

CHANGE SUMMARY (†NEW page numbers based on FINAL-SIGNED-MASTER-09022018-1 version)

TOPIC	PAGE†	NEW?	UPDATE?	NOTES	A.R.E. ‡
✦ Quick Reference Guide (QRG)	2	✓		Replaces old TOC; links are clickable; TOC button in header is clickable*	
✦ Main Table of Contents (TOC)	3-7	✓		Arranged by Heading (CPGs & Procedures & Policies); each entry is a clickable link	
✦ Medical Director Intro & Philosophy of Care	8-10	✓		All Providers must attest to reading this	
✦ Contributor list	11		✓		
✦ BioTel Medical Direction Team List	12		✓		
✦ Abbreviations and Definitions	13-14		✓	PEDI content is now in PINK; expanded w/clarifications; ETI def'n; geri trauma = 60	
✦ Universal Care – Adult	15-18		✓	Split out from Universal Care – Pediatric; Lots of important updates	
✦ Universal Care – Pediatric	19-22	✓		Split out from Universal Care – Adult; PEDIATRIC content is PINK, not yellow; Color Zones by age/length/weight match Broselow/PediaTape & new PEDI-Guide	
✦ RESUSCITATION	23				
Asystole/PEA	24-25		✓	Change to epi dosing interval; max 3 epi doses;	
Cardiac Arrest	26-28		✓	IV preferred over IO access (IO probably ineffective); new pregnancy guidelines	
Determin. Of Death/Field Term/DNR Policy	29	✓		Duplicate link to actual page in Policies section	
External Jugular IV Access Procedure	30	✓		NEW Procedure for peripheral IV access, when indicated	
Intraosseous Access	31		✓	Changes to recommended needle kit size selection; added alternate sites (if trained)	
Post-Cardiac Arrest Care	33		✓	No therapeutic hypothermia by EMS; transport to 24-hr cath lab facility	
VFib & Pulseless VTach	35		✓	Change to epi dosing interval; max 3 epi doses; "Lido or amiodarone";	
✦ CARDIOVASCULAR	38				
Bradycardia	39		✓	Stronger emphasis on TCP;	
Chest Pain/Discomfort	41		✓	Emphasis on time to 1 st ECG & serial ECG; de-emphasize Morphine;	
Right- & Posterior ECG Procedure	43	✓		NEW Procedure , including indications	
Stroke (Acute) and TIA	44		✓	MANY MAJOR critical changes: LVO screen (C-STAT), patient care, destination!	
Syncope & Presyncope	47	✓		New CPG	
Tachycardia w/Pulse: STABLE	48		✓	No major changes EXCEPT to add Modified Valsalva Maneuver	
Tachycardia w/Pulse: UNSTABLE	50		✓	No major changes	
Transcutaneous Pacing (TCP) Procedure	52	✓		NEW Procedure, including indications ; adapted from EMS Training Bulletin 14-003	
Ventricular Assist Device (VAD)	53		✓	CPR permitted; New patient care flow diagram	
✦ RESPIRATORY	56				
Airway Management – Adult	57	✓		Split from Universal Care & Expanded – many important changes; PEEP Valves	
Advanced Airway Checklist	63	✓		New Checklist/Reporting Form for all advanced airway interventions	
CPAP Procedure	65		✓	Minimum age changed to 5 years (if equipment is available)	
Cricothyrotomy (Needle) Procedure	66		✓	Minor changes	
Nasotracheal Intubation Procedure	67		✓	Minor changes	
Needle Thoracostomy Procedure	68		✓	Preferred (adults): 4th or 5th ICS @ AAL/MAL (higher success rate) – must train first	
Pharm-Assisted Intubation Procedure	70		✓	Clarified procedure, med dosing; add Checklist; remove lido premed; atropine 1 yr	
Respiratory Distress – Adult	72		✓	Multiple edits, incl. adding dexamethasone (optional); removed refusal option	
Tracheostomy & Stoma Care Procedure	75	✓		NEW procedure with general guidance	

