PCA (Std) 150 mg/30 mL PCA 300 mg/30 mL PCA (Max)  <b>Peds:</b> 0.5 mg/mL 1 mg/mL 5 mg/mL
Muromonab CD-3 (Orthoclone OKT3)	Immunosuppressant	X	X	X		5 mg/5mL	

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Naloxone (Narcan)	Antidote	X	X	X	GR	0.04 mg/mL 0.4 mg/mL 1 mg/mL	<b>Adults:</b> 0.4 mg/ 1000 mL (for pruritis) 10 mg/ 100 mL (for overdose)  <b>Peds:</b> 4 mcg/mL (for pruritis) 400 mcg/mL (for clonidine overdose)
Neostigmine (Prostigmin)	Antidote	X				0.25 mg/mL 0.5 mg/mL	1 mg/mL
niCARdipine (Cardene)	Calcium Channel Blocker	X			GR		<b>Adult:</b> 50 mg / 250 mL (Std) 40 mg / 200 mL (ED, Radiology, Lifeflight only) 100 mg/250 mL (Max)  <b>Peds:</b> 500 mcg/mL <b>**Central Line                      Preferred</b>
Nitroglycerin (Nitrostat)	Vasodilator	X	X No titration of infusion		GR	100 mcg/mL (intermittent dosing)	<b>Adult:</b> 25 mg/250 mL (Std) 100 mg/250 mL (Max)  <b>Peds:</b> 100 mcg/mL 400 mcg/mL
Nitroprusside (Nipride)	Vasodilator	X			GR		<b>Adult:</b> 50 mg/250 mL (Std) 100 mg/250 mL (Max)  <b>Peds:</b> 200 mcg/mL 400 mcg/mL 800 mcg/mL

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Norepinephrine (Levophed)	Adrenergic agonist	X	X No titration of infusion		GR		<b>Adult:</b> 8 mg/250 mL (Std) 16 mg/250 mL (Max)  <b>Peds:</b> <b>≤ 5 kg:</b> 16 mcg/mL (Std) 32 mcg/mL (central line only) <b>&gt; 5 kg:</b> 32 mcg/mL (Std-if central line) 16 mcg/mL 64 mcg/mL  <b>**Central Line Preferred</b>
Octreotide (SandoSTATIN)	Miscellaneous	X	X	X	GR	50, 100, 500 mcg/mL	<b>Adult:</b> 500 mcg / 250 mL (Std)  <b>Peds:</b> 10 mcg/mL (Std)
Oxytocin (Pitocin)	Miscellaneous	X	X	X	GR	10 units/mL	15 Units / 250 mLs
Pamidronate (Aredia)	Bisphosphonate	X	X	X			
Pancuronium (Pavulon)  <b>HIGH ALERT MEDICATION</b>	Neuromuscular Blocker	X			GR	1 mg/mL 2 mg/mL	<b>Adult:</b> 100 mg/100 mL  <b>Peds:</b> 1 mg/mL
Paracalcitrol (Zemplar)	Vitamin D Analog	X	X	X		5 mcg/mL	
Pentazocine (Talwin)	Opioid	X	X	X		30 mg/mL	1 mg /mL PCA 5 mg/mL PCA



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PENTobarbital (Nembutal)	Sedative	X			GR	6 mg/mL	<b>Adult:</b> 3000 mg/500 mL (Std, Max)  <b>Peds:</b> 50 mg/mL
PHENobarbital	Anticonvulsant	X	X	X		130 mg/mL	
Phenylephrine (Neosynephrine)	Adrenergic agonist	X	10T3 only, per high dose Interleukin 2 protocol		GR	100 mcg/mL  <b>Central Line Preferred</b>	<b>Adult:</b> 30 mg/250 mL (Std) 120 mg/250 mL (Max)  <b>Peds:</b> 60 mcg/mL (Std) 120 mcg/mL  <b>Central Line Preferred</b>
Phenytoin Sodium (Dilantin)	Anticonvulsant	X	X	X	GR	50 mg/mL	Doses 300 mg or greater will be diluted in 250 mL
Phytonadione (Aquamephyton)	Antidote	X	X	X	GR	Not for IV Push	<b>Adults:</b> Dose diluted in 50 mLs of NS  <b>Peds:</b> Dose diluted in 5-10 mLs of D5W or NS; maximum conc: 10 mg/mL

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DRUG	DRUG CLASS	APPROVED FOR X = Approved for Level of Care Indicated			Guardrails	*IV PUSH CONCENTRATION	*INFUSION CONCENTRATION
		ICU	Step Down	Gen Care			Standard (Std) Maximum (Max)
Potassium Chloride (KCl)	Electrolyte	X	X	X	GR	Not for IV Push	<p><b>Adult:</b> 10 mEq/50 mL (Std) 20 mEq/100 mL (Std)</p> <p>Max conc. per bag : central TPN: 200 mEq/L peripheral TPN: 40 mEq/L</p> <p>Max large volume IV conc: 80 mEq/L</p> <p><b>Peds:</b> peripheral potassium run: 80 mEq/L</p> <p>central line potassium run: 200 mEq/L</p> <p><b>NICU:</b> 1 mEq or 2 mEq of KCl may be ordered for addition to 100 mL of TPN or IVF in the buretrol. If less than 100 mL is available, 0.5 mEq in 50 mL may be ordered</p>
Procainamide (Procan)	Antiarrhythmic	X	X No titration of infusion		GR		<p><b>Adult:</b> 1000 mg/250 mL NS (Std) 2000 mg/250 mL NS (Max)</p> <p><b>Peds:</b> 4000 mcg/mL</p>
Prochlorperazine (Compazine)	Antiemetic	X	X	X		5 mg/mL	

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		ICU	Step Down	Gen Care			Standard (Std) Maximum (Max)
Promethazine (Phenergan)	Antiemetic	X	X	X		2.5 mg/mL Dilute 25mg to volume of 10mL  <b>Peds:</b> Restricted to central line and requires attending approval	
Propofol (Diprivan)	Sedative	X			GR	10 mg/mL	10 mg/mL
Propranolol (Inderal)	Beta-blocker	X				1 mg/mL	
Protamine Sulfate	Antidote	X	X	X		10 mg/mL	
Ranitidine (Zantac)	Antihistamine	X	X	X		25 mg/mL	
Remifentanyl (Ultiva)	Opioid	X				Bolus: 50 mcg/mL	Infusion: 5 mg/250 mL
Rituximab (Rituxan)	Monoclonal Antibody	X	X	X		Not for IV Push	1 mg/mL (Std) (50 mg/hr = 50 mL/hr)  For Rapid Rate: Mix all doses in NS 300 mL total volume
Rocuronium (Zemuron)	Neuromuscular Blocker	X				10 mg/mL	
<b>HIGH ALERT MEDICATION</b>							
Sodium Bicarbonate	Electrolyte	X	X	X		50 mEq/50 mL  <b>NICU:</b> 4.2% (0.5 mEq/mL)	

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		ICU	Step Down	Gen Care			Standard (Std) Maximum (Max)
23.4% Sodium Chloride  <b>HIGH ALERT MEDICATION</b>  <b>Double Check Required</b>	Electrolyte	X  Restricted use – see IV Push Column				Undiluted concentration = 4 mEq/mL  Restricted to the following indications:  1. Elevated Intra-Cranial Pressure (ICP) – administered by MD  2. Treatment of muscle cramping in Dialysis Patients  3. Vein sclerosing in cosmetic and dermatology clinics – administered by MD  <b>**Central Line Preferred</b>	<b>Not for IV infusion</b>
3% Sodium Chloride  <b>HIGH ALERT MEDICATION</b>  <b>Double Check Required</b>	Electrolyte	X (VCH & VUH)	X VUH only	X VUH only		<b>Not for IV Push</b>	0.513 mEq/mL  <b>**Central Line Preferred</b>
5% Sodium Chloride  <b>HIGH ALERT MEDICATION</b>  <b>Double Check Required</b>	Electrolyte	X For Dialysis Unit Use Only by Dialysis Staff				<b>Not for IV Push</b>	0.856 mEq/mL  <b>**Central Line Preferred</b>

