A special meeting of PMAC is on:
Tuesday, July 26, 2011
9:00AM – 12:00PM
Riverside County Regional Medical Center
26520 Cactus Avenue, Moreno Valley
Rooms A1018 and A1020
951/358-5029

1. CALL TO ORDER
   Chairman Reza Vaezazizi, MD

2. PLEDGE OF ALLEGIANCE
   Reza Vaezazizi, MD

3. ROUNDTABLE INTRODUCTIONS
   Reza Vaezazizi, MD

4. Draft Policy Review and Discussion (90 Minutes)
   4.1 6000 Introduction to Protocols
   4.2 6010 Universal Patient
   4.3 6011 Calculation Chart
   4.4 6020 Physician on Scene Assuming Responsibility
   4.5 6030 Refusal of Treatment and or Transportation
   4.6 6090 Do not Attempt Resuscitation-Discontinue Resuscitation
   4.7 Prehospital Death
   4.8 6300 Burns

5. Break (10 Minutes)

6. Draft Policy Review and Discussion (60 Minutes)
   6.1 6320 Heat Illness and / or Hyperthermia
   6.2 6400 Nausea and Vomiting
   6.3 6530 Seizures
   6.4 6600 Pre-Eclampsia
   6.5 6700 Overdose
   6.6 6710 Toxic Exposure, Inhalation or Ingestion

7. Good of the Order / Announcements (10 Minutes)
8. **Next Special Meeting / Adjournment (5 Minutes)**  
August 23, 2011
PURPOSE
To introduce these treatment protocols, explain the format, provide standard definitions, and list the references that apply to the County of Riverside EMS Agency (REMSA) Treatment Protocols.

AUTHORITY
California Health and Safety Code - Division 2.5: Emergency Medical Services [1797. - 1799.207.]

Introduction to Treatment Protocols
Riverside Emergency Medical Services Agency (REMSA) Policy (including the Administrative Policies, Operational Policies, Treatment Protocols, and Performance Standards) that has been approved by the REMSA Director and Medical Director, and bears effective and expiration dates marking it as current, constitutes medical control by the REMSA Medical Director as specified in Section 1798 of the California Health and Safety Code. Each individual policy must be observed within the context of all REMSA Policy inclusively.

The REMSA Treatment Protocols must be adhered to by all REMSA authorized providers including the:

- Emergency Medical Dispatcher (EMD)
- Emergency Medical Responder (EMR)
- Emergency Medical Technician (EMT)
- Advanced Emergency Medical Technician (AEMT)
- Paramedic (PM)
- Mobile Intensive Care Nurse (MICN)
- Base Hospital Physician (BHP)

First responders who have completed Cal Fire’s “First Responder Medical Training” as described on page 20 of the CDF Training and Academy Course Catalog, must follow the REMSA Treatment Protocols as if they were trained at the EMR level, and may not operate beyond the REMSA approved scope of practice of an EMR.

The REMSA Treatment Protocols are organized around the Universal Patient Treatment Protocol. The Universal Patient Treatment Protocol must be followed for all patients as it provides a universal patient treatment algorithm that allows other REMSA Treatment Protocols to be integrated as clinically indicated for scene management, emergency stabilization, patient disposition, and patient management. Each applicable REMSA policy must additionally be followed with the intent to provide simple, rapid, and proven to be effective, life saving treatment with rapid transport to definitive care at the most clinically appropriate receiving hospital.

The most medically qualified EMT, AEMT, or PM at scene must contact a REMSA authorized Base Hospital (BH) for Online Medical Direction (OMD) when required by REMSA Policy. OMD is not provided to the EMR. Additionally, OMD is required when the EMT, AEMT, or PM encounters an atypical presentation or circumstance, or is uncertain of any of the following:

1. The differential diagnosis and field impression
2. What therapeutic interventions are indicated
3. What patient disposition is indicated
OMD is provided to the EMT, AEMT, or PM through recorded radio or phone voice communications with the MICN or BHP of a REMSA authorized BH. The MICN may provide OMD regarding further assessment, clarification, monitoring, and patient disposition. The BHP may additionally provide OMD which includes orders for medications or procedures. A base hospital physician order (BHPO) is required for the administration or application of many medications or procedures, as described below under “Medication and Procedure Orders”. At no time may any REMSA authorized EMS provider operate beyond, or direct another to operate beyond, their REMSA approved scope of practice.

**Algorithms**

All REMSA treatment algorithms follow the conventional left-to-right and top-to-bottom pattern to indicate the general action sequence. Traditional flowchart shapes are used to illustrate the algorithm, though the conventional “decision” diamond is not used. Where discretionary EMS provider judgment is required, wording such as “as clinically indicated” or “when clinically required” is used to emphasize the critical thinking process required. While presented sequentially, many of the elements in each section are expected to be completed simultaneously. The content of each section is to be performed by the provider(s) signified by the colored tab attached to the right of that section: EMR, EMT, AEMT, or PM.
Medication and Procedure Orders

REMSA Treatment Protocols include written orders for medications and procedures using the format shown above as “an example order”. These orders apply to both adult and pediatric patients with necessary dosage or size adjustments given by means of the REMSA Calculation Chart, and any limitations described in the order. A frequent limitation is the requirement of a BHPO.

To obtain a BHPO the EMT, AEMT, or PM must contact a BH. Once contacted, a BH provides OMD, directing all further prehospital care. The BHP may then order medications and procedures referred to under the section “Base Hospital Physician Orders”, or may order any available medication or procedure within the field provider’s scope of practice.

The section “Base Hospital Physician Orders” is designed as a reference for the EMT, AEMT, or PM when determining the need to contact OMD, and as a reference for the MICN or BHP when providing orders within the field provider’s scope of practice. It is not meant as a list of medications and procedures that require a BHPO in every circumstance, as many of the medications and procedures listed repeat the written orders already provided.

Printing and Display

All REMSA Treatment Protocols are intended for color printing, and hard copy retention in a binder using top loading sheet protectors. These protocols are also intended for electronic display in Adobe Portable Document Format (PDF). Distribution is provided by means of the EMS Agency’s official websites.

Definitions

The standard definitions as used throughout the REMSA Treatment Protocols follow.

Apparent Life-Threatening Event (ALTE)
An infantile episode characterized by some combination of apnea, color change, marked change in muscle tone, choking, or gagging.

References

The REMSA Treatment Protocols are based in law, science, and medical consensus. The references that contributed to these policies are listed as HTML links below.

Authority
3. County of Riverside Ordinance 756 (Ambulance Ordinance)
4. County of Riverside: EMS Plan
5. County of Riverside: Trauma Plan

Common References
6. National EMS: Core Content
7. National EMS: Scope of Practice Model
8. California EMSA: Scope of Practice Position Statements
10. The Joint Commission: "Do Not Use" List of Abbreviations
12. 2010 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science

5310 — Ambulance Diversion
14. CDF: Training and Academy Course Catalog
15. Barriers to adoption of evidence-based prehospital airway management practices in California.

16. The leadership vacuum in resuscitative medicine.
17. Improving handoffs in the emergency department.
18. Institute for Healthcare Improvement: SBAR Technique for Communication: A Situational Briefing Model
19. Contra Costa EMS - SBAR Communication
20. Accuracy of bedside glucose measurement from three glucometers in critically ill patients.
21. Review article: glucose measurement in the operating room: more complicated than it seems.
22. Comparison of POCT and central laboratory blood glucose results using arterial, capillary, and venous samples from MICU patients on a tight glycemic protocol.
23. Efficacy and compliance of a prehospital spinal immobilization guideline.
25. The 6-plus-person lift transfer technique compared with other methods of spine boarding.
26. Are scoop stretchers suitable for use on spine-injured patients?
27. A comparison of the King-LT to endotracheal intubation and Combitube in a simulated difficult airway.
30. Accuracy of surface landmark identification for cannula cricothyroidotomy.
31. Comparison of intravenous and intraosseous access by pre-hospital medical emergency personnel with and without CBRN protective equipment.
32. Comparison of two intraosseous access devices in adult patients under resuscitation in the emergency department: A prospective, randomized study.
33. Transporting without infusions: effect on door-to-needle time for acute coronary syndrome patients.
34. Infantile Apnea and Home Monitoring.
35. Patients presenting to the emergency department with non-specific complaints: the Basel Non-Specific Complaints (BANC) study.
36. A comparison of the quality of blood specimens drawn in the field by EMS versus specimens obtained in the emergency department.
37. BD Vacutainer Tube Guide
38. BD Vacutainer Order of Draw

6011 — Calculation Chart
40. CDC Clinical Growth Charts
41. Performance Measures Checklist for Recommended Pediatric Equipment and Supplies for BLS and ALS Ambulances
42. Meridian Medical Technologies AtroPen Pack Insert

6030 — Patient Disposition of Refusal of Treatment and-or Transport
43. CURVES: a mnemonic for determining medical decision-making capacity and providing emergency treatment in the acute setting.

