

King County



Paramedic Pocket Guide 2012

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ACKNOWLEDGEMENTS

Thanks to Betty Hurtado for design and production. Thanks also to KCM1 for their contribution.

MEDICATIONS

ACETAMINOPHEN

Peds Dosage	10-15 mg/kg Follow directions on container
Indications	Reduction of fever in children particularly when associated with febrile seizures
Contraindications	Allergy
Side effects	Rarely, hypoglycemia
Other	

MEDICATIONS

ADENOSINE (Adenocard)	
Adult Dosage	6 mg rapid IV push. May repeat dose of 12 mg, 12 mg
Peds Dosage	0.1 mg/kg IV push. Repeat dose of 0.2 mg/kg
Indications	PSVT
Contraindications	Atrial fibrillation, atrial flutter, VT, WPW
Side effects	Hypotension, nausea, vomiting, bradycardia, asystole, bronchoconstriction in asthma patients.
Other	Adenosine should not be given to treat complex tachycardia of uncertain type. Reduce dosage by half if taking Persantine or Tegretol. Caution with calcium channel blockers, beta blockers. Caution in patients with bronchospasm

MEDICATIONS

ALBUTEROL

Adult Dosage	One vial by nebulizer, may be repeated (2.5 mg in 3 ml)
Peds Dosage	Half-vial diluted with saline, repeat as needed
Indications	Bronchospasm, hyperkalemia
Contraindications	Allergy
Side effects	Tachycardia, elevated blood pressure, CNS stimulation
Other	Use cautiously in patients with coronary artery disease

MEDICATIONS

AMINOPHYLLINE	
Adult Dosage	6 mg/kg over 20-30 min, not to exceed 25 mg/min. Infusion: 250 mg in 250 ml D ₅ W, at 0.5 to 1 mg/kg/hr
Peds Dosage	6 mg/kg loading. Infusion: 125 mg/ 250 ml D ₅ W
Indications	Bronchospasm (asthma, COPD), CHF
Contraindications	Allergy, hypotension, MI, cardiac dysrhythmia
Side effects	Arrhythmias, hypotension, seizures, nausea, vomiting
Other	

MEDICATIONS

ASPIRIN

Adult Dosage	325 mg - 1 adult or 4 baby aspirin (80 mg) tablets
Peds Dosage	Not indicated
Indications	Cardiac chest pain. Indicated even when patient takes daily aspirin.
Contraindications	Allergy, active bleeding
Side effects	GI distress, bleeding, dizziness
Other	Patient use of coumadin, etc. is not a contraindication

MEDICATIONS

ATROPINE

Adult Dosage	Bradycardia: 0.5 to 1 mg IV (up to 3 mg IV). Asystole: 1 mg up to 3 mg IV. Bronchospasm: 0.4 to 1 mg via ETT or neb. OP Poisoning: 2 mg up to 50 mg as needed
Peds Dosage	0.01 to 0.03 mg/kg IV up to 0.04 mg/kg IV. Bronchospasm: 0.2 mg in neb, one treatment only.
Indications	Bradycardia, OP, carbamate poisoning, bronchospasm, prior to intubation in peds patient
Contraindications	Allergy, denervated heart
Side effects	Tachycardia, headache, dry mouth
Other	Atropine may be used as an alternative to ipratropium (Atrovent) for bronchospasm

MEDICATIONS

ATROPINE, HIGH-DOSE	
Adult Dosage	2 mg IV every 5 to 15 min, Large doses may be required in a severely poisoned patient
Peds Dosage	2 mg IV every 5 to 15 min, Large doses may be required in a severely poisoned patient
Indications	OP/carbamate/nerve agent poisoning
Contraindications	None in the context of the above
Side effects	Palpitations, headache, dry mouth, dilated pupils
Other	May require continued administration of atropine

MEDICATIONS

CYANIDE KIT (Amyl Nitrite And Sodium Thiosulfate)	
Adult Dosage	<p><u>Adult:</u> <i>Amyl nitrite</i>: 1 amp broken in 4X4, hold over patient's nose, 15 seconds on, 15 seconds off, continue while starting IV.</p> <p><i>Sodium thiosulfate</i>: 12.5 g IV (50 ml -- 1 vial).</p>
Peds Dosage	<p><u>Pediatric:</u> <i>Amyl nitrite</i>: 1 amp broken in 4X4, hold over patient's nose, 15 seconds on, 15 seconds off, continue while starting IV.</p> <p><i>Sodium thiosulfate</i>: 1.65 ml/kg up to 50 ml, IV</p>
Indications	<p>Cyanide poisoning</p> <p>Smoke inhalation with presumed cyanide poisoning (sodium thiosulfate only)</p>
Contraindications	<p>DO NOT use amyl nitrite for suspected CN poisoning from smoke inhalation</p>
Side effects	<p>Hypotension, nausea, vomiting</p>

MEDICATIONS

CALCIUM CHLORIDE

Adult Dosage	500 mg to 1 g (2 to 4 mg/kg) IV for suspected hyperkalemia, 500 mg for magnesium overdose
Peds Dosage	20 mg/kg IV
Indications	Suspected hyperkalemia, Ca channel blocker OD, hydrofluoric acid exposure, magnesium overdose
Contraindications	VF, dig toxicity
Side effects	Arrhythmias, hypotension, necrosis at injection site
Other	Use separate line for NaHCO ₃ . May need repeated doses for Ca channel blocker OD

MEDICATIONS

D50	
Adult Dosage	25 g IV, may repeat once
Peds Dosage	D25 should be used in children at 2-4 ml/kg. D10 should be used in neonates at 5-10 ml/kg.
Indications	Hypoglycemia
Contraindications	Intracranial/intraspinal hemorrhage
Side effects	Phlebitis/thrombosis at site
Other	<p><u>D25</u> (children > 1 yr) Dilute D50 1:1 w/LR or D5W</p> <p><u>D10</u> (children < 1 yr) Add 12.5 gm (1/2 amp) D50 to bag of D5W</p>

MEDICATIONS

DIASTAT (Rectal Valium)

Adult Dosage	5 - 10 mg
Peds Dosage	< 2 years: 5 mg > 2 years: 5 - 10 mg
Indications	Seizures when diazepam would normally be used but IV access is not available
Contraindications	Allergy
Side effects	Hypoventilation, drowsiness, confusion, diarrhea
Other	Place patient on side. Insert lubricated applicator tip into rectum, 3 seconds while pushing drug, then 3 seconds before removing applicator, then 3 seconds to hold buttocks together.

MEDICATIONS

DIAZEPAM (Valium)	
Adult Dosage	2.5 to 10 mg IV, repeated as needed
Peds Dosage	0.25 mg/kg IV
Indications	Seizures, sedation, alcohol withdrawal
Contraindications	Allergy
Side effects	Hypotension, respiratory depression
Other	<p>May be given rectally but Diastat is preferred.</p> <p>Rectal</p> <ul style="list-style-type: none"> ■ Pediatric dose per rectum: 0.25 - 0.5 mg/kg maximum of 15 mg. ■ Adult dose per rectum: 5 -10 mg maximum of 30 mg. <p>IM administration as a last resort</p>

MEDICATIONS

DILTIAZEM **(Cardizem)**

Adult Dosage	20 mg (0.25 mg/kg) over 2 minutes IV Repeat at 25 mg (0.35 mg/kg) in 15 minutes as needed
Peds Dosage	Not indicated
Indications	Atrial flutter, atrial fibrillation, SVT
Contraindications	AV block, CHF, hypotension, VT, history of WPW
Side effects	Hypotension, bradycardia, AV block
Other	

MEDICATIONS

DIPHENHYDRAMINE (Benadryl)	
Adult Dosage	25-50 mg IV (IM also approved)
Peds Dosage	1 mg/kg IV
Indications	Anaphylaxis, allergic reaction, dystonic reaction
Contraindications	Allergy. Excreted in breast milk; therefore use cautiously if woman is breastfeeding.
Side effects	Sedation, headache, palpitations
Other	Medications causing dystonic reactions include: Compazine, Haldol, Mellaril, Thorazine, etc. Pregnancy: Class B drug; may be used for serious allergic reactions

MEDICATIONS

EPINEPHRINE 1:1000

Adult Dosage	0.3 to 0.5 mg SQ or IM
Peds Dosage	0.01 mg/kg SQ or IM. Neb: 0.01 mg/kg diluted Croup 3 - 5 mg, nebulized over 15 minutes
Indications	Anaphylaxis, bronchospasm
Contraindications	None if anaphylaxis, caution if CAD
Side effects	Tachycardia, hypertension, anxiety, headache
Other	Nebulized epinephrine may be substituted for racemic epinephrine

MEDICATIONS

EPINEPHRINE 1:10,000	
Adult Dosage	Cardiac arrest: 0.5 to 1mg IV every 3 to 5 min (can be given ETT at double the dose if no IV access) Anaphylaxis: 0.3 - 0.5 mg IV
Peds Dosage	0.01 mg/kg. IV Drip: 1 mg in D ₅ W, titrate to effect
Indications	VF, VT, asystole, PEA, anaphylaxis
Contraindications	None
Side effects	Tachyarrhythmias, hypertension
Other	

MEDICATIONS

ETOMIDATE

Adult Dosage	0.1 to 0.3 mg/kg IV (half if elderly or hypotensive). 0.1 mg/kg IV for conscious/deep sedation, administer slowly. One dose only.
Peds Dosage	Not indicated in children under ten (10) years except after approval by medical control.
Indications	Induction, conscious sedation
Contraindications	Hypersensitivity, use cautiously in pregnancy
Side effects	Myoclonic jerks, pain at site, nausea, vomiting, laryngospasm, transient apnea
Other	

MEDICATIONS

<p>FUROSEMIDE (Lasix)</p>	
<p>Adult Dosage</p>	<p>40 - 80 mg IV if not currently taking or double daily dose up to 160 mg IV</p>
<p>Peds Dosage</p>	<p>1 mg/kg</p>
<p>Indications</p>	<p>CHF/pulmonary edema, hypertensive crisis, hypertensive head injury</p>
<p>Contraindications</p>	<p>Dehydration, allergy, eclampsia</p>
<p>Side effects</p>	<p>Hypotension</p>
<p>Other</p>	

MEDICATIONS

GLUCAGON

Adult Dosage	1 mg SQ or IM. Second dose: 1 mg if no response. Beta-blocker OD: may require 2 to 10 mg.
Peds Dosage	More than 20 kg: 1 mg SQ or IM Less than or equal to 20 kg: 0.5 mg SQ or IM
Indications	Hypoglycemia with no IV access. Beta-blocker overdose (consider in calcium channel blocker overdose). Esophageal obstruction
Contraindications	Allergy, pheochromocytoma
Side effects	Nausea, vomiting, diarrhea, hypertension, tachycardia
Other	

MEDICATIONS

IPRATROPIUM (Atrovent)	
Adult Dosage	0.5 mg (one unit vial) mixed with one dose albuterol, repeated once
Peds Dosage	Same
Indications	Bronchospasm
Contraindications	Allergy
Side effects	Tachycardia, CNS stimulation
Other	

MEDICATIONS

ISOPROTERENOL (Isuprel)

Adult Dosage	1 mg in 250 ml D ₅ W, titrate to effect
Peds Dosage	Not indicated
Indications	Bradycardia refractory to atropine/pacing; torsade
Contraindications	Allergy, caution in patients with myocardial infarction
Side effects	Tachyarrhythmias, ventricular irritability
Other	

