



Inland Counties Emergency Medical Agency

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Serving San Bernardino, Inyo, and Mono Counties
Tom Lynch, EMS Administrator
Reza Vaezazizi, MD, Medical Director

DATE: August 29, 2019

TO: EMS Providers - ALS, LALS, BLS, EMS Aircraft
Hospital CEOs, ED Directors, Nurse Managers and PLNs
EMS Training Institutions and Continuing Education Providers
Inyo, Mono and San Bernardino County EMCC Members
Medical Advisory Committee (MAC) Members
Systems Advisory Committee (SAC) Members

FROM: Tom Lynch
EMS Administrator

Reza Vaezazizi, MD
Medical Director

**SUBJECT: IMPLEMENTATION OF POLICIES/PROTOCOLS EFFECTIVE
OCTOBER 1, 2019**

The policies listed below will be effective October 1, 2019.

ICEMA Reference Number and Name

7040	Medication - Standard Orders
9130	Shock (Non-Traumatic) (New)
11010	Respiratory Emergencies - Adult
11090	Shock (Non-Traumatic) (Delete)
14010	Respiratory Emergencies - Pediatric

Please insert and replace the attached policies and the Table of Contents in the EMS Policy, Procedure and Protocol Manual with the updated documents and ensure every station or facility has a reference copy. The ICEMA policies and protocols can also be found on ICEMA's website at www.ICEMA.net under the EMS Policy, Procedure and Protocol Manual section.

If you have any questions, please contact Suzee Kolodzik, EMS Specialist, at (909) 388-5820 or via e-mail at susan.kolodzik@cao.sbcounty.gov.

TL/RV/SK/jlm

Attachments

c: File Copy

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POLICIES/PROTOCOLS CHANGES EFFECTIVE OCTOBER 1, 2019

Reference #	Name	Changes
DELETIONS		
11090	Shock (Non-traumatic)	Deleted from 11000 - Adult Emergencies and added to 9000 - General Patient Care Policies.
NEW		
9130	Shock (Non-traumatic)	Deleted from 11000 - Adult Emergencies and added to 9000 - General Patient Care Policies.
1000 ACCREDITATION AND CERTIFICATION		
None		
2000 DATA COLLECTION		
None		
3000 EDUCATION		
None		
4000 QUALITY IMPROVEMENT		
None		
5000 MISCELLANEOUS SYSTEM POLICIES		
None		
6000 SPECIALTY PROGRAM/ PROVIDER POLICIES		
None		
7000 STANDARD DRUG & EQUIPMENT LISTS		
7040	Medication - Standard Orders	Addition of Magnesium Sulfate for severe asthma/respiratory distress for adult and pediatric.
8000 TRANSPORT/TRANSFERS AND DESTINATION POLICIES		
None		
9000 GENERAL PATIENT CARE POLICIES		
None		
10000 SKILLS		
None		
11000 ADULT EMERGENCIES		
11010	Respiratory Emergencies - Adult	Addition of Magnesium Sulfate with base hospital order.
12000 END OF LIFE CARE		
None		
13000 ENVIRONMENTAL EMERGENCIES		
None		

POLICIES/PROTOCOLS CHANGES EFFECTIVE OCTOBER 1, 2019

Reference #	Name	Changes
14000 PEDIATRIC EMERGENCIES		
14010	Respiratory Emergencies - Pediatric	Addition of Magnesium Sulfate with base hospital order.
15000 TRAUMA		
None		

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SERIES	SYSTEM POLICIES AND PROCEDURES	EFFECTIVE DATE
1000	CERTIFICATION, ACCREDITATION and AUTHORIZATION	
1030	EMT Certification	08/15/17
1040	EMT-P Accreditation	06/18/19
1050	MICN Authorization - Base Hospital, Administrative, Flight Nurse, Critical Care Transport	04/01/16
1070	EMT/AEMT Incident Investigation, Determination of Action, Notification, and Administrative Hearing Process	08/15/14
1090	Criminal History Background Checks (Live Scan)	08/15/14
1100	AEMT Certification	07/01/15
1110	RCP Authorization	04/01/16
1120	EMT-P Student Field Internship Requirements	08/08/17
2000	DATA COLLECTION	
2020	ICEMA Abbreviation List	03/15/12
2030	Minimum Documentation Requirements for Transfer of Patient Care	03/15/12
2040	Requirements for Patient Care Reports	03/15/17
2050	Requirements for Collection and Submission of EMS Data	12/01/16
3000	EDUCATION	
3020	Continuing Education Provider Requirements	01/22/19
3030	EMT Continuing Education Requirements	01/22/19
3050	Public Safety First Aid And CPR Training Program Approval	01/22/19
3060	Public Safety Optional Skills Course Approval	01/22/19
3070	Tactical Casualty Care Course Approval	01/22/19
4000	QUALITY IMPROVEMENT	
4010	Continuous Quality Improvement Plan	02/28/11
5000	MISCELLANEOUS SYSTEM POLICIES	
5010	Licensure Changes 911 Receiving Hospitals	01/01/10
5020	Base Hospital Selection Criteria	07/15/00
5030	Review of Policies and Protocols	02/01/16
5040	Radio Communication Policy	02/01/16
5050	Medical Response to a Multi-Casualty Incident	04/01/13
5050 I/Mono Annex	Inyo and Mono Counties Medical Response to a Multi-Casualty Incident	05/01/11
5060	MCI Definitions/Key ICS Positions	01/01/10
5070	Medical Response to Hazardous Materials/Terrorism Incident	04/01/13
5080	ICEMA Ground Based Ambulance Rate Setting Policy-San Bernardino County	05/08/12
5100	Triage Tag Tuesday	04/10/18
6000	SPECIALTY PROGRAM/PROVIDER POLICIES	
6010	Paramedic Vaccination Policy	04/01/13
6060	Specialty and Optional Scope Program Approval	08/15/19
6070	ST Elevation Myocardial Infarction Critical Care System Designation (San Bernardino County Only)	08/15/19
6080	Paramedic Blood Draw for Chemical Test at the Request of a Peace Officer	04/01/13
6090	Fireline Paramedic	07/15/19
6100	Stroke Critical Care System Designation (San Bernardino County Only)	08/15/19

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SERIES	SPECIALTY PROGRAM/PROVIDER POLICIES <i>continued</i>	EFFECTIVE DATE
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6120	Emergency Medical Dispatch Center Requirements <i>(San Bernardino County Only)</i>	08/15/13
6130	Medical Priority Dispatch Minimum Response Assignments for Emergency Medical Dispatch (EMD) Categories	08/15/13
6150	Trial Study Participation	03/01/15
6170	ChemPack Deployment	04/15/18
7000	STANDARD DRUG & EQUIPMENT LISTS	
7010	BLS/LALS/ALS Standard Drug and Equipment List	08/15/19
7020	EMS Aircraft Standard Drug and Equipment List	08/15/19
7030	Controlled Substance Policy	07/15/19
7040	Medication - Standard Orders	REVISED 10/01/19
8000	TRANSPORT/TRANSFERS AND DESTINATION POLICIES	
8010	Interfacility Transfer Guidelines	10/15/16
8020	Specialty Care Transport	04/01/16
8050	Transport of Patients (BLS)	04/15/18
8060	Requests for Ambulance Redirection and Hospital Diversion <i>(San Bernardino County Only)</i>	08/15/19
8070	Aircraft Rotation Policy <i>(San Bernardino County Only)</i>	04/01/13
8090	Fort Irwin Continuation of Care	10/15/16
8120	Continuation of Care <i>(San Bernardino County Only)</i>	08/15/19
8130	Destination Policy	08/15/19
8140	Transport Policy <i>(Inyo County Only)</i>	12/15/15
8150	Ambulance Patient Offload Delay	12/15/16
8160	Emergency Medical Transport of Police Dogs - Pilot Project <i>(San Bernardino County Only)</i>	01/01/19
	PATIENT CARE POLICIES	
9000	GENERAL PATIENT CARE POLICIES	
9010	General Patient Care Guidelines	11/01/18
9020	Physician on Scene	06/18/19
9030	Responsibility for Patient Management Policy	06/18/19
9040	Reporting Incidents of Suspected Abuse Policy (Revised)	08/15/19
9050	Organ Donor Information	06/18/19
9060	Local Medical Emergency Policy	02/01/14
9070	Applying Patient Restraints Guidelines	11/01/18
9080	Care of Minors in the Field	02/01/16
9090	Patient Refusal of Care - Adult	06/01/14
9110	Treatment of Patients with Airborne Infections and Transport Recommendations	06/18/19
9120	Nausea and Vomiting	12/01/14
9130	Shock (Non-Traumatic)	NEW 10/01/19
10000	SKILLS	
10190	Procedure - Standard Orders (Revised)	07/15/19
11000	ADULT EMERGENCIES (15 YEARS OF AGE AND OLDER)	
11010	Respiratory Emergencies - Adult	REVISED 10/01/19
11020	Airway Obstruction - Adult	08/15/14
11040	Bradycardias - Adult	08/01/18

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11060	Suspected Acute Myocardial Infarction (AMI)	08/15/19
11070	Cardiac Arrest - Adult	08/15/19
11080	Altered Level of Consciousness/Seizures - Adult	07/15/19
11090	Shock (Non-Traumatic) DELETE	10/01/19
11100	Burns - Adult	07/15/19
11110	Stroke Treatment - Adult	08/15/19
11120	Ventricular Assist Device (VAD)	04/15/18
11130	Psychiatric/Behavioral Emergencies - Adult	11/01/18
11140	Pain Management - Adult	08/15/19
11150	Smoke Inhalation/CO Exposure/Suspected Cyanide Toxicity	07/15/19
12000	END OF LIFE CARE	
12010	Determination Of Death on Scene	08/15/19
12020	End of Life Care and Decisions	10/15/16
13000	ENVIRONMENTAL EMERGENCIES	
13010	Poisonings	04/15/18
13020	Heat Related Emergencies	08/15/14
13030	Cold Related Emergencies	06/01/15
13040	Nerve Agent Antidote Kit (Training, Storage and Administration)	04/15/18
14000	PEDIATRIC EMERGENCIES (LESS THAN 15 YEARS OF AGE)	
14010	Respiratory Emergencies - Pediatric REVISED	10/01/19
14020	Airway Obstruction - Pediatric	07/15/19
14030	Allergic Reactions - Pediatric	04/15/18
14040	Cardiac Arrest - Pediatric	08/15/19
14050	Altered Level of Consciousness - Pediatric	07/15/19
14060	Seizure - Pediatric	07/15/19
14070	Burns - Pediatric	04/15/18
14080	Obstetrical Emergencies	08/01/18
14090	Newborn Care	08/15/19
15000	TRAUMA	
15010	Trauma - Adult (15 years of age and older) (Revised)	07/15/19
15020	Trauma - Pediatric (Less than 15 years of age) (Revised)	07/15/19
15030	Trauma Triage Criteria	02/01/16
15040	Glasgow Coma Scale Operational Definitions	04/01/13
15050	Hospital Emergency Response Team (HERT) Policy	10/15/13
16000	PUBLIC SAFETY FIRST AID POLICIES	
16010	Allergic Reaction and Anaphylaxis (Authorized Public Safety Personnel)	04/15/18
16020	Nerve Agent Exposure (Authorized Public Safety Personnel)	04/15/18
16030	Opioid Overdose (Authorized Public Safety Personnel)	04/15/18
16040	Respiratory Distress (Authorized Public Safety Personnel)	04/15/18
16050	Optional Skills and Medications (Authorized Public Safety Personnel)	01/22/19
16060	Public Safety AED Service Provider	01/22/19



MEDICATION - STANDARD ORDERS

Medications listed in this protocol may be used only for the purposes referenced by the associated ICEMA Treatment Protocol.