6200 — Chest Pain - Suspected Acute Coronary Syndrome (ACS)
44. Initial aspirin dose and outcome among ST-elevation myocardial infarction patients treated with fibrinolytic therapy.
45. Nitrate induced coronary vasodilatation: differential effects of sublingual application by capsule or spray.
46. More rapid relief of pain with isosorbide dinitrate oral spray than with sublingual tablets in elderly patients with angina pectoris.
47. Sublingual nitroglycerin or spray in the treatment of angina.


49. FDA Safety Recall of Stamina-Rx

6250 — Cardiac Arrest

50. 2010 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science

6090 — Patient Disposition of Do Not Attempt Resuscitation - Discontinue Resuscitation

51. California EMS Authority: Do-Not-Resuscitate (DNR) Guidelines & Frequently Asked Questions about DNR

52. 2010 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science

6300 — Burns

53. American Burn Association Severity Determination

54. Elements of Neurologic Assessment from Spinal Cord Medicine Principles and Practice

55. Burn Transfer Guidelines - NSW Severe Burn Injury Service - 2nd Edition

56. The association between hypothermia, prehospital cooling, and mortality in burn victims.

6320 — Heat Related Illnesses

57. Medscape: Heatstroke

58. Medscape: Cooling Techniques for Hyperthermia

59. Sickle-cell trait as a risk factor for sudden death in physical training.

60. Fatal rhabdomyolysis presenting as mild heat illness in military training.

61. Sickle cell trait and sudden death--bringing it home.

6400 — Nausea and Vomiting

62. The management of children with gastroenteritis and dehydration in the emergency department.

6510 — Altered Mental Status with Hypoglycemia

63. Prehospital treatment of severe hypoglycaemia: a comparison of intramuscular glucagon and intravenous glucose.

64. Subcutaneous glucagon may be better than oral glucose for prehospital treatment of symptomatic hypoglycaemia.

65. Does the level of prehospital care influence the outcome of patients with altered levels of consciousness?

66. Information for the Physician - Glucagon for Injection

6700 — Overdose

67. The empiric use of naloxone in patients with altered mental status; a reappraisal.

68. Intranasal naloxone delivery is an alternative to intravenous naloxone for opioid overdoses.

6850 — Dyspnea with Suspected CHF

69. Practical recommendations for prehospital and early in-hospital management of patients presenting with acute heart failure syndromes.

Anaphylaxis

70. Epinephrine absorption in adults: intramuscular versus subcutaneous injection.

Hyperglycemia

71. Diabetic ketoacidosis.
**Treatment Protocol**

**Policy:** Universal Patient  
**Effective:** April 1, 2012  
**Expires:** March 31, 2013

**Applies To:**  
EMR, EMT, AEMT, PM, EMS System

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**Arrive Scene**

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**Scene Size-up**

- Personal, personnel, and patient safety  
- Environmental hazards  
- Nature of event and number of victims  
- Mechanism of injury  
- Additional response and resources needed  
- Need for special operations

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**Scene Management**

- Ensure safety and security of all personnel  
  Practice body substance isolation (BSI) and use personal protective equipment (PPE)
- Stage as necessary, avoid and/or mitigate hazards
- Access and stabilize scene while maintaining exit, evacuation, and transport routes
- Establish ICS as operationally indicated by nature of event and number of victims  
  May initiate MCI if 5 or more victims will require ambulance transport, or as operationally required
- Request additional response and resources as required  
  Conserve evidence and request law enforcement for any suspected criminal activity  
  Ensure that appropriate first response and special operations equipment are responding  
  Ensure that appropriate transport ambulance is responding  
  Ensure response or request air ambulance as clinically indicated and operationally required  
- Cancel, reduce, or increase priority of responding equipment as clinically indicated and operationally required
- Begin special operations (triage, extrication, evacuation, fire fighting, etc.) as required
- Assign health care management decisions to the most medically qualified REMSA authorized EMS provider

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**Insert Treatment Protocols for Scene Management**

Follow operationally indicated Treatment Protocols when required for scene management

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**Patient Contact**
Primary Assessment

Identify self, then comfort, calm, reassure, restrict activity, position and cover or expose as clinically indicated

Formulate general initial impression

Perform qualitative assessment of:
- Need for spinal immobilization
- Responsiveness using AVPU (Alert, Verbal, Pain, Unresponsive)
- Airway patency
- Breathing effort, approximate rate, equality of breath sounds, and adequacy
- Circulation including skin signs, bleeding, approximate rate, strength, and regularity
- Disability

As clinically indicated, determine patient’s age, weight, and height:
- Age by written record, report by patient or parent, or estimate by EMS
- Weight by measurement, written record, report by patient or parent, Broselow Tape, or estimate by EMS
- Height by measurement, written record, report by patient or parent, or estimate by EMS

Classify patient as pediatric if: 14 years old or less and 36 kilograms (80 pounds) or less and Broselow Tape Green or less

Determine the patient’s chief complaint

Perform a focused physical examination

Team Communication

The most medically qualified REMSA authorized EMS provider must consult with the EMS team regarding:
- Findings on primary assessment
- Intended emergency stabilization

Emergency Stabilization

Establish, maintain, and ensure the following as clinically indicated:

Manual spinal immobilization
- Airway using manual airway maneuvers, oropharyngeal suction, OPA and/or NPA
- Breathing using mouth to mask or bag valve mask (BVM)
- Circulation using bleeding control, and CPR according to current AHA Guidelines

Position
- Position patient as clinically indicated for safety, comfort, and to meet physiologic requirements:
  - Recovery position, left or right lateral recumbent, supine, low to high Fowler’s, or seated
  - Never use Trendelenburg or elevate legs for shock, and never position patient prone

Oxygen
- Give oxygen as clinically indicated using:
  - Nasal cannula at 2-6 LPM, non-rebreather mask at 10-15 LPM, or BVM at 10-15 LPM

Handoff
- Handoff to arriving EMS providers as required using: Situation Background Assessment Recommendation
Emergency Stabilization (continued)

Assist
Assist more medically qualified REMSA authorized EMS providers within scope of practice as requested

SpO₂
Attach, interpret, continuously monitor, achieve, and maintain SpO₂ of 94% or greater when equipped

Home Glucometry
Assist patient with home glucometry as necessary

Assist
Prepare for ALS procedures under the direction of a more medically qualified REMSA authorized EMS provider

ECG
Attach ECG monitor when paramedic is present
Perform 12 Lead ECG as clinically indicated when paramedic is present

Blood Glucose
Obtain and evaluate blood glucose as clinically indicated when AEMT or paramedic is present

Mechanical Spinal Immobilization
Establish, maintain, and ensure mechanical spinal immobilization as clinically indicated by the possibility of a traumatic mechanism combined with any one of these criteria:
1. Neck or upper thoracic: pain or tenderness or deformity
2. New onset neurological deficits: numbness or tingling or weakness or paralysis
3. High risk mechanism of injury
4. Altered mental state, distracting pain, or influence of alcohol or drugs or medications
5. Atypical presentation, circumstance, or provider uncertainty

Prepare for Transport
Package and prepare for transport

King Airway
Establish, maintain, and ensure airway using King Airway when required for emergency stabilization
See REMSA Calculation Chart for pediatric application on patients greater than 8 years of age

Attach, interpret, and continuously monitor ETCO₂ by capnography (colorimetric CO₂ detector for AEMT/backup)
Capnography is mandatory following King Airway placement