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♦ GENERAL MEDICAL	78				
Allergic Reaction	79		✓	MANY MAJOR critical changes: e.g. focus on severe reaction, epi dosing table	
Diagram: anaphylaxis criteria	82	✓		New emphasis on recognition & early, evidence-based treatment of anaphylaxis	
Altered Mental Status (AMS)/CNS Dep.	83		✓	Many significant changes, incl. GCS, BLS naloxone; diabetic split to new CPG; no ammonia inhalants	
Diabetic Emergencies (hypo- & hyper-)	86	✓		New CPG: Many new items, e.g. D10W for hypo; new CPG for hyperglycemia	
Pain Management	89		✓	Many changes: e.g. low-dose ketamine (LDK) (training required); Pain Scales	
Seizure	94		✓	Several small changes	
Sepsis	96	✓		New CPG: Recognition of sepsis; “Sepsis Alert” criteria; vigorous resuscitation	
Shock	97		✓	Several small changes	
Vomiting	99		✓	Several small changes	
♦ TRAUMA	100				
Amputated Body Part	101		✓	Minor edits	
Burns (Thermal/Electrical/Chemical)	102		✓	Expanded electrical/chemical burn guidance; TBSA diagrams; new IV fluid recs;	
Eye Injury	105		✓	Many significant, important edits	
Head Injury/TBI	107	✓		New CPG: many critical patient care guidelines, especially re: hypoxia/BP/temp	
Helmet/Equipment Removal Procedure	109	✓		New procedure, including step-by-step illustrations	
Hemorrhage Control/Tourniquet	112	✓		New CPG: 3 methods of hemorrhage control, incl. hemostatic agents	
Spinal Motion Restriction (SMR) Proc.	115		✓	Extensive revision for EBM & clarity; new SMR decision flow chart; Geri = 65	
Trauma (General)	120		✓	Clarified permissive hypotension wording & fluid resuscitation; Geri = 65	
♦ PEDIATRIC-SPECIFIC	123				
Airway Management – Pediatric	124	✓		New CPG: many important changes and clarifications; PEEP Valves	
Advanced Airway Checklist	127	✓		New Checklist/Reporting Form for all advanced airway interventions	
BioTel PEDI-Guide®	129	✓		Duplicate link to actual page in the Formulary section	
BRUE (previously ALTE)	130	✓		NEW CPG adapted from EMS Training Bulletin 14-002	
Respiratory Distress – Pediatric	132		✓	Many critical changes e.g. dexamethasone; CPAP 5 & older; epi & mag dosing	
♦ OB-GYN and NEONATAL	135				
Emergency Childbirth: Normal Proc.	136		✓	Few minor edits	
Emergency Childbirth: Abnormal Proc.	137		✓	Few minor edits	
Neonatal Care	141		✓	Several important changes to resuscitation guidelines (esp. meconium)	
Obstetrical & Gynecological	143		✓	Several important changes; Mag Sulfate change to 5 g	
♦ BEHAVIORAL HEALTH	145				
Behavioral Emerg/Excited Delirium	146		✓	Several important edits: clinical guidance, clarify ketamine dose, add BARS scale.	
Restraint of Patient Policy	148		✓	Duplicate link to actual page in the Policies section	
TASER Barb Removal Procedure	149		✓	No major changes	

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◆ TOXINS and ENVIRONMENTAL	150				
Carbon Monoxide Exposure	151		✓	Minor changes: consider cyanide toxicity; HBOT considerations/destination	
Cold-Related Emergencies/Hypothermia	153	✓		New CPG: adapted from EMS Training Bulletin 15-001	
Cyanide Toxicity	157		✓	Minor edits to antidote administration	
Heat-Related Emergencies	159	✓		NEW CPG	
Lightning/Lightning Strike	161	✓		NEW CPG	
Poisoned Patient and Overdose	162		✓	Multiple significant edits to detail guidance for specific poison categories	
Snakebite (Venomous)	164	✓		NEW CPG	
Toxic Chemical Exposure	166	✓		NEW CPG	
◆ POLICIES: CLIN OPS – PT. CARE/TRANSPORT	169				
BioTel Social Work Program Referral	170	✓		NEW Policy	
Custody	171		✓	Minor, but important, clarifications, esp. re: positioning	
Destination	176		✓	Many important changes, especially TRAUMA (adult and pedi), Stroke	
Determ. Death/Field Term/DNR	183		✓	Many minor changes, few major clarifications	
DME (Durable Medical Equipment) T'port	187	✓		NEW Policy	
ELAP (Emergency Legal Assistance Program)	188	✓		NEW Policy, adapted from EMS Training Bulletin 15-002	
EMS Wait Times at Hospitals	191		✓	Strengthened wording	
EMTALA	192		✓	Clarification of adult+pedi patients in 1 ambulance	
Evaluation and Transport	194		✓	Many minor changes, few major clarifications; adapted in part from EMS TB 17-001	
Freestanding Emergency Centers (FEC)	199	✓		NEW Policy	
Physician Coordination Out-of-Hospital	201		✓	No major changes	
Restraint of Patient	204		✓	Important edits, especially re: prone positioning, restraints, etc.	
State Deployment Outside Jurisdiction	206	✓		NEW Policy, adapted from EMS Training Bulletin 15-004	
◆ POLICIES: CLIN OPS – COMMS/REPORTING	207				
Adverse Incident Self-Reporting	208	✓		NEW Policy: "safe harbor" self-reporting	
Child/Elderly/Disabled Abuse Reporting	209	✓		NEW Policy, adapted from EMS Training Bulletin 15-006	
Mandatory Contact	211		✓	Minor edits, including adding ROSC to the list of mandatory contacts	
Radio and Verbal Reporting	212		✓	Minor edits	
◆ POLICIES: ADMINISTRATIVE	214				
Credentialing	215		✓	Minor changes	
Return to Duty (Recredentialing)	217		✓	No major changes	