For Nerve Agent Antidote Kit (NAAK) or medications deployed with the ChemPack see Appendix I (Page 12).

Adenosine (Adenocard) - Adult (ALS)

Stable narrow-complex SVT or Wide complex tachycardia:

Adenosine, 6 mg rapid IVP followed immediately by 20 cc NS bolus, and Adenosine, 12 mg rapid IVP followed immediately by 20 cc NS bolus if patient does not convert. May repeat one (1) time.

Reference #s 7010, 7020, 11050

Albuterol (Proventil) Aerosolized Solution - Adult (LALS, ALS)

Albuterol, 2.5 mg nebulized, may repeat two (2) times.

Reference #s 6090, 7010, 7020, 11010, 11100

Albuterol (Proventil) Metered-Dose Inhaler (MDI) - Adult (LALS, ALS - Specialty Programs Only)

Albuterol MDI, four (4) puffs every ten (10) minutes for continued shortness of breath and wheezing.

Reference #s 6090, 6110, 7010, 7020, 14010, 14030, 14070

Albuterol (Proventil) - Pediatric (LALS, ALS)

Albuterol, 2.5 mg nebulized, may repeat two (2) times.

Reference #s 7010, 7020, 14010, 14030, 14070

Albuterol (Proventil) Metered-Dose Inhaler (MDI) - Pediatric (LALS, ALS - Specialty Programs Only)

Albuterol MDI, four (4) puffs every ten (10) minutes for continued shortness of breath and wheezing.

Reference #s 6090, 6110, 7010, 7020, 14010, 14030, 14070

Aspirin, chewable (LALS, ALS)

Aspirin, 325 mg PO chewed (one (1) adult non-enteric coated aspirin) or four (4) chewable 81 mg aspirin.

Reference #s 2020, 6090, 6110, 7010, 7020, 11060

Atropine (ALS)

Atropine, 0.5 mg IV/IO. May repeat every five (5) minutes up to a maximum of 3 mg or 0.04 mg/kg.

Organophosphate poisoning:

Atropine, 2 mg IV/IO, repeat at 2 mg increments every five (5) minutes if patient remains symptomatic.

Reference #s 6090, 6110, 7010, 7020, 11040, 12020, 13010

Calcium Chloride (ALS)

Calcium Channel Blocker Poisonings:

Calcium Chloride, 1 gm (10 cc of a 10% solution) IV/IO, base hospital order only.

Reference #s 2020, 7010, 7020, 13010

Dextrose - Adult (LALS, ALS)

Hypoglycemia - Adult with blood glucose less than 80 mg/dL:

Dextrose 10% /250 ml (D10W 25 gm) IV/IO Bolus

Reference #s 2020, 6090, 6110, 7010, 7020, 8010, 11050, 11080, 13020, 13030

Dextrose - Pediatric (LALS, ALS)

Hypoglycemia - Neonates (0 - 4 weeks) with blood glucose less than 35 mg/dL or pediatric patients (more than 4 weeks) with glucose less than 60 mg/dL:

Dextrose 10%/250 ml (D10W 25 gm) 0.5 gm/kg (5 ml/kg) IV/IO

Reference #s 2020, 7010, 7020, 13020, 13030, 14040, 14050, 14060

Diphenhydramine - Adult (ALS)

Diphenhydramine, 25 mg IV/IO

Diphenhydramine, 50 mg IM

Reference #s 6090, 6110, 7010, 7020, 11010, 13010

Diphenhydramine - Pediatric (ALS)

Diphenhydramine, 1 mg/kg slow IV/IO, not to exceed adult dose of 25 mg, **or**

Diphenhydramine, 2 mg/kg IM not to exceed adult dose of 50 mg IM

Reference #s 7010, 7020, 14030

Epinephrine (1 mg/ml) - Adult (LALS, ALS)

Severe Bronchospasm, Asthma Attack, Pending Respiratory Failure, Severe Allergic Reactions:

Epinephrine, 0.3 mg IM. May repeat after fifteen (15) minutes one (1) time if symptoms do not improve.

Reference # 11010

Epinephrine (0.1 mg/ml) - Adult (ALS)

For persistent severe anaphylactic reaction:

Epinephrine (0.1 mg/ml), 0.1 mg slow IVP/IO. May repeat every five (5) minutes as needed to total dosage of 0.5 mg.

Reference # 11010

Cardiac Arrest, Asystole, PEA:

Epinephrine (0.1 mg/ml), 1 mg IV/IO.

Reference #s 2020, 6090, 6110, 7010, 7020, 11010, 11070, 12020

Epinephrine (0.01 mg/ml) - Adult (ALS)

Post resuscitation, persistent profound shock and hypotension (Push Dose Epinephrine):

Prepare Epinephrine 0.01 mg/ml solution by mixing 9 ml of normal saline with 1 ml of Epinephrine 0.1 mg/ml in a 10 ml syringe. Administer 1 ml every one (1) to five (5) minutes titrated to maintain SBP more than 90 mm Hg.

Reference #s 2020, 6090, 6110, 7010, 7020, 7040, 11090

Epinephrine (1 mg/ml) - Pediatric (LALS, ALS)

Severe Bronchospasm, Asthma Attack, Pending Respiratory Failure, Severe Allergic Reactions:

Epinephrine, 0.01 mg/kg IM not to exceed adult dosage of 0.3 mg.

Reference #s 2020, 6090, 7010, 7020, 14010, 14030

Epinephrine (0.1 mg/ml) - Pediatric (ALS)

Anaphylactic reaction (no palpable radial pulse and depressed level of consciousness):

Epinephrine (0.1 mg/ml), 0.01 mg/kg IV/IO, no more than 0.1 mg per dose. May repeat to a maximum of 0.5 mg.

Cardiac Arrest:

1 day to 8 years Epinephrine (0.1 mg/ml), 0.01 mg/kg IV/IO (do not exceed adult dosage)

9 to 14 years Epinephrine (0.1mg/ml), 1.0 mg IV/IO

Newborn Care:

Epinephrine (0.1 mg/ml), 0.01mg/kg IV/IO if heart rate is less than 60 after one (1) minute after evaluating airway for hypoxia and assessing body temperature for hypothermia.

Epinephrine (0.1 mg/ml), 0.005 mg/kg IV/IO every ten (10) minutes for persistent hypotension as a base hospital order or in radio communication failure.

Reference # 14090

Epinephrine (0.01 mg/ml) - Pediatric (ALS)

Post resuscitation, profound shock and hypotension (Push Dose Epinephrine):

Prepare Epinephrine 0.01 mg/ml solution by mixing 9 ml of normal saline with 1 ml of Epinephrine 0.1 mg/ml in a 10 ml syringe. Administer 0.1ml/kg (do not exceed adult dosage), every one (1) to five (5) minutes. Titrate to maintain a SBP more than 70 mm Hg.

Reference #s 2020, 7010, 7020, 7040, 11090, 14040

Fentanyl - Adult (ALS)

Chest Pain (Presumed Ischemic Origin):

Fentanyl, 50 mcg slow IV/IO over one (1) minute. May repeat every five (5) minutes titrated to pain, not to exceed 200 mcg.

Fentanyl, 100 mcg IM/IN. May repeat 50 mcg every ten (10) minutes titrated to pain, not to exceed 200 mcg.

Acute traumatic injuries, acute abdominal/flank pain, burn injuries, Cancer pain, Sickle Cell Crisis:

Fentanyl, 50 mcg slow IV/IO push over one (1) minute. May repeat every five (5) minutes titrated to pain, not to exceed 200 mcg IV/IO, **or**

Fentanyl, 100 mcg IM/IN. May repeat 50 mcg every ten (10) minutes titrated to pain, not to exceed 200 mcg.

Pacing, synchronized cardioversion:

Fentanyl, 50 mcg slow IV/IO over one (1) minute. May repeat in five (5) minutes titrated to pain, not to exceed 200 mcg.

Fentanyl, 100 mcg IN. May repeat 50 mcg every ten (10) minutes titrated to pain, not to exceed 200 mcg.

Reference #s 2020, 6090, 6110, 7010, 7020, 7030, 10190, 11060, 11100, 11140, 13030, 15010

Fentanyl - Pediatric (ALS)

Fentanyl, 0.5 mcg/kg slow IV/IO over one (1) minute. May repeat in five (5) minutes titrated to pain, not to exceed 100 mcg.

Fentanyl, 1 mcg/kg IM/IN, may repeat every ten (10) minutes titrated to pain not to exceed 200 mcg.

Reference #s 2020, 6110, 7010, 7020, 7030, 11060, 13030, 14070, 15020

Glucose - Oral - Adult (BLS, LALS, ALS)*Adult with blood glucose less than 80 mg/dL:*

Glucose - Oral, one (1) tube for patients with an intact gag reflex and hypoglycemia.

Reference #s 7010, 7020, 11080, 11090, 11110, 13020

Glucose - Oral - Pediatric (BLS, LALS, ALS)*Hypoglycemia - Neonates (0 - 4 weeks) with blood glucose less than 35 mg/dL or pediatric patients (more than 4 weeks) with glucose less than 60 mg/dL:*

Glucose - Oral, one (1) tube for patients with an intact gag reflex and hypoglycemia.

Reference #s 7010, 7020, 14050, 14060

Glucagon - Adult (LALS, ALS)

Glucagon, 1 mg IM/SC/IN, if unable to establish IV. May administer one (1) time only.