Venous Access
Establish, maintain, and ensure peripheral IV access when required for emergency stabilization
Establish IV access during transport of the non-entrapped, transport ready critical trauma patient
Restrict fluid administration in the critical trauma patient by using saline lock extension sets

Airway using direct laryngoscopy and Magill forceps as clinically indicated

Endotracheal Intubation
Establish, maintain, and ensure airway using endotracheal intubation when required for emergency stabilization
See REMSA Calculation Chart for pediatric application on patients greater than 8 years of age

Attach, interpret, and continuously monitor ETCO₂ by capnography (colorimetric CO₂ detector may backup)
Capnography is mandatory following endotracheal intubation
Emergency Stabilization (continued)

Suction trachea as clinically indicated

Vascular Access
Establish, maintain, and ensure IV or IO access when required for emergency stabilization
   Establish IV or IO access during transport of the non-entrapped, transport ready critical trauma patient
   Restrict fluid administration in the critical trauma patient by using saline lock extension sets
   *Peripheral IV access is the first-line method of vascular access*

ECG
Interpret and continuously monitor ECG
Interpret 12 Lead ECG
   Transmit identified STEMI ECG to REMSA Base Hospital STEMI Receiving Center, when equipped

Insert Treatment Protocols for Emergency Stabilization
*Follow clinically indicated Treatment Protocols when required for emergency stabilization*

Secondary Assessment

Complete physical examination (head to toe)

Quantitative assessment of:
   *Responsiveness including pupils, level of consciousness and orientation to PPTE (person, place, time and event)*
   *Airway including capnography to confirm airway patency and placement*
   *Breathing rate, breath sounds, and SPO2*
   *Circulation including capillary refill time, rate, systolic/diastolic BP, and ECG/12 lead ECG*
   *Disability including GCS (Glasgow Coma Scale), LAPSS (Los Angeles Prehospital Stroke Screen), and V/CBG (venous or capillary blood glucose)*

Detailed history of chief complaint

Signs and symptoms
Allergies
Medications (including dose, route and frequency)
Past medical history
Last oral intake
Events leading to injury or illness

Formulate prehospital provider impression

Team Communication
The most medically qualified REMSA authorized EMS provider must consult with the EMS team regarding:
   *Results of emergency stabilization*
   *Findings on secondary assessment*
   *Intended patient disposition and management*
**Patient Disposition**

**Determine Destination**
Determine destination while balancing patient’s preference with their clinical needs.

**Base Hospital Contact**
*Base hospitals provide online medical direction (OMD) and base hospital physician orders (BHPOs) including: Concurrent quality assurance, orders, destinations, and other direction of prehospital care*

*Base hospital contact will be performed by the most medically qualified REMSA authorized EMS provider*

Contact a single REMSA authorized base hospital (BH) in all:
- Critical trauma – contact a trauma base hospital
- Critical burns – contact a base hospital
- MCI – contact a base hospital
- STEMI – contact a STEMI base hospital
- Stroke – contact a base hospital
- ALTE (apparent life-threatening event) – contact a base hospital
- Atypical presentation, circumstance, or provider uncertainty – contact a base hospital

Assess, clarify, monitor, treat within scope of practice, and determine or change destination as directed by BH

*Once contacted, the BH directs all further prehospital treatment*

**Insert Treatment Protocols for Patient Disposition**
*Follow operationally indicated Treatment Protocols when required for patient disposition*

**Transport**
Transport with continuous monitoring, reassessment, and treatment per applicable protocols
Patient Management

ECG
Repeat 12 Lead ECG as clinically indicated when paramedic is present

Blood Glucose
Obtain and evaluate blood glucose as clinically indicated when AEMT or paramedic is present

Notify Receiving
Confirm notification of receiving facility by Base Hospital, or notify receiving facility using: Unit, Age, Sex, History, Illness or injuries, Condition, ETA

Establish Venous Access
Establish peripheral IV access as clinically indicated
  - Restrict fluid administration in the critical trauma patient by using saline lock extension sets
  - Avoid the antecubital fossa unless required for emergency stabilization
  - Consider the need for: additional sites, a volume control chamber, lock, small or large bore catheters

Draw Blood Samples
Draw venous blood samples as clinically indicated
Label tubes with:
  1. Patient’s name
  2. Date and time drawn
  3. Drawer’s initials
Store tubes in doubled biohazard bags and handoff to receiving staff

ECG
Interpret and continuously monitor ECG
Interpret 12 Lead ECG
  - Transmit identified STEMI to REMSA Base Hospital STEMI Receiving Center when equipped

Insert Treatment Protocols for Patient Management
Follow clinically indicated Treatment Protocols when required for patient management
Re-Assessment

Focused physical examination

Qualitative and quantitative re-assessment of:
- Responsiveness including AVPU, pupils, level of consciousness and orientation to PPT
- Airway patency, including capnography to confirm airway placement
- Breathing effort, rate, equality, adequacy, breath sounds, and SpO₂
- Circulation including skin signs, bleeding, capillary refill time, rate, strength, regularity, s/d BP, and ECG/12 lead
- Disability including GCS, LAPSS, and V/CBG

Repeat every 5 minutes or less as clinically indicated for unstable patients
Repeat every 15 minutes or less as clinically indicated for apparently stable patients during the first hour of care
Repeat every 30 minutes or less as clinically indicated for apparently stable patients following the first hour of care

Team Communication
The most medically qualified REMSA authorized EMS provider must consult with the EMS team regarding:
- Results of patient management
- Findings on re-assessment
- Intended further patient management

Re-Insert Treatment Protocol(s) for Patient Management
Follow clinically indicated Treatment Protocols when required for further patient management

Arrive Hospital

Handoff
The most medically qualified REMSA authorized EMS provider must handoff to receiving staff using:
- Situation
- Background
- Assessment
- Recommendation

Perform Documentation
The most medically qualified REMSA authorized EMS provider must complete the patient care report

Complete the following additional documents as required:
- Riverside County: Procedure Evaluation Form, STEMI Report, Submersion Incident Report Form, etc.
- California State: Report of Suspected Dependant Adult/Elder Abuse
- California State: Suspected Child Abuse Report

Ensure that local law enforcement has been notified of all suspected:
- Criminal activity
- Domestic violence or sexual assault
- Child / dependant adult / elder abuse

Return to Readiness
**PURPOSE**
The purpose of this protocol is to prevent errors in calculating initial medication dose and volume, airway size, and cardioversion/defibrillation energy settings.

**AUTHORITY**
California Health and Safety Code - Division 2.5: Emergency Medical Services [1797. - 1799.207.]

**Required Equipment**
A Broselow Tape and a laminated copy of this treatment protocol are required field equipment. This chart must be color printed, front and back, at full size and carried in each first response and transport vehicle.

**Determining Age, Weight, and Height**
Determine a patient’s age, weight, and height:
- Age by written record, report by patient or parent, or estimate by EMS
- Weight by measurement, written record, report by patient or parent, Broselow Tape, or estimate by EMS
- Height by measurement, written record, report by patient or parent, or estimate by EMS

**Pediatric Patient**
A pediatric patient is defined as:
- 14 years old or less and 36 kilograms (80 pounds) or less and Broselow Tape Green or less

**Calculation Chart**
Orders are obtained through indicated treatment protocols, or a base hospital physician order (BHPO). This chart is to be used when calculating medication dosage, airway size, and cardioversion/defibrillation energy settings. The process is:

1. Determine patient’s age, weight, and height
2. Determine Broselow Tape color in the pediatric patient
3. As directed by an indicated treatment protocol, or a BHPO, use this chart to calculate medication dosage and volume:
   a. Obtain the order, route, and any adjustments through the indicated treatment protocol or a BHPO
   b. Use only REMSA authorized medications in the REMSA required concentrations as found in the REMSA Drug and Equipment List, and in the “Medication” column of this chart
   c. Use a 1 mL syringe graduated in tenths and hundredths for indicated volumes less than 1 mL
   d. Have a second qualified person audit dosage prior to administration, when available
4. As directed by an indicated treatment protocol, or a BHPO, use this chart to calculate airway size and energy settings

