Acetazolamide (Diamox)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
500mg/3min	500mg	May Cause Hypokalemia and/or Acidosis. May cause paresthesias. Dilute each 500mg in 5mL sterile water.	**CC**

Adenosine (Adenocard)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
6 mg over 1-2 seconds directly into vein followed by 20ml NS fush. Decrease dose to 3mg if administered via Central line & flush with NS	12 mg/dose	Monitor ECG, BP & HR Common adverse rxns: facial flushing, headache, dypsnea, chest pressure, lightheadedness, numbness, and nausea. Watch for allergic reactions. Use with caution in patients with history of allergic reactions. Give undiluted.	**CC, 8 (must be on cardiac monitor)**

Alteplase (CathoFlo-T-PA)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
Dilute powder with 2.2 ml Sterile Water For Inj. Do not shake. Instill 2 mg in dysfunctional catheter. May repeat once if catheter function is not restored after 120 minutes.	2 mg per dose	A 5 micron filter should be used for Cathflo 2mg until further notice.	**A PICC certified RN only**

Amiodarone

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
May give IV push undiluted as a bolus for pulseless VT or VF. May also give 150 mg IVPB over 10 min for stable VT, AF or supraventricular tachy.	300 mg IV as an undiluted bolus.	The amiodarone loading dose should be followed with a 1 mg/min infusion for 6 hours and then by a 0.5 mg/min infusion for the at least the next 16 hours.	**CC, 8 (must be on cardiac monitor)**

Atropine Sulfate

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
0.5mg q 3-5 min	3 mg or 0.04 mg/kg	May cause: urinary retention, blurred vision, hallucinations, disorientation Give undiluted	**CC/8 (must be on cardiac monitor)**

Bumetanide (Bumex)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
0.5 mg/minute Inject at 0.2mg/minute for renal failure patients. Give undiluted.	0.5 - 2 mg per dose MR q2-3hrs, NTE 10mg/day	Patients should be weighed on a daily basis. Monitor for oliguria and bladder dystension. May cause hypokalemia. Tinnitus and reversible hearing loss, which is sometimes irreversible, occurs with rapid injection of higher doses in patients with renal failure. Use caution in patients cross-sensitive to sulfonamides.	**A**

Calcitriol (Calcijex)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
0.5-1 mcg IV over 1-2 minutes after each dialysis for management of hypocalcemia in patients on chronic dialysis.	2 mcg /day three times weekly if undergoing hemodialysis .	Hypertension, flushing, bradycardia and tachycardia Give undiluted.	**A**

Calcium Chloride

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
500 – 1000mg over 2-5 min	1 Gram/dose	Avoid extravasation. (Administer via central line or deep vein preferred; severe necrosis may occur with scalp, small hand or foot veins). Give undiluted. Use caution in digitalized patients - possible cardiac toxicity/arrhythmias. Monitor ECG	**CC**

Calcium Gluconate

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
100mg over 2 -5 min (For cardiac arrest may administer over 10 – 20 sec)	3 Gram/dose	Avoid extravasation. Administer through a large vein. Give undiluted. Use caution in digitalized patients - possible cardiac toxicity/arrhythmias	**CC**

Cefazolin (Ancef)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
Give over 5 minutes	3 Gram/dose	500mg or 1gm is diluted with a minimum of 5mL of Sterile Water for Injection	**OR**

Cisatracurium (Nimbex)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
150-200 mcg/kg undiluted as bolus over 5-10 seconds for hypothermia protocol		Give undiluted.	**CC**

Cosyntropin (Cortrosyn)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
250 mcg in 2 ml of NS and administer over 2 minutes for diagnostic use for adrenocortical insufficiency	750 mcg	Bradycardia, hypertension Redness and pain at injection site	**A**

Desmopressin (DDAVP)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
2-4 mcg/day over 2 min for diabetes insipidis. May be given subcut.	4 mcg	Monitor BP and HR Give undiluted.	**A**

Dexamethasone (Decadron / Hexadrol)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
4 to 20mg over 1-2 minutes	--	3-6 mg/kg/dose in shock. May repeat every 2-6 hours as shock persist. Hypokalemia, hypernatremia, and hypocalcemia may result from therapy. Give undiluted.	**A**

