COUNTY OF LOS ANGELES
EMERGENCY MEDICAL SERVICES

PROVIDER AGENCY ADVISORY COMMITTEE

MEETING NOTICE

The Provider Agency Advisory Committee meetings are open to the public. You may address this Committee on any agenda item before or during consideration of that item, and on other items of interest that are not on the agenda, but which are within the subject matter jurisdiction of this Committee.

DATE: April 16, 2025

TIME: 1:00 pm

LOCATION: IN-PERSON MEETING
Cathy Chidester Conference Room [1st Floor Hearing Room]
Los Angeles County EMS Agency
10100 Pioneer Boulevard
Santa Fe Springs, California 90670

AGENDA

1. CALL TO ORDER

2. INTRODUCTIONS / ANNOUNCEMENTS / PRESENTATIONS

2.1 Committee Membership Changes
2.2 EMSAAC 2025 Annual Conference
2.3 Joint Educational Session
Topic: Pediatric Out of Hospital Cardiac Arrest. June 3, 2025. 1145 a.m. – 1245 p.m.

3. APPROVAL OF MINUTES: February 12, 2025

4. UNFINISHED BUSINESS

There was no unfinished business.

5. NEW BUSINESS

5.1 9-1-1 IFT Cognito Form

Policies for Discussion; Action Required:

5.2 Reference No. 814, Determination/Pronouncement of Death in the Field

Policies for Discussion; No Action Required:

5.3 Reference No. 1309, MCG: Color Code Drug Doses

Agitated Delirium Changes

5.4 Reference No. 526, Behavioral/Psychiatric Crisis Patient Destination *(No changes)*
5.5 Reference No. 526.1, Medical Clearance Criteria Screening Tool for Psychiatric Urgent Care Centers (PUCC)

5.6 Reference No. 838, Application of Patient Restraints
5.7 Reference No. 1200.2, Treatment Protocol: Base Contact Requirements
5.8 Reference No. 1200.3, Treatment Protocol: Provider Impressions
5.9 Reference No. 1200.4, Treatment Protocol: BLS Upgrade to ALS Assessment
5.10 Reference No. 1209, Treatment Protocol: Behavioral/Psychiatric Crisis
5.11 Reference No. 1307, MCG: Care of the Patient with Agitation *(No changes)*
5.12 Reference No. 1307.3, MCG: Common Etiologies of Agitation, Field Presentation, Likelihood Verbal De-Escalation
5.13 Reference No. 1317.25, MCG: Drug Reference - Midazolam
5.14 Reference No. 1373, MCG: Treatment Protocol Quality Improvement Fallout Data Dictionary

6. REPORTS AND UPDATES

6.1 Sidewalk CPR
6.2 EMS Update 2025
6.3 EmergiPress
6.4 ELCOR Committee
6.5 Research Initiatives and Pilot Studies
  6.5.1 LA DROP
  6.5.2 ThoraSite Pilot
6.6 PediDOSE Trial
6.7 Pedi-PART
6.8 California Office of Traffic Safety (OTS) Grants Projects
  6.8.1 RAPID LA County Medic Mobile Application
  6.8.2 Trauma Dashboards
6.9 Health Data Exchange

7. OPEN DISCUSSION

8. NEXT MEETING: June 18, 2025

9. ADJOURNMENT

EMERGENCY MEDICAL SERVICES COMMISSION
PROVIDER AGENCY ADVISORY COMMITTEE

MINUTES
Wednesday, February 12, 2025

MEMBERSHIP / ATTENDANCE

	MEMBERS IN ATTENDANCE	ORGANIZATION
X	Carol Meyer, Chair	EMSC, Commissioner
	Paul Espinosa, Vice-Chair	EMSC, Commissioner
	Jason Cervantes	EMSC, Commissioner
	Kenneth Powell	EMSC, Commissioner
	James Lott, PsyD, MBA	EMSC, Commissioner
	Gary Washburn	EMSC, Commissioner
	Kristin Kolenda	EMSC, Commissioner
	Ken Lieberman	EMSC, Commissioner
X	Sean Stokes	Area A *(Rep to Medical Council)*
X	Patrick Nulty	Area A, Alternate
X	Keith Harter	Area B
X	Clayton Kazan, MD	Area B, Alternate
	Vacant	Area C
X	Jeffrey Tsay	Area C, Alternate
X	Ryan Jorgensen	Area E
X	Geoffrey Dayne	Area E, Alternate
X	Joel Davis	Area F
	Andrew Reno	Area F, Alternate
X	Adam Brown	Area G *(Rep to BHAC)*
X	Stefan Viera	Area G, Alternate
X	Matthew Conroy	Area H
	Tim Wuerfel	Area H, Alternate
	David Hahn	Area H, Alternate
X	Julian Hernandez	Employed Paramedic Coordinator
X	Tisha Hamilton	Employed Paramedic Coordinator, Alt
X	Jenny Van Slyke	Prehospital Care Coordinator
	Vacant	Prehospital Care Coordinator, Alternate
X	Bryan Sua	Public Sector Paramedic Coordinator
	Drew Pryor	Public Sector Paramedic Coordinator, Alt
	Maurice Guillen	Private Sector Paramedic
	Scott Buck	Private Sector Paramedic, Alternate
	Tabitha Cheng, MD	Provider Agency Medical Director
X	Tiffany Abramson, MD	Provider Agency Medical Director, Alt
X	Robert Ower	Private Sector Nurse Staffed Amb Program
	Jonathan Lopez	Private Sector Nurse Staffed Amb Program,
	Scott Jaeggi	EMT Training Program
	Albert Laicans	EMT Training Program, Alternate
X	Ray Mosack	Paramedic Training Program
	Vacant	Paramedic Training Program, Alternate
X	Jennifer Nulty	EMS Educator
	Heather Calka	EMS Educator, Alternate

EMS AGENCY STAFF	EMS AGENCY STAFF
Richard Tadeo	Nichole Bosson, MD
Denise Whitfield, MD	Shira Schlesinger, MD
Jake Toy, MD	Michael Kim, MD
Bijan Arab, MD	Jonathan Warren, MD
Chris Clare	Roel Amara
Jacqueline Rifenburg	Frederick Bottger
Jennifer Calderon	Sam Calderon
Paula Cho	Lily Choi
Mark Ferguson	Natalie Greco
Han Na Kang	Gary Watson
Gerard Waworundeng	David Wells
Christine Zaiser	

GUEST	ORGANIZATION
Danielle Ogaz	LACoFD
Benjamin Esparza	LAFD
Jim Goldsworthy	LAFD Air Operations
Jessie Castillo	PRN Ambulance
Joseph Villegos	PRN Ambulance
Michael Stone, MD	USC EMS Fellow
Michelle Evans	West Coast Ambulance
Lyn Riley	Multiple FDs – EMS Educator
Eric Eckels	All Town Ambulance
Alicia Bravo	All Town Ambulance
Kimberly Tan	UCLA Ctr for Prehospital Care
Adrienne Roel	Culver City, El Segundo FDs
Patricia Guerera	Burbank FD, San Gabriel FD
Armando Jurado	Lifeline Ambulance
Jameel Sylvia	UCLA Ctr for Prehospital Care
Marc Cohen, MD	LAFD; Multiple FDs Med Director
Shant Shekherdimian, MD	PRN Ambulance
Duane Anderson	ZOLL Medical
Amir Rombon Rahimian, MD	LAFD

1. CALL TO ORDER – Chair Carol Meyer, called meeting to order at 1:02 p.m.

2. INTRODUCTIONS AND ANNOUNCEMENTS

2.1 New PAAC Chair *(Richard Tadeo)*

- EMS Agency Director introduced Commissioner Carol Meyer as the 2025 Committee Chair.

2.2 2024 EMS Annual Data Report *(Richard Tadeo)*

- EMS Agency Director reviewed this Annual report with Committee.

2.3 EMS Agency Roster *(Richard Tadeo)*

- Updated EMS Agency Roster dated January 21, 2025, was distributed to this Committee, listing the contact information for EMS Agency staff.

2.4 Educational Session: E-Bikes and Micromobility *(Shira Schlesinger, MD)*

- Announcement was made for a 1-hour Continuing Education session, scheduled for March 4, 2025, 1145 am-1:00 pm, via ZOOM link. This 1-hr session will be presented between the scheduled PedAC and Medical Advisory Committee meetings.
- Presented by Dr. Lourdes Swentek, Assistant Professor of Surgery, Division of Trauma, Burns, Surgical Critical Care and Acute Care Surgery, University of California, Irvine.
- Information and hand-out with link to this session was provided.

2.5 EMSAAC 2025 Annual Conference *(Carol Meyer)*

- Chair reminded Committee of the upcoming EMSAAC conference scheduled for May 28 & 29, 2025, at the Loews Coronado Bay Resort. A pre-conference titled Disaster Medical Response will be conducted on May 27th.

3. APPROVAL OF MINUTES (Brown/Kazan) December 18, 2024, minutes were approved as written.

4. UNFINISHED BUSINESS

There was no unfinished business.

5. NEW BUSINESS

Policies for Discussion; Action Required:

5.1 Reference No. 513, ST-Elevation Myocardial Infarction (STEMI) Patient Destination *(Nichole Bosson, MD)*

Policy reviewed and approved as written.

M/S/C (Conroy/Brown) Approve: Reference No. 513, ST-Elevation Myocardial Infarction (STEMI) Patient Destination.

5.2 Reference No. 830, EMS Pilots and Scientific Studies *(Jake Toy, MD)*

Policy reviewed and approved with the following recommendation:

- Provide a definition of the term "EMS Clinician" as described in Principle 2.

M/S/C (Kazan/Stokes) Approve: Reference No. 830, EMS Pilots and Scientific Studies, with recommendation.

5.3 Reference No. 503, Guidelines for Hospitals Requesting Diversion of ALS/BLS Patients *(Nichole Bosson, MD)*

Policy reviewed and approved as written.

M/S/C (Kazan/Brown) Approve: Reference No. 503, Guidelines for Hospitals Requesting Diversion of ALS/BLS Patients.

5.4 Reference No. 503.2, Diversion Request Quick Reference Guide *(Nichole Bosson, MD)*

Policy reviewed and approved as written.

M/S/C (Kazan/Brown) Approve: Reference No. 503.2, Diversion Request Quick Reference Guide.

5.5 Reference No. 516, Cardiac Arrest (Non-Traumatic) Patient Destination *(Nichole Bosson, MD)*

Policy reviewed and approved as written.

M/S/C (Kazan/Brown) Approve: Reference No. 516, Cardiac Arrest (Non-Traumatic) Patient Destination.

5.6 Reference No. 834, Patient Refusal of Treatment/Transport and Treat and Release at Scene *(Denise Whitfield, MD)*

Policy reviewed and approved as written.

M/S/C (Conroy/Kazan) Approve: Reference No. 834, Patient Refusal of Treatment/Transport and Treat and Release on Scene.

Policies for Discussion; No Action Required:

The following policies were reviewed as information only:

5.7 Reference No. 321, Extracorporeal Cardiopulmonary Resuscitation (ECPR) Receiving Center Standards *(Nichole Bosson, MD)*
5.8 Reference No. 1210, Treatment Protocol: Cardiac Arrest *(Nichole Bosson, MD)*
5.9 Reference No. 1318, MCG: ECPR Patient Algorithm *(Nichole Bosson, MD)*
5.10 Reference No. 1200.2, Treatment Protocol: Base Contact Requirements *(Denise Whitfield, MD)*
5.11 Reference No. 1209/1209-P, Treatment Protocol: Behavioral / Psychiatric Crisis *(Denise Whitfield, MD)*
5.12 Reference No. 1306, MCG: Evaluation and Care of Patients at Risk of Suicide *(Denise Whitfield, MD)*
Recommendation: Principles 2: Remove wording after the statement "Several suicide risk screening tools are evidence-based and validated."
5.13 Reference No. 1306.1, MCG: Columbia Suicide Severity Risk Scale *(Denise Whitfield, MD)*
5.14 Reference No. 1306.2, MCG: Disposition Guidance for Patients at Risk of Suicide (Denise Whitfield, MD)
5.15 Reference No. 1231-P, Treatment Protocol: Seizures (Pediatric) *(Nichole Bosson, MD)*
5.16 Reference No. 1237 / 1237-P, Treatment Protocol: Respiratory Distress *(Nichole Bosson, MD)*
5.17 Reference No. 1302, MCG: Airway Management and Monitoring *(Nichole Bosson, MD)*
5.18 Reference No. 1242 / 1242-P, Treatment Protocol: Crush Injury / Syndrome *(Nichole Bosson, MD)*
5.19 Reference No. 1375, MCG: Vascular Access *(Nichole Bosson, MD)*
5.20 Reference No. 1213-P, Treatment Protocol: Cardiac Dysrhythmia – Tachycardia *(Nichole Bosson, MD)*
5.21 Reference No. 1244 / 1244-P, Treatment Protocol: Traumatic Injury *(Nichole Bosson, MD)*
5.22 Reference No. 1309, MCG: Color Code Drug Doses *(Nichole Bosson, MD)*
5.23 Reference No. 1317.13, MCG: Drug Reference – Dextrose *(Nichole Bosson, MD)*
5.24 Reference No. 1333, MCG: Monitoring Transfusion of Blood Products *(Nichole Bosson, MD)*
5.25 Reference No. 1240-P, Treatment Protocol: HAZMAT (Pediatric) *(Nichole Bosson, MD)*

6. REPORTS AND UPDATES

6.1 EMS Update 2025 *(Shira Schlesinger, MD)*

- Train-the-Trainer sessions are scheduled for March 24-26, 2025. Please register with Vanessa Gonzalez at vgonzalez3@dhs.lacounty.gov
- Pre-Training module will be available March 17, 2025.
- EMS Agency is seeking assistance from providers who utilize Target Solutions, to test this platform while EMS Update is being built. If available to assist, please contact Dr. Schlesinger.

6.2 EmergiPress *(Shira Schlesinger, MD)*

- January/February EmergiPress will be posted on the EMS Agency's webpage shortly. Topics include pregnancy complications and complicated childbirth.

6.3 ITAC Update *(Shira Schlesinger, MD)*

- There was no meeting in February. Next meeting is scheduled for May 5, 2025.
- Provider agencies wanting to utilize a new product, may schedule a review for a potential presentation to ITAC through Dr. Schlesinger. (sschlesinger2@dhs.lacounty.gov)

6.4 EMS and Law Enforcement Co-Response (ELCOR) Task Force *(Nichole Bosson, MD)*

- Recently formed into an official Committee and will meet quarterly. This Committee's goal is to improve collaboration between the EMS community and law enforcement. More information will follow.

6.5 Research Initiatives and Pilot Studies

6.5.1 Prehospital Blood Transfusion – LA DROP *(Nichole Bosson, MD)*

- Los Angeles County Fire Department will begin this pilot on April 1, 2025. Compton Fire Department is moving forward to implement either simultaneously or shortly thereafter within this pilot.
- Once the 2-year pilot is implemented, the EMS Agency will distribute a memorandum of introduction.

6.5.2 ThoraSite Pilot *(Denise Whitfield, MD)*

- Pilot has completed. Data is currently being collected and once analyzed, will be presented to this Committee.

6.5 PediDOSE Trial *(Nichole Bosson, MD)*

- Starting July 1, 2025, and after completion of EMS Update 2025, this Trial will begin Phase 3, which will reduce the age of enrollment to 12 months of age through 18 years. (Currently, Phase 2 patients are ≥16 months of age through 18 years.)

6.7 Pedi-PART *(Nichole Bosson, MD)*

- Trial continues with more than 140 patients enrolled.
- Biggest challenges identified related to study compliance include:
  - Teenagers being intubated as the primary method of airway management
  - i-gel not being placed on odd calendar days
- Paramedics are encouraged to follow the guidelines of the study.
- Paramedic Self Reporting (PSR) is doing well.
- RALPH recall: due to time advancing too quickly, all the devices were being recalled and sent back for recalibration. Thank you for all your efforts in returning these devices back to the EMS Agency. Once repairs are complete, these devices will be redistributed to the providers. Providers may decide independently if they wish to utilize the devices in the field during this study.

6.8 California Office of Traffic Safety (OTS) Grants Projects

6.8.1 RAPID LA County Medic Mobile Application *(Nichole Bosson, MD and Denise Whitfield, MD)*

- This mobile application has been released and is now active.
- Please encourage all staff to download both the RAPID LA County Medic and Color Code Drug Dosages applications.
- Training will be released during EMS Update 2025. A training video is available on the EMS Agency's website. (see "Updates from the Medical Director")
- EMS Agency policies and procedures within this Application will be updated regularly.

6.8.2 Trauma Dashboards/Curriculum *(Shira Schlesinger, MD)*

- Waiting resolution of contract issues before continuing with creating the live dashboard.

7. OPEN DISCUSSION

7.1 I.V. Fluid Shortages *(Nichole Bosson, MD)*

Medical Director asked if providers were having difficulty with receiving orders for the following intravenous (IV) fluids:

- Normal Saline: Providers responded there were no current issues.
- Dextrose 10%/250mL: The EMS Agency was informed there were a couple of providers experiencing a delay in shipment. Therefore, the Medical Director informed that if providers continue having difficulty, they should utilize D50 for adults and preserve the use of D10 for pediatric patients. *(A Memorandum with these instructions was distributed to all providers on January 16, 2025)*
- Those experiencing a critical low inventory of D10, may contact the EMS Agency for potential assistance from the Disaster Cache.

7.2 Voluntary Stroke Survey *(Nichole Bosson, MD)*

Providers were encouraged to participate in the upcoming Stroke Survey. This survey will be distributed shortly to all providers and is voluntary.

8. NEXT MEETING – April 16, 2025

9. ADJOURNMENT - Meeting adjourned at 3:05 p.m.

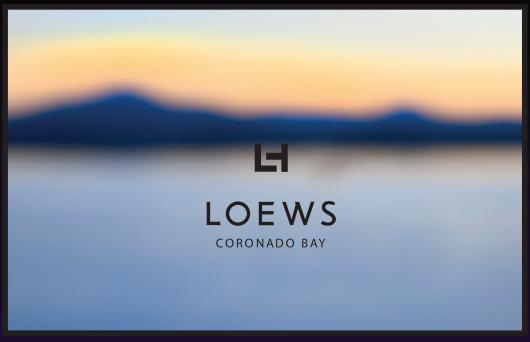
EMSAAC
EMERGENCY MEDICAL SERVICES ADMINISTRATORS' ASSOCIATION OF CALIFORNIA

2025 Annual EMSAAC CONFERENCE

California Dreamin'

United in Our Mission

Pre-Conference, May 27: California Screamin' - Your Disaster Medical Response



May 28 & 29, 2025

Loews Coronado Hotel, San Diego

Presented by: EMS Administrators' Association of California
Monitor the EMSAAC website for current information: www.EMSAAC.org

California Dreamin': United in Our Mission

The EMS Administrators' Association of California (EMSAAC) cordially invites California's EMS leaders and professionals to join us for the EMSAAC Annual Conference 2025 at the Loews Coronado Resort on the Coronado Peninsula in San Diego. EMSAAC continues to lead the way in creating conferences that are meaningful and exciting to attend.

This year's theme, California Dreamin': United in Our Mission, embodies the concept that regardless of our individual counties, provider agencies or hospitals, we are united in providing the highest quality of EMS care to our communities. The theme lays down the foundation for a broad variety of subject matter to interest all levels of prehospital care personnel and managers including ambulance providers, fire department personnel, military and law enforcement partners, LEMSA personnel, ED nurses, physicians, Public Health emergency preparedness and response coordinators and anyone that provides EMS to their community. The conference included lectures, panel discussions and opportunities to network with current leaders and innovators in EMS as well as previews new and upcoming equipment, products and services.

About EMSAAC

EMSAAC is composed of administrators from 34 Local EMS Agencies (LEMSAs). These county-designated agencies are responsible for planning, coordinating, implementing, monitoring, and evaluating a local, integrated system of emergency medical services. The LEMSAs partner with the California EMS Authority to carry out applicable regulations and guidelines statewide.

Continuing Education Credits

This conference has been planned and implemented to provide instructor-based continuing education for nurses and prehospital care professionals through the Orange County Emergency Medical Services Agency, a division of the Orange County Health Care Agency.

Provider is approved by the California Board of registered Nursing, BRN Provider #13945 for up to 11 contact hours. California EMS CE provided by the Orange County EMS Agency CEP#30-0001. Up to 11 hours of instructor-based CE will be issued to EMTS, paramedics and MICNs upon completion.

EMSAAC
EMERGENCY MEDICAL SERVICES ADMINISTRATORS' ASSOCIATION OF CALIFORNIA

IN COLLABORATION WITH THE
EMERGENCY MEDICAL DIRECTORS
ASSOCIATION OF CALIFORNIA

Alameda
Central California
Coastal Valleys
Contra Costa
El Dorado
Imperial
Inland
Kern
Los Angeles
Marin
Merced
Monterey
Mountain-Valley
Napa
North Coast
Northern California
Orange
Riverside
Sacramento
San Benito
San Diego
San Francisco
San Joaquin
San Luis Obispo
San Mateo
Santa Barbara
Santa Clara
Santa Cruz
Sierra-Sac Valley
Solano
Stanislaus
Tuolumne
Ventura
Yolo

California Dreamin'
United in Our Mission

EMSAAC

May 28 & May 29, 2025

Pre-Conference May 27

See page 7 for all registration

LOEWS
CORONADO BAY

Make your hotel reservations today!

Loews Coronado Bay Resort
4000 Lowes Coronado Bay Road, Coronado, California 92118
Reservation Center: 1-800-235-6397 Hotel Direct: 619-424-4000
Online: https://www.loewshotels.com/coronado-bay-resort/group-emsaac-conference-2025

The Resort

Centered between the Pacific Ocean and Coronado Bay, the resort epitomizes the true southern California lifestyle. Taking full advantage of the resort's waterfront location, the new redesign artfully combines San Diego's sun and surf with the casual charm of southern California. Relax by one of three pools, stroll down the pristine Silver Strand State Beach, pamper yourself at the Sea Spa, sailing or boating on the bay or just enjoy a glass of wine sitting at the outdoor fire feature watching the sunset. Other resort activities include three tennis courts, a full service marina, bike rentals and a fleet of gondolas. The ideal setting for families, the hotel has a children's pool and a kids club offering a range of activities, including scavenger hunts and magic tricks (surcharges). The Resort is a Four Diamond Award hotel and listed as one of the Top 10 Best Hotels in San Diego!

Rates & Reservations

Please make your own reservations and be sure to request the EMSAAC Conference reduced rate of $239 per night plus taxes. This low rate includes:

- Just 15-20 minutes from San Diego Airport
- Complimentary guestroom internet access
- Complimentary use of fitness center
- 15% discount off spa services from Sea Spa
- No resort fees
- Reduced parking rate of $15/day (Valet at $30/day)

A block of rooms will be held until April 23, 2025. After this date, reservations will be accepted on a space and rate available basis only. This conference rate will be honored 3 days before and 3 days after the conference dates, excluding suite rates, and subject to availability. Check-in time: 4pm

Your Stay

Almost all of the 439 rooms have a water view, either bay or ocean views. The Amenities featured in guestrooms include air conditioning, minibars, and complimentary newspapers. Guestrooms have cable television with pay movies. Business-friendly amenities include multi-line phones, desks, and voice mail. Balconies are featured in all guestrooms. Bathrooms provide bathrobes and hair dryers.

Conference Program

DAY 1 - Wednesday, May 28, 2025

7:00 am
Sunny California Registration and Jamming with Exhibitors
Continental Breakfast in Exhibit Hall

8:00 am - 8:05 am
California Welcome
Jeff Fariss, EMSAAC President

8:05 am - 8:15 am
Introduction to the Golden State
Elizabeth Basnett, Director
California EMS Authority

8:15 am - 9:15 am
KEYNOTE SPEAKER
Freedom, Opportunity & Adventure: Organizational Culture in a Multi-Generational Workforce
Jeff Butler, International TEDx Speaker

Modern day workplace has four generations working under one roof: Baby Boomers, Generation Xers, Millennials and now Generation Z. All work together to accomplish common organizational goals however, with differences in each of these generation's viewpoints, upbringings, culture, ideas, beliefs and experiences, it is likely to see some tiffs or clashes within the organization. This makes managing four different generations in the workplace an extremely difficult task to accomplish, though not impossible. Jeff, backed by a decade of psychological research, shares insights about motivations, differences, and communication styles of the four generations. You will learn how organizations across various industries are thriving with the multigenerational workforce and how yours can too, turning your multigenerational workforce into a competitive advantage.

9:15 am - 10:00 am
Mission Through the Lens of Equity: CARESTAR Foundation
Tanir Ami, CEO

The CARESTAR Foundation provides grant funding for EMS-related programs and is committed to partnering with grantees to enable strong and meaningful work that transforms and enhances the field of emergency and prehospital care. The CEO will provide an overview of grant funding opportunities. The focus is primarily supporting local community organizations and/or collaboratives engaging residents who identify as Black, Indigenous, and/or people of color, whose voices add much-needed perspectives to the conversations and decisions that shape emergency and prehospital care response and delivery in California.

10:00 am - 10:30 am
Good Vibrations – Break with Exhibitors

10:30 am - 11:30 am
Surfing Through the Choices: Collaborative Informed Decision Making in EMS
Doug Wolfberg, EMS Attorney
Until EMS busts the myths about "patient abandonment," we can't fully embrace true innovation and patient-centered care. Fear of liability for abandonment has driven many bad EMS policies, protocols and deployment decisions. Are EMS practitioners required to transport every patient who wants it? What is the liability if a patient is released from EMS care despite their wishes? Is EMS required to continue care until someone of "equal or higher training" takes over? Led by one of the nation's most well-known and respected EMS attorneys, this session will look at the law of patient abandonment, and define what it is, and what it isn't – looking at specific EMS case studies. This presentation will bust many of the long-standing and deeply ingrained myths around patient abandonment, and demonstrate how misplaced fears of liability can stifle EMS innovation.

11:30 am - 12:15 pm
Up & Down California: Improving EMS Care for Sexual Assault Survivors
Zita Konik, MD & Naila Francies
Alameda County EMS Agency

The California Penal Code authorizes each county to establish an interagency Sexual Assault Response Team (SART) Program. The speakers will discuss the newest innovations and best practices of these teams and how EMS integrates to provide sensitive care to victims and survivors of sexual assault as a component of the SART.

12:15 am - 1:30 pm
California Stoked – Lunch/Visiting Exhibitors

1:30 pm - 2:30 pm
Redefining Leadership in the Sunkist State
Jeff Butler, International TEDx Speaker

Have you ever wondered why some employees continue to underperform while others become rock stars? Or better yet, is it possible to turn new hires into a linchpin team consistently? Imagine being able to lay out a roadmap for employees so that they are able to maximize their leadership ability without having to micromanage them. With a path where employees feel empowered and want to contribute versus being obligated to by their overbearing boss, Jeff reveals the roadmap that the most disruptive companies in the world are leveraging to maximize their employees leadership abilities. More specifically, how do they create a team where leadership is encouraged and cultivated to the point where an entire organization benefits. Some strategies are commonplace like strong management systems, but others are obscure requiring a leader to truly understand how the mind works in order to unlock their employee's potential.

2:30 pm - 3:00 pm
California Feelin' – Break with Exhibitors

3:00 pm - 4:30 pm
California Grown – Research Panel

Moderators:
Karl Sporer, MD, Napa County EMS Agency
Nichole Bosson, MD, LA County EMS Agency

Organized by EMDAC, each year rave reviews are received for a panel of different researchers in the field of EMS. They present data, trials or published papers keeping the audience abreast of the newest innovations and thinking backed by evidence-based foundations.

1) Naloxone Treatment in Out of Hospital Cardiac Arrest
David Dillion, MD, PhD
UC San Francisco

2) Impact of Diversion Policies on APOT
Jennifer Farah, MD
UCSD and Chula Vista Fire Department

3) Pediatric Behavioral Emergencies
Kenshata Watkins, MD
UC San Francisco

4:30 pm - 4:45 pm
California Sunset – Day's Wrap Up

5:30 pm - 6:30 pm
President's Reception – Everybody is a Star!
Exhibit Hall (light hors d'oeuvres)

Conference Program

DAY 2 - Thursday May 29, 2025

8:00 am
Surfing with the Exhibitors
Continental Breakfast in Exhibit Hall

8:30 am - 8:45 am
Welcome Back & EMS Leadership Awards
Shaun Vincent, EMSAAC President-Elect
Dustin Ballard, EMDAC

8:45 am - 9:45 am
KEYNOTE SPEAKER
Legacy of Freedom House
John Moon, Former Freedom House Paramedic & Assistant Chief of Pittsburg EMS

Founded in 1967 in a predominantly Black neighborhood and staffed entirely by Black paramedics, the Freedom House Ambulance Service set the standard for ambulance services and helped establish the training program and procedures for modern EMS systems. The legacy of Freedom House lives on in the training that today's first responders receive and the high quality of medical care that they give their patients. By refusing the status quo and raising the standard of care in their own community, the Black paramedics raised the standard of care for all. As an EMT leader, Chief Moon will share the legacy of Freedom House.

9:45 am - 10:30 am
La La Land – Break with Exhibitors

10:30 am - 11:30 am
California Dreams - or Nightmares? Busting the Myths about Patient Abandonment
Doug Wolfberg, EMS Attorney

Too many EMS systems focus on the binary choice of "treat and transport" or "patient refusals." The reality is that EMS practitioners have an ongoing duty to ensure that they help patients make informed decisions in every phase of the EMS-patient interaction. Decisions on whether to accept treatments or interventions, on whether or not to be transported, and the choice of destination, are all clinically significant patient care choices that require the informed decisions of the patient or the patient's legally responsible decision maker. EMS diversifies into much more than a simple "treat and transport model," modalities like telehealth, community paramedicine and transport to alternate destinations require a collaborative approach to patient decision making and, in some cases, the involvement of advanced practitioners in the patient consent process. This session will help EMS leaders reframe their thinking as EMS moves beyond "patient refusals" and into the new era of "collaborative informed decision making" in EMS.

11:30 am - 12:30 am
Earth, Wind and Fire: How Climate Change Affects EMS?
Michael Wysession, PhD

As a leading professor of Earth and Planetary Sciences, Dr. Wysession will explain the science behind the increasing trends of climate- and weather-related disasters impacting California and how the state and its EMS professionals can better prepare for the unpredictable future occurrences of earthquakes and heat-related illnesses in California. As an author and co-author, Michael has made many contributions to geoscience education and literacy and is a recipient of several scientific awards so join EMSAAC as he shares his knowledge of climate change.

12:30 am – 1:45 pm

Sun, Surf & Savor – Lunch & Final Visit with Exhibitors

1:15 pm – 2:45 pm

Lights, Action, Cameras: Implementing EMS Body-Worn Cameras
Chris Keller
New Orleans EMS

Body-worn cameras (BWCs) are a controversial topic in EMS, even though they are standard practice in police departments. Currently, only a few EMS agencies around the world utilize this technology. However, with the rise in assaults and battery against EMS personnel across the nation, the discussion around BWCs has become increasingly relevant for prehospital providers. BWCs offer real-time access to evolving situations and opportunities for later review. They enhance provider and patient safety, improve quality assurance and education, and facilitate online medical direction through telemedicine. Chris will describe the development and implementation of a BWC program within a mid-size urban EMS system and review the logistical, legal, ethical, and operational considerations. He will share their experiences with community education and engagement regarding the BWC program, highlighting how it has contributed to administrative and educational compliance within our department. He will also demonstrate how an EMS-based BWC program can provide an extra layer of protection for your agency's employees and their patients.

2:45 pm – 3:00 pm

Rollin' Through – Stretch Break

3:00 pm – 4:00 pm

Rush Hour Every Hour: APOT and How to Implement Redesign
- *Gregory Kann, MD, Sacramento County EMS Agency*
- *Joe Rudnicki, Sacramento Metro Fire*
- *Kimberly Adams, RN, Kaiser Roseville*

Ambulance wait times have long been a problem in California – no matter if you are in the north or south. Despite best practices, toolkits and legislation, the overcrowding problems and delays continue. Working with hospitals and providers, this is how Sacramento EMS and its partners collaborated to redesign APOT processes and will share their best approach

4:00 pm
Viva (Long Live) California
Final Raffles & Wrap Up

Keynote Speakers

Jeff Butler, International TEDx Speaker – Jeff Butler is an author and workplace strategist who explores human behavior within the working world. His experience spans over 40 industries in four continents on how different cultures and employees interact with each other. He studies common threads of behavior in industries such as IT professionals, underground utility workers, police officers to clothing retail chains and others. In addition, Jeff has also worked with companies like Google, Amazon, John Deere and Coldwell Banker. As a researcher and practitioner, he runs a consulting company and a tech company, TrinityFix, where he is able to test his ideas in different workplace environments. His ideas have made it to TEDx twice and he has appeared in dozens of media outlets including two books on human behavior: The Authentic Workplace and The Key To The New You. Currently, he lives in Dallas, Texas as an out of place Californian.

John Moon, Former Freedom House Paramedic & retired Assistant Chief of Pittsburgh EMS – John was raised in Pittsburgh's Hill District and joined Freedom House, America's First Emergency Medical Service, in 1972. He continued to work in emergency medicine for more than five decades and now works to preserve Freedom House legacy and mentor the next generation of emergency and community responders in Pittsburgh.

Faculty

Kimberley Adams, RN
EMS Manager
Roseville Medical Center - Kaiser Permanente
Roseville, California

Tanir Ami
CEO
CARESTAR Foundation
Berkeley, California

Dustin Ballard, MD
Medical Director
Marin County EMS Agency
Immediate Past President, EMDAC
San Rafael, California

Elizabeth Basnett
Director
EMS Authority
Assistant Secretary, Cal HHS
Sacramento, California

Nichole Bosson, MD, MPH, FAEMS
Medical Director, LA County EMS Agency
Director, EMS Fellowship
Harbor-UCLA Medical Center
Santa Fe Springs, California

David Dillion, MD, PhD
Assistant Professor, UC Davis
Emergency Physician, UC Davis
Sacramento, California

Jennifer Farah, MD
Medical Director, UCSD Base Hospital
Medical Director, Chula Vista Fire Department
San Diego, California

Jeff Fariss
EMS Director
Kern County EMS Agency
President, EMSAAC
Bakersfield, California

Naila Francies
EMS Coordinator
Alameda County EMS Agency
San Leandro, California

Gregory Kann, MD
EMS Medical Director
Sacramento County EMS Agency
Sacramento, California

Christopher Keller
Deputy Chief of Operations
New Orleans EMS
New Orleans, Louisiana

Zita Konik, MD
EMS Medical Director
Alameda County EMS Agency
President, EMDAC
San Leandro, California

Joe Rudnicki
EMS Division Chief
Sacramento Metro Fire
Sacramento, California

Karl Sporer, MD
EMS Medical Director
Napa County EMS Agency
Napa, California

Shaun Vincent
EMS Administrator
Napa County EMS Agency
President-Elect, EMSAAC
Napa, California

Kenshata Watkins, MD
Pediatric Emergency Care
UCSF Benioff Children's Hospital
Oakland, California

Doug Wolfberg
Founding Partner
Page, Wolfberg & Wirth
Mechanicsburg, Pennsylvania

Michael Wysession
Professor of Geophysics
Executive Director, Center for Teaching and Learning
Washington University in St. Louis
St. Louis, Missouri

CONFERENCE REGISTRATION

May 28 & 29, 2025
On Coronado Island

All registrations are taken ONLINE only at emsaac.org

Payments can be made by credit card, PayPal or through a PO or check. Confirmation and W-9 available on the website. Registration fees include all conference materials and food & beverage for breakfast and lunches.

EARLY Conference Registration – if payment **received before midnight (MN) May 7** NOTE: The first 50 paid registrations will be entered into a raffle for a special door prize.	$450
Late or onsite Registraiton – received after MN May 7	$525
Virtual Registration – Zoom platform	$350
Disaster Pre-Conference including lunch (separate registration) **May 27, 11: am – 4:30 pm**	$150

Pre-Conference
May 27, 2025
11 am – 4:30 pm

Your Disaster Medical Response

From California Screamin' to California Dreamin': Transforming Crisis into Capability

Where Challenges Meet Solutions

California's emergency response landscape is undergoing a rapid transformation, driven by the increasing frequency of natural disasters, evolving public health challenges, and the swift pace of technological advancements. This shift presents both significant challenges and unique opportunities for growth and innovation within our emergency response community.

This pre-conference session is designed to highlight cutting-edge strategies for resilience and transformative leadership practices that are reshaping daily operations and long-term planning. By drawing on real-world examples and evidence-based solutions, participants will gain practical insights and tools to enhance the adaptability and strength of emergency response systems across the state.

Featuring leaders from all sectors of emergency management, this session will showcase individuals who have not only navigated the urgent needs of healthcare emergency preparedness and response but have also pioneered forward-thinking, impactful solutions to many of the challenges we face in building community resilience.

Building on EMSAAC's three-decade legacy of fortifying California's emergency medical services, this session aims to bridge the gap between current challenges and future possibilities. We will move beyond conventional methods, exploring innovative solutions that foster greater collaboration and unity within our diverse emergency response community. This event promises to be a catalyst for reimagining emergency response in California and beyond.

Faculty:

Dr. Shruti Dhapodkar
Director
Department Emergency Management
County of San Mateo

Bruce Barton
Director
Emergency Management Department
County of Riverside

Tameka Bowden
Medical Reserve Corps Program
Region IX MRC Liaison
Office of the Administration for Strategic Preparedness and Response (ASPR)

Traci Holt
EMS/MRC Program Administrator
Ventura County EMS Agency

Adriane Gil-Stefansen
Deputy EMS Administrator
Ventura County EMS Agency

Daniel Maguire
Disaster Response and Recovery Officer
Ventura County Human Services Agency

Sponsors & Exhibitors

Many generous sponsors and exhibitors make the EMSAAC Conference possible. The conference is an outstanding opportunity to see the latest and greatest new EMS tools and applications as well as to meet the representatives and directly discuss material needs. The following is a list of sponsors and exhibitors to date; others will be joining this distinguished group:

9-1-1 IFT Form

Interfacility transports using 9-1-1 system

9-1-1 Provider *

Date *

Time (military) *

00:00

Sequence Number *

Scene Incident Facility *

How did Patient Arrive at Incident Facility *

Receiving Hospital *

Reason for Transfer *

Appropriate based on chart review? *

Name/Title of person who completed the chart review (in the event further information is needed) *

Other comments

Please attach PCR(s) and other relevant documents such as ECG(s)

Upload or drag files here.

Submit

PURPOSE: This policy is intended to provide EMS personnel with parameters to determine whether or not to withhold resuscitative efforts in accordance with the patient's wishes, and to provide guidelines for base hospital physicians to discontinue resuscitative efforts and pronounce death.

AUTHORITY: California Health and Safety Code, Division 2.5
California Probate Code, Division 4.7
California Family Code, Section 297-297.5
California Health and Safety Code, Division 1, Part 1.8, Section 443 et seq.

DEFINITIONS:

Advance Health Care Directive (AHCD): A written document that allows patients who are unable to speak for themselves to provide health care instructions and/or appoint a Power-of-Attorney for Health Care. There is no one standard format for an AHCD. Examples of AHCDs include:

- Durable Pp~~p~~ower of ~~a~~Attorney for Healthcare (DPAHC)
- Healthcare proxies
- Living wills (valid in California if dated prior to 7-1-2000; advisory but not legally binding after that date)

Agent: An individual, eighteen years of age or older, designated in a durable power of attorney for health care to make health care decisions for the patient, also known as "attorney-in-fact".

Aid-in-Dying Drug: A drug determined and prescribed by a physician for a qualified individual, which the qualified individual may choose to self-administer to bring about his or her death due to terminal illness. The prescribed drug may take effect within minutes to several days after self-administration.

Conservator: Court-appointed authority to make health care decisions for a patient.

Determination of Death: To conclude that a patient has died by conducting an assessment to confirm the absence of respiratory, cardiac, and neurologic function.

End of Life Option Act: This California state law authorizes an adult, eighteen years or older, who meets certain qualifications, and who has been determined by his or her attending physician to be suffering from a terminal disease to make a request for an "aid-in-dying drug" prescribed for the purpose of ending his or her life in a humane and dignified manner.

Immediate Family: The spouse, domestic partner, parent, adult children, adult sibling(s), or family member intimately involved in the care of the patient.

APPROVED: _____ _____
Director, EMS Agency Medical Director, EMS Agency

Organized ECG Activity: A sinus, atrial or junctional (supraventricular) rhythm.

Pronouncement of Death: A formal declaration by a base hospital physician that life has ceased.

Standardized Patient-Designated Directives: Forms or medallions that recognize and accommodate a patient's wish to limit prehospital treatment at home, in long term care facilities, or during transport between facilities. Examples include:

- Statewide Emergency Medical Services Authority (EMSA)/California Medical Association (CMA) Prehospital DNR Form (Ref. No. 815.1)
- Physician Orders for Life-Sustaining Treatment (POLST, Ref. No. 815.2)
- State EMS Authority-approved DNR Medallion

PRINCIPLES:

1. Resuscitative efforts are of no benefit to patients whose physical condition precludes any possibility of successful resuscitation.

2. EMTs and paramedics may **determine** death based on specific criteria set forth in this policy.

3. Base hospital physicians may **pronounce** death based on information provided by the paramedics in the field and guidelines set forth in this policy.

4. If there is any objection or disagreement by family members or EMS personnel regarding terminating or withholding resuscitation, basic life support (BLS) resuscitation, including defibrillation, may continue or begin immediately and paramedics should contact the base hospital for further directions.

5. Aggressive resuscitation in the field to obtain the return of spontaneous circulation (ROSC) is encouraged. Transporting patients without ROSC is discouraged with the exception of patients who meet ECPR criteria and are transported on a mechanical compression device.

6. EMS personnel should honor valid do-not-resuscitate (DNR) orders and other patient designated end-of-life directives in the field and act in accordance with the patient's wishes when death appears imminent.

POLICY:

I. EMS personnel may determine death in the following circumstances:

   A. In addition to the absence of respiration, cardiac activity, and neurologic reflexes, one or more of the following physical or circumstantial conditions exist:

      1. Decapitation

      2. Massive crush injury

      3. Penetrating or blunt injury with evisceration of the heart, lung or brain

4. Decomposition

5. Incineration

6. Pulseless, non-breathing victims with extrication time greater than fifteen minutes, where no resuscitative measures can be performed prior to extrication.

7. Penetrating trauma patients who, based on the paramedic's thorough assessment, are found apneic, pulseless, asystolic, and without pupillary reflexes upon the arrival of EMS personnel at the scene.

8. Blunt trauma patients who, based on a paramedic's thorough patient assessment, are found apneic, pulseless, and without organized ECG activity (sinus, atrial or junctional rhythm) due to traumatic mechanism upon the arrival of EMS personnel at the scene.

    a. For patients with shockable ventricular rhythm, defibrillate as per TP 1243/1243-P in attempt to restore organized ECG activity prior to determination of death.

9. Pulseless, non-breathing victims of a multiple victim incident where insufficient medical resources preclude initiating resuscitative measures.

10. Drowning victims, when it is reasonably determined that submersion has been greater than one hour.

11. Rigor mortis (requires assessment as described in Section I, B.)

12. Post-mortem lividity (requires assessment as described in Section I, B.)

B. If the initial assessment reveals rigor mortis and/or post-mortem lividity only, EMTs and/or paramedics shall perform the following assessments (may be performed concurrently) to confirm the absence of respiratory, cardiac, and neurologic function for determination of death in the field:

1. Assessment of respiratory status:

    a. Assure that the patient has an open airway.

    b. Look, listen and feel for respirations. Auscultate the lungs for a minimum of 30 seconds to confirm apnea.

2. Assessment of cardiac status:

    a. Auscultate the apical pulse for a minimum of 60 seconds to confirm the absence of heart sounds.

    b. Adults and children: Palpate the carotid pulse for a minimum of 60 seconds to confirm the absence of a pulse.

c. Infants: Palpate the brachial pulse for a minimum of 60 seconds to confirm the absence of a pulse.

3. Assessment of neurological reflexes:

a. Check for pupillary response with a penlight or flashlight to determine if pupils are fixed and dilated.

b. Check and confirm unresponsive to pain stimuli.

C. Patients in atraumatic cardiopulmonary arrest who do not meet the conditions described in Section I. A. require immediate BLS measures to be initiated. If one or more of the following conditions is met, resuscitation may be discontinued and the patient is determined to be dead:

1. A valid standardized patient-designated directive indicating DNR.

2. A valid AHCD with written DNR instructions or the agent identified in the AHCD requesting no resuscitation.

3. Immediate family member present at scene:

a. With a patient-designated directive on scene requesting no resuscitation

b. Without said documents at scene, with full agreement of immediate family requesting no resuscitation, and EMS providers concur

4. Parent or legal guardian is required and must be present at scene to withhold or terminate resuscitation for patients less than 18 years of age.

II. Patients in atraumatic cardiopulmonary arrest who do not meet the conditions described in Section I require immediate cardiopulmonary resuscitation in accordance with Ref. No. 1210, Treatment Protocol: Cardiac Arrest. Base contact for medical direction shall be established when indicated by Ref. No. 1210.

A. EMS Personnel may determine death if a patient is in **asystole** after 20 minutes of quality cardiopulmonary resuscitation on scene and meets ALL of the following criteria:

1. Patient 18 years or greater

2. Arrest not witnessed by EMS personnel

3. No shockable rhythm identified at any time during the resuscitation

4. No ROSC at any time during the resuscitation

5. No hypothermia

B. Base Physician consultation for pronouncement is not required if Section A is met.

C. Base Physician contact shall be established to guide resuscitation and to make decisions regarding timing of transport, if transport is indicated, for ~~all~~ patients in cardiopulmonary arrest who do not meet the conditions described in Section I or IIA of this policy. ECPR candidates are transported prior to Base Contact.

D. In the event that immediate family members on scene request termination of resuscitation after resuscitation is in progress, and the patient does not meet criteria in section IIA, base physician consultation shall be made for termination and pronouncement. This does not apply to brief initiation of CPR while establishing patient/family wishes as per I.C.3.

III. Physician guidelines for transport versus termination

A. Resuscitation should be continued on-scene until one of the following:

1. ROSC is confirmed with a palpable pulse and corresponding rise in $EtCO_2$ Paramedics should stabilize the patient on scene after ROSC (for approximately 5 minutes) per TP 1210 and initiate transport once ROSC is maintained.

2. The patient is determined to be an ECPR candidate and has not achieved ROSC despite initial on scene resuscitation (scene time limited to ≤15 minutes prior to transport).

3. Base physician determines further resuscitative efforts are futile

~~2.~~

B. Patients who have NOT maintained ROSC after on-scene resuscitation and stabilization should NOT be transported unless the Base physician determines transport is indicated and/or the patient meets ECPR criteria.

1. Early transport for patients with ongoing resuscitation is NOT advised.

2. The decision to transport a patient with refractory OHCA should be based on the availability of therapies at the receiving center that are not available on scene.

IV. Crime Scene Responsibility, Including Presumed Accidental Deaths and Suspected Suicides

A. Responsibility for medical management rests with the most medically qualified person on scene.

B. Authority for crime scene management shall be vested in law enforcement. To access the patient, it may be necessary to ask law enforcement officers for assistance to create a “safe path” that minimizes scene contamination.

C. If law enforcement is not on scene, EMS personnel should attempt to create a "safe path" and secure the scene until law enforcement arrives.

V. Procedures Following Pronouncement of Death

A. The deceased should not be moved without the coroner's authorization. Any invasive equipment (i.e., intravenous line, endotracheal tube) used on the patient should be left in place.

NOTE: If it is necessary to move the deceased because the scene is unsafe, the body is creating a hazard, or the body is at risk of loss through fire or flood, the EMS personnel may relocate the deceased to a safer location, or transport to the most accessible receiving facility.

B. If law enforcement or the coroner confirms that the deceased will not be a coroner's case and the personal physician is going to sign the death certificate, any invasive equipment used during the resuscitation may be removed.

C. EMS personnel should remain on scene until law enforcement arrives. During this time, when appropriate, the provider should provide grief support to family members.

VI. Required Documentation for Patients Determined Dead/Pronounced in the Field

A. The time and criteria utilized to determine death; the condition, location and position of the body, and any care provided.

B. The location and the rationale if the deceased was moved. If the coroner authorized movement of the deceased, document the coroner's case number (if available) and the coroner's representative who authorized the movement.

C. Time of pronouncement and name of the pronouncing physician if base hospital contact was initiated

D. The name of the agent identified in the AHCD or patient-designated directive or the name of the immediate family member who made the decision to withhold or withdraw resuscitative measures. Obtain their signature on the EMS Report Form.

E. If the deceased is **not** a coroner's case and their personal physician is going to sign the death certificate:

1. Document the name of the coroner's representative who authorized release of the patient, and

2. The name of the patient's personal physician signing the death certificate, and

3. Any invasive equipment removed

VII. End of Life Option Act

A. Resuscitation shall be withheld on patients in cardiopulmonary arrest who have self-administered an aid-in-dying drug (see Ref. No. 815.4, End of Life Option Field Quick Reference Guide).

B. Document the presence of a Final Attestation and attach a copy if available.

CROSS REFERENCE:

Prehospital Care Manual:
Ref. No. 516, **Cardiac Arrest (Non-Traumatic) Patient Destination**
Ref. No. 518, **Decompression Emergencies/Patient Destination**
Ref. No. 519, **Management of Multiple Casualty Incidents**
Ref. No. 606, **Documentation of Prehospital Care**
Ref. No. 815, **Honoring Prehospital Do Not Resuscitate Orders**
Ref. No. 815.1, **EMSA/CMA Prehospital Do Not Resuscitate (DNR) Form**
Ref. No. 815.2, **Physician Orders for Life-Sustaining Treatment (POLST) Form**
Ref. No. 815.3, **Sample - Final Attestation For An Aid-In-Dying Drug to End My Life in a Humane and Dignified Manner**
Ref. No. 815.4, **End of Life Option Field Quick Reference Guide**
Ref. No. 819, **Organ Donor Identification**

MEDICAL CONTROL GUIDELINE: COLOR CODE DRUG DOSES

PRINCIPLES:

1. Correct dosing of medications based on weight in kilograms is a safety concern for delivery of medications to children and adults in the prehospital setting.

2. To optimize safety in dosing medications for children and adults, a standard formulary has been created. This ***Color Code Drug Doses*** medical control guideline pre-calculates all doses based on kilogram weight for children and an adult dose including maximum dose is delineated.

3. EMS provider agencies shall procure medications and stock approved Assessment and ALS Units in accordance with the drug formulation specified in this medical control guideline.

4. The Color Code Drug Doses and the Treatment Protocols shall be used to determine drug doses.

GUIDELINES:

1. EMS providers shall utilize a length-based resuscitation tape (i.e., Broselow™) to determine weight in kilograms and color code of children less than or equal to 14 years of age.

2. EMS providers shall use this guideline to determine dose of medication for children 3 to 36 kilograms. Documentation of dose will be in mgs and in mLs.

3. EMS providers contacting the base hospital shall report and document the appropriate color code and weight in kilograms utilizing a length-based resuscitation tape (i.e., Broselow™).

4. Base hospital personnel shall use this guideline to order dose of medication for children 3 to 36 kilograms; all doses will be given in mg and mLs.

5. Adult dosing will be used for children who are measured to be longer than the length-based resuscitation tape.

DRUG FORMULATIONS:

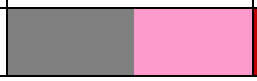
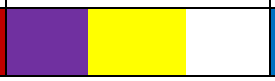
MEDICATION	FORMULATION	DOSAGE	Maximum Single Dose
Adenosine	3mg/mL	0.1mg/kg Repeat dose 0.2mg/kg	12mg
Albuterol	2.5mg/3mL	2.5mg <4 years; 5mg ≥4 years	5mg
Albuterol MDI	90 mcg/puff	2 puffs <4 years; 4 puffs ≥4 years	360 mcg
Amiodarone	50mg/mL	5mg/kg	300mg
Atropine	0.1mg/mL	0.02mg/kg	1mg (adult) 0.5mg (pediatric)
Calcium Chloride (dilute 1:1 with NS if <1year)	100mg/mL	20mg/kg	1gm
Dextrose 10%	0.1gm/mL	5mL/kg	250mL
Diphenhydramine	50mg/mL	1mg/kg	50mg
DuoDote™ (Pralidoxime Chloride)	Auto injector	1 DuoDote™	3 DuoDotes™
Epinephrine **(Push Dose) 0.1mg/mL IV**	0.01mg/mL	0.1mL/kg every 1-5 mins	10mcg (1 mL)

Mix 9mL of normal saline with 1mL of epinephrine 0.1mg/mL (IV epi) in a 10mL syringe to create epinephrine 0.01mg/mL, administer 0.1mL/kg (up to 1 mL at a time) every 1-5 mins to maintain adequate SBP.

Epinephrine **0.1mg/mL IV**	0.1mg/mL	0.01mg/kg	1mg
Epinephrine **1mg/mL IM**	1mg/mL	0.01mg/kg	0.5mg
Epinephrine **1mg/mL Nebulized (NEB)**	1mg/mL	2.5mg <1 year; 5mg ≥1 year	5mg (5mL)
Fentanyl **IV/IM**	50mcg/mL	1mcg/kg	50mcg
Fentanyl **IN**	50mcg/mL	1.5mcg/kg	50mcg
Glucagon	1mg/mL	0.5 mg <1 year; 1mg ≥1 year	1mg
Glucopaste (4 years or older)	15gm	15gm	15gm
Hydroxocobalamin	25mg/mL	70mg/kg	5g
Ketorolac **slow IV/IO push**	15mg/mL	0.5mg/kg	15mg
Ketorolac **IM (Adult)**	15mg/mL	1mg/kg	30mg
Ketorolac **IM (Pediatric)**	15mg/mL	0.5mg/kg ≥4 years	15mg
Lidocaine 2% **(IO ONLY)**	20mg/mL	0.5 mg/kg	40mg
Midazolam all indications **IV/IO**	5mg/mL	0.1mg/kg	5mg

MEDICATION	FORMULATION	DOSAGE	Maximum Single Dose
Midazolam Agitation/Sedation **IN/IM**	5mg/mL	0.2mg/kg	5 or ~~5mg~~10mg
Midazolam Seizure 0-11 mo **IN/IM**	5mg/mL	0.2mg/kg	2.2mg
Midazolam Seizure ≥12mo **IN/IM**	5mg/mL	PediDOSE* 12-16 months: 1.25mg 17months-5 years: 2.5mg 6-11 years: 5mg ≥12 years: 10mg	1.25mg, 2.5mg, 5mg, or 10mg depending on age
Morphine Sulfate **IV/IM/IO**	4mg/mL	0.1mg/kg	4mg
Naloxone	1mg/mL	0.1mg/kg	2mg-4mg
Normal Saline	0.9% Na Cl	20mL/kg	1L
Nitroglycerin SL (adults only)	0.4mg	0.4mg	1.2mg
Olanzapine ODT	10mg	10mg	10mg
Ondansetron ODT/IV/IM	4mg tab or (4 years or older ODT only) 2mg/mL IV/IM (adults only)	4mg	4mg
Sodium Bicarbonate IV (dilute 1:1 with NS if <1year)	1mEq/mL	1mEq/kg	50mEq
Tranexamic Acid (TXA)	1gm/10mL	1gm/10mL	1gm in 50 or 100mL infused over 10 minutes

***PediDOSE Midazolam IN/IM only - dosing chart for treatment of seizures**

Age	0-11 months	12-16 months	17 months – 5 years	6-11 years	≥12 years
Midazolam Dose IN/IM	0.2mg/kg	1.25 mg	2.5 mg	5 mg	10 mg
Volume IN/IM	See color code	0.25 mL	0.5 mL	1mL	2mL
If age is unknown					

COLOR CODE DRUG DOSES:

3 Kg — GREY

Length 47 – 59.5 cm			**Less than 3 months**		
Normal Vital Signs:	Heart Rate: 100-180		Respirations: 30-60	Systolic BP: >60	
Cardioversion:	3 joules		6 joules	6 joules	
Defibrillation:	6 joules		12 joules	12 joules	
Supraglottic Airway:	igel	Size 1	No gastric suction catheter		
Medication	**Dose**	**mLs**	**Medication**	**Dose**	**mLs**
Adenosine	0.3mg	0.1mL	Fentanyl IV/IM	3mcg	0.06mL
Albuterol NEB	2.5mg	3mL	Fentanyl IN	4.5mcg	0.09mL
Amiodarone	15mg	0.3mL	Glucagon IM	0.5mg	0.5mL
Atropine	0.06mg	0.6mL	Hydroxocobalamin IV/IO**	210mg	8.4mL
Calcium Chloride*	60mg	0.6mL	Lidocaine 2% IO	1.5mg	0.08mL
Dextrose 10% slow IV	15mL	15mL	Midazolam Agitation/Sedation IV/IO	0.3mg	0.06mL
Diphenhydramine IV/IM	3mg	0.06mL	Midazolam Agitation/Sedation IN/IM	0.6mg	0.12mL
DuoDote™	1 dose	NA	Midazolam Seizure 0- 11mo IN/IM	0.6mg	0.12mL
Epinephrine Push Dose	3mcg	0.3mL	Morphine IV/IM/IO	0.3mg	0.08mL
Epinephrine 0.1mg/mL IV	0.03mg	0.3mL	Naloxone IV/IM/IN	0.3mg	0.3mL
Epinephrine 1mg/mL IM	0.03mg	0.03mL	Normal Saline IV Bolus	60mL	60mL
Epinephrine 1mg/mL NEB	2.5mg	2.5mL	Sodium Bicarbonate*	3mEq	3mL

*Dilute 1:1 with NS

**Reconstitute 5g vial in 200ml NS

4 Kg — GREY

Length 47 – 59.5 cm			**Less than 3 months**		
Normal Vital Signs:	Heart Rate: 100-180		Respirations: 30-60	Systolic BP: >60	
Cardioversion:	4 joules		8 joules	8 joules	
Defibrillation:	8 joules		16 joules	16 joules	
Supraglottic Airway:	igel	Size 1	No gastric suction catheter		
Medication	**Dose**	**mLs**	**Medication**	**Dose**	**mLs**
Adenosine	0.4mg	0.13mL	Fentanyl IV/IM	4mcg	0.08mL
Albuterol NEB	2.5mg	3mL	Fentanyl IN	6mcg	0.12mL
Amiodarone	20mg	0.4mL	Glucagon IM	0.5mg	0.5mL
Atropine	0.08mg	0.8mL	Hydroxocobalamin IV/IO**	280mg	11.2mL
Calcium Chloride*	80mg	0.8mL	Lidocaine 2% IO	2mg	0.1mL
Dextrose 10% slow IV	20mL	20mL	Midazolam Agitation/Sedation IV/IO	0.4mg	0.08mL
Diphenhydramine IV/IM	4mg	0.08mL	Midazolam Agitation/Sedation IN/IM	0.8mg	0.16mL
DuoDote™	1 dose	NA	Midazolam Seizure 0-11mo IN/IM	0.8mg	0.16mL
Epinephrine Push Dose	4mcg	0.4mL	Morphine IV/IM/IO	0.4mg	0.1mL
Epinephrine 0.1mg/mL IV	0.04mg	0.4mL	Naloxone IV/IM/IN	0.4mg	0.4mL
Epinephrine 1mg/mL IM	0.04mg	0.04mL	Normal Saline IV Bolus	80mL	80mL
Epinephrine 1mg/mL NEB	2.5mg	2.5mL	Sodium Bicarbonate*	4mEq	4mL

*Dilute 1:1 with NS

**Reconstitute 5g vial in 200ml NS

5Kg

Length 47 – 59.5 cm			**Less than 3 months**		
Normal Vital Signs:	Heart Rate: 100-180		Respirations: 30-60	Systolic BP: >60	
Cardioversion:	5 joules		10 joules	10 joules	
Defibrillation:	10 joules		20 joules	20 joules	
Supraglottic Airway:	igel	Size 1	No gastric suction catheter		

Medication	Dose	mLs	Medication	Dose	mLs
Adenosine	0.5mg	0.17mL	Fentanyl IV/IM	5mcg	0.1mL
Albuterol NEB	2.5mg	3mL	Fentanyl IN	7.5mcg	0.15mL
Amiodarone	25mg	0.5mL	Glucagon IM	0.5mg	0.5mL
Atropine	0.1mg	1mL	Hydroxocobalamin IV/IO**	350mg	14mL
Calcium Chloride*	100mg	1mL	Lidocaine 2% IO	2.5mg	0.12mL
Dextrose 10% slow IV	25mL	25mL	Midazolam Agitation/Sedation IV/IO	0.5mg	0.1mL
Diphenhydramine IV/IM	5mg	0.1mL	Midazolam Agitation/Sedation IN/IM	1mg	0.2mL
DuoDote™	1 dose	NA	Midazolam Seizure 0-11mo IN/IM	1mg	0.2mL
Epinephrine Push Dose	5mcg	0.5mL	Morphine IV/IM/IO	0.5mg	0.12mL
Epinephrine 0.1mg/mL IV	0.05mg	0.5mL	Naloxone IV/IM/IN	0.5mg	0.5mL
Epinephrine 1mg/mL IM	0.05mg	0.05mL	Normal Saline IV Bolus	100mL	100mL
Epinephrine 1mg/mL NEB	2.5mg	2.5mL	Sodium Bicarbonate*	5mEq	5mL

*Dilute 1:1 with NS

**Reconstitute 5g vial in 200ml NS

GREY

6 Kg

Length 59.5 – 62 cm			**3 – 4 months**		
Normal Vital Signs:	**Heart Rate:** 100-160		**Respirations:** 25-40	**Systolic BP:** >70	
Cardioversion:	6 joules		12 joules	12 joules	
Defibrillation:	12 joules		24 joules	24 joules	
Supraglottic Airway:	igel	Size 1.5	10 F gastric suction catheter		
Medication	**Dose**	**mLs**	**Medication**	**Dose**	**mLs**
Adenosine	0.6mg	**0.2mL**	Fentanyl **IV/IM**	6mcg	**0.12mL**
Albuterol NEