Treatment Protocol: HAZMAT



Contact Medical Alert Center (MAC) for all MCIs prior to transport otherwise notify the receiving hospital ①

- 1. Secure area, establish incident site, and don protective equipment/gear appropriate for hazardous material exposure according to the provider agency protocol
- If MCI, begin triage (*Ref. 519.2 and Ref. 519.5*) Provide MAC with the following incident information: properties of contaminant, type of decontamination performed, signs/symptoms, and smells
- 3. Remove patient from source if safe to do so, and move to decontamination area prn
- 4. Assess airway and initiate basic and/or advanced airway maneuvers prn (MCG 1302)
- 5. Administer Oxygen prn (MCG 1302)
- 6. Remove patient's clothing
- Flush skin, eyes and mucous membranes with copious amounts of water For eye involvement, irrigate with Normal Saline 1L during transport; allow patient to remove contact lenses if possible
- Initiate cardiac monitoring (MCG 1308) Perform 12-lead ECG prn For patients with dysrhythmias, treat in conjunction with TP 1212-P, Cardiac Dysrhythmia -Bradycardia or TP 1213-P, Cardiac Dysrhythmia - Tachycardia
- 9. Establish vascular access prn (MCG 1375)
- 10. Assess for signs of trauma If traumatic injury suspected, treat in conjunction with *TP* 1244-P, *Traumatic Injury*
- For poor perfusion (MCG 1355): Normal Saline 20mL/kg IV rapid infusion per MCG 1309 For persistent poor perfusion, treat in conjunction with TP 1207-P, Shock/Hypotension
- 12. Consider contacting the Poison Control Center in conjunction with the Base Hospital for assistance with management of toxins (*Ref. 805*)

NERVE AGENT EXPOSURE

- If multiple symptomatic patients with > 50 victims involved, request EMS CHEMPACK from the MAC (*Ref. 1108*)
- 14. Pediatric patients <u>longer</u> than the length-based resuscitation tape (Broselow[™]) should be treated according to adult doses which are listed below and found in *TP 1240, HAZMAT* <u>Mild Exposure</u>: 1 DuoDote IM



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<u>Moderate Exposure</u>: 2 DuoDotes IM, one after the other <u>Severe Exposure</u>: 3 DuoDotes IM, one after the other

Pediatric patients between 3 – 36 kilograms body weight based on measurement using the length-based resuscitation tape (Broselow™) should be treated as follows: ②

<u>Mild Exposure</u>: Atropine (0.1mg/mL) 0.02mg/kg IV/IM, dose as per *MCG* 1309 Moderate Exposure: 1 DuoDote IM

Severe Exposure:

<u>ure</u>: 1 or 2 DuoDote(s) IM, one after the other when applicable, based on the table below:

23 A			
Avg Wt (KG)	Color	Initial Emergency Dose	
4	Grey		
6.5	Pink		
8.5	Red	1 DuoDote	
10.5	Purple		
13	Yellow		
16.5	White		
20.5	Blue		
26	Orange	2 DuoDotes	
33	Green		
26	Orange	2 DuoDotes	

*Duodote (2.1mg Atropine/600 mg 2PAM Chloride)

- 16. For seizure, treat in conjunction with TP 1231-P, Seizure
- 17. For EMS CHEMPACK Deployment:

EMS CHEMPACK may be used for repeat dosing as necessary

Avg Wt (KG)	Color	Repeat Atropine Dose Multi-dose vial (0.4mg/mL) 0.1mg/kg IV or IM	2PAM Chloride* Multi-dose vial (50mg/mL) 50 mg/kg IM or IV	Diazepam** Multi-dose vial (5mg/mL) 0.1 – 0.2mg/kg IV or IM prn seizure
4	Grey	0.4mg, 1mL	200mg, 4mL	0.5 mg, 0.1mL
6.5	Pink	0.7mg, 1.75mL	325mg, 6.5mL	1mg, 0.2mL
8.5	Red	0.9mg, 2.25mL	425mg, 8.5mL	1.5mg, 0.3mL
10.5	Purple	1mg, 2.5mL	525mg, 10.5mL	2mg, 0.4mL
13	Yellow	1.3mg, 3.25mL	650mg, 13mL	2.5mg, 0.5mL
16.5	White	1.6mg, 4mL	825mg, 16.5mL	3mg, 0.6mL
20.5	Blue	2mg, 5mL	1000mg, 20mL	4mg, 0.8mL
26	Orange	2.6mg, 6.5mL	1000mg, 20mL	5mg, 1mL
33	Green	3.3mg, 8.25mL	1000mg, 20mL	6mg, 1.2mL

Repeat Atropine dose prn 5 minutes after initial emergency DuoDote. Multi-dose vials can provide closer to ideal dosages, if available.

*Repeat Pralidoxime dose 60 minutes after Initial Emergency DuoDote.

** For seizure, if utilizing the CHEMPACK, prioritize midazolam to treat pediatric seizure per *TP*-1231-P, Seizure since the diazepam autoinjector will be too large a dose for pediatric patients.

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If midazolam supply is limited, multi-dose vial diazepam may be available and can be administered as per above table.

Dosing is rounded to the nearest tenth.

IV preferred route for Diazepam but can administer IM if not IV available May repeat diazepam dose x1 in 5 min

If the child is too tall for the pediatric resuscitation tape and adult size, treat per adult protocol *TP 1240, HAZMAT*

ORGANOPHOSPHATE EXPOSURE

 For heart rate < 60bpm, hypotension, respiratory depression and/or extreme salivation Atropine (0.1mg/mL) 0.05mg/kg IV/IO May be repeated every 5 min, maximum total dose 5mg

For seizure, treat in conjunction with TP 1231-P, Seizure

RADIOLOGIC EXPOSURE

- If radiation contamination is suspected, confirm by using appropriate detection devices available through Department of Public Health (DPH), Radiation Management at (213) 989-7140
- If radiation contamination present, identify the cause of the contamination 3
 Internal Radiation is exposure through open wound, ingestion or inhalation of radioactive materials
 External Radiation is exposure through a Radiological Dispersal Device (RDD), Radiological Material Release (RMR) or Radiological Exposure Device (RED)
- 21. For External Radiation:

If a RDD is used and in the absence of any other information, evacuate 1,650 feet in all directions from the detonation site and then contact the MAC ③ Notify DPH Radiation Management at (213) 989-7140 if departmental HAZMAT team is not available and prolonged exposures are expected ④

- 22. For patients with a life-threatening condition: Treat using appropriate treatment protocol based on complaints in conjunction with decontamination Remove the outer clothing and utilize containment mitigation techniques before transport
- 23. For patients without a life-threatening condition:
 Decontaminate using departmental protocols
 Treat using appropriate treatment protocol based on signs and symptoms
- 24. Asymptomatic and minimal exposure suspected: Decontaminate and release patient if appropriate **S**

CYANIDE EXPOSURE

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- Ref. No. 1240-P
- 25. For patients with cardiovascular, neurologic, and/or respiratory compromise due to suspected or known cyanide exposure:

Hydroxocobalamin 70mg/kg IV/IO, dose per MCG 1309

Reconstitute 5 grams in 200mL of Normal Saline (25mg/ml) and infuse over 15 minutes May repeat x1 in 15 min

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- If MCI, MAC should be contacted for 5 or more patients and coordinate all destination decisions otherwise the Base Hospital should be notified as specified in this protocol, and if no Base Hospital required then the receiving hospital will be notified.
- Nerve agent exposure symptom severity: SEVERE: severe respiratory distress, respiratory arrest, cyanosis, extreme SLUDGE (salivation, lacrimation, urination, defecation, gastrointestinal distress and emesis) seizures, unconsciousness MODERATE: miosis, rhinorrhea, shortness of breath, vomiting, diarrhea MILD: miosis, rhinorrhea and increased salivation
- Radiation Exposure Safety: Exposure to victims with internal radiation poses low-to-no risk to EMS personnel Exposure to victims with external radiation exposure poses low-to-moderate risk to EMS personnel Remember the following principles:

Time: limit time with the victim to a minimum *Distance:* the further away from the source, the smaller the dose received. *Shielding:* "Turnouts" will protect from alpha and beta emitters, wear respiratory protection if particulate matter (i.e., dust or powder) present

- The HAZMAT team, MAC, or Department of Public Health Radiation Management will be able to redefine boundaries, establish radiation dose guidelines, assist with monitoring and decontamination procedures, and provide support to on-scene responders. These resources may also refer to *Emergency Response Guidebook* for other recommended scene precautions.
- If number of patients exceeds available resources, asymptomatic patients with minimal exposure may be released for home decontamination.