MEDICATIONS

LIDOCAINE

Adult Dosage	1 to 1.5 mg/kg IV with repeat doses of 0.5 to 1 mg/kg up to 3 mg/kg. Drip: 2 - 4 mg/min, reduced if elderly or liver disease
Peds Dosage	1 mg/kg
Indications	VF, VT, ventricular ectopy, local anesthetic prior to central line access, etc
Contraindications	AV blocks, brady/escape rhythms
Side effects	Anxiety, nausea, altered LOC, widening of QRS, seizures
Other	Premixed bag for lidocaine drip—1 gram/250 ml = 4 mg/ml <ul style="list-style-type: none"> ■ 60 drops = 1 ml (<u>mini drip</u>) ■ 2 mg/min = 30 drops/min = 1 drop every 2 seconds ■ 4 mg/min = 60 drops/min = 1 drop every second

MEDICATIONS

MAGNESIUM SULFATE

Adult Dosage	VF/VT/torsades: 2 g in 10 ml D5W up to 6 g IV Pre-eclampsia: 4 g in 100 ml D5W over 20 min. IV Eclampsia: 4 g over 5 to 10 min. IV COPD/asthma: 2 g in 100 ml D5W, over 20 min IV
Peds Dosage	Torsades, VF/VT: 25 to 50 mg/kg IV up to 2 gm
Indications	VF/VT refractory to lidocaine, procainamide; torsade; eclampsia/pre-eclampsia; COPD/asthma, V-Tach with tricyclic antidepressant OD, VF or VT from digitalis OD
Contraindications	AV block, hypocalcemia, renal failure
Side effects	Altered LOC, hypotension, arrhythmias, bradycardia/asystole, resp depression, potentiates paralytics

MEDICATIONS

METOPROLOL	
Adult Dosage	5 mg IV every 5 min up to 15 mg IV (give over 1 - 2 min)
Peds Dosage	Not indicated
Indications	Acute myocardial infarction, acute coronary syndrome, hypertensive crisis, refractory VT or VF, hyperthyroidism
Contraindications	Persons with chronic lung disease or asthma. Hypotension and bradycardia (BP<100 systolic, HR<60). Known allergy. Cocaine OD - can elevate BP.
Side effects	Bradycardia, hypotension, heart block, CHF, bronchospasm

MEDICATIONS

MIDAZOLAM (Versed)

Adult Dosage	1 - 5mg IV, IO, or IM, titrate to effect (repeat PRN)
Peds Dosage	0.05 - 0.2mg/kg IV, IO, IM, titrate to effect 0.1 – 0.4 mg/kg intranasal, titrate to effect
Indications	Conscious sedation, RSI, seizures
Contraindications	Hypersensitivity, narrow-angle glaucoma
Side effects	Hypotension, resp depression, bradycardia, nausea
Other	May dilute for more accurate dosing

MEDICATIONS

MORPHINE

Adult Dosage	2 mg IV increments to desired effect
Peds Dosage	0.05 mg/kg IV increments to desired effect
Indications	Pain, pulmonary edema, adjunct to sedation
Contraindications	Allergy, closed head injury
Side effects	Respiratory depression, hypotension, nausea, vomiting, dizziness, altered LOC
Other	May pretreat with phenergan to reduce nausea and vomiting. Phenergan potentiates morphine's effect.

MEDICATIONS

NALOXONE (Narcan)

Adult Dosage	0.4 mg increments up to 10 mg IV, IM, or ETT. Nasal narcan: 0.8 mg/ nostril
Peds Dosage	0.01 mg/kg
Indications	Opiate OD
Contraindications	Allergy
Side effects	Withdrawal symptoms, nausea, vomiting, diarrhea Rarely Narcan may precipitate severe hypertension or pulmonary edema.
Other	

MEDICATIONS

NITROGLYCERIN	
Adult Dosage	0.4 mg SL or spray every 3 - 5 min for acute coronary syndrome. May be given more frequently in CHF.
Peds Dosage	Not applicable
Indications	Acute coronary syndrome CHF/pulmonary edema Esophageal spasm
Contraindications	Hypotension, Hypertensive crisis related to CNS event. Recent use of Viagra or related meds: Viagra - 24 hrs Levitra - 24 hrs Cialis - 48 hrs
Side effects	Headache, dizziness, hypotension
Other	Caution in pts with right ventricular infarct (consider fluid challenge)

MEDICATIONS

NOREPINEPHRINE (Levophed)

Adult Dosage	4 to 8 mg in 250 ml D ₅ W IV. Titrate to effect
Peds Dosage	Not indicated
Indications	Cardiogenic shock, profound hypotension secondary to drug OD, anaphylaxis, spinal shock
Contraindications	Hypotension due to hypovolemia (use fluid). Caution in pts taking MAOIs, tricyclics
Side effects	Arrhythmias, hypertension
Other	

MEDICATIONS

ONDANSETRON (Zofran)	
Adult Dosage	4 mg IV or IM (IV given over 2 minutes)
Peds Dosage	6 months to 12 years: 0.1 mg/kg IV or IM to max of 4 mg
Indications	Nausea/vomiting
Contraindications	Hypersensitivity/allergy
Side effects	Transient EKG changes (rare)
Other	

MEDICATIONS

OXYTOCIN (Pitocin)

Adult Dosage	10 units IV or IM, followed by 40 units in 1000 ml Ringers, titrated to effect
Peds Dosage	Not applicable
Indications	Post-partum hemorrhage
Contraindications	Placenta not delivered, twin not delivered
Side effects	Arrhythmias, increased blood loss, hypotension. Overdosage can cause uterine rupture
Other	

MEDICATIONS

PHENOBARBITAL	
Adult Dosage	130 to 260 mg IV
Peds Dosage	10 to 20 mg/kg IV
Indications	Seizures
Contraindications	Allergy, pregnancy
Side effects	Decreased LOC, respiratory depression, hypotension
Other	

MEDICATIONS

PROCAINAMIDE (Pronestyl)

Adult Dosage	Cardiac arrest: 100 mg increments every 2 minutes up to 500 mg. Perfusing rhythm: 20 mg/min IV up to 17 mg/kg followed by drip of 1 - 4 mg/min.
Peds Dosage	Cardiac arrest: Not routinely indicated. Perfusing rhythm: 15 mg/kg infused over 30-60 min not to exceed 20 mg/min. 20 kg Child: 5-10 mg/min IV 40 kg Child: 10-20 mg/min IV 60 kg Child: 20 mg/min IV
Indications	VT, VF, or wide-complex tachycardia of unknown origin, WPW
Contraindications	High degree AV block, bradycardias, torsade, prolonged QT
Side effects	Anxiety, nausea, seizures, widening of QRS, hypotension, CNS toxicity
Other	Stop if hypotension occurs or if QRS widens by 50%.

MEDICATIONS

PROMETHAZINE (Phenergan)	
Adult Dosage	12.5 to 25 mg slow IV or IM (recommend thigh or buttocks due to chemical irritation)
Peds Dosage	0.25 mg/kg IV or IM Use caution due to respiratory depression.
Indications	Nausea/vomiting
Contraindications	Decreased LOC, uncomplicated vomiting in children
Side effects	Sedation, extrapyramidal reaction (higher doses), tachycardia, bradycardia, hyperexcitability
Other	When administering IV, dilute in LR to equal 10 ml

MEDICATIONS

ROCURONIUM (Zemuron)	
Adult Dosage	Up to 0.5 mg/kg IV. Repeat dosing as required.
Peds Dosage	Up to 0.5 mg/kg IV. Repeat dosing as required
Indications	Maintain paralysis following intubation
Contraindications	Allergy
Side effects	Prolonged paralysis
Other	

MEDICATIONS

SODIUM BICARBONATE	
Adult Dosage	Cardiac arrest: 1 mEq/kg IV, repeat 0.5 mEq/kg every 10 min. TCA overdose: treat unstable, wide-complex rhythms by titrating to normal rhythm
Peds Dosage	1 to 2 mEq/kg
Indications	Acidosis, hyperkalemia, TCA OD
Contraindications	Alkalosis
Side effects	
Other	Incompatible with CaCl ₂ , atropine, epinephrine

MEDICATIONS

SUCCINYLCHOLINE (Anectine)

Adult Dosage	1 to 1.5 mg/kg IV
Peds Dosage	1 to 2 mg/kg IV. <2 yrs: 2 mg/kg
Indications	Facilitate endotracheal intubation
Contraindications	Malignant hyperthermia, caution with hyperkalemia, major burns, CVA, glaucoma, eye injury
Side effects	Phlebitis/thrombosis at site
Other	

MEDICATIONS

TETRACAINE

Adult Dosage	1 to 2 drops
Peds Dosage	1 to 2 drops
Indications	Eye pain (non-penetrating injury)
Contraindications	Penetrating eye injury (leaking fluid)
Side effects	
Other	

CLINICAL PEARLS

12-Lead ECGs

Location of Infarct

Lateral: I, aVL, V5, V6

Inferior: II, III, aVF

Septal: V1, V2

Anterior: V3, V4

- ST segment elevation (1 mm or more) suggests INFARCT
- ST segment depression (1 mm or more) suggests ISCHEMIA
- Flipped T waves suggest ISCHEMIA
- Pathologic Q waves (1 mm wide or more) suggest older infarct

RIGHT VENTRICULAR INFARCTION

- Associated with inferior MI
- ST elevation in V4R, V5R
- Hypotension, JVD
- Caution with use of nitroglycerin. Consider fluid for hypotension

POSTERIOR INFARCTION

- Reciprocal changes in V1, V2
- Tall R waves

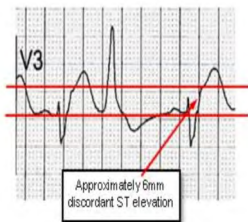
CLINICAL PEARLS

Diagnosing MI in presence of LBBB

Increased suspicion if:

- ST elevation > 1 mm concordant with QRS
- ST depression > 1 mm in V1, V2, V3
- ST elevation > 5 mm discordant with QRS

When in doubt, treat as acute ischemia if clinically consistent picture



Distinguishing VT from SVT

Features favoring VT:

- AV dissociation (more QRS than P waves)
- Older age
- History of heart disease/MI

When in doubt, treat for VT!

CLINICAL PEARLS

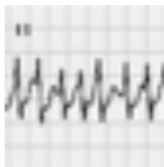
WPW (Wolff Parkinson White)

- Short PR
- Wide QRS
- Delta wave
- Prone to SVT



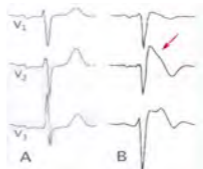
A-fib with history of WPW

- Can be extremely fast
- Prone to VF
- Do not administer diltiazem (or adenosine)
- Procaine or cardioversion is treatment of choice



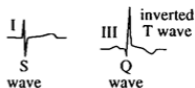
Brugada's Syndrome

- May mimic STEMI
- Inherited disorder most common among those from SE Asia
- Characterized by episodes of polymorphic VT, syncope, sudden death.
- EKG at rest may show ST segment elevation in V1 to V3 with RBBB pattern.