Dextrose

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
25 Grams/ 5 minutes (50ml of a 50% solution)	determined by blood sugar levels	Administer slowly in a large vein - solution is hypertonic. Give undiluted. Monitor serum potassium levels.	**A**

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Diazepam (Valium)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
5 mg/minute	10mg/dose OR no more than 30mg in an 8-hour period.	Avoid extravasation - flush vein with normal saline. Too rapid a push can cause hypotension, apnea, or bradycardia. Cardiac arrest and respiratory depression can occur. Give undiluted. Monitor blood pressure.	**A**

Digoxin (Lanoxin)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
0.25mg over ≥5minute Digitalizing dose: ½ of the total digitalizing dose as initial dose, then ½ in each subsequent doses at 6-8 hr intervals. ESRD: if load is necess-ary, reduce by 50%	1.5mg/day	Avoid extravasation For patients with pulmonary edema, give over 10-15 minutes. Use EXTREME CAUTION with IV Calcium. Can cause FATAL arrhythmias. Rate of administration for monitored patients only Give undiluted.	**A**

Diltiazem (Cardizem)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
0.25mg/kg over 2 min. Repeat after 15 min with 0.35mg/kg over 2 mins if first dose inadequate. (usual 1st dose 20mg) (usual 2nd dose 25mg)	45mg	Give undiluted through a running line and follow bolus with iv infusion at 5-15 mg/hr for not more than 24h, NTE 15mg/hr Adverse rxns: hypotension Decrease dose in hepatic dysfunction. Contraindicated in sick sinus syndrome, AV block, severe hypotension (sys <90mm Hg), concomitant beta blocker therapy, known hypersensitivity.	**CC / 8**

Diphenhydramine (Benadryl)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
25 mg/minute	100 mg/single dose; 400 mg in 24hrs.	Give undiluted. Watch for anticholinergic effects, including urinary retention and drowsiness.	**A**

Enalaprilat (Vasotec)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
0.625 – 2.5mg iv over 5 minutes. May repeat q6 hours based on response	2.5mg q6h	Monitor BP, renal function and serum potassium Crcl 10-50 : 75% of dose Crcl <10 : 50% of dose Give undiluted thru a running line.	**CC, ER**

Ephedrine Sulfate

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
5 - 25 mg/minute (Dilute with NS to 5mg/ml and slow IVPush)	25 mg/dose NTE 150mg/24hrs	1. may cause hypertension. 2. may decrease urine output. 3. may cause tachycardia. 4. Use caution in patients with heart disease.	**CC**

Epinephrine (Adrenalin)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
1 mg/minute (5 - 10 ml of 1: 10,000 solution) May repeat q3-5 mins during resuscitation effort.	0.2 mg/kg	Monitor blood pressure and heart rate every 2-5 minutes until stable; then every 30 minutes. 1:10,000: Give undiluted. 1:1000: Dilute with 9ml of NS or Sterile Water. Avoid extravasation. Do not inject at same site as sodium bicarbonate.	**CC**

Epoetin (Epogen, Procrit)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
50-100 units/kg through the venous line at the end of dialysis 3 times/week	100 units / Kg	Do not shake. Store in refrigerator. Adverse rxns: fever headache, cough, rash congestion, edema, arthralgia, seizures, hypertension, flu-like symptoms. Give undiluted or mixed with an equal amount of NS.	**A**

Eptifibatide (Integrilin)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
For ACS- 180 mcg/kg over 1-2 minutes followed by a continuous infusion of 2 mcg/kg/min (see infusion drip chart)	Max bolus 22.6 mg. Max infusion rate 15mg/hour	Coagulation parameters, signs and symptoms of excessive bleeding.. PT/PTT, Hg/Hct and platelets. Give undiluted.	**CC, ER**

Ethacrynate Sodium (Edecrin Sodium)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
10 mg/minute (Dilute w/ NS to 1mg/ml then IVPush)	100mg/dose	Monitor for diarrhea. Watch serum sodium and potassium, dehydration, hepatic encephalopathy. Monitor hearing.	**CC / 8**

Etomidate

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
0.2-0.6 mg/kg over 30-60 seconds for rapid sequence intubation	Max of 20 mg	Transient involuntary muscle movements, myoclonus, nausea, vomiting, bradycardia, hypertension or hypotension. Give undiluted.	**CC, ER Physician trained in airway mgmt must be at bedside**