Beta blocker Poisoning:

Glucagon, 1 mg IV/IO (base hospital order only)

Reference #s 6090, 6110, 7010, 7020, 11080, 13010, 13030

Glucagon - Pediatric (LALS, ALS)

Glucagon, 0.025 mg/kg IM/IN, if unable to start an IV. May be repeated one (1) time after twenty (20) minutes for a combined maximum dose of 1 mg.

Reference #s 7010, 7020, 13030, 14050, 14060

Ipratropium Bromide (Atrovent) Inhalation Solution use with Albuterol Adult (ALS)

Atrovent, 0.5 mg nebulized. Administer one (1) dose only.

Reference #s 7010, 7020, 11010, 11100

Ipratropium Bromide (Atrovent) Metered-Dose Inhaler (MDI) use with Albuterol Adult (ALS - Specialty Programs Only)

When used in combination with Albuterol MDI use Albuterol MDI dosing.

Reference #s 6090, 6110, 7010, 7020, 11010, 11100

Ipratropium Bromide (Atrovent) Inhalation Solution use with Albuterol - Pediatric (ALS)

1 day to 12 months Atrovent, 0.25 mg nebulized. Administer one (1) dose only.

1 year to 14 years Atrovent, 0.5 mg nebulized. Administer one (1) dose only.

Reference #s 7010, 7020, 14010, 14030, 14070

Ipratropium Bromide (Atrovent) Metered-Dose Inhaler (MDI) use with Albuterol - Pediatric (ALS - Specialty Programs Only)

When used in combination with Albuterol MDI use Albuterol MDI dosing.

Reference #s 6090, 6110, 7010, 7020, 14010, 14030, 14070

Ketamine - Adult (ALS)

Acute traumatic injury, acute abdominal/flank pain, burn injuries, cancer related pain and sickle cell crisis:

Ketamine, 0.3 mg/kg to a max of 30 mg in a 50 - 100 ml of NS via IV over five (5) minutes. May repeat one (1) time, after 15 minutes, if pain score remains at five (5) or higher. Do not administer IVP, IO, IM, or IN.

This is the official pain scale to be used in patient assessment and documented on the PCR.



Reference #s 7010, 7020, 11140

Lidocaine - Adult (ALS)*VT (pulseless)/VF:*

Initial Dose: Lidocaine, 1.5 mg/kg IV/IO

For refractory *VT (pulseless)/VF*, may administer an additional 0.75 mg/kg IV/IO, repeat one (1) time in five (5) to ten (10) minutes; maximum total dose of 3 mg/kg.*V-Tach, Wide Complex Tachycardia - with Pulses:*

Lidocaine, 1.5 mg/kg slow IV/IO

May administer an additional 0.75 mg/kg slow IV/IO; maximum total dose of 3 mg/kg.

*Reference #s 2020, 6090, 7010, 7020, 8010, 10190, 11050, 11070, 15010***Lidocaine - Pediatric (ALS)***Cardiac Arrest:*

1 day to 8 years Lidocaine, 1.0 mg/kg IV/IO

9 to 14 years Lidocaine, 1.0 mg/kg IV/IO

May repeat Lidocaine at 0.5 mg/kg after five (5) minutes; maximum total dose of 3 mg/kg.

*Reference #s 2020, 7010, 7020, 14040***Lidocaine 2% (Intravenous Solution) - Pediatric and Adult (ALS)***Pain associated with IO infusion:*

Lidocaine, 0.5 mg/kg slow IO push over two (2) minutes, not to exceed 40 mg total.

*Reference #s 2020, 7010, 7020, 10140, 10190***Lidocaine 2% Gel (Viscous) - Pediatric and Adult (ALS)***Pain associated with Nasogastric/Orogastric Tube insertion.**Reference # 10190***Magnesium Sulfate (ALS)***Polymorphic Ventricular Tachycardia:*

Magnesium Sulfate, 2 gm IV/IO bolus over five (5) minutes for polymorphic VT if prolonged QT is observed during sinus rhythm post-cardioversion.

Eclampsia (Seizure/Tonic/Clonic Activity):

Magnesium Sulfate, 4 gm IV/IO slow IV push over three (3) to four (4) minutes.

Magnesium Sulfate, 10 mg/min IV/IO drip to prevent continued seizures.

Reference #s 2020, 7010, 7020, 8010, 14080

Severe Asthma/Respiratory Distress (ALS) (base hospital order only):

Magnesium Sulfate, 2 gm slow IV drip over 20 minutes. Do not repeat.

Reference# 11010

Magnesium Sulfate - Pediatric (ALS)

Severe Asthma/Respiratory Distress (base hospital order only):

Magnesium Sulfate, 50mg/kg slow IV drip over 20 minutes. Do not exceed the adult dosage of 2 gm total. Do not repeat.

Reference # 14010

Midazolam (Versed) - Adult (ALS)

Behavioral Emergencies, with suspected excited delirium:

Midazolam, 5 mg IM/IN or IV/IO push. May repeat once for a total dosage of 10 mg.

Reference # 11130

Seizure:

Midazolam, 2.5 mg IV/IO/IN. May repeat in five (5) minutes for continued seizure activity,
or

Midazolam, 5 mg IM. May repeat in ten (10) minutes for continued seizure activity.

Assess patient for medication related reduced respiratory rate or hypotension.

Maximum of three (3) doses using any combination of IV/IO/IM/IN may be administered for continued seizure activity. Contact base hospital for additional orders and to discuss further treatment options.

Pacing, synchronized cardioversion:

Midazolam, 2 mg slow IV/IO push or IN

Reference #s 6090, 6110, 7010, 7020, 10190, 11080, 13020, 14080

Midazolam (Versed) - Pediatric (ALS)*Seizures:*

Midazolam, 0.1 mg/kg IV/IO with maximum dose 2.5 mg. May repeat Midazolam in five (5) minutes, **or**

Midazolam, 0.2 mg/kg IM/IN with maximum dose of 5 mg. May repeat Midazolam in ten (10) minutes for continued seizure.

Assess patient for medication related reduced respiratory rate or hypotension.

Maximum of three (3) doses using any combination of IV/IO/IM/IN may be administered for continued seizure activity. Contact base hospital for additional orders and to discuss further treatment options.

Reference #s 7010, 7020, 14060

Naloxone (Narcan) - Adult (BLS)*For resolution of respiratory depression related to suspected opiate overdose:*

Naloxone, 0.5 mg IM/IN, may repeat Naloxone 0.5 mg IM/IN every two (2) to three (3) minutes if needed.

Do not exceed 10 mg of Naloxone total regardless of route administered.

Reference #s 7010, 7020, 8050 11080

Naloxone (Narcan) - Adult (LALS, ALS)*For resolution of respiratory depression related to suspected opiate overdose:*

Naloxone, 0.5 mg IV/IO/IM/IN, may repeat Naloxone 0.5 mg IV/IO/IM/IN every two (2) to three (3) minutes if needed.

Do not exceed 10 mg of Naloxone total regardless of route administered.

Reference #s 6110, 7010, 7020, 11080

Naloxone (Narcan) - Pediatric (BLS)*For resolution of respiratory depression related to suspected opiate overdose:*

1 day to 8 years	Naloxone, 0.1 mg/kg IM/IN (do not exceed the adult dose of 0.5 mg per administration)
9 to 14 years	Naloxone, 0.5 mg IM/IN

May repeat every two (2) to three (3) minutes if needed. Do not exceed the adult dosage of 10 mg total IM/IN.

Reference #s 7010, 7020, 8050, 14040, 14050

Naloxone (Narcan) - Pediatric (LALS, ALS)

For resolution of respiratory depression related to suspected opiate overdose:

- | | |
|------------------|---|
| 1 day to 8 years | Naloxone, 0.1 mg/kg IV/IO/IM/IN (do not exceed the adult dose of 0.5 mg per administration) |
| 9 to 14 years | Naloxone, 0.5 mg IV/IO/IM/IN |

May repeat every two (2) to three (3) minutes if needed. Do not exceed the adult dosage of 10 mg total IV/IO/IM/IN.

Reference #s 7010, 7020, 14040, 14050

Nitroglycerin (NTG) (LALS, ALS)

Nitroglycerin, 0.4 mg sublingual/transmucosal.

One (1) every three (3) minutes as needed. May be repeated as long as patient continues to have signs of adequate tissue perfusion. **If a Right Ventricular Infarction is suspected, the use of nitrates requires base hospital contact.**

Nitroglycerin is contraindicated if there are signs of inadequate tissue perfusion or if sexual enhancement medications have been utilized within the past forty-eight (48) hours.

Reference #s 6090, 6110, 7010, 7020, 11010, 11060

Ondansetron (Zofran) - Patients four (4) years old to Adult (ALS)

Nausea/Vomiting:

Ondansetron, 4 mg slow IV/IO/ODT

All patients four (4) to eight (8) years old: May administer a total of 4 mgs of Ondansetron prior to base hospital contact.

All patients nine (9) and older: May administer Ondansetron 4 mg; may repeat two (2) times, at ten (10) minute intervals, for a total of 12 mgs prior to base hospital contact.

May be used as prophylactic treatment of nausea and vomiting associated with narcotic administration.

Reference #s 6110, 7010, 7020, 9120, 10100, 15010, 15020

Oxygen (non-intubated patient per appropriate delivery device)

General Administration (Hypoxia):

Titrate Oxygen at lowest rate required to maintain SPO₂ at 94%. Do not administer supplemental oxygen for SPO₂ more than 95%.

Chronic Obstructive Pulmonary Disease (COPD):

Titrate Oxygen at lowest rate required to maintain SPO₂ at 90%. Do not administer supplemental oxygen for SPO₂ more than 91%.

Reference #s 9010, 9120, 11010, 11020, 11040, 11050, 11060, 11080, 11090, 11100, 11150, 13010, 13020, 13030, 14010, 14020, 14030, 14050, 14060, 14070, 14080, 14090, 15010, 15020

Sodium Bicarbonate (ALS) (base hospital order only)

Tricyclic Poisoning:

Sodium Bicarbonate, 1 mEq/kg IV/IO

Reference #s 2020, 7010, 7020, 13010

Tranexamic Acid (TXA) - Patients 15 years of age and older (ALS)

Signs of hemorrhagic shock meeting inclusion criteria:

Administer TXA 1 gm in 50 - 100 ml of NS via IV/IO over ten (10) minutes. Do not administer IVP as this will cause hypotension.

Reference #s 7010, 7020, 15010

APPENDIX I

Medications for self-administration or with deployment of the ChemPack.

Medications listed below may be used only for the purposes referenced by the associated ICEMA Treatment Protocol. Any other use, route or dose other than those listed, must be ordered in consultation with the Base Hospital physician.

Atropine - Pediatric (BLS, AEMT-Auto-injector only with training, ALS)

Known nerve agent/organophosphate poisoning with deployment of the ChemPack using:

Two (2) or more mild symptoms: Administer the weight-based dose listed below as soon as an exposure is known or strongly suspected. If severe symptoms develop after the first dose, two (2) additional doses should be repeated in rapid succession ten (10) minutes after the first dose; do not administer more than three (3) doses. If profound anticholinergic effects occur in the absence of excessive bronchial secretions, further doses of atropine should be withheld.

One (1) or more severe symptoms: Immediately administer (3) three weight-based doses listed below in rapid succession.

Weight-based dosing:

Less than 6.8 kg (less than 15 lbs):	0.25 mg, IM using multi-dose vial
6.8 to 18 kg (15 to 40 lbs):	0.5 mg, IM using AtroPen auto-injector
18 to 41 kg (40 to 90 lbs):	1 mg, IM using AtroPen auto-injector
More than 41 kg (more than 90 lbs):	2 mg, IM using multi-dose vial

Symptoms of insecticide or nerve agent poisoning, as provided by manufacturer in the AtroPen product labeling, to guide therapy:

Mild symptoms: Blurred vision, bradycardia, breathing difficulties, chest tightness, coughing, drooling, miosis, muscular twitching, nausea, runny nose, salivation increased, stomach cramps, tachycardia, teary eyes, tremor, vomiting, or wheezing.

Severe symptoms: Breathing difficulties (severe), confused/strange behavior, defecation (involuntary), muscular twitching/generalized weakness (severe), respiratory secretions (severe), seizure, unconsciousness, urination (involuntary).

NOTE: Infants may become drowsy or unconscious with muscle floppiness as opposed to muscle twitching.

Reference #s 7040, 13010, 13040

Diazepam (Valium) - Adult (ALS)

For seizures associated with nerve agent/organophosphate exposure ONLY with the deployment of the ChemPack:

Diazepam 10 mg (5 mg/ml) auto-injector IM (if IV is unavailable), **or**
Diazepam 2.5 mg IV

Reference # 13040

Diazepam (Valium) - Pediatric (ALS)

For seizures associated with nerve agent/organophosphate exposure ONLY with the deployment of the ChemPack:

Diazepam 0.05 mg/kg IV

Reference # 13040

Nerve Agent Antidote Kit (NAAK)/Mark I or DuoDote (containing Atropine/Pralidoxime Chloride for self-administration or with deployment of the ChemPack) - Adult

Nerve agent exposure with associated symptoms:

One (1) NAAK auto-injector IM into outer thigh. May repeat up to two (2) times every ten (10) to fifteen (15) minutes if symptoms persist.

Reference #s 7010, 7020, 13010, 13040



SHOCK (NON-TRAUMATIC)

I. FIELD ASSESSMENT/TREATMENT INDICATORS

- Patient exhibits signs/symptoms of profound shock and hypotension with a SBP of less than 90 mm Hg for adults and a SBP less than 70 mm Hg for pediatrics.
- Determine history of illness.
- History of GI bleeding, vomiting, diarrhea, fever/sepsis or vaginal bleeding.
- Post ROSC for Out of Hospital Cardiac Arrest (OHCA).
- Consider hypoglycemia or narcotic overdose.

II. LIMITED ALS (LALS) INTERVENTIONS

- Maintain airway with appropriate adjuncts, including perilyngeal airway adjunct if indicated.
- Obtain O₂ saturation on room air or on home oxygen if possible.
- Place AED pads on patient as precaution in event patient goes into sudden cardiac arrest.
- Obtain vascular access.
- If hypotensive or have signs or symptoms of inadequate tissue perfusion, administer fluid challenges:
 - ADULT
 - Administer 500 ml IV bolus, may repeat one (1) time until tissue perfusion improves
 - PEDIATRIC
 - Administer 20 ml/kg IV bolus, may repeat one (1) time for tachycardia, change in central/peripheral pulses or altered level of consciousness.

- For patients with no respiratory difficulties and adequate signs of tissue perfusion:
 - ADULT/PEDIATRIC
 - Maintain IV at TKO.

III. ALS INTERVENTIONS

- Perform activities identified in LALS Interventions.
- Maintain airway with appropriate adjuncts, including advanced airway if indicated. Obtain O₂ saturation on room air or on home oxygen if possible.
- Place on cardiac monitor.
- Obtain vascular access.
- If hypotensive or has signs or symptoms of inadequate tissue perfusion, administer fluid challenges:
 - ADULT
 - Administer 500 ml IV bolus, may repeat one (1) time to sustain a SBP of more than 90 mm Hg or until tissue perfusion improves.
 - If no response to fluid administration, stop fluids and administer Push Dose Epinephrine per ICEMA reference #7040 - Medication - Standard Orders.
 - PEDIATRIC
 - Administer 20 ml/kg IV bolus, may repeat one (1) time for tachycardia, change in central/peripheral pulses or altered level of consciousness.
 - If no response to fluid administration, stop fluids and administer Push Dose Epinephrine per ICEMA reference #7040 - Medication - Standard Orders.
- For adults with sustained SBP of more than 90 mm Hg, pediatrics with sustained SBP more than 70 mm Hg, no respiratory difficulties and adequate signs of tissue perfusion:
 - ADULT
 - Maintain IV at TKO.

➤ PEDIATRIC

- Maintain IV at TKO.

Base Hospital May Order

- Establish 2nd large bore IV en route.

IV. REFERENCE

<u>Number</u>	<u>Name</u>
7040	Medication -Standard Orders



RESPIRATORY EMERGENCIES - ADULT

CHRONIC OBSTRUCTIVE PULMONARY DISEASE

I. FIELD ASSESSMENT/TREATMENT INDICATORS

Symptoms of chronic pulmonary disease, wheezing, cough, pursed lip breathing, decreased breath sounds, accessory muscle use, anxiety, ALOC or cyanosis.

II. BLS INTERVENTIONS

- Reduce anxiety, allow patient to assume position of comfort.
- Administer oxygen as clinically indicated, obtain oxygen saturation on room air, or on home oxygen if possible.

III. LIMITED ALS (LALS) INTERVENTIONS

- Perform activities identified in the BLS Interventions.
- Maintain airway with appropriate adjuncts, including advanced airway if indicated. Obtain oxygen saturation on room air or on home oxygen if possible.
- Administer Albuterol per ICEMA Reference #7040 - Medication - Standard Orders.

IV. ALS INTERVENTIONS

- Perform activities identified in the BLS and LALS Interventions.
- Administer Albuterol with Atrovent per ICEMA Reference #7040 - Medication - Standard Orders.
- Place patient on Continuous Positive Airway Pressure (CPAP), refer to ICEMA Reference #10190 - Procedure - Standard Orders.
- Consider advanced airway, refer to ICEMA Reference #10190 - Procedure - Standard Orders.

V. REFERENCES

<u>Number</u>	<u>Name</u>
7040	Medication - Standard Orders
10190	Procedure - Standard Orders

ACUTE ASTHMA/BRONCHOSPASM/ALLERGIC REACTION/ANAPHYLAXIS**I. FIELD ASSESSMENT/TREATMENT INDICATORS**

History of prior attacks, possible toxic inhalation or allergic reaction, associated with wheezing, diminished breath sounds or cough.

II. BLS INTERVENTIONS (For severe asthma and/or anaphylaxis **only)**

- Reduce anxiety, allow patient to assume position of comfort.
- Administer oxygen as clinically indicated, humidified oxygen preferred.

III. LIMITED ALS (LALS) INTERVENTIONS

- Perform activities identified in the BLS Interventions.
- Maintain airway with appropriate adjuncts, obtain oxygen saturation on room air if possible.
- Administer Albuterol per ICEMA Reference #7040 - Medication - Standard Orders.
- For signs of inadequate tissue perfusion, initiate IV bolus of 300 cc NS. If signs of inadequate tissue perfusion persist may repeat fluid bolus one (1) time.
- If no response to Albuterol, administer Epinephrine (1 mg/ml) per ICEMA Reference #7040 - Medication - Standard Orders. Contact base hospital for patients with a history of coronary artery disease, history of hypertension or over 40 years of age prior to administration of Epinephrine.
- May repeat Epinephrine (1 mg/ml), per ICEMA Reference #7040 - Medication - Standard Orders, after 15 minutes one (1) time.

IV. ALS INTERVENTIONS

- Perform activities identified in the BLS and LALS Interventions.
- Administer Albuterol, with Atrovent per ICEMA Reference #7040 - Medication - Standard Orders.

- For suspected allergic reaction, consider Diphenhydramine per ICEMA Reference #7040 - Medication - Standard Orders.
- Place patient on Continuous Positive Airway Pressure (CPAP), refer to ICEMA Reference #10190 - Procedure - Standard Orders.
- If no response to Albuterol, administer Epinephrine (1 mg/ml) per ICEMA Reference #7040 - Medication - Standard Orders. Contact base hospital for patients with a history of coronary artery disease, history of hypertension or over 40 years of age prior to administration of Epinephrine.
- May repeat Epinephrine (1 mg/ml) per ICEMA Reference #7040 - Medication - Standard Orders after 15 minutes one (1) time.
- For persistent severe anaphylactic reaction, administer Epinephrine (0.1 mg/ml) per ICEMA Reference #7040 - Medication - Standard Orders.
- Consider advanced airway, refer ICEMA Reference #10190 - Procedure - Standard Orders.

V. BASE HOSPITAL MAY ORDER THE FOLLOWING

- For severe asthma/respiratory distress that has failed to respond to the other previous treatments, administer Magnesium Sulfate per ICEMA Reference #7040 - Medication - Standard Orders.

VI. REFERENCES

<u>Number</u>	<u>Name</u>
7040	Medication - Standard Orders
10190	Procedure - Standard Orders

ACUTE PULMONARY EDEMA/CHF

I. FIELD ASSESSMENT/TREATMENT INDICATORS

History of cardiac disease, including CHF, and may present with rales, occasional wheezes, jugular venous distention and/or peripheral edema.

II. BLS INTERVENTIONS

- Reduce anxiety, allow patient to assume position of comfort.
- Administer oxygen as clinically indicated. For pulmonary edema with high altitude as a suspected etiology, descend to a lower altitude and administer high flow oxygen with a non re-breather mask.
- Be prepared to support ventilations as clinically indicated.