EKG in PE

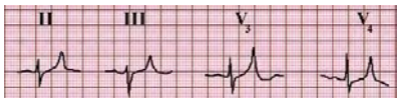
S1Q3T3 (high specificity but low sensitivity for pulmonary embolus – only 10% of PEs show)



CLINICAL PEARLS

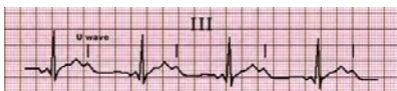
Hyperkalemia

- Tall, peaked T waves
- Wide QRS (progressing to sine wave)
- At risk of asystole, VF
- Tx: calcium, bicarb, albuterol



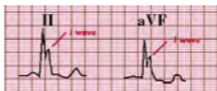
Hypokalemia

- Flat T wave
- Large U wave
- At risk for torsades, VF/VT



Hypothermia

- Osborne (J) waves



CLINICAL PEARLS

Intraosseous

Pink: pediatric (3 to 30 kg)

Blue: adult (40 kg or greater)

Yellow: obese, edema

Conscious patient:

After starting an IO, administer 2% lidocaine

0.5 mg/kg peds (i.e. 20 kg child = 10mg (0.5cc)

20 to 40 mg (1 to 2 cc) adults

Follow lidocaine with 10 cc ringer's flush

APGAR

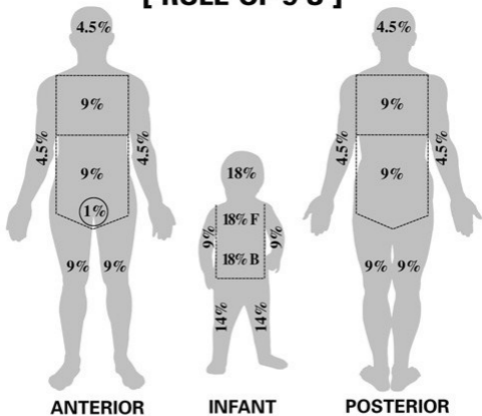
1 and 5 minutes

Signs	0	1	2
Heart Rate	Absent	Below 100	Above 100
Respiratory Effort	Absent	Slow, irregular	Good, crying
Muscle Tone	Limp	Some flexion of extremities	Active motion
Reflex irritability Response to catheter in nostril (tested after oropharynx is clear)	No response	Grimace	Cough, sneeze
Color	Blue, pale	Body pink, extremities blue	Completely pink

CLINICAL PEARLS

Burns

[RULE OF 9'S]



PALMAR METHOD
(Patient's palm)

1%

Parkland Formula

$\% \text{ burned} \times \text{pt wt (kg)} \times 4 = \text{volume of fluid/24 hrs.}$
Give half in first 8 hrs.

CLINICAL PEARLS

Diabetic Meds

Pre-dispose to long-lasting hypoglycemia

Sulfonoureas: Diabinese, Tolinase, Orinase,
Amaryl, Glucotrol/Glipizide, Micronase, Diabeta,
Glyburide

Meglitinides: Prandin

Thiazolidinediones: Rezulin, Avandia, Actos

Others (long-lasting hypoglycemia uncommon)

Alpha-glucosidase inhibitors: Precose, Glyset

Biguanides: Metformin/Glucophage

*when in doubt about disposition, call!

Normal Serum Lab Values

Potassium (K ⁺)	3.6 - 5.2
Sodium (Na ⁺)	135 - 145
HCO ₃ ⁻ (bicarb)	21 - 28
Creatinine (Cr)	0.6 – 1.4
Hemoglobin	12 - 16
Hematocrit	36 - 48
Platelets (Plt)	150k-400k
White count (WBC)	4 - 11
Lactate	< 2
ABG (pH/paO ₂ /pCO ₂)	7.4 / 90 / 40
INR	< 1.2 (2 – 3 with coumadin)

CLINICAL PEARLS

STUDY GUIDELINES

ROC ALPS

<u>Include</u>	<u>Exclude</u>
<ul style="list-style-type: none"> • Adult, non-trauma cardiac arrest • VF recurs after 1 or more shocks 	<ul style="list-style-type: none"> • Peds, pregnant, prisoners • DNAR, Opt-out bracelet • Already received lido • Broken syringe

Actions

- Verbalize for recorder
- Is VF present after shock? (may peek)
- Epi, flush
- 1st dose ALPS drug:
-- 2 syringes (1 if <100 lbs)
- Shock/intubate/more epi as needed
- 2nd dose ALPS drug if VF
- Rescue drug: anything but lido
- Stickers on MIRF and ER sheet
- Give ER sheet to ER and advise
- Call ALPS: 1-800-607-2926

Lactate

<u>Include</u>	<u>Exclude</u>
<ul style="list-style-type: none"> • Adult trauma to HMC • IV access 	<ul style="list-style-type: none"> • <15 or <50 kg if age unknown • known prisoner

Actions

- Insert strip into lactate meter
- Wick drop of blood from IV (no fingersticks)
- DON'T report lactate to ED staff
- DO report that pt. is enrolled in study
- Call lactate study pager 1-800-607-1879
-- report lactate number

CLINICAL PEARLS

STUDY GUIDELINES

Hypothermia

<u>Include</u>	<u>Exclude</u>
<ul style="list-style-type: none">• Non-traumatic adult cardiac arrest → pulses• Unconscious, temp 34C or warmer	<ul style="list-style-type: none">• Peds, pregnant, prisoners• Head bleed

Actions

- Insert esophageal probe, record temp
- Call HMC for randomization 1-800-462-9826
 - Shockable or non-shockable?
 - Transport hospital

<u>Hypothermia</u>	<u>Control</u>
<ul style="list-style-type: none">• Give 1 L cold NS• Sedate valium 1-5 mg• Give roc .5mg/kg• Record temp• If 33C or warmer, give 2nd L cold saline• Record temp• Record temp at hosp	<ul style="list-style-type: none">• Use minimal covers, no active cooling• Record temp at hosp arrival

Both study groups:

Call study nurse: 1-888-210-6779

CLINICAL PEARLS

Bloodborne Exposure

These steps are time-critical

1. Wash exposed site thoroughly with soap and water. Flush mucous membranes with water only.
2. **Collect 1 red top and 1 lavender top blood tube from the source patient AND retain this blood for exposure testing.**
3. **Contact MSO-1 Immediately**
4. Collect source patient name, address, phone number, destination hospital and next of kin
5. PEP if appropriate after MD contact

Airborne Exposure

For meningitis and TB, collect as much pt information as possible and contact MSO 1 or MSO 10 ASAP.

Meningitis PEP (after MD contact): Cipro.
Meningitis has a treatment window of 72 hours after exposure.

CLINICAL PEARLS

MCI Run Card

Patients	Fire Units	Medics	MSO	Transport
1-10	5 Total Units	2	1	5 AMB
11-19	8 Total Units & MCI Unit	3	2	10 AMB
20-29	12 Total Units & MCI Unit	4	3	15 AMB
30-39	16 Total Units Zone 5 Task Force MCI Unit	4	3	20 AMB 1 Metro Bus
40-49	16 Total Units Zone 5 Task Force Engine Strike Team MCI Unit	4 King 1 ALS Strike Team	3	25 AMB 1 Metro bus
50 +	16 Total Units Zone 5 Task Force Zone 1 Engine Strike Team MCI Unit	4 King 1 ALS Strike Team	4	25 AMB 1 Metro bus
100 +	16 Total Units Zone 5 Task Force Zone 1 & 6 Engine Strike Team MCI Unit Port MCI 777	4 King 2 ALS Strike Teams	4	25 AMB 2 Metro Busses

MASS CASUALTY INCIDENT

First arriving medic unit, initial tasks

Activate the DMCC:

- HMC: 206-744-3253.
- Overlake as backup: 425-688-5100
- Cause, number of pts, location, special considerations (hazmat, multiple burns, etc)
- Secure a "Medical" radio channel

Medical:

- Identify and set up a treatment area close to the transportation corridor
- Delineate red, yellow, and green areas as indicated
- Control the flow of pts to the transport area

Transport:

- Establish transportation corridor
- Establish ambulance staging
- Obtain tracking sheets and bands
- Establish communication with DMCC

Glasgow Coma Scale for Head Injury

EYE OPENING

Spontaneous	4
To loud voice	3
To pain	2
None	1

VERBAL RESPONSE

Oriented	5
Confused, disoriented	4
Inappropriate words	3
Incomprehensible sounds	2
None	1

BEST MOTOR RESPONSE

Obeys	6
Localizes	5
Withdraws (flexion)	4
Abnormal flexion posturing	3
Extension posturing	2
None	1

CLINICAL PEARLS

MEDICAL PLANS

Plan A

VF/Pulseless VT

- Follow BLS guidelines for CPR
- Defibrillate when indicated
- Sodium bicarb 1 mEq/kg when indicated
- Epi 1 mg q 3 to 5 min
- Lidocaine 1 to 1.5 mg/kg, second dose 0.5 to 1 mg/kg, third dose same
- Procaine 100 mg increments
- Start drip 1 to 4 mg/min of appropriate anti-arrhythmic
- If still in VF, MgSO₄ 2 gm in 10cc LR, up to 6 gm for torsades

Asystole

- Epi 1 mg q 3 to 5 min
- Bicarb 1 mEq/kg if indicated

CLINICAL PEARLS

PEA

- Epi 1 mg q 3 to 5 min
- Atropine 1 mg (repeated to 3 mg) if HR is less than 60
- Pacing if HR is less than 60
- Bicarb 1 mEq/kg if indicated
- Levophed drip titrated to BP

- Consider:
 - Hypovolemia: fluid
 - Tamponade: centesis
 - HyperK: bicarb, calcium, albuterol
 - Overdoses
 - TCA (bicarb)
 - Ca channel blockers (Ca)
 - Beta blockers (glucagon)

Pediatric cardiac arrest

- Airway management
- See Broselow for drug dosages
- Epi q 3 to 5 min
- If VF, shock at 2 j/kg, up to 4 j/kg
- Correct acidosis, hypoxia, hypovolemia, hypothermia

ALS PROVIDERS

Organization	Address	Telephone
Belleuve Fire Department	450 110th Avenue NE Belleuve, WA 98004	(425) 452-6892 (Phone) (425) 452-5287 (Fax)
Harborview Medical Center Paramedic Training	325 Ninth Avenue Seattle, WA 98104	(206) 521-1224 (Phone) (206) 521-1215 (Phone)
King County Medic One	7064 South 220 th Street #9 Kent, WA 98032	(206) 296-8550 (Phone) (206) 296-0515 (Fax)
Redmond Fire Department	8450 - 161st Avenue NE Redmond, WA 98052	(425) 556-2200 (Phone) (425) 556-2227 (Fax)
Seattle Fire Department Medic One	325 Ninth Avenue Seattle, WA 98104	(206) 386-1483 (Phone) (206) 386-1364 (Fax)
Shoreline Fire Department	17525 Aurora Avenue N. Shoreline, WA 98133	(206) 533-6500 (Phone) (206) 546-5719 (Fax)
Vashon Island Fire & Rescue	10020 SW Bank Road Vashon, WA 98070-1150	(206) 463-2405 (Phone) (206) 463-2954 (Fax)

AMBULANCE AND OTHER AGENCIES

Organization	Address	Telephone
Tri-Med Ambulance	18821 E. Valley Highway Kent, WA 98032	(206) 243-5622 (Phone) (425) 454-0208 (Fax)
American Medical Response	13075 Gateway Drive SE Suite 100 Tukwila, WA 98168	(206) 444-4440 (Main) (206) 623-1111 (Dispatch) (206) 444-4599 (Fax)
The Boeing Company	P.O. Box 3707, MS 10-51 Seattle, WA 98124	(206) 655-7700 (Phone) (206) 655-1454 (Fax)
KC Sheriffs Office Search & Rescue Special Operations	7300 Perimeter Road S., Room 143 Seattle, WA 98108-3849	(206) 296-3853 (Phone) (206) 296-4271 (Fax)
Rural/Metro Ambulance	6405 – 218 th Street SW Mt. Lake Terrace, WA 98043	(425) 672-1111 (Phone) 1-800-989-9993 (425) 771-3891 (Fax)

COMMUNITY RESOURCES

Agency	Phone Number	Reason to Call
Crisis Clinic of King County	206-461-3222 (206) 461-8368 (Fax)	Mental health resource agency for concerned parents, relatives, etc.
Mental Health HMC Outpatient Services HMC Community Care Line, Consulting Nurse Program UW Medical Center Clinic	(206) 731-3120 (Fax) (206) 731-2500 (206) 598-3300	Mentally ill patients not serious enough to hospitalize, but in need of professional counseling
King County EMS Division	(206) 296-4693	Administration of EMS services
Language Bank American Red Cross	(206) 323-2345	Foreign language translation
Medical Examiner – King County	(206) 731-3232	Report expected natural death; request death investigation

COMMUNITY RESOURCES

Agency	Phone Number	Reason to Call
Washington Poison Center	1-800-222-1222	Ingestion of substances
Sexual Assault - King County Resource Center - 24 hr Resource Line	(425) 226-5062 1-888-998-6423	Support for rape victims
Seattle Mental Health	(206) 302-2300	All mental health services including 24hr Crisis Response Service
NISSA Northwest Infant Survival and SIDS Alliance	(206) 548-9290	Support for families who have experienced a SIDS death
Domestic Violence Hotlines - King County - Washington State - National	(206) 205-5555 1-800-562-6025 1-800-799-7233	Domestic violence information
King County 24 hour Crisis Line	(206) 461-3222 1-866-427-4747	Emotional, Physical or Drug Abuse, Suicide
National Suicide Prevention Lifeline	1-800-784-2433 1-800-273-8255	Suicide, emotional, family

DISPATCH CENTERS

Airport Communication Center
SeaTac International Airport
17801 Pacific Highway South
Seattle, WA 98188

Phone: (206) 787-5229
FAX: (206) 787-5167

NORCOM
450 -110th Avenue NE
Bellevue, WA 98004

Phone: (425) 577-5656
FAX: (425) 577-5629

Enumclaw Police Department
1705 Wells
Enumclaw, WA 98022

Phone: (360) 825-3505
FAX: (360) 825-0184

Seattle Fire Department Dispatch
105 Fifth Avenue South
Seattle, WA 98104

Phone: (206) 386-1490
FAX: (206) 684-7276

Valley Communications Center
27519 108th Avenue SE
Kent, WA 98030

Phone: (253) 852-2121
FAX: (253) 372-1506

EMERGENCY DEPARTMENTS

Hospital	City	Telephone	Door Code
Auburn Regional Medical Center	Auburn	253-333-2561	
Children's Hospital	Seattle	206-987-2222	
St. Elizabeth	Enumclaw	360-802-3208	
Evergreen Hospital	Kirkland	425-899-1711	
Good Samaritan Hospital	Puyallup	253-697-4200	
Group Health - Central	Seattle	206-326-3223	
Group Health - Eastside	Bellevue	425-502-4120	
Harborview Medical Center	Seattle	206-744-4074	
Highline Community Hospital	Burien	206-431-5316	
Highline Comm. Hospital - Riverton	Tukwila	206-248-4730	
Mary Bridge Children's Hospital	Tacoma	253-403-1418	
Monroe Valley Hospital	Monroe	360-794-1402	
Northwest Hospital	Seattle	206-368-1765	
Overlake Hospital	Bellevue	425-688-5100	

TELEPHONE NUMBERS — EMERGENCY DEPARTMENTS**EMERGENCY DEPARTMENTS (CONT.)**

Providence Hospital – Colby	Everett	425-261-3000	
Providence Hospital – Pacific	Everett	425-258-7555	
Snoqualmie Valley Hospital	Snoqualmie	425-831-2323	
St. Clare Hospital	Lakewood	253-589-8700	
St. Francis Hospital	Federal Way	253-944-7971	
St. Joseph Medical Center	Tacoma	253-426-6963	
Swedish Hospital	Edmonds	425-640-4682	
Swedish Hospital - Ballard	Seattle	206-781-6341	
Swedish Hospital - Central	Seattle	206-386-2573	
Swedish Hospital - Providence	Seattle	206-320-2111	
Tacoma General Hospital	Tacoma	253-403-1050	
UW Medical Center	Seattle	206-598-4000	
VA Puget Sound Health Center	Seattle	206-762-1010	
Valley Medical Center	Renton	206-575-2574	
Virginia Mason Hospital	Seattle	206-583-6433	

FIRE DEPARTMENTS

Organization	Address	Telephone
Bellevue Fire Department	450 110th Avenue NE Bellevue, WA 98004	(425) 452-6892 (Phone) (425) 452-5287 (Fax)
Mountain View Fire & Rescue, Station #98 (KC District #44)	22015 SE 296th Street Black Diamond, WA 98010	(253) 735-0284 (Phone) (253) 735-0287 (Fax)
Bothell Fire & EMS	10726 Beardslee Blvd. Bothell, WA 98011-3250	(425) 486-1678 (Phone) (425) 486-4556 (Fax)
Burien/Normandy Park Fire Department (KCFD #2)	15100 Eighth Avenue SW Seattle, WA 98166-2244	(206) 242-2040 (Phone) (206) 433-6042 (Fax)
Duvall Fire Department	15600 First Avenue NE Duvall, WA 98019	(425) 788-1625 (Phone) (425) 788-0199 (Fax)
Eastside Fire & Rescue	175 NW Newport Way Issaquah, WA 98027	(425) 392-3433 (Phone) (425) 313-3200 (Phone) (425) 391-8764 (Fax)
Enumclaw Fire Department (KCFD #28)	1330 Wells Street Enumclaw, WA 98022	(360) 825-5544 (Phone) (360) 825-9442 (Fax)

FIRE DEPARTMENTS (CONT.)

Organization	Address	Telephone
Fall City Fire Department	4301 - 334th Place SE Fall City, WA 98024-0609	(425) 222-5841 (Phone) (425) 222-4566 (Fax)
King County Fire District #40	18002 108th Avenue SE Renton, WA 98055	(425) 255-0931 (Phone) Voice Mail for Deanna (206) 296-7742 (Fax)
Kangley/Palmer Fire Department (KCFD #47)	33536 SE 309 th Street Palmer, WA 98051-0206	(360) 886-1915 (Phone) Voice Mail for Anita
Kent Fire Life and Safety	24611 - 116th Avenue SE Kent, WA 98031	(253) 856-4300 (Phone) (253) 856-6300 (Fax)
King County Medic One	7064 S 220 th Street Building # 9 Kent, WA 98032	(206) 296-8550 (Phone) (800) 459-7544 (206) 296-0515 (Fax)
Kirkland Fire Department	123 Fifth Avenue Kirkland, WA 98033	(425) 587-3650 (Phone) (425) 587-3651 (Fax)

FIRE DEPARTMENTS (CONT.)

Organization	Address	Telephone
Maple Valley Fire & Life Safety	23775 SE 264 th Maple Valley, WA 98038	(425) 432-0200 (Phone) (425) 413-2040 (Fax)
Mercer Island Fire Department	3030 – 78 th SE Mercer Island, WA 98040-2823	(206) 275-7607 (Phone) (206) 275-7970 (Fax)
Mountain View Fire & Rescue	32316 – 148 th Avenue SE Auburn, WA 98092	(253) 735-0284 (Phone) (253) 735-0287 (Fax)
Northshore Fire Department	7220 NE 181st Street Kenmore, WA 98028	(425) 354-1780 (Phone) (425) 354-1781 (Fax)
Port of Seattle Fire Department	2400 South 170 th Street Seattle, WA 98158	(206) 787-5327 (Phone) (206) 787-4908 (Fax)
Redmond Fire Department	8450 - 161st Avenue NE Redmond, WA 98052	(425) 556-2200 (Phone) (425) 556-2227 (Fax)

FIRE DEPARTMENTS (CONT.)

Organization	Address	Telephone
Renton Fire and Emergency Services	1055 South Grady Way, 6th Flr Renton, WA 98055	(425) 430-7000 (Phone) (425) 430-7044 (Fax)
SeaTac Fire Department	2929 South 200th Street SeaTac, WA 98198	(206) 973-4500 (Phone) (206) 973-4529 (Fax)
Seattle Fire Department	301 Second Avenue South Seattle, WA 98104	(206) 386-1400 (Phone) (206) 386-1412 (Fax)
Shoreline Fire Department	17525 Aurora Avenue North Shoreline, WA 98133	(206) 533-6500 (Phone) (206) 546-5719 (Fax)
Skykomish/Stevens Pass Fire Department	107 West Cascade Highway Skykomish, WA 98288	(360) 677-2686 (Phone) (360) 677-2574 (Fax)
Skyway/Bryn Mawr/ Lakeridge Fire Depart.	12424 - 76th Avenue South Seattle, WA 98178	(206) 772-1430 (Phone) (206) 772-6095 (Fax)
Snoqualmie Fire Depart- ment	37600 SE Snoqualmie Park- way Snoqualmie, WA 98065	(425) 888-1551 (Phone) (425) 888-1513 (Fax)
Snoqualmie Pass Fire & Rescue	69802 SW Snoqualmie Pass Summit Drive Snoqualmie Pass, WA 98068	(425) 434-6333 (Phone) (425) 434-6355 (Fax)

FIRE DEPARTMENTS (CONT.)

Organization	Address	Telephone
South King Fire & Rescue	31617 First Avenue South Federal Way, WA 98003-5201	(253) 839-6234 (Phone) (253) 529-7204 (Fax)
Tukwila Fire Department	444 Andover Park E. Tukwila, WA 98188	(206) 575-4404 (Phone) (206) 575-4439 (Fax)
Valley Regional Fire Authority	1101 "D" Street NE Auburn, WA 98002	(253) 288-5800 (Phone) (253) 288-5900 (Fax)
Vashon Island Fire & Rescue	10020 SW Bank Road Vashon, WA 98070-1150	(206) 463-2405 (Phone) (206) 463-2954 (Fax)
Woodinville Fire & Rescue	17718 Woodinville-Snohomish Road NE Woodinville, WA 98072	(425) 483-2131 (Phone) (425) 486-0361 (Fax)
WA State Office Of Emergency Medical Service and Trauma System	P.O. Box 47853 Olympia, WA 98504-7853	(360) 236-2800 (Office) (360) 236-2830 (Fax)

Medical Control Hospitals

HMC: 206-744-3252

Auburn: 253-872-5688

Evergreen: 425-899-1730

Highline: 206-246-7533

Overlake: 425-688-5100

Northwest: 206-368-1981

St. Francis: 253-874-0456

Other

Children's: 206-987-2222

ME: 206-731-3232

Poison Control: 1-800-709-0911

Studies

Hypothermia

Randomization: 206-462-9826

Study nurse: 1-888-210-6779

ALPS: 1-800-607-2926

Lactate: 1-800-607-1879

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JANUARY 2012