Famotidine (Pepcid)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
20 mg diluted to 5-10 ml with 0.9% sodium chloride injection over 2 minutes	20mg	The only adverse effect traced directly to the IV route is transient irritation at the injection site. Other rare side effects seen with all dosage forms of famotidine include headache, dizziness, constipation, and diarrhea.	**A**

Fentanyl (Sublimaze)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
25-100mcg Over 1-2 minutes	Total dose of 1.5 mcg/kg in any 30 - 60 minute period. If MD present at bedside, 2 mcg/kg/dose allowed up to 250 mcg total dose per case.	Use With Caution With MAOI. Patient must be on pulse oximetry to monitor respiratory depression. Give undiluted or may dilute with 5 mL NS or Sterile Water. Have naloxone (Narcan) available.	**CC**

Flumazenil (Romazicon)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
Suspected overdose: 0.2 mg over 30 seconds, then 0.3 mg after 30 seconds, then 0.5mg at 1 minute intervals.	3 mg total dose for suspected overdose	Push undiluted through freely flowing IV into large vein, Pt should have airway and established IV access prior to administration . Monitor for return of sedation or respiratory depression.	**A**
Reversal of sedation: 0.2 mg over 15 seconds Repeat dose at 1 minute intervals	1 mg total dose for reversal of sedation (In event of resedation may repeat doses at a 20 – min intervals with a max of 1mg/dose and 3mg/hr)	May potentiate seizures so use with caution in tricyclic antidepressants overdose, long term benzodiazepine use and head injury. Adv. Rxns: headache, injection site pain, sweating, fatigue, flushing, dizziness, n/v, agitation, blurred vision tremor.	

Furosemide (Lasix)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
20-40mg /minute	200 mg/dose	Monitor for oliguria/bladder dystension. Monitor serum sodium and potassium, dehydration, hepatic coma, increased BUN. Monitor blood pressure closely. Give undiluted. Watch for cross-sensitivity to Sulfonamides, tinnitus and reversible hearing loss (sometimes irreversible) may occur when using higher doses in renal failure. Weigh patient daily.	**A**

Glucagon

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
Give IV bolus over 1 minute. For beta blocker/calcium channel blocker toxicity, give bolus over 3 – 5 minutes.	1mg/dose	Dilute using provided diluents to a concentration of 1mg/mL. Observe for nausea and vomiting.	**A**

Haloperidol lactate (Haldol)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
2 – 10 mg/min	10 mg/dose **(Adults)** (Total dose ≥ 35mg/day increases risk of QT prolongation and total dose ≥35mg in <6 hours increases risk of torsades de pointes) 0.15 mg/kg/day **(Peds)** (Usual: 0.025-0.050 mg/kg/day in 2 to 3 divided doses)	For the treatment of delirium (agitation, confusion, psychosis) in critical care patients. Effects observed within 30 to 60 mins and may last 4 to 8 hours. May cause QT prolongation on EKG. Use with caution with other drugs that prolong QT interval. May cause extrapyradimal symptoms (EPS) but less so than IM injection. Patients with burns may be more susceptible to EPS. Elderly patients may be more sensitive to the drug effect. Use lowest effective dose to reduce potential for adverse effects. Give undiluted. Haloperidol is incompatible with NS. Flush lines with D5W before and after administration of dose. **DO NOT USE THE DECANOATE FORM FOR IV PUSH.**	**CC**

Heparin Sodium

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
Specified Units/1 minute	10,000 U per dose	Coagulation studies should be performed. PTT usually aimed at 1.5-2.0 times the control. Monitor for signs of bleeding. Watch for allergic reactions. Give undiluted.	**A**

Hydralazine (Apresoline)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
Not to exceed 5mg/min Give undiluted.	40mg/dose	Monitor BP. Avg. maximal decrease in 10-80 minutes. Lower dose in renal disease. Adverse rxns: headache, anorexia, n/v, diarrhea, palpitations, tachycardia, angina, peripheral neuritis, dizziness, flushing, muscle cramping. Must be on telemetry. Contraindicated in coronary artery disease, mitral valve and rheumatic heart disease.	**CC / 8**