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✦ FORMULARY TOC	220		✓	Clickable links; new “optional meds” wording; new optional medications (“O”)	
✦ BioTel MACC®	221	✓		NEW MACC: Reduce unjustifiable harm from medication errors; mandatory procedure	
✦ DRUG SHEETS			✓	Redesigned for standardization and clarity; refer to PEDI-Guide where applicable	
Adenosine	223		✓	No major changes, except clarification of contraindications	
Albuterol	224		✓	Removed pregnancy contraindication	
Amiodarone	225		✓	No longer preferred over lidocaine in most circumstances	
Aspirin	226		✓	No major changes	
Atropine	227		✓	2 nd -line for unstable bradycardia; high doses needed for nerve agent & other WMD	
Calcium Chloride	228		✓	No major changes, except to change pedi dose to 20 mg/kg (0.2 mL/kg) (no dose range)	
Dexamethasone (O)	229	✓		NEW, Optional for respiratory distress, allergic reaction (after EPI!); new adult dose	
Dextrose 10% in Water	230	✓		NEW, replaces D50/D25 as 1st-line treatment of symptomatic hypoglycemia	
Dextrose 50% (D50) (O)	231		✓	Optional and ONLY when D10W unavailable; MUST be diluted to D10NS for use	
Diazepam (O)	233		✓	Optional (midazolam preferred); added IV/IO pediatric dosing (2 nd -line)	
Diphenhydramine	234		✓	No major changes except removed requirement for pediatric dilution	
Dopamine (O)	235		✓	Optional, Second-line drip in most cases (norepi or epi preferred); New Drip Chart	
Epinephrine 0.1 mg/mL	237		✓	(aka “1:10,000”); New dosing table; New Drip Chart	
Epinephrine 1 mg/mL	239		✓	(aka “1:1000”); New dosing table; new croup dosing; New Drip Chart	
Epinephrine Auto-Injector (O)	241	✓		NEW, optional med for allergic reaction (similar “epi safe”-type kits may substitute); BLS providers may use “any available” up to 3 doses under ALS supervision	
Etomidate (O)	242		✓	Optional	
Fentanyl (O)	243		✓	Optional; Preferred opioid analgesic; ½ starting dose for elderly (standing order)	
Glucagon	244		✓	Important clarification of proper use; advisory to transport; changed pedi dosing	
Glucose 40% Oral Gel	245		✓	Minor changes; “buccal” route for everyone	
Hydroxocobalamin (Cyanokit) (O)	246		✓	Optional: Cyanide toxicity; new dilution/dosing; consider CO comorbidity; IV preferred	
Ipratropium	247		✓	No significant changes	
Ketamine (O)	248		✓	BIG CHANGES: Optional: ExDS, proc. Sedation, pain – DILUTION/CONCENTRATION & dosing issues; must have training & medical director approval (this is not new)	
Lidocaine	253		✓	Equal preference with amiodarone for most VF/pVT; removed as PAI premed for TBI	
Magnesium Sulfate	254		✓	New dilution/reduction dosing, esp. pediatric resp distress & eclampsia	
Methylprednisolone (O)	256		✓	Optional: resp. distress, allergic reaction (after EPI!); dilute/reduce for pedi: new doses	
Midazolam (O)	257		✓	No major changes, except need for dilution/reduction for pedi; consistent dosing	
Morphine (O)	258		✓	½ starting dose for elderly (standing order); reduction for pedi	
Naloxone	259		✓	Administration by trained BLS providers; new dosing guidelines; dilution/reduction	
Nitroglycerin	260		✓	Added Go-Nitro; changed BP cutoffs	
Nitrous Oxide (O)	261		✓	Optional	
Norepinephrine	262		✓	Preferred vasoactive drip for most shock; New Drip Chart	
Ondansetron (O)	264		✓	Optional; Not for kids under 2; age 2-4: call BioTel; new dosing; No IN route	
Pralidoxime Chloride (2-PAM) (O)	265		✓	Optional	
Promethazine (O)	266		✓	Optional and 2 nd -line (ondansetron preferred); no IV dosing; watch for side effects	
Proparacaine (O)	267		✓	Optional	
Sodium Bicarbonate	268		✓	Administration during CPR may falsely elevate PetCO ₂ (resemble ROSC)	

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<ul style="list-style-type: none"> ✦ APPENDICES and OTHER RESOURCES 	269				
<ul style="list-style-type: none"> ✦ BioTel PEDI-Guide® 	271	✓		<p>NEW, PRECALCULATED PEDI DOSE/EQUIPMENT TABLES, by weight/length/age:</p> <ul style="list-style-type: none"> “JUST IN TIME” pediatric meds/equipment and normal vital sign ranges 12 Color Zones correspond to Broselow (& similar) length-based tapes Customized to BioTel medications & equipment Reduces calculations for pediatric med dosing & equipment sizing SUPPLEMENT to detailed information in full CPGs & drug sheets Depends entirely on knowing medication CONCENTRATION 3-step procedure: SELECT card; DILUTE (when indicated); REDUCE (when indicated) Must use MACC to verify correct concentration and volume (mL) Must upgrade to 2017 Broselow or 2017 PediaTape 	

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