III. LIMITED ALS (LALS) INTERVENTIONS

- Perform activities identified in the BLS Interventions.
- Maintain airway with appropriate adjuncts, obtain oxygen saturation on room air if possible.
- Administer Nitroglycerine (NTG) per ICEMA Reference #7040 - Medication - Standard Orders. In the presence of hypotension (SBP less than 100), the use of NTG is contraindicated.
- If symptoms do not improve after NTG administration, consider Albuterol per ICEMA Reference #7040 - Medication - Standard Orders.

IV. ALS INTERVENTIONS

- Perform activities identified in the BLS and LALS Interventions.
- Place patient on Continuous Positive Airway Pressure (CPAP), refer to ICEMA Reference #10190 - Procedure - Standard Orders.
- Consider advanced airway, refer to ICEMA Reference #10190 - Procedure - Standard Orders.

V. REFERENCES

<u>Number</u>	<u>Name</u>
7040	Medication - Standard Orders
8050	Transport of Patients (BLS)
10190	Procedure - Standard Orders



SHOCK (NON-TRAUMATIC)

I. FIELD ASSESSMENT/TREATMENT INDICATORS

- Patient exhibits signs/symptoms of profound shock and hypotension with a SBP of less than 90 mm Hg for adults and a SBP less than 70 mm Hg for pediatrics.
- Determine history of illness.
- History of GI bleeding, vomiting, diarrhea, fever/sepsis or vaginal bleeding.
- Post ROSC for Out of Hospital Cardiac Arrest (OHCA).
- Consider hypoglycemia or narcotic overdose.

II. LIMITED ALS (LALS) INTERVENTIONS

- Maintain airway with appropriate adjuncts, including perilyngeal airway adjunct if indicated.
- Obtain O₂ saturation on room air or on home oxygen if possible.
- Place AED pads on patient as precaution in event patient goes into sudden cardiac arrest.
- Obtain vascular access.
- If hypotensive or have signs or symptoms of inadequate tissue perfusion, administer fluid challenges:

➤ ADULT

- Administer 500 ml IV bolus, may repeat one (1) time until tissue perfusion improves

➤ PEDIATRIC

- Administer 20 ml/kg IV bolus, may repeat one (1) time for tachycardia, change in central/peripheral pulses or altered level of consciousness.

- For patients with no respiratory difficulties and adequate signs of tissue perfusion:
 - ADULT/PEDIATRIC
 - Maintain IV at TKO.

III. ALS INTERVENTIONS

- Perform activities identified in LALS Interventions.
- Maintain airway with appropriate adjuncts, including advanced airway if indicated. Obtain O₂ saturation on room air or on home oxygen if possible.
- Place on cardiac monitor.
- Obtain vascular access.
- If hypotensive or has signs or symptoms of inadequate tissue perfusion, administer fluid challenges:
 - ADULT
 - Administer 500 ml IV bolus, may repeat one (1) time to sustain a SBP of more than 90 mm Hg or until tissue perfusion improves.
 - If no response to fluid administration, stop fluids and administer Push Dose Epinephrine per ICEMA reference #7040 - Medication - Standard Orders.
 - PEDIATRIC
 - Administer 20 ml/kg IV bolus, may repeat one (1) time for tachycardia, change in central/peripheral pulses or altered level of consciousness.
 - If no response to fluid administration, stop fluids and administer Push Dose Epinephrine per ICEMA reference #7040 - Medication - Standard Orders.
- For adults with sustained SBP of more than 90 mm Hg, pediatrics with sustained SBP more than 70 mm Hg, no respiratory difficulties and adequate signs of tissue perfusion:
 - ADULT
 - Maintain IV at TKO.

➤ PEDIATRIC

- Maintain IV at TKO.

Base Hospital May Order

- Establish 2nd large bore IV en route.

IV. REFERENCE

<u>Number</u>	<u>Name</u>
7040	Medication -Standard Orders

DELETED



RESPIRATORY EMERGENCIES - PEDIATRIC (Less than 15 years of age)

I. FIELD ASSESSMENT/TREATMENT INDICATORS

- Asthma
- Toxic Inhalation
- Difficult Breathing

II. BLS INTERVENTIONS

- Assess environment and determine possible causes.
- If safe remove patient from any suspected contaminant.
- Recognize signs and symptoms of respiratory distress for age.
- Reduce anxiety, assist patient to assume position of comfort.
- Oxygen administration as clinically indicated (humidified oxygen preferred).

III. LIMITED ALS (LALS) INTERVENTIONS

- Perform activities identified in the BLS Interventions.
- Maintain airway with appropriate adjuncts, obtain oxygen saturation on room air if possible.
- Albuterol per ICEMA Reference #7040 - Medication - Standard Orders.
- If no response to Albuterol, consider Epinephrine per ICEMA Reference #7040 - Medication - Standard Orders.
- Obtain vascular access at a TKO rate.
- If allergic reaction suspected, refer to ICEMA Reference #14030 - Pediatric Allergic Reaction (Less than 15 years of age).

IV. ALS INTERVENTIONS

- Perform activities identified in the BLS and LALS Interventions.
- Albuterol with Atrovent per ICEMA Reference #7040 - Medication - Standard Orders.
- If no response to Albuterol and Atrovent, consider Epinephrine per ICEMA Reference #7040 - Medication - Standard Orders. Obtain vascular access at a TKO rate.
- If allergic reaction suspected, refer to ICEMA Reference #14030 - Allergic Reactions - Pediatric (Less than 15 years of age).
- Base hospital physician may order additional medications or interventions as indicated by patient condition.

V. BASE HOSPITAL MAY ORDER THE FOLLOWING

- For severe asthma/respiratory distress that has failed to respond to the other previous treatments, administer Magnesium Sulfate per ICEMA Reference #7040 - Medication - Standard Orders.

VI. REFERENCES

<u>Number</u>	<u>Name</u>
7040	Medication - Standard Orders
14030	Allergic Reactions - Pediatric (Less than 15 years of age)



MEDICATION - STANDARD ORDERS

Medications listed in this protocol may be used only for the purposes referenced by the associated ICEMA Treatment Protocol.

For Nerve Agent Antidote Kit (NAAK) or medications deployed with the ChemPack see Appendix I (Page 12).

Adenosine (Adenocard) - Adult (ALS)

Stable narrow-complex SVT or Wide complex tachycardia:

Adenosine, 6 mg rapid IVP followed immediately by 20 cc NS bolus, and Adenosine, 12 mg rapid IVP followed immediately by 20 cc NS bolus if patient does not convert. May repeat one (1) time.

Reference #s 7010, 7020, 11050

Albuterol (Proventil) Aerosolized Solution - Adult (LALS, ALS)

Albuterol, 2.5 mg nebulized, may repeat two (2) times.

Reference #s 6090, 7010, 7020, 11010, 11100

Albuterol (Proventil) Metered-Dose Inhaler (MDI) - Adult (LALS, ALS - Specialty Programs Only)

Albuterol MDI, four (4) puffs every ten (10) minutes for continued shortness of breath and wheezing.

Reference #s 6090, 6110, 7010, 7020, 14010, 14030, 14070

Albuterol (Proventil) - Pediatric (LALS, ALS)

Albuterol, 2.5 mg nebulized, may repeat two (2) times.

Reference #s 7010, 7020, 14010, 14030, 14070

Albuterol (Proventil) Metered-Dose Inhaler (MDI) - Pediatric (LALS, ALS - Specialty Programs Only)

Albuterol MDI, four (4) puffs every ten (10) minutes for continued shortness of breath and wheezing.

Reference #s 6090, 6110, 7010, 7020, 14010, 14030, 14070

Aspirin, chewable (LALS, ALS)

Aspirin, 325 mg PO chewed (one (1) adult non-enteric coated aspirin) or four (4) chewable 81 mg aspirin.

Reference #s 2020, 6090, 6110, 7010, 7020, 11060

Atropine (ALS)

Atropine, 0.5 mg IV/IO. May repeat every five (5) minutes up to a maximum of 3 mg or 0.04 mg/kg.

Organophosphate poisoning:

Atropine, 2 mg IV/IO, repeat at 2 mg increments every five (5) minutes if patient remains symptomatic.

Reference #s 6090, 6110, 7010, 7020, 11040, 12020, 13010

Calcium Chloride (ALS)

Calcium Channel Blocker Poisonings:

Calcium Chloride, 1 gm (10 cc of a 10% solution) IV/IO, base hospital order only.

Reference #s 2020, 7010, 7020, 13010

Dextrose - Adult (LALS, ALS)

Hypoglycemia - Adult with blood glucose less than 80 mg/dL:

Dextrose 10% /250 ml (D10W 25 gm) IV/IO Bolus

Reference #s 2020, 6090, 6110, 7010, 7020, 8010, 11050, 11080, 13020, 13030

Dextrose - Pediatric (LALS, ALS)

Hypoglycemia - Neonates (0 - 4 weeks) with blood glucose less than 35 mg/dL or pediatric patients (more than 4 weeks) with glucose less than 60 mg/dL:

Dextrose 10%/250 ml (D10W 25 gm) 0.5 gm/kg (5 ml/kg) IV/IO

Reference #s 2020, 7010, 7020, 13020, 13030, 14040, 14050, 14060

Diphenhydramine - Adult (ALS)

Diphenhydramine, 25 mg IV/IO

Diphenhydramine, 50 mg IM

Reference #s 6090, 6110, 7010, 7020, 11010, 13010

Diphenhydramine - Pediatric (ALS)

Diphenhydramine, 1 mg/kg slow IV/IO, not to exceed adult dose of 25 mg, **or**

Diphenhydramine, 2 mg/kg IM not to exceed adult dose of 50 mg IM

Reference #s 7010, 7020, 14030

Epinephrine (1 mg/ml) - Adult (LALS, ALS)

Severe Bronchospasm, Asthma Attack, Pending Respiratory Failure, Severe Allergic Reactions:

Epinephrine, 0.3 mg IM. May repeat after fifteen (15) minutes one (1) time if symptoms do not improve.

Reference # 11010

Epinephrine (0.1 mg/ml) - Adult (ALS)

For persistent severe anaphylactic reaction:

Epinephrine (0.1 mg/ml), 0.1 mg slow IVP/IO. May repeat every five (5) minutes as needed to total dosage of 0.5 mg.

Reference # 11010

Cardiac Arrest, Asystole, PEA:

Epinephrine (0.1 mg/ml), 1 mg IV/IO.