Hydrocortisone Sodium Succinate (Solu-Cortef)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
Dilute 100mg with ≤ 2ml of bact. water and give over 30 seconds. (For dose > 500mg, IVPush over 10 min)	500 mg/dose 8 Grams/day	Monitor patient's weight. Possible hyperglycemia. Monitor for hypocalcemia and hypokalemia. Watch for increased intraocular pressure.	**A**

Hydromorphone (Dilaudid)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
over 2-3 mins Give undiluted or may dilute with 5 mL of Sterile Water or NS	4 mg/4hours Opiate Naïve patients, starting dose for acute moderate to severe pain should not be greater than: Healthy, young adults: 1mg Elderly, debilitated adults: 0.5 mg If pain not relieved, doses in 0.3 mg – 0.5 mg increments may be administered.	1 mg of hydromorphone=6.66 mg of morphine Usual onset of effect is 10-15 minutes, with a peak effect at 30 minutes to 1 hour. Evaluate pain response. Administer at least 1/2 hour before treatments, ambulation, etc. Monitor respiratory depression (breath count) and sedation level (POSS) with vital signs and med administration.	**A**

Ibutilide (Corvert)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
1 mg over 10 minutes	1 mg	1. Observe with continuous EKG for at least 4 hours after dose. 2. Stop infusion as soon as arrhythmia is terminated or if ventricular tachycardia or marked prolongation of QT interval occurs. 3. Can cause fatal arrhythmias especially sustained polymorphic ventricular tachycardia with QT prolongation.	**CC**

Indigo Carmine

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
40mg/20-60 seconds DO NOT dilute solution prior to injection.	40 mg (5ml) is usually sufficient for one dose.	Biologic half-life of drug is 4-5 minutes. A mild pressor effect may be encountered. Used to localize ureteral orifices during cystoscopy and ureteral catheterization.	**A**

Insulin , Regular

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
10 units / 2-3 secs		Monitor blood sugar, urine sugar, ketone levels, and CO2. Give undiluted. Administer supportive care to comatose patients in ketoacidosis: -Aspiration precautions -Respiratory care -Vital signs	**A**

Iron Sucrose

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
Over 2 to 5 minutes.	200mg	Give undiluted.	**A**

Ketamine (Ketajet, Ketalar)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
over 1 minute undiluted	1.5 mg/Kg IV 4.0 mg/Kg IM	1. Do not use if pt has prior allergic or emergent phenomenon, or is pregnant. 2. Resusitative equipment in room, with suctioning setup. 3. Use with premedication of benzodiazepine, and a pain medication. 4. NPO at least 4 hours to administration.	**MD / CC**
CAUTION!!!!!!	MD; Physician must be present in room when IV Ketamine is administered, unless patient is intubated with assisted mechanical ventilation.		

Ketorolac (Toradol)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
Over 15 seconds	30 mg (120mg max/day) (15 mg in renal impairment or older than age 65 with a max of 60mg/day)	For short-term use only (less than 5 days). GI effects include peptic ulcer, GI bleeding or perforation. Inhibits platelets leading to bleeding. Give undiluted. Contraindications: 1. Cerebrovascular bleeding or others with high risk of bleeding. 2. Advanced renal failure.	**A**

Labetalol (Normodyne, Trandate)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
Initial Dose of 20 mg over 2 minutes followed by 40-80 mg at 10 minute intervals until desired supine BP achieved. (IV bolus 10 mg/min)	300 mg total dose	1. Contraindications: asthma, overt cardiac failure, greater than 1st degree heart block, and severe bradycardia 2. Monitoring- Must be on telemetry. Check BP at 5-10 minute intervals. Maximum effect of each dose occurs in 5 minutes. 3. Give undiluted.	**CC/8**

Leucovorin Calcium

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
10mg /minute	- -	Used as an antidote following Methotrexate therapy. Dilute woth D5W or Sterile Water to a final conc. Of 10mg/mL Do Not Omit Doses.	**10**

Levothyroxine Sodium (Synthroid)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
Up to 100 mcg/minute	500mcg per day (for initial dose only)	1. Pt must be completely NPO 2. Reconstitute with 5ml NS only. Shake well and use immediately. Discard unused portion. 3. Do not add to other IV solutions. 4. IV dose is approximately twice as potent as oral.	**CC**
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	100mcg per day		**A**