Contact a base hospital for online medical direction in case of atypical presentation, circumstance, or uncertainty. This includes pediatric patients less than Broselow Tape Grey, and adult patients less than 36 kg (80 lb) / 4’ 10”.
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<th>Red</th>
<th>Purple</th>
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<th>Orange</th>
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<td><strong>Amiodarone</strong></td>
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<td>BHPO</td>
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<td>0.07 mg</td>
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<td>0.3 mg</td>
<td>0.3 mg</td>
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</tr>
<tr>
<td>1 mg</td>
<td>0.04 mL</td>
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<td>0.09 mL</td>
<td>0.09 mL</td>
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<td>1 mg</td>
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<td><strong>Medication</strong></td>
<td>Grey</td>
<td>Pink</td>
<td>Red</td>
<td>Purple</td>
<td>Yellow</td>
<td>White</td>
<td>Blue</td>
<td>Orange</td>
<td>Green</td>
<td>Adult</td>
</tr>
<tr>
<td><strong>Calcium Chloride 10%</strong></td>
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<td>BHPO</td>
<td>BHPO</td>
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<td>150 mg</td>
<td>150 mg</td>
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**REMSA 2012 Policy 6011 — Calculation Chart** [7/18/11 - 17:50] 3 of 6
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<th>Grey</th>
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<th>Red</th>
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<th>Yellow</th>
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<th>Blue</th>
<th>Orange</th>
<th>Green</th>
<th>Adult</th>
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<td>Ipratropium Bromide 0.5 mg</td>
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<td>0.7 mL</td>
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<td>1 mL Ampule or Vial</td>
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<td>0.07 mL</td>
<td>0.09 mL</td>
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<td>8.5 mEq</td>
<td>10 mEq</td>
<td>13 mEq</td>
<td>16.5 mEq</td>
<td>21 mEq</td>
<td>27 mEq</td>
<td>33 mEq</td>
<td>50 mEq</td>
</tr>
<tr>
<td>Verapamil 5 mg</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>BHPO</td>
</tr>
<tr>
<td>2 mL Vial</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5 mg</td>
</tr>
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REMSA 2012  Policy 6011 — Calculation Chart
<table>
<thead>
<tr>
<th>Airway</th>
<th>Grey</th>
<th>Pink</th>
<th>Red</th>
<th>Purple</th>
<th>Yellow</th>
<th>White</th>
<th>Blue</th>
<th>Orange</th>
<th>Green</th>
<th>Adult</th>
</tr>
</thead>
<tbody>
<tr>
<td>Endotracheal Tube 6.0–9.0 Cuffed</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>6.0</td>
<td>6.5</td>
<td>7.0–9.0</td>
</tr>
<tr>
<td>King Airway Size 3, 4, or 5</td>
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<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>3 Yellow</td>
<td>3 Yellow</td>
<td>4 Red 5 Purple</td>
</tr>
<tr>
<td>Oropharyngeal Airway 0 (50 mm)–5 (100 mm)</td>
<td>none</td>
<td>0 (50 mm)</td>
<td>0 (50 mm)</td>
<td>1 (60 mm)</td>
<td>1 (60 mm)</td>
<td>2 (70 mm)</td>
<td>3 (80 mm)</td>
<td>4 (90 mm) 5 (100 mm)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nasopharyngeal Airway 14 Fr.–36 Fr.</td>
<td>none</td>
<td>14 Fr.</td>
<td>16 Fr.</td>
<td>18 Fr.</td>
<td>20 Fr.</td>
<td>22 Fr.</td>
<td>24 Fr.</td>
<td>26 Fr.</td>
<td>28 Fr.</td>
<td>30–36 Fr.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Energy Settings</th>
<th>Grey</th>
<th>Pink</th>
<th>Red</th>
<th>Purple</th>
<th>Yellow</th>
<th>White</th>
<th>Blue</th>
<th>Orange</th>
<th>Green</th>
<th>Adult</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardioversion</td>
<td>BHPO</td>
<td>BHPO</td>
<td>BHPO</td>
<td>BHPO</td>
<td>BHPO</td>
<td>BHPO</td>
<td>BHPO</td>
<td>BHPO</td>
<td>BHPO</td>
<td>BHPO</td>
</tr>
<tr>
<td>Initial Shock</td>
<td>4 J</td>
<td>7 J</td>
<td>9 J</td>
<td>10 J</td>
<td>15 J</td>
<td>20 J</td>
<td>30 J</td>
<td>30 J</td>
<td>50 J</td>
<td>70 J</td>
</tr>
<tr>
<td>Subsequent Shocks</td>
<td>8 J</td>
<td>15 J</td>
<td>20 J</td>
<td>20 J</td>
<td>30 J</td>
<td>50 J</td>
<td>50 J</td>
<td>50 J</td>
<td>70 J</td>
<td>70 J</td>
</tr>
<tr>
<td>Defibrillation</td>
<td>BHPO</td>
<td>BHPO</td>
<td>BHPO</td>
<td>BHPO</td>
<td>BHPO</td>
<td>BHPO</td>
<td>BHPO</td>
<td>BHPO</td>
<td>BHPO</td>
<td>BHPO</td>
</tr>
<tr>
<td>Initial Shock</td>
<td>8 J</td>
<td>15 J</td>
<td>20 J</td>
<td>20 J</td>
<td>30 J</td>
<td>50 J</td>
<td>70 J</td>
<td>70 J</td>
<td>100 J</td>
<td>120 J</td>
</tr>
<tr>
<td>Subsequent Shocks</td>
<td>20 J</td>
<td>30 J</td>
<td>50 J</td>
<td>50 J</td>
<td>70 J</td>
<td>70 J</td>
<td>100 J</td>
<td>160 J</td>
<td>Per Manu.</td>
<td>Per Manu.</td>
</tr>
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<td>Energy Settings</td>
<td>BHPO</td>
<td>BHPO</td>
<td>BHPO</td>
<td>BHPO</td>
<td>BHPO</td>
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<td>BHPO</td>
<td>BHPO</td>
<td>BHPO</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Fireline Medication</th>
<th>Grey</th>
<th>Pink</th>
<th>Red</th>
<th>Purple</th>
<th>Yellow</th>
<th>White</th>
<th>Blue</th>
<th>Orange</th>
<th>Green</th>
<th>Adult</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albuterol MDI 90 µg 1 Metered Dose (puff)</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>180 µg</td>
<td>180 µg</td>
<td>180 µg</td>
<td>180 µg</td>
<td>180 µg</td>
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<tr>
<td>Fireline Medication</td>
<td>Grey</td>
<td>Pink</td>
<td>Red</td>
<td>Purple</td>
<td>Yellow</td>
<td>White</td>
<td>Blue</td>
<td>Orange</td>
<td>Green</td>
<td>Adult</td>
</tr>
</tbody>
</table>

REMSA 2012  Policy 6011 — Calculation Chart  [7/18/11 - 17:50]  5 of 6
Orders are obtained through the Carbamate, Organophosphate, or Nerve Agent Exposure Treatment Protocol. This chart is to be used when calculating medication dosage for medications in the CDC CHEMPACK caches. CDC CHEMPACK medications are cached for deployment in case of a nerve agent attack. The process is:

1. Determine patient’s age, weight, and height
2. Determine Broselow Tape color in the pediatric patient
3. As directed by the Carbamate, Organophosphate, or Nerve Agent Exposure Treatment Protocol use this chart to calculate medication dosage and volume:
   a. Obtain the order, route, and any adjustments through the Carbamate, Organophosphate, or Nerve Agent Exposure Treatment Protocol
      i. Note that these orders are for IM delivery of these medications only
   b. Use only CDC CHEMPACK medications as described in the “Medication” column of this chart
      i. Reconstitute the 1 g / 20 mL vial of Pralidoxime with 5 mL Sterile Water to 1000 mg / 5 mL
      ii. Do not give this concentration by IV/IO!
   c. Use a 1 mL syringe graduated in tenths and hundredths for indicated volumes less than 1 mL
   d. Classify atypical pediatric patients less than Broselow Tape Grey as Broselow Tape Grey
   e. Classify atypical adult patients less than 36 kg (80 lb) / 4’ 10” using the Broselow Tape to classify by color

### Requires use of CDC CHEMPACK Medications

<table>
<thead>
<tr>
<th>Medication</th>
<th>Grey</th>
<th>Pink</th>
<th>Red</th>
<th>Purple</th>
<th>Yellow</th>
<th>White</th>
<th>Blue</th>
<th>Orange</th>
<th>Green</th>
<th>Adult</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDC: AtroPen - 0.5 mg</td>
<td>0.5 mg</td>
<td>0.5 mg</td>
<td>0.5 mg</td>
<td>0.5 mg</td>
<td>0.5 mg</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>1 Autoinjector (kit)</td>
<td>1 kit</td>
<td>1 kit</td>
<td>1 kit</td>
<td>1 kit</td>
<td>1 kit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CDC: AtroPen - 1 mg</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>1 mg</td>
<td>1 mg</td>
<td>1 mg</td>
<td>1 mg</td>
<td>2 mg</td>
</tr>
<tr>
<td>1 Autoinjector (kit)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 kit</td>
<td>1 kit</td>
<td>1 kit</td>
<td>1 kit</td>
<td>2 kits</td>
</tr>
<tr>
<td>CDC: Atropine</td>
<td>0.2 mg</td>
<td>0.32 mg</td>
<td>0.44 mg</td>
<td>0.52 mg</td>
<td>0.64 mg</td>
<td>0.84 mg</td>
<td>1.04 mg</td>
<td>1.36 mg</td>
<td>1.64 mg</td>
<td>2 mg</td>
</tr>
<tr>
<td>8 mg</td>
<td>0.5 mL</td>
<td>0.8 mL</td>
<td>1.1 mL</td>
<td>1.3 mL</td>
<td>1.6 mL</td>
<td>2.1 mL</td>
<td>2.6 mL</td>
<td>3.4 mL</td>
<td>4.1 mL</td>
<td>5 mL</td>
</tr>
<tr>
<td>20 mL Vial</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CDC: Diazepam</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>10 mg</td>
</tr>
<tr>
<td>10 mg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 kit</td>
</tr>
<tr>
<td>1 Autoinjector (kit)</td>
<td></td>
<td></td>
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<tr>
<td>CDC: Diazepam</td>
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<td>2 mg</td>
<td>2.5 mg</td>
<td>3.5 mg</td>
<td>4 mg</td>
<td>5.5 mg</td>
<td>7 mg</td>
<td>8.5 mg</td>
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</tr>
<tr>
<td>50 mg</td>
<td>0.2 mL</td>
<td>0.3 mL</td>
<td>0.4 mL</td>
<td>0.5 mL</td>
<td>0.7 mL</td>
<td>0.8 mL</td>
<td>1.1 mL</td>
<td>1.4 mL</td>
<td>1.7 mL</td>
<td>2 mL</td>
</tr>
<tr>
<td>10 mL Vial</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>CDC: Mark I</td>
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<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
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<td>2 mg / 600 mg</td>
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<td>1 kits</td>
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<tr>
<td>1 Kit of 2 Autoinjectors</td>
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<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>CDC: Pralidoxime</td>
<td>NOT IV/IO</td>
<td>NOT IV/IO</td>
<td>NOT IV/IO</td>
<td>NOT IV/IO</td>
<td>NOT IV/IO</td>
<td>NOT IV/IO</td>
<td>NOT IV/IO</td>
<td>NOT IV/IO</td>
<td>NOT IV/IO</td>
<td>NOT IV/IO</td>
</tr>
<tr>
<td>1000 mg</td>
<td>80 mg</td>
<td>140 mg</td>
<td>180 mg</td>
<td>200 mg</td>
<td>260 mg</td>
<td>340 mg</td>
<td>420 mg</td>
<td>540 mg</td>
<td>600 mg</td>
<td>600 mg</td>
</tr>
<tr>
<td>5 mL in 20 mL Vial</td>
<td>0.4 mL</td>
<td>0.7 mL</td>
<td>0.9 mL</td>
<td>1 mL</td>
<td>1.3 mL</td>
<td>1.7 mL</td>
<td>2.1 mL</td>
<td>2.7 mL</td>
<td>3 mL</td>
<td>3 mL</td>
</tr>
</tbody>
</table>
Enter from the Universal Patient Treatment Protocol
For specific Patient Disposition of On Scene Physician Wishing to Assume Responsibility

Patient Disposition

On Scene Physician Wishing to Assume Responsibility
When an on scene physician wishes to assume responsibility for prehospital emergency care:

1. Require valid photo ID and California medical license

2. Inform the on scene physician that:
   a. The on scene physician must request that the base hospital physician relinquish medical control
   b. If the base hospital physician agrees, the on scene physician may direct medical care
   c. The on scene physician must accompany the patient during ambulance transport

3. Contact a single REMSA authorized base hospital (BH):
   a. Provide the on scene physician’s name and license number
   b. The on scene physician must request medical control on a recorded line
   c. Establish that the base hospital physician has relinquished medical control

4. If the base hospital physician has relinquished medical control:
   a. Assist the on scene physician as directed, within scope of practice
   b. Maintain base hospital contact and transport to an appropriate receiving facility
   c. The on scene physician must sign the completed PCR

Return to Universal Patient Treatment Protocol
For continuing Scene Management, Emergency Stabilization, Patient Disposition, or Patient Management

***** ***** Base Hospital Physician Orders ***** *****
Assess, clarify, monitor, treat within scope of practice, and determine or change destination
As ordered

Once contacted, the BH directs all further prehospital treatment
Policy: Refusal of Treatment and/or Transport

Applies To: EMR, EMT, AEMT, PM, EMS System

<table>
<thead>
<tr>
<th>Policy</th>
<th>Approval: REMSA Medical Director Humberto Ochoa, MD</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 1, 2012</td>
<td>Expires March 31, 2013</td>
<td>Signature</td>
</tr>
</tbody>
</table>

Enter from the Universal Patient Treatment Protocol
*For specific Patient Disposition of Refusal of Treatment and/or Transport*

Patient Disposition

**Refusal of Treatment and/or Transport**
A patient, parent, or guardian initiating refusal of treatment and/or transport, or a law enforcement officer initiating refusal of transport, must be:

1. An apparently rational and competent legal-adult
2. Alert and oriented to person, place, time, and event
3. Fully informed of, understand and acknowledge, the:
   a. EMS provider’s level of training
   b. EMS provider’s findings
   c. Need for treatment, transport, and further evaluation by an emergency physician
   d. Possible consequences of refusal, including death when applicable
   e. Ability to recall 911, and EMS provider’s willingness to return
   f. Other options to access medical care

Contact a single REMSA authorized base hospital for all:

1. Non-emancipated minors
   a. Refusal must be made by a parent or guardian
   b. Consider law enforcement involvement as needed
2. Patients in custody
   a. Refusal of treatment must be made by the patient, parent, or guardian; as above
   b. Refusal of transport must be made by law enforcement
3. Refusals of transport following initiation of treatment
4. Refusals of clinically indicated treatment and/or transport

Having met the requirements above:

1. Allow the patient, parent, guardian or law enforcement officer to initiate refusal
2. The legal-adult patient, parent, guardian or law enforcement officer must sign appropriate releases
3. Fully document refusal on patient care report and attachments

Return to Universal Patient Treatment Protocol
*For continuing Scene Management, Emergency Stabilization, Patient Disposition, or Patient Management*

**** **** Base Hospital Physician Orders **** ****

Assess, clarify, monitor, treat within scope of practice, and determine or change destination
As ordered

*Once contacted, the BH directs all further prehospital treatment*
Policy: Do Not Attempt Resuscitation / Discontinue . . .
Approval: REMSA Medical Director
Humberto Ochoa, MD

Applies To:
EMR, EMT, AEMT, PM, EMS System
Approval: REMSA Director
Bruce Barton, CCEMT-P

Enter from the Universal Patient Treatment Protocol
For specific Patient Disposition of Do Not Attempt Resuscitation / Discontinue Resuscitation

Patient Disposition

Do Not Attempt Resuscitation
Do not attempt resuscitation when one or more of the following are present:
1. MCI patient remains apneic despite manual airway maneuvers
2. Apneic and pulseless with rigor mortis and postmortem lividity
3. Decapitation
4. Generalized decomposition or incineration
5. Separation of brain, heart, or lungs from body
6. Total abdominal evisceration
7. Complete transection of torso
8. A valid, signed, and dated advance directive indicating that resuscitation is not desired
9. Rigor mortis or postmortem lividity with continuous asystole or PEA at a rate less than 10
10. Blunt trauma arrest with continuous asystole or PEA at a rate less than 10

Discontinue Resuscitation
Discontinue resuscitation when one or more of the above items 1–10 are present
To discontinue resuscitation in pediatrics requires a base hospital physician order (BHPO)

Discontinue resuscitation when all of the following are present prior to transport:
1. Medical (not trauma) patient
2. Unwitnessed arrest
3. No bystander CPR
4. No shock delivered
5. A minimum of two rounds of resuscitative medications have been given without ROSC
6. Continuous asystole or PEA at a rate less than 10
To discontinue resuscitation in pediatrics requires a base hospital physician order (BHPO)

Return to Universal Patient Treatment Protocol
For continuing Scene Management, Emergency Stabilization, Patient Disposition, or Patient Management

***** ***** Base Hospital Physician Orders ***** *****
Assess, clarify, monitor, treat within scope of practice, and determine or change destination
As ordered
Once contacted, the BH directs all further prehospital treatment
Enter from the Universal Patient Treatment Protocol
For specific Patient Disposition of Prehospital Death

Patient Disposition

Prehospital Death
When the decision not to attempt / to discontinue resuscitation has been made:

1. Comfort and care for survivors

2. Notify local law enforcement (LE) of prehospital death

3. Contact the County of Riverside Coroner’s Office, give report, and answer all applicable questions
   If coroner’s case:
   - Leave invasive medical devices in place and remain at scene until released by LE
   - Arrange for the Coroner to receive a copy of the completed PCR
   If released to mortuary:
   - Remove invasive medical devices, position and cover body
   - If contacted, release only name, location, and time of death to the mortuary

4. Include these details on the PCR:
   - History, medications, time of death, circumstances, and description of any advanced directive
   - Identification of the local law enforcement officer at scene
   - Identification of the coroner’s investigator who received report and coroner’s case number
   - Disposition of the body

When a death occurs during transport: Divert to the closest hospital without crossing county lines

Contact a Base Hospital and/or the Coroner’s Office as needed for guidance in unusual circumstances

Return to Universal Patient Treatment Protocol
For continuing Scene Management, Emergency Stabilization, Patient Disposition, or Patient Management

***** ***** Base Hospital Physician Orders ***** *****

Assess, clarify, monitor, treat within scope of practice, and determine or change destination
As ordered

Once contacted, the BH directs all further prehospital treatment
Treatment Protocol 6300

Effective: April 1, 2012  Expires: March 31, 2013

Policy: Burns

Apply To: EMR, EMT, AEMT, PM, EMS System

Approval: REMSA Medical Director Humberto Ochoa, MD

Approval: REMSA Director Bruce Barton, CCEMT-P

Enter from the Universal Patient Treatment Protocol
For specific Patient Disposition, Emergency Stabilization or Patient Management of Burns

Pertinent Findings

<table>
<thead>
<tr>
<th>Environment Source</th>
<th>History</th>
<th>Physical</th>
<th>Differential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Electrical Thermal</td>
<td>Mechanism of injury Associated trauma Inhalation injury</td>
<td>1° - Superficial, red, sometimes painful 2° - Skin may be red, blistered, swollen. Very painful. 3° - Whitish, charred or translucent, decreased sensation in burned area. Use ‘Rule of Nines’ or ‘Rule of Palms’ to estimate BSA</td>
<td>Critical trauma Suspected inhalation injury Airway compromise Thermal, chemical, electrical 1°, 2°, or 3° Body surface area (BSA) To: Face Hands Feet Genitalia/perineum Major joints</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ADULT RULE OF NINES
9% (head) 9% (right arm) 9% (left arm) 36% (torso)
1% (genitalia/perineum) 18% (right leg) 18% (left leg)

INFANT RULE OF NINES
18% (head) 9% (right arm) 9% (left arm) 36% (torso)
14% (right leg) 14% (left leg)

RULE OF PALMS
Surface of patient’s palm equals approximately 1% of BSA

Emergency Stabilization or Patient Management

Remove all of patient’s rings, bracelets, and binding clothing

Chemical burns: Brush off dry chemicals, flush with water, and consult label for decontamination instructions

Electrical burns: Consider possibility of spinal trauma and need for spinal stabilization, treat related injuries

Eye burns: Flush copiously, check for contact lenses, patch the eye(s)

Tar burns: Cool with water but do not remove tar; then apply petrolatum gauze dressing

Thermal burns of less than 20% BSA: Cool with wet dressing, then follow with dry, clean, non-adherent dressing

Thermal burns greater than 20% BSA: Apply dry, clean, non-adherent dressing

250 mL 0.9% Normal Saline IV/IO bolus For significant burns May repeat as clinically indicated

See REMSA Calculation Chart for pediatric dosage
Emergency Stabilization or Patient Management (continued)

Morphine Sulfate 5 mg slow IV/IO push or IM
For pain associated with burns
When systolic BP is greater than 90 mmHg prior to administration
May repeat once prior to base hospital contact
See REMSA Calculation Chart for pediatric dosage

Patient Disposition

Burn patients with airway compromise will be transported to the closest Paramedic Receiving Center

Airway compromise has priority over burns

Burn patients meeting Critical Trauma Criteria will be transported to a Trauma Center per REMSA Policy:
Trauma Triage Indicators and Destination

Trauma has priority over burns

Contact a single REMSA authorized base hospital (BH) in all critical burns including:
1. Suspected inhalation injury
2. Burns involving face, hands, feet, genitalia/perineum, or major joints
3. High voltage electrical burns
4. Second degree (2°) burns greater than 10% BSA
5. Third degree (3°) burns
Assess, clarify, monitor, treat within scope of practice, and determine or change destination as directed by BH

Once contacted, the BH directs all further prehospital treatment

Return to Universal Patient Treatment Protocol

For continuing Scene Management, Emergency Stabilization, Patient Disposition, or Patient Management

***** ***** Base Hospital Physician Orders ***** *****

0.9% Normal Saline Bolus
As ordered
For burns

Morphine
As ordered
For pain associated with burns
# Treatment Protocol

**Effective:** April 1, 2012  
**Expires:** March 31, 2013

<table>
<thead>
<tr>
<th>Policy:</th>
<th>Heat Illness / Hyperthermia</th>
</tr>
</thead>
</table>
| Approval: REMSA Medical Director  
Humberto Ochoa, MD |
| Applies To:  
EMR, EMT, AEMT, PM, EMS System |
| Approval: REMSA Director  
Bruce Barton, CCEMT-P |

---

## Enter from the Universal Patient Treatment Protocol

*For specific Patient Disposition, Emergency Stabilization or Patient Management of Heat Illness / Hyperthermia*

<table>
<thead>
<tr>
<th>Environment</th>
<th>History</th>
<th>Physical</th>
<th>Differential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hot</td>
<td>Heat intolerance</td>
<td>Normal mental status</td>
<td>Heat cramps</td>
</tr>
<tr>
<td>Humid</td>
<td>Lack of acclimatization</td>
<td>Headache, nausea and vomiting</td>
<td>Heat exhaustion</td>
</tr>
<tr>
<td>Physical exertion</td>
<td>Physical exertion / physically unfit</td>
<td>Malaise, muscle cramps, exhaustion</td>
<td>Heat stroke</td>
</tr>
<tr>
<td>Dehydration</td>
<td>Allergies, illness, infection</td>
<td>Tachypnea, tachycardia, normotension</td>
<td>Thyroid storm</td>
</tr>
<tr>
<td>Electrolyte depletion</td>
<td>Sick cell trait/disease</td>
<td>Skin signs may vary</td>
<td>Excited delirium</td>
</tr>
<tr>
<td>Medication use:</td>
<td>Elderly</td>
<td>Shivering</td>
<td>Malignant hyperthermia</td>
</tr>
<tr>
<td>Anticholinergics</td>
<td>Thyroid disorder</td>
<td>Hypotension</td>
<td>Alcohol, Epilepsy, Insulin,</td>
</tr>
<tr>
<td>Antihistamines</td>
<td>Medication use</td>
<td>Altered mental status</td>
<td>Overdose, Uremia,</td>
</tr>
<tr>
<td>Neuroleptics</td>
<td>Prescribed MAOIs or SSRIs</td>
<td>Bizarre behavior, combative</td>
<td>Trauma, Temperature,</td>
</tr>
<tr>
<td>Stimulants</td>
<td>Use of ecstasy, LSD, PCP, cocaine</td>
<td>Syncope, seizures or coma</td>
<td>Infection, Psychosis,</td>
</tr>
<tr>
<td></td>
<td>Recent general anesthesia</td>
<td>May exceed core temperature of 105°F</td>
<td>Stroke</td>
</tr>
</tbody>
</table>

## Pertinent Findings

**Emergency Stabilization or Patient Management**

**Remove from heat:**
- Shade and expose
- Move to air conditioned environment

**Obtain baseline temperature and note method:** tympanic, temporal, axillary, or touch

**Aggressively cool the hyperthermic altered mental status patient:**
- Wet constantly with tepid water, fan, and encourage evaporative cooling
- Apply cold packs to anterior neck, armpits, and groin
- Avoid causing shivering
- Discontinue aggressive cooling at an approximated core temperature of 102°F

**Re-assess temperature frequently**

**Obtain and evaluate blood glucose when AEMT or paramedic is present**

250 mL 0.9% Normal Saline IV/IO bolus

For heat illness / hyperthermia

May repeat as clinically indicated

See REMSA Calculation Chart for pediatric dosage
Return to Universal Patient Treatment Protocol
*For continuing Scene Management, Emergency Stabilization, Patient Disposition, or Patient Management*

0.9% Normal Saline Bolus
As ordered
For heat illness / hyperthermia

Albuterol HHN or in-line with a ventilatory device
As ordered
For suspected hyperkalemia associated with heat illness / hyperthermia

Midazolam (Versed)
As ordered
For shivering associated with heat illness / hyperthermia

Sodium Bicarbonate 8.4%
As ordered
For suspected rhabdomyolysis and/or hyperkalemia associated with heat illness / hyperthermia

Calcium Chloride 10%
As ordered
For suspected hyperkalemia associated with heat illness / hyperthermia
**Enter from the Universal Patient Treatment Protocol**

*For specific Emergency Stabilization or Patient Management of **Nausea and/or Vomiting***

### Pertinent Findings

<table>
<thead>
<tr>
<th>Environment</th>
<th>History</th>
<th>Physical</th>
<th>Differential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antibiotics</td>
<td>Sensitivity to 5-HT3 antagonists: Ondansetron (Zofran) Alopizin (Lotronex) Dolasetron (Anzemet) Granisetron (Kytril) Palonosetron (Aloxi) others</td>
<td>Nausea and/or vomiting Abdominal pain Flank pain Anorexia Constipation Fever Rash Dyspnea Cough Headache Neck pain Altered mental status</td>
<td>Medical: acute myocardial infarction, alcoholic ketoacidosis, appendicitis, choking, diabetic ketoacidosis, infection, ingestion, gastroliths, gastroenteritis, GI obstruction, kidney stones, meningitis, migraine, overdose, pancreatitis, pneumonia, pregnancy, pylonephritis, stroke, testicular torsion Trauma: (occult) head trauma, pain</td>
</tr>
<tr>
<td>Chemotherapy meds</td>
<td>Recent medication changes Recent surgery Ingestion Illness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NSAIDS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opiates</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toxins and/or foods</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traumatic MOI</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Emergency Stabilization or Patient Management

4 mg Ondansetron (Zofran) slow IV/IO push or IM For nausea and/or vomiting
May repeat with a base hospital physician order (BHPO)
See REMSA Calculation Chart for pediatric dosage

4 mg Ondansetron (Zofran) Oral Disintegrating Tablet (ODT) For nausea and/or vomiting
May repeat with a base hospital physician order (BHPO)
See REMSA Calculation Chart for pediatric dosage

### Return to Universal Patient Treatment Protocol

*For continuing Scene Management, Emergency Stabilization, Patient Disposition, or Patient Management*

**** **** Base Hospital Physician Orders **** ****

Ondansetron (Zofran)
As ordered
For nausea and/or vomiting
Enter from the Universal Patient Treatment Protocol
For specific Emergency Stabilization or Patient Management of Seizures

**Pertinent Findings**

<table>
<thead>
<tr>
<th>Environment</th>
<th>History</th>
<th>Physical</th>
<th>Differential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical alert tag Anti-seizure medications Trauma</td>
<td>Downtime, last meal, last meds History of seizures Noncompliant with medication Alcohol withdrawal Recent infection or fever</td>
<td>Seizures Altered mental status Pallor, diaphoresis Urination, defecation Oral and other trauma</td>
<td>Febrile, absence, simple partial, complex partial, myoclonic, atonic, tonic, clonic, tonic-clonic, or eclamptic seizure Aura and/or post-ictus ALTE (apparent life-threatening event) Alcohol, Epilepsy, Insulin, Overdose, Uremia, Trauma, Infection, Psychosis, Stroke</td>
</tr>
</tbody>
</table>

**Emergency Stabilization or Patient Management**

Protect patient from injury, loosen restrictive clothing, do not forcibly restrain, preserve privacy
Perform cooling measures as clinically indicated for febrile seizures
Obtain and evaluate blood glucose when AEMT or paramedic is present

5 mg Midazolam (Versed) slow IV/IO push or IM/IN
For continuous or recurrent tonic-clonic seizures unrelated to eclampsia
May repeat with a base hospital physician order (BHPO)
See REMSA Calculation Chart for pediatric dosage

**Return to Universal Patient Treatment Protocol**
For continuing Scene Management, Emergency Stabilization, Patient Disposition, or Patient Management

****** ***** Base Hospital Physician Orders ***** ******

Midazolam (Versed)
As ordered
For seizures
Effective April 1, 2012
Expires March 31, 2013

Policy: Pre-Eclampsia and Eclampsia

Applies To: EMR, EMT, AEMT, PM, EMS System

Approval: REMSA Medical Director
Humberto Ochoa, MD

Signature

Approval: REMSA Director
Bruce Barton, CCEMT-P

Signature

Enter from the Universal Patient Treatment Protocol
For specific Emergency Stabilization, Patient Disposition or Patient Management of Pre-Eclampsia and Eclampsia

Pertinent Findings

Environment
Low socioeconomic class
Obesity
Less than 20 years of age
Over 35 years of age

History
First or multiple pregnancies
Conception with a new partner
Multi-fetal pregnancy
From 20 weeks gestation thru four weeks postpartum
Diabetes, kidney disease, HTN
Family history of pre-eclampsia
Gravida (pregnancies)
Para (viable births)
Abortus (lost pregnancies)
LMP (last menstrual period)
EDC (estimated date of confinement: first day of LMP + 280 days)
Prenatal care and findings
Diagnosis of gestational diabetes
Diagnosis of pre-eclampsia

Physical
Malaise
Abdominal and/or back pain
Nausea and vomiting
Decreased urine output
Hypoglycemia
Headache, vertigo, visual disturbance
Focal neurological deficits
Sudden water retention/weight gain
Peripheral and/or pitting edema
Hypertension
Pulmonary edema
Hyperreflexia, clonus, seizure, coma
Disseminated intravascular coagulation

Differential
Normal pregnancy
Placenta abruptio
Ruptured liver
Hypoglycemia
Chronic HTN
Stroke
Seizure
HELLP Syndrome
Hemolysis,
Elevated Liver
Enzymes, Low
Platelet Count
DIC

Emergency Stabilization or Patient Management

Decrease stimuli and maintain a quiet, dark environment
Place patient in left lateral recumbent position
Obtain and evaluate blood glucose when AEMT or paramedic is present

Patient Disposition

Base Hospital Contact
Contact a single REMSA authorized base hospital (BH) in all cases of pre-eclampsia or eclampsia
Assess, clarify, monitor, treat within scope of practice, and determine or change destination as directed by BH
Return to Universal Patient Treatment Protocol
For continuing Scene Management, Emergency Stabilization, Patient Disposition, or Patient Management

***** ***** Base Hospital Physician Orders ***** *****

Magnesium Sulfate 50%
As ordered (typically 4 g in 50 mL Normal Saline IV/IO drip over 10 minutes)
For suspected pre-eclampsia (may be given prophylactically) or eclampsia

Midazolam (Versed)
As ordered
For eclampsia unresponsive to Magnesium Sulfate 50%
## Treatment Protocol 6700

<table>
<thead>
<tr>
<th>Policy: Overdose</th>
<th>Effective: April 1, 2012</th>
<th>Expires: March 31, 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applies To: EMR, EMT, AEMT, PM, EMS System</td>
<td>Approval: REMSA Medical Director Humberto Ochoa, MD</td>
<td>Signature</td>
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<td></td>
<td>Approval: REMSA Director Bruce Barton, CCEMT-P</td>
<td>Signature</td>
</tr>
</tbody>
</table>

### Enter from the Universal Patient Treatment Protocol

*For specific Emergency Stabilization or Patient Management of Overdose*

### Pertinent Findings

<table>
<thead>
<tr>
<th>Environment Evidence of:</th>
<th>History Substance:</th>
<th>Physical</th>
<th>Differential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accident</td>
<td>Acetaminophen or aspirin</td>
<td>Altered mental status</td>
<td>Alcohol, Epilepsy, Insulin, Overdose, Uremia, Trauma, Infection, Psychosis, Stroke</td>
</tr>
<tr>
<td>Suicide</td>
<td>Cardiac medications</td>
<td>Seizures</td>
<td>Insecticides</td>
</tr>
<tr>
<td>Crime</td>
<td>Depressants or stimulants</td>
<td>Altered respiratory rate and rhythm</td>
<td>Other toxins</td>
</tr>
<tr>
<td>Crime</td>
<td>Cyclic antidepressants</td>
<td>Bradycardia, tachycardia, dysrhythmia</td>
<td></td>
</tr>
<tr>
<td>Substance</td>
<td>Other medications</td>
<td>Hypotension or hypertension</td>
<td></td>
</tr>
<tr>
<td>Route</td>
<td>Route, quantity, and time</td>
<td>Hypothermia or hyperthermia</td>
<td></td>
</tr>
<tr>
<td>Quantity</td>
<td>SAMPLE history</td>
<td>Sluggish, dilated or pinpoint pupils</td>
<td></td>
</tr>
<tr>
<td>Conserve evidence</td>
<td></td>
<td>Skin signs and secretions</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Abdominal pain, nausea, and vomiting</td>
<td></td>
</tr>
</tbody>
</table>

### Emergency Stabilization or Patient Management

1. Obtain and evaluate blood glucose when AEMT or paramedic is present

2. 2 mg Naloxone (Narcan) IN/IM
   - For respiratory depression with suspected narcotic overdose
   - During nasal administration: divide the dose between nostrils as needed not to exceed 1 mL per nostril
   - May repeat as clinically indicated
   - See REMSA Calculation Chart for pediatric dosage

3. 2 mg Naloxone (Narcan) IV/IO push
   - For respiratory depression with suspected narcotic overdose
   - May repeat as clinically indicated
   - See REMSA Calculation Chart for pediatric dosage

4. 50 mg Diphenhydramine (Benadryl) IM or slow IV/IO push
   - For suspected dystonic reactions and the extrapyramidal effects of phenothiazine overdose
   - May repeat with a base hospital physician order (BHPO)
   - See REMSA Calculation Chart for pediatric dosage
**Base Hospital Physician Orders**

<table>
<thead>
<tr>
<th>Drug</th>
<th>EMT</th>
<th>AEMT</th>
<th>PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activated Charcoal PO</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>As ordered</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>For suspected overdose</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Naloxone (Narcan) IN/IM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>As ordered</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>For respiratory depression with suspected narcotic overdose</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calcium Chloride 10%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>As ordered</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>For suspected beta blocker or calcium channel blocker overdose</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diphenhydramine (Benadryl)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>As ordered</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>For suspected dystonic reactions and the extrapyramidal effects of phenothiazine overdose</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glucagon</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>As ordered</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>For suspected beta blocker or calcium channel blocker overdose</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Naloxone (Narcan)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>As ordered</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>For respiratory depression with suspected narcotic overdose</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium Bicarbonate 8.4%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>As ordered</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>For altered mental status and/or dysrhythmia with suspected cyclic antidepressant overdose</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Enter from the Universal Patient Treatment Protocol
For specific Emergency Stabilization or Patient Management of Toxic Exposure, Inhalation, or Ingestion

Pertinent Findings

<table>
<thead>
<tr>
<th>Environment</th>
<th>History</th>
<th>Physical</th>
<th>Differential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evidence of: Accident</td>
<td>Substance: Chemicals (both liquids and powders), Chlorine, Cyanide, Hydrogen Sulfide, Hydrofluoric Acid, Phosgene</td>
<td>Altered mental status, agitation, seizures, Altered respiration, dyspnea, apnea, Bradycardia, tachycardia, dysrhythmia</td>
<td>Alcohol, Epilepsy, Insulin, Overdose, Uremia, Trauma, Infection, Psychosis, Stroke, Carbamates, Organophosphates, Other toxic exposure, Other toxic inhalation, Other toxic ingestion</td>
</tr>
<tr>
<td>Evidence of: Substance</td>
<td>Other toxins</td>
<td>Hypotension or hypertension</td>
<td></td>
</tr>
<tr>
<td>Route</td>
<td>Route, quantity, and time</td>
<td>Hypothermia or hyperthermia</td>
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<tr>
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<td>Sluggish, dilated or pinpoint pupils</td>
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</tr>
<tr>
<td>Conserve evidence</td>
<td></td>
<td>Skin signs and secretions</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Abdominal pain, nausea, and vomiting</td>
<td>SLUDGEM</td>
</tr>
</tbody>
</table>

Emergency Stabilization or Patient Management

Follow the Scene Management of Hazardous Materials Treatment Protocol when applicable

Decontaminate:
- Remove and bag patient’s clothing, jewelry, etc.
- Brush off dry chemicals and blot excess liquid chemicals
- Wash patient with mild soap and water
- Rinse and flush with large amounts of water
  - Flush contaminated eyes with saline for 15 minutes or until pain and irritation subside
- Cover with warm dry clothing and/or blankets
- Consult container label or onsite MSDS for decontamination instructions
  - Remove label or copy page from MSDS, conserve in sealed plastic bag, and transport

Do not induce vomiting

Antidote:
- Consult container label or onsite MSDS for antidote instructions
- Read decontamination and antidote instructions to Online Medical Direction (OMD)

2.5 mg Albuterol 0.083% (Proventil or Ventolin) HHN or in-line with a ventilatory device
For bronchospasm associated with toxic inhalation
May repeat as clinically indicated
See REMSA Calculation Chart for pediatric dosage
### Return to Universal Patient Treatment Protocol

_for continuing Scene Management, Emergency Stabilization, Patient Disposition, or Patient Management_

<table>
<thead>
<tr>
<th></th>
<th>EMR</th>
<th>EMT</th>
<th>AEMT</th>
<th>PM</th>
</tr>
</thead>
</table>

#### Base Hospital Physician Orders

**Assist with site supplied antidote**  
As ordered  
For suspected toxic exposure, inhalation, or ingestion

**Potable Water PO**  
As ordered  
For suspected toxic ingestion

**Milk PO**  
As ordered  
For suspected toxic ingestion

**Activated Charcoal PO**  
As ordered  
For suspected toxic ingestion

**Calcium Chloride 10%**  
As ordered  
For cardiac dysrhythmias associated with toxic exposure, inhalation, or ingestion

**Magnesium Sulfate 50%**  
As ordered  
For cardiac dysrhythmias associated with toxic exposure, inhalation, or ingestion