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		ICU	Step Down	Gen Care			Standard (Std) Maximum (Max)
Succinylcholine (Anectine)  <b>HIGH ALERT MEDICATION</b>	Neuromuscular Blocker	X				20 mg/mL	
Tacrolimus (Prograf)	Immunosuppressant	X	X	X	GR	5 mg/mL	Dose diluted in 250 mL glass (Std)  Dose diluted in 100 mL glass (Max)
Vasopressin (Pitressin)	Vasoconstrictor	X			GR	Bolus: 20 unit/mL (0.5 or 1 mL)  Infusion: 1 unit/mL  <b>**Central Line Preferred</b>	<b>Adult:</b> 60 units/100 mL (Std, Max)  <b>Peds:</b> For DI dosing: 0.005 units/mL 0.01 units/mL 0.02 units/mL  For CV dosing: 0.05 units/mL; 0.1 units/mL 1 units/mL  <b>**Central Line Preferred</b>
Vecuronium (Norcuron)  <b>HIGH ALERT MEDICATION</b>	Neuromuscular Blocker	X			GR	1 mg/mL	<b>Adult:</b> 20 mg/100 mL (Std) 100 mg/100 mL (Max)  <b>Peds:</b> 1 mg/mL
Verapamil (Isoptin, Calan)	Calcium Channel Blocker	X	X No titration of infusion		GR	2.5 mg/mL	100 mg/250 mL (Std, Max)
Zolendronic Acid (Reclast or Zometa)	Bisphosphonate	X	X	X			4 mg / 100 mL (Zometa) 5 mg / 100 mL (Reclast)

## VUMC INTRAVENOUS MEDICATION ADMINISTRATION CHART

### Unit Designations

Revised October 2014

Unit / Area	ICU Designation	Step-down Designation	General Care Designation
<b>VUH / CCT</b>			
11 North - Myelosuppression			X
11 South - Burn	X	X see unit for beds	
10 North - Trauma	X		
10 South - Orthopedic/Trauma			X
10T3 - Stem Cell Transplant		X	
9 North		X	
9 South - Urology			X
9T3 - SICU	X		
8 North			X
8 South			X
8T3 - MICU	X		
7 North		X	
7 South - Dialysis	X		
7 South - Pediatrics - NICU	X		
7T3 - Transplant and Surgical Care			X
6 North - Neurology / Epilepsy			X
6 South - Cardiac Vascular Surgical Stepdown		X	
6T3 - Neuro ICU	X		
5 North - CVICU	X		
5 South - Cardiac Stepdown		X	
5T3 - Cardiac Cath Lab / Hybrid OR / EP Lab / PACU	X		
5T3 - HR / Cardiac Observation (COBS)		X	
4 MSC - Maternal Special Care		X	
4 North - Labor and Delivery		X	
4 South - Holding and Recovery		X	
4 South - Surgical areas	X		
4 East			X
3 North	X		
CTU - Clinical Transition Unit			X
ED	X		
OR / HR / PACU	X		
PTU - Psychiatric Transition Unit			X
Radiology Outpatient Recovery		X	
S 3100 - Clinical Research Center		X	
S 3400			X
S 4400			X
S 5400	ICU level medications may be given to patients covered by a Palliative Care attending. Otherwise, patients are considered to be General Care		
S 6400 - Orthopaedics			X
S 7400			X
TVC OR	X		
VUH Newborn Nursery			X
VUH Stahlman NICU	X		

**Alternate infusion rates permitted at physician discretion.**

**Note: Please refer to other references, such as Mosby's for additional information on administration and monitoring.**

## VUMC INTRAVENOUS MEDICATION ADMINISTRATION CHART

### Unit Designations

Revised October 2014

Unit / Area	ICU Designation	Step-down Designation	General Care Designation
<b>VMG - Any clinics not listed are considered to be general care designation</b>			
Cool Springs Oncology Infusion			X
Cool Springs Rheum infusion			X
Med. Spec. Infusion (OHO)			X
Oncology Infusion			X
Peds Infusion			X
Stem Cell Infusion			X
VSAP			X
<b>Clinic Procedure Suites</b>			
5MCE-S ECHO/TEE	X		
Cosmetic Surgery	X		
Endoscopy Lab	X		
FEL	X		
Vanderbilt Bone and Joint Surgery Center	X		
Interventional Pain Clinic (OHO)	X		
MCE OR / HR / RR	X		
Oral Surgery	X		
Plastic Surgery	X		X
Radiation Oncology		X	
TVC MOHS Dermatology		X	
Urology		X	
<b>Children's Hospital</b>			
ED	X		
NICU	X		
5A & B & C	X		
6 A - Myelosuppression			X
6 B - Hematology / Oncology			X
6 C - Acute Care Cardiology Unit			X
7A & B & C			X
8A & B & C			X
OR / HR / PACU	X		
<b>Vanderbilt Psychiatric Hospital</b>			
ECT Suite	X		
All other areas			X

Alternate infusion rates permitted at physician discretion.

Note: Please refer to other references, such as Mosby's for additional information on administration and monitoring.