Lidocaine (Xylocaine Intravenous)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
1 – 1.5mg/kg over 2 – 3 min. May repeat dose of 0.5 – 0.75mg/kg every5-10 mins up to a total cumulative dose of 3mg/kg	3 mg/kg total dose	Signs of toxicity include: hypotension, bradycardia, and seizures. Monitor blood pressure every 10-15 minutes until infusion rate is stabilized (more frequently in hypotension). Use cardiac monitor. Watch for signs of prolonged conduction; i.e., increased PR interval/ widening of QRS complex/ increased PVCs. Increases the severity of AV block. Watch for signs of increasing arrhythmias. Have resuscitative equipment available. Give with caution in elderly patients- particularly in renal/hepatic disease. Caution in hypovolemia. Bolus dose given undiluted.	**CC / 8**

Lorazepam (Ativan)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
2 mg/minute	2 mg iv every 4 hours prn. For the elderly, start with 0.5 or 1 mg iv every 4 hrs- titrate to effect with frequent monitoring. 4mg/dose (anxiolytic) 8mg/dose (status epilepticus) All units may give up to 6mg every 15 minutes when following the Alcohol Withdrawal orderset and waiting for transfer to Critical Care.	May cause CNS depression, somnolence and hypotension. May decrease ability to recall recent events. May have additive effects with other CNS depressants. Dilute with equal volume of compatible solution (e.g. NS, D5W or Sterile Water.	**A**
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	For Critical Care Units and ER only: 2 mg every 5 minutes as needed to a max of 20 mg/hour May give up to 6mg every 15 minutes when following the Alcohol Withdrawal orderset.	**Caution-** Use conservative doses in the elderly population and patients with renal and hepatic dysfunction. Monitor parameters: Respiratory, cardiovascular and mental status. For reversal: Flumazenil 0.2 mg iv, may repeat q 1-2 minutes to a max of 1 mg.	**CC, ER**

Meperidine (Demerol)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
10 mg/ minute	100 mg/ 4 hours	Contraindicated With MAOI. Avoid use in renal repairment Watch for respiratory depression and hypotension. Use caution in patients with head injury, lesion, or increasd intracranial pressure. Too rapid administration can result in severe respiratory depression, apnea, shock, cardiac arrest. Have naloxone on hand. Have patient supine when administering due to orthostatic hypotension. Seizure precautions. Ambulate with caution. Caution in blood loss, severe hypotension. Dilute to 10mg/mL final concentration.	**A**

Methylprednisolone Sod. Succinate (Solu Medrol)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
Over 3-15 minutes (≤1.8mg/kg or ≤125mg/ dose) Over 15-30 minutes (≥2 mg/kg or 250mg/ dose) Over ≥30 minutes (15mg/kg or ≥500mg/dose) Over 1 hour (>15mg/kg or ≥1 g)	Up to 30mg/Kg for shock over ≥30 min. Usual dose 10 - 250mg up to 6 times daily.	Reconstitute with bacteriostatic water as directed. Infection precautions. Monitor bleeding; blood pressure for hypotension. Observe patient weight. Hyperglycemia can be caused at higher doses. Monitor decreases in serum potassium and calcium. Watch for behavioral changes; possible vertigo. Watch for increased intraocular pressure. Antacid therapy may be needed.	**A**

Metoclopramide (Reglan)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
10 mg/ minute Give undiluted.	10 mg	May cause extrapyramidal symptoms, drowsiness or confusion.	**A**

Metoprolol Tartrate (Lopressor)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
5mg / minute	15 mg total dose over 10-15 mins	1. Monitor blood pressure, heart rate, ECG, respirations. 2. Monitor symptoms of cardiac failure (shortness of breath, orthopnea, cough). 3. Give undiluted.	**CC / 8**

Midazolam (Versed)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
1-2.5 mg over at least 2 minutes. Allow 2 or more minutes to fully evaluate the sedative effect before additional doses. **CAUTION** ! ! ! ! MD; Physician must be present in room when intravenous midazolam is administered for procedural sedation unless the patient is on mechanical ventilation.	2.5.mg/ dose Total dose not to exceed 10 mg (If given in combination with an opioid, reduce dose of both agents)	1. Hypotension, apnea, bradycardia. 2. Watch for respiratory depression. 3. Monitor blood pressure. 4. Use caution in patients >60 years old. Start with 0.5 mg and increase gradually up to 1.5 mg 5. Sedative dose should be individually titrated, taking into account patient's age, clinical status and concomitant use of other CNS depressants. 6. Dilute 1mg/mL vials with NS or D5W. Concentration not to exceed 0.5mg/mL.	**CC**

Morphine Sulfate

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
2 – 6 mg/min		Contraindicated in bronchial asthma, repiratory depression, hypersensivity. Bed rest for at least 1 hour and ambulate with caution. Monitor for respiratory depression and blood pressure. Seizure precaution. Hallucinations / disorientation reactions. May cause urinary retention; measure urine output. Maintain hydration; treat constipation. Have Naloxone on hand. Have order countersigned by PCC/NCC/Chg Nurse/Supervisor. Report using 24 hour Patient Report Form. Give undiluted or may dilute with 5 mL of Sterile Water or NS.	**A**

Naloxone (Narcan)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
0.4 mg/ 30 seconds Give undiluted.	2 mg/ dose, repeat at 2-3 min. intervals until response **10 mg total ** If no response at this dose, agent may not be a narcotic.	Ventricular tachycardia/fibrillation may occur if pre-existing ventricular irritability found and patient is also on isoproterenol or epinephrine, monitor respiratory status. Watch for vomiting Watch heart rate and blood pressure. Watch for narcotic withdrawal reactions.	**A**

Ondansetron (Zofran)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
4mg over 2-5 minutes Give undiluted.	16mg/dose	Adverse reactions reported include: headache, dizziness, and musculoskeletal pain although the rates of adverse reactions were not different than those observed with placebo.	**A**

Pancuronium (Pavulon)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
0.06- 0.1 mg/kg over 1 minute. Maintenance Doses: 0.01/kg over 1 minute every 25-60 minutes. Give undiluted.	0.2 mg/kg	1. Patient must be intubated. 2. Do not use in patient with hepatic or renal impairment (CrCl<30). 3. DO NOT USE if tachycardia present or undesirable. 4. Small doses can have profound effect in myasthenic patients. Adverse rxns: Skeletal muscle weakness, trancient rash.	**CC**

Pantoprazole (Protonix)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
Push over two minutes for reconstituted solution if 4mg/ml Flush with sterile saline before and after administration	80mg		**A**

Phenobarbital Sodium

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
Not > 60mg/ minute Give undiluted.	Max total dose of 30mg/kg Note: All units may push 130mg over 2 minutes x 2 doses when following the alcohol withdrawal protocol.	For status epilepticus, give loading dose of 10-20mg/kg. May repeat dose in 20 min if needed. Other seizures use 2-6mg/kg/day. Contraindicated in patients with hypersensitivity to barbiturates and in patients with concurrent respiratory depression. Adverse reactions include: excessive sedation and respiratory depression.	**CC**

Phenytoin Sodium (Dilantin)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
50mg / minute Administer at 20 mg/min in elderly and patients with pre-existing cardiovascular conditions. Too rapid a push can lead to hypotension, respiratory arrest, asystole, ventricular fibrillation.	20mg/kg	Monitor for hypoglycemia. Use cautiously in patients with liver impairment. Monitor for signs of toxicity. Remain with the patient for 10 minutes. Watch blood pressure every 5 minutes for at least 30 minutes. Ambulate with caution after at least one hour. Give undiluted (Incompatible with D5W or Sterile Water.	**CC**

Physostigmine (Antilirium)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
Give 1mg or less over 1 to 5 minutes	1mg/dose	Reported adverse events include bradycardia, hypersalivation, respiratory difficulties, seizures. Monitor heart rate and respiratory status. Give undiluted.	**A**

Procainamide (Pronestyl)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
Give each 20mg or less over 1 minute. Maximum rate: 50mg/minute using extreme caution	100mg/dose	Reported adverse events include hypotension. Monitor cardiac function and blood pressure. Dilute each 100mg with 5 to 10 mL of D5W.	**A** **(when using ACLS protocol)**

Prochlorperazine (Compazine)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
5 mg/minute Give undiluted.	10 mg/dose 40mg/day	Patients should be observed for hypotension that can occur immediately following iv injection. Delayed side effects usually from longer term therapy include muscle rigidity, motor restlessness, pseudoparkinsonism, and rarely tardive dyskinesia.	**A**

Propofol (Diprivan)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
Over 3-5 minutes A R.N. is **not allowed** to give propofol IV push in any hospital setting.	10 ml	Observe for respiratory depression including hypoxia and apnea. Hypotension is a common side effect. **Once opened, the product must be used immediately due to the high risk of bacterial contamination of the emulsion. All unused propofol must be discarded within 6 hours.**	Only a trained anesthesiologist or physician competent in acute airway management may give propofol IV push. The administering physician must remain present at the bedside through an appropriate follow-up period.

Propranolol (Inderal)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
1 mg /minute Give undiluted.	1 - 3 mg/ dose; MR every 2-5 mins up to total of 5mg	Monitor signs / symptoms of cardiac failure: increased CVP, every 15 minutes X 1 , then hourly; shortness of breath, orthopnea, cough, hypoglycemia. For rales , auscultate lungs every 30 minutes X 2 hours. Monitor for PR prolongation, be prepared to treat for bradycardia per AV block.	**CC**

Protamine Sulfate

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
5 mg/ minute Dilute to a concentration of at least 10mg/mL	Up to 50 mg/ 10 minutes. Do not >100 mg in a short period without coag. studies.	Watch PTT or clotting time. Watch for signs of bleeding around vascular access sites. Be prepared to treat hypotension, bradycardia, dyspnea. Watch blood pressure q2 minutes during and after injection, Keep patient supine . Monitor heart rate Check for **fish allergies**; patient may be hypersensitive to protamine. Watch for Heparin rebound 8-9 hours after Protamine neutralization.	**CC**

Rocuronium (Zemuron)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
Intubation dose of 0.6 to 1.2 mg/kg by rapid push undiluted. A physician with **intubation priv.** must be present at the bedside.	1.2 mg/kg	1. Small doses can have profound effect in myasthenic patients. 2. Use with caution in patients with severe liver dysfunction due to reduced elimination.	**CC**

Sodium Bicarbonate

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
1 mEq / kg over 1 - 3 minutes as ordered. Give undiluted	- -	Monitor hypernatremia; with too rapid administration, tetany and hypokalemia may occur. Administration in ketoacidosis increases insulin sensitivity, accelerates the drop in serum potassium and promotes cerebral edema. Use cautiously in pts with CHF.	**A**

Succinylcholine (Quelicin)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
Intubation dose of 0.3 to 1.1 mg/kg by rapid push undiluted. A physician with **intubation credentials** must be present at the bedside.	1.5 mg/kg	1. Use with extreme caution in patients with severe burns, electrolyte imbalances, hyperkalemia, and patients receiving quinidine or digoxin as serious cardiac arrhythmias may result. 2. On rare occasions, may precipitate malignant hyperthermia. Early signs include muscle rigidity, tachycardia, tachypnea, and rising temperature.	**CC**

Tenecteplase (TNKase)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
Give each 50mg or less as a bolus over 5 seconds		Dilute to a concentration of 5mg/mL using the provided diluents (sterile water for injection) in the kit.	**CC**

Vecuronium (Norcuron)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
100 mcg/kg over 1-2 minutes for hypothermia protocol			**CC**

Verapamil (Isoptin, Calan)

CC = (Critical Care) 8 = (8th Floor) 10 = (10th Floor) A = (All Units/Certified RN's)

Rate of Administration	Maximum Dose	Miscellaneous Information	Restriction
2.5 - 5 mg/ 2 minutes	20-30 mg	Disopyramide should not be given within 48 hours before or 24 hours after verapamil. In older patients, administer over 3 minutes to minimize untoward drug effects. In patients with moderate to severe cardiac dysfunction (pulmonary wedge pressure> 2mm Hg, ejection fraction < 20%), acute worsening of heart failure may be seen. Give undiluted.	**CC** ***Scroll down for 8 th floor***
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5 mg / 5 minutes	15 mg		**8**

Approved by P&T Committee: January 30, 2017.