Reference #s 2020, 6090, 6110, 7010, 7020, 11010, 11070, 12020

Epinephrine (0.01 mg/ml) - Adult (ALS)

Post resuscitation, persistent profound shock and hypotension (Push Dose Epinephrine):

Prepare Epinephrine 0.01 mg/ml solution by mixing 9 ml of normal saline with 1 ml of Epinephrine 0.1 mg/ml in a 10 ml syringe. Administer 1 ml every one (1) to five (5) minutes titrated to maintain SBP more than 90 mm Hg.

Reference #s 2020, 6090, 6110, 7010, 7020, 7040, 11090

Epinephrine (1 mg/ml) - Pediatric (LALS, ALS)

Severe Bronchospasm, Asthma Attack, Pending Respiratory Failure, Severe Allergic Reactions:

Epinephrine, 0.01 mg/kg IM not to exceed adult dosage of 0.3 mg.

Reference #s 2020, 6090, 7010, 7020, 14010, 14030

Epinephrine (0.1 mg/ml) - Pediatric (ALS)

Anaphylactic reaction (no palpable radial pulse and depressed level of consciousness):

Epinephrine (0.1 mg/ml), 0.01 mg/kg IV/IO, no more than 0.1 mg per dose. May repeat to a maximum of 0.5 mg.

Cardiac Arrest:

1 day to 8 years Epinephrine (0.1 mg/ml), 0.01 mg/kg IV/IO (do not exceed adult dosage)

9 to 14 years Epinephrine (0.1mg/ml), 1.0 mg IV/IO

Newborn Care:

Epinephrine (0.1 mg/ml), 0.01mg/kg IV/IO if heart rate is less than 60 after one (1) minute after evaluating airway for hypoxia and assessing body temperature for hypothermia.

Epinephrine (0.1 mg/ml), 0.005 mg/kg IV/IO every ten (10) minutes for persistent hypotension as a base hospital order or in radio communication failure.

Reference # 14090

Epinephrine (0.01 mg/ml) - Pediatric (ALS)

Post resuscitation, profound shock and hypotension (Push Dose Epinephrine):

Prepare Epinephrine 0.01 mg/ml solution by mixing 9 ml of normal saline with 1 ml of Epinephrine 0.1 mg/ml in a 10 ml syringe. Administer 0.1ml/kg (do not exceed adult dosage), every one (1) to five (5) minutes. Titrate to maintain a SBP more than 70 mm Hg.

Reference #s 2020, 7010, 7020, 7040, 11090, 14040

Fentanyl - Adult (ALS)

Chest Pain (Presumed Ischemic Origin):

Fentanyl, 50 mcg slow IV/IO over one (1) minute. May repeat every five (5) minutes titrated to pain, not to exceed 200 mcg.

Fentanyl, 100 mcg IM/IN. May repeat 50 mcg every ten (10) minutes titrated to pain, not to exceed 200 mcg.

Acute traumatic injuries, acute abdominal/flank pain, burn injuries, Cancer pain, Sickle Cell Crisis:

Fentanyl, 50 mcg slow IV/IO push over one (1) minute. May repeat every five (5) minutes titrated to pain, not to exceed 200 mcg IV/IO, **or**

Fentanyl, 100 mcg IM/IN. May repeat 50 mcg every ten (10) minutes titrated to pain, not to exceed 200 mcg.

Pacing, synchronized cardioversion:

Fentanyl, 50 mcg slow IV/IO over one (1) minute. May repeat in five (5) minutes titrated to pain, not to exceed 200 mcg.

Fentanyl, 100 mcg IN. May repeat 50 mcg every ten (10) minutes titrated to pain, not to exceed 200 mcg.

Reference #s 2020, 6090, 6110, 7010, 7020, 7030, 10190, 11060, 11100, 11140, 13030, 15010

Fentanyl - Pediatric (ALS)

Fentanyl, 0.5 mcg/kg slow IV/IO over one (1) minute. May repeat in five (5) minutes titrated to pain, not to exceed 100 mcg.

Fentanyl, 1 mcg/kg IM/IN, may repeat every ten (10) minutes titrated to pain not to exceed 200 mcg.

Reference #s 2020, 6110, 7010, 7020, 7030, 11060, 13030, 14070, 15020

Glucose - Oral - Adult (BLS, LALS, ALS)*Adult with blood glucose less than 80 mg/dL:*

Glucose - Oral, one (1) tube for patients with an intact gag reflex and hypoglycemia.

Reference #s 7010, 7020, 11080, 11090, 11110, 13020

Glucose - Oral - Pediatric (BLS, LALS, ALS)*Hypoglycemia - Neonates (0 - 4 weeks) with blood glucose less than 35 mg/dL or pediatric patients (more than 4 weeks) with glucose less than 60 mg/dL:*

Glucose - Oral, one (1) tube for patients with an intact gag reflex and hypoglycemia.

Reference #s 7010, 7020, 14050, 14060

Glucagon - Adult (LALS, ALS)

Glucagon, 1 mg IM/SC/IN, if unable to establish IV. May administer one (1) time only.

Beta blocker Poisoning:

Glucagon, 1 mg IV/IO (base hospital order only)

Reference #s 6090, 6110, 7010, 7020, 11080, 13010, 13030

Glucagon - Pediatric (LALS, ALS)

Glucagon, 0.025 mg/kg IM/IN, if unable to start an IV. May be repeated one (1) time after twenty (20) minutes for a combined maximum dose of 1 mg.

Reference #s 7010, 7020, 13030, 14050, 14060

Ipratropium Bromide (Atrovent) Inhalation Solution use with Albuterol Adult (ALS)

Atrovent, 0.5 mg nebulized. Administer one (1) dose only.

Reference #s 7010, 7020, 11010, 11100

Ipratropium Bromide (Atrovent) Metered-Dose Inhaler (MDI) use with Albuterol Adult (ALS - Specialty Programs Only)

When used in combination with Albuterol MDI use Albuterol MDI dosing.

Reference #s 6090, 6110, 7010, 7020, 11010, 11100

Ipratropium Bromide (Atrovent) Inhalation Solution use with Albuterol - Pediatric (ALS)

1 day to 12 months Atrovent, 0.25 mg nebulized. Administer one (1) dose only.
1 year to 14 years Atrovent, 0.5 mg nebulized. Administer one (1) dose only.

Reference #s 7010, 7020, 14010, 14030, 14070

Ipratropium Bromide (Atrovent) Metered-Dose Inhaler (MDI) use with Albuterol - Pediatric (ALS - Specialty Programs Only)

When used in combination with Albuterol MDI use Albuterol MDI dosing.

Reference #s 6090, 6110, 7010, 7020, 14010, 14030, 14070

Ketamine - Adult (ALS)

Acute traumatic injury, acute abdominal/flank pain, burn injuries, cancer related pain and sickle cell crisis:

Ketamine, 0.3 mg/kg to a max of 30 mg in a 50 - 100 ml of NS via IV over five (5) minutes. May repeat one (1) time, after 15 minutes, if pain score remains at five (5) or higher. Do not administer IVP, IO, IM, or IN.

This is the official pain scale to be used in patient assessment and documented on the PCR.



Reference #s 7010, 7020, 11140

Lidocaine - Adult (ALS)*VT (pulseless)/VF:*

Initial Dose: Lidocaine, 1.5 mg/kg IV/IO

For refractory *VT (pulseless)/VF*, may administer an additional 0.75 mg/kg IV/IO, repeat one (1) time in five (5) to ten (10) minutes; maximum total dose of 3 mg/kg.*V-Tach, Wide Complex Tachycardia - with Pulses:*

Lidocaine, 1.5 mg/kg slow IV/IO

May administer an additional 0.75 mg/kg slow IV/IO; maximum total dose of 3 mg/kg.

*Reference #s 2020, 6090, 7010, 7020, 8010, 10190, 11050, 11070, 15010***Lidocaine - Pediatric (ALS)***Cardiac Arrest:*

1 day to 8 years Lidocaine, 1.0 mg/kg IV/IO

9 to 14 years Lidocaine, 1.0 mg/kg IV/IO

May repeat Lidocaine at 0.5 mg/kg after five (5) minutes; maximum total dose of 3 mg/kg.

*Reference #s 2020, 7010, 7020, 14040***Lidocaine 2% (Intravenous Solution) - Pediatric and Adult (ALS)***Pain associated with IO infusion:*

Lidocaine, 0.5 mg/kg slow IO push over two (2) minutes, not to exceed 40 mg total.

*Reference #s 2020, 7010, 7020, 10140, 10190***Lidocaine 2% Gel (Viscous) - Pediatric and Adult (ALS)***Pain associated with Nasogastric/Orogastric Tube insertion.**Reference # 10190***Magnesium Sulfate (ALS)***Polymorphic Ventricular Tachycardia:*

Magnesium Sulfate, 2 gm IV/IO bolus over five (5) minutes for polymorphic VT if prolonged QT is observed during sinus rhythm post-cardioversion.

Eclampsia (Seizure/Tonic/Clonic Activity):

Magnesium Sulfate, 4 gm IV/IO slow IV push over three (3) to four (4) minutes.

Magnesium Sulfate, 10 mg/min IV/IO drip to prevent continued seizures.

Reference #s 2020, 7010, 7020, 8010, 14080

Severe Asthma/Respiratory Distress (ALS) (base hospital order only):

Magnesium Sulfate, 2 gm slow IV drip over 20 minutes. Do not repeat.

Reference# 11010

Magnesium Sulfate - Pediatric (ALS)*Severe Asthma/Respiratory Distress (base hospital order only):*

Magnesium Sulfate, 50mg/kg slow IV drip over 20 minutes. Do not exceed the adult dosage of 2 gm total. Do not repeat.

Reference # 14010

Midazolam (Versed) - Adult (ALS)*Behavioral Emergencies, with suspected excited delirium:*

Midazolam, 5 mg IM/IN or IV/IO push. May repeat once for a total dosage of 10 mg.

Reference # 11130

Seizure:

Midazolam, 2.5 mg IV/IO/IN. May repeat in five (5) minutes for continued seizure activity,
or

Midazolam, 5 mg IM. May repeat in ten (10) minutes for continued seizure activity.

Assess patient for medication related reduced respiratory rate or hypotension.

Maximum of three (3) doses using any combination of IV/IO/IM/IN may be administered for continued seizure activity. Contact base hospital for additional orders and to discuss further treatment options.

Pacing, synchronized cardioversion:

Midazolam, 2 mg slow IV/IO push or IN

Reference #s 6090, 6110, 7010, 7020, 10190, 11080, 13020, 14080

Midazolam (Versed) - Pediatric (ALS)*Seizures:*

Midazolam, 0.1 mg/kg IV/IO with maximum dose 2.5 mg. May repeat Midazolam in five (5) minutes, **or**

Midazolam, 0.2 mg/kg IM/IN with maximum dose of 5 mg. May repeat Midazolam in ten (10) minutes for continued seizure.

Assess patient for medication related reduced respiratory rate or hypotension.

Maximum of three (3) doses using any combination of IV/IO/IM/IN may be administered for continued seizure activity. Contact base hospital for additional orders and to discuss further treatment options.

Reference #s 7010, 7020, 14060

Naloxone (Narcan) - Adult (BLS)*For resolution of respiratory depression related to suspected opiate overdose:*

Naloxone, 0.5 mg IM/IN, may repeat Naloxone 0.5 mg IM/IN every two (2) to three (3) minutes if needed.

Do not exceed 10 mg of Naloxone total regardless of route administered.

Reference #s 7010, 7020, 8050 11080

Naloxone (Narcan) - Adult (LALS, ALS)*For resolution of respiratory depression related to suspected opiate overdose:*

Naloxone, 0.5 mg IV/IO/IM/IN, may repeat Naloxone 0.5 mg IV/IO/IM/IN every two (2) to three (3) minutes if needed.

Do not exceed 10 mg of Naloxone total regardless of route administered.

Reference #s 6110, 7010, 7020, 11080

Naloxone (Narcan) - Pediatric (BLS)*For resolution of respiratory depression related to suspected opiate overdose:*

1 day to 8 years	Naloxone, 0.1 mg/kg IM/IN (do not exceed the adult dose of 0.5 mg per administration)
9 to 14 years	Naloxone, 0.5 mg IM/IN

May repeat every two (2) to three (3) minutes if needed. Do not exceed the adult dosage of 10 mg total IM/IN.

Reference #s 7010, 7020, 8050, 14040, 14050

Naloxone (Narcan) - Pediatric (LALS, ALS)

For resolution of respiratory depression related to suspected opiate overdose:

1 day to 8 years	Naloxone, 0.1 mg/kg IV/IO/IM/IN (do not exceed the adult dose of 0.5 mg per administration)
9 to 14 years	Naloxone, 0.5 mg IV/IO/IM/IN

May repeat every two (2) to three (3) minutes if needed. Do not exceed the adult dosage of 10 mg total IV/IO/IM/IN.

Reference #s 7010, 7020, 14040, 14050

Nitroglycerin (NTG) (LALS, ALS)

Nitroglycerin, 0.4 mg sublingual/transmucosal.

One (1) every three (3) minutes as needed. May be repeated as long as patient continues to have signs of adequate tissue perfusion. **If a Right Ventricular Infarction is suspected, the use of nitrates requires base hospital contact.**

Nitroglycerin is contraindicated if there are signs of inadequate tissue perfusion or if sexual enhancement medications have been utilized within the past forty-eight (48) hours.

Reference #s 6090, 6110, 7010, 7020, 11010, 11060

Ondansetron (Zofran) - Patients four (4) years old to Adult (ALS)

Nausea/Vomiting:

Ondansetron, 4 mg slow IV/IO/ODT

All patients four (4) to eight (8) years old: May administer a total of 4 mgs of Ondansetron prior to base hospital contact.

All patients nine (9) and older: May administer Ondansetron 4 mg; may repeat two (2) times, at ten (10) minute intervals, for a total of 12 mgs prior to base hospital contact.

May be used as prophylactic treatment of nausea and vomiting associated with narcotic administration.

Reference #s 6110, 7010, 7020, 9120, 10100, 15010, 15020

Oxygen (non-intubated patient per appropriate delivery device)

General Administration (Hypoxia):

Titrate Oxygen at lowest rate required to maintain SPO₂ at 94%. Do not administer supplemental oxygen for SPO₂ more than 95%.

Chronic Obstructive Pulmonary Disease (COPD):

Titrate Oxygen at lowest rate required to maintain SPO₂ at 90%. Do not administer supplemental oxygen for SPO₂ more than 91%.

Reference #s 9010, 9120, 11010, 11020, 11040, 11050, 11060, 11080, 11090, 11100, 11150, 13010, 13020, 13030, 14010, 14020, 14030, 14050, 14060, 14070, 14080, 14090, 15010, 15020

Sodium Bicarbonate (ALS) (base hospital order only)

Tricyclic Poisoning:

Sodium Bicarbonate, 1 mEq/kg IV/IO

Reference #s 2020, 7010, 7020, 13010

Tranexamic Acid (TXA) - Patients 15 years of age and older (ALS)

Signs of hemorrhagic shock meeting inclusion criteria:

Administer TXA 1 gm in 50 - 100 ml of NS via IV/IO over ten (10) minutes. Do not administer IVP as this will cause hypotension.

Reference #s 7010, 7020, 15010

APPENDIX I

Medications for self-administration or with deployment of the ChemPack.

Medications listed below may be used only for the purposes referenced by the associated ICEMA Treatment Protocol. Any other use, route or dose other than those listed, must be ordered in consultation with the Base Hospital physician.

Atropine - Pediatric (BLS, AEMT-Auto-injector only with training, ALS)

Known nerve agent/organophosphate poisoning with deployment of the ChemPack using:

Two (2) or more mild symptoms: Administer the weight-based dose listed below as soon as an exposure is known or strongly suspected. If severe symptoms develop after the first dose, two (2) additional doses should be repeated in rapid succession ten (10) minutes after the first dose; do not administer more than three (3) doses. If profound anticholinergic effects occur in the absence of excessive bronchial secretions, further doses of atropine should be withheld.

One (1) or more severe symptoms: Immediately administer (3) three weight-based doses listed below in rapid succession.

Weight-based dosing:

Less than 6.8 kg (less than 15 lbs):	0.25 mg, IM using multi-dose vial
6.8 to 18 kg (15 to 40 lbs):	0.5 mg, IM using AtroPen auto-injector
18 to 41 kg (40 to 90 lbs):	1 mg, IM using AtroPen auto-injector
More than 41 kg (more than 90 lbs):	2 mg, IM using multi-dose vial

Symptoms of insecticide or nerve agent poisoning, as provided by manufacturer in the AtroPen product labeling, to guide therapy:

Mild symptoms: Blurred vision, bradycardia, breathing difficulties, chest tightness, coughing, drooling, miosis, muscular twitching, nausea, runny nose, salivation increased, stomach cramps, tachycardia, teary eyes, tremor, vomiting, or wheezing.

Severe symptoms: Breathing difficulties (severe), confused/strange behavior, defecation (involuntary), muscular twitching/generalized weakness (severe), respiratory secretions (severe), seizure, unconsciousness, urination (involuntary).

NOTE: Infants may become drowsy or unconscious with muscle floppiness as opposed to muscle twitching.

Reference #s 7040, 13010, 13040

Diazepam (Valium) - Adult (ALS)

For seizures associated with nerve agent/organophosphate exposure ONLY with the deployment of the ChemPack:

Diazepam 10 mg (5 mg/ml) auto-injector IM (if IV is unavailable), **or**
Diazepam 2.5 mg IV

Reference # 13040

Diazepam (Valium) - Pediatric (ALS)

For seizures associated with nerve agent/organophosphate exposure ONLY with the deployment of the ChemPack:

Diazepam 0.05 mg/kg IV

Reference # 13040

Nerve Agent Antidote Kit (NAAK)/Mark I or DuoDote (containing Atropine/Pralidoxime Chloride for self-administration or with deployment of the ChemPack) - Adult

Nerve agent exposure with associated symptoms:

One (1) NAAK auto-injector IM into outer thigh. May repeat up to two (2) times every ten (10) to fifteen (15) minutes if symptoms persist.

Reference #s 7010, 7020, 13010, 13040



SHOCK (NON-TRAUMATIC)

I. FIELD ASSESSMENT/TREATMENT INDICATORS

- Patient exhibits signs/symptoms of profound shock and hypotension with a SBP of less than 90 mm Hg for adults and a SBP less than 70 mm Hg for pediatrics.
- Determine history of illness.
- History of GI bleeding, vomiting, diarrhea, fever/sepsis or vaginal bleeding.
- Post ROSC for Out of Hospital Cardiac Arrest (OHCA).
- Consider hypoglycemia or narcotic overdose.

II. LIMITED ALS (LALS) INTERVENTIONS

- Maintain airway with appropriate adjuncts, including perilyngeal airway adjunct if indicated.
- Obtain O₂ saturation on room air or on home oxygen if possible.
- Place AED pads on patient as precaution in event patient goes into sudden cardiac arrest.
- Obtain vascular access.
- If hypotensive or have signs or symptoms of inadequate tissue perfusion, administer fluid challenges:
 - ADULT
 - Administer 500 ml IV bolus, may repeat one (1) time until tissue perfusion improves
 - PEDIATRIC
 - Administer 20 ml/kg IV bolus, may repeat one (1) time for tachycardia, change in central/peripheral pulses or altered level of consciousness.

- For patients with no respiratory difficulties and adequate signs of tissue perfusion:
 - ADULT/PEDIATRIC
 - Maintain IV at TKO.

III. ALS INTERVENTIONS

- Perform activities identified in LALS Interventions.
- Maintain airway with appropriate adjuncts, including advanced airway if indicated. Obtain O₂ saturation on room air or on home oxygen if possible.
- Place on cardiac monitor.
- Obtain vascular access.
- If hypotensive or has signs or symptoms of inadequate tissue perfusion, administer fluid challenges:
 - ADULT
 - Administer 500 ml IV bolus, may repeat one (1) time to sustain a SBP of more than 90 mm Hg or until tissue perfusion improves.
 - If no response to fluid administration, stop fluids and administer Push Dose Epinephrine per ICEMA reference #7040 - Medication - Standard Orders.
 - PEDIATRIC
 - Administer 20 ml/kg IV bolus, may repeat one (1) time for tachycardia, change in central/peripheral pulses or altered level of consciousness.
 - If no response to fluid administration, stop fluids and administer Push Dose Epinephrine per ICEMA reference #7040 - Medication - Standard Orders.
- For adults with sustained SBP of more than 90 mm Hg, pediatrics with sustained SBP more than 70 mm Hg, no respiratory difficulties and adequate signs of tissue perfusion:
 - ADULT
 - Maintain IV at TKO.

➤ PEDIATRIC

- Maintain IV at TKO.

Base Hospital May Order

- Establish 2nd large bore IV en route.

IV. REFERENCE

<u>Number</u>	<u>Name</u>
7040	Medication -Standard Orders



RESPIRATORY EMERGENCIES - ADULT

CHRONIC OBSTRUCTIVE PULMONARY DISEASE

I. FIELD ASSESSMENT/TREATMENT INDICATORS

Symptoms of chronic pulmonary disease, wheezing, cough, pursed lip breathing, decreased breath sounds, accessory muscle use, anxiety, ALOC or cyanosis.

II. BLS INTERVENTIONS

- Reduce anxiety, allow patient to assume position of comfort.
- Administer oxygen as clinically indicated, obtain oxygen saturation on room air, or on home oxygen if possible.

III. LIMITED ALS (LALS) INTERVENTIONS

- Perform activities identified in the BLS Interventions.
- Maintain airway with appropriate adjuncts, including advanced airway if indicated. Obtain oxygen saturation on room air or on home oxygen if possible.
- Administer Albuterol per ICEMA Reference #7040 - Medication - Standard Orders.

IV. ALS INTERVENTIONS

- Perform activities identified in the BLS and LALS Interventions.
- Administer Albuterol with Atrovent per ICEMA Reference #7040 - Medication - Standard Orders.
- Place patient on Continuous Positive Airway Pressure (CPAP), refer to ICEMA Reference #10190 - Procedure - Standard Orders.
- Consider advanced airway, refer to ICEMA Reference #10190 - Procedure - Standard Orders.

V. REFERENCES

<u>Number</u>	<u>Name</u>
7040	Medication - Standard Orders

10190 Procedure - Standard Orders

ACUTE ASTHMA/BRONCHOSPASM/ALLERGIC REACTION/ANAPHYLAXIS**I. FIELD ASSESSMENT/TREATMENT INDICATORS**

History of prior attacks, possible toxic inhalation or allergic reaction, associated with wheezing, diminished breath sounds or cough.

II. BLS INTERVENTIONS (For severe asthma and/or anaphylaxis only)

- Reduce anxiety, allow patient to assume position of comfort.
- Administer oxygen as clinically indicated, humidified oxygen preferred.

III. LIMITED ALS (LALS) INTERVENTIONS

- Perform activities identified in the BLS Interventions.
- Maintain airway with appropriate adjuncts, obtain oxygen saturation on room air if possible.
- Administer Albuterol per ICEMA Reference #7040 - Medication - Standard Orders.
- For signs of inadequate tissue perfusion, initiate IV bolus of 300 cc NS. If signs of inadequate tissue perfusion persist may repeat fluid bolus one (1) time.
- If no response to Albuterol, administer Epinephrine (1 mg/ml) per ICEMA Reference #7040 - Medication - Standard Orders. Contact base hospital for patients with a history of coronary artery disease, history of hypertension or over 40 years of age prior to administration of Epinephrine.
- May repeat Epinephrine (1 mg/ml), per ICEMA Reference #7040 - Medication - Standard Orders, after 15 minutes one (1) time.

IV. ALS INTERVENTIONS

- Perform activities identified in the BLS and LALS Interventions.
- Administer Albuterol, with Atrovent per ICEMA Reference #7040 - Medication - Standard Orders.
- For suspected allergic reaction, consider Diphenhydramine per ICEMA Reference #7040 - Medication - Standard Orders.

- Place patient on Continuous Positive Airway Pressure (CPAP), refer to ICEMA Reference #10190 - Procedure - Standard Orders.
- If no response to Albuterol, administer Epinephrine (1 mg/ml) per ICEMA Reference #7040 - Medication - Standard Orders. Contact base hospital for patients with a history of coronary artery disease, history of hypertension or over 40 years of age prior to administration of Epinephrine.
- May repeat Epinephrine (1 mg/ml) per ICEMA Reference #7040 - Medication - Standard Orders after 15 minutes one (1) time.
- For persistent severe anaphylactic reaction, administer Epinephrine (0.1 mg/ml) per ICEMA Reference #7040 - Medication - Standard Orders.
- Consider advanced airway, refer ICEMA Reference #10190 - Procedure - Standard Orders.

V. BASE HOSPITAL MAY ORDER THE FOLLOWING

- For severe asthma/respiratory distress that has failed to respond to the other previous treatments, administer Magnesium Sulfate per ICEMA Reference #7040 - Medication - Standard Orders.

VI. REFERENCES

<u>Number</u>	<u>Name</u>
7040	Medication - Standard Orders
10190	Procedure - Standard Orders

ACUTE PULMONARY EDEMA/CHF

I. FIELD ASSESSMENT/TREATMENT INDICATORS

History of cardiac disease, including CHF, and may present with rales, occasional wheezes, jugular venous distention and/or peripheral edema.

II. BLS INTERVENTIONS

- Reduce anxiety, allow patient to assume position of comfort.
- Administer oxygen as clinically indicated. For pulmonary edema with high altitude as a suspected etiology, descend to a lower altitude and administer high flow oxygen with a non re-breather mask.
- Be prepared to support ventilations as clinically indicated.

III. LIMITED ALS (LALS) INTERVENTIONS

- Perform activities identified in the BLS Interventions.
- Maintain airway with appropriate adjuncts, obtain oxygen saturation on room air if possible.
- Administer Nitroglycerine (NTG) per ICEMA Reference #7040 - Medication - Standard Orders. In the presence of hypotension (SBP less than 100), the use of NTG is contraindicated.
- If symptoms do not improve after NTG administration, consider Albuterol per ICEMA Reference #7040 - Medication - Standard Orders.

IV. ALS INTERVENTIONS

- Perform activities identified in the BLS and LALS Interventions.
- Place patient on Continuous Positive Airway Pressure (CPAP), refer to ICEMA Reference #10190 - Procedure - Standard Orders.
- Consider advanced airway, refer to ICEMA Reference #10190 - Procedure - Standard Orders.

V. REFERENCES

<u>Number</u>	<u>Name</u>
7040	Medication - Standard Orders
8050	Transport of Patients (BLS)
10190	Procedure - Standard Orders



SHOCK (NON-TRAUMATIC)

I. FIELD ASSESSMENT/TREATMENT INDICATORS

- Patient exhibits signs/symptoms of profound shock and hypotension with a SBP of less than 90 mm Hg for adults and a SBP less than 70 mm Hg for pediatrics.
- Determine history of illness.
- History of GI bleeding, vomiting, diarrhea, fever/sepsis or vaginal bleeding.
- Post ROSC for Out of Hospital Cardiac Arrest (OHCA).
- Consider hypoglycemia or narcotic overdose.

II. LIMITED ALS (LALS) INTERVENTIONS

- Maintain airway with appropriate adjuncts, including perilyngeal airway adjunct if indicated.
- Obtain O₂ saturation on room air or on home oxygen if possible.
- Place AED pads on patient as precaution in event patient goes into sudden cardiac arrest.
- Obtain vascular access.
- If hypotensive or have signs or symptoms of inadequate tissue perfusion, administer fluid challenges:

➤ ADULT

- Administer 500 ml IV bolus, may repeat one (1) time until tissue perfusion improves

➤ PEDIATRIC

- Administer 20 ml/kg IV bolus, may repeat one (1) time for tachycardia, change in central/peripheral pulses or altered level of consciousness.

- For patients with no respiratory difficulties and adequate signs of tissue perfusion:
 - ADULT/PEDIATRIC
 - Maintain IV at TKO.

III. ALS INTERVENTIONS

- Perform activities identified in LALS Interventions.
- Maintain airway with appropriate adjuncts, including advanced airway if indicated. Obtain O₂ saturation on room air or on home oxygen if possible.
- Place on cardiac monitor.
- Obtain vascular access.
- If hypotensive or has signs or symptoms of inadequate tissue perfusion, administer fluid challenges:
 - ADULT
 - Administer 500 ml IV bolus, may repeat one (1) time to sustain a SBP of more than 90 mm Hg or until tissue perfusion improves.
 - If no response to fluid administration, stop fluids and administer Push Dose Epinephrine per ICEMA reference #7040 - Medication - Standard Orders.
 - PEDIATRIC
 - Administer 20 ml/kg IV bolus, may repeat one (1) time for tachycardia, change in central/peripheral pulses or altered level of consciousness.
 - If no response to fluid administration, stop fluids and administer Push Dose Epinephrine per ICEMA reference #7040 - Medication - Standard Orders.
- For adults with sustained SBP of more than 90 mm Hg, pediatrics with sustained SBP more than 70 mm Hg, no respiratory difficulties and adequate signs of tissue perfusion:
 - ADULT
 - Maintain IV at TKO.

➤ PEDIATRIC

- Maintain IV at TKO.

Base Hospital May Order

- Establish 2nd large bore IV en route.

IV. REFERENCE

<u>Number</u>	<u>Name</u>
7040	Medication -Standard Orders

DELETED



RESPIRATORY EMERGENCIES - PEDIATRIC (Less than 15 years of age)

I. FIELD ASSESSMENT/TREATMENT INDICATORS

- Asthma
- Toxic Inhalation
- Difficult Breathing

II. BLS INTERVENTIONS

- Assess environment and determine possible causes.
- If safe remove patient from any suspected contaminant.
- Recognize signs and symptoms of respiratory distress for age.
- Reduce anxiety, assist patient to assume position of comfort.
- Oxygen administration as clinically indicated (humidified oxygen preferred).

III. LIMITED ALS (LALS) INTERVENTIONS

- Perform activities identified in the BLS Interventions.
- Maintain airway with appropriate adjuncts, obtain oxygen saturation on room air if possible.
- Albuterol per ICEMA Reference #7040 - Medication - Standard Orders.
- If no response to Albuterol, consider Epinephrine per ICEMA Reference #7040 - Medication - Standard Orders.
- Obtain vascular access at a TKO rate.
- If allergic reaction suspected, refer to ICEMA Reference #14030 - Pediatric Allergic Reaction (Less than 15 years of age).

IV. ALS INTERVENTIONS

- Perform activities identified in the BLS and LALS Interventions.
- Albuterol with Atrovent per ICEMA Reference #7040 - Medication - Standard Orders.
- If no response to Albuterol and Atrovent, consider Epinephrine per ICEMA Reference #7040 - Medication - Standard Orders. Obtain vascular access at a TKO rate.
- If allergic reaction suspected, refer to ICEMA Reference #14030 - Allergic Reactions - Pediatric (Less than 15 years of age).
- Base hospital physician may order additional medications or interventions as indicated by patient condition.

V. BASE HOSPITAL MAY ORDER THE FOLLOWING

- For severe asthma/respiratory distress that has failed to respond to the other previous treatments, administer Magnesium Sulfate per ICEMA Reference # 7040 - Medication - Standard Orders.

VI. REFERENCES

<u>Number</u>	<u>Name</u>
7040	Medication - Standard Orders
14030	Allergic Reactions - Pediatric (Less than 15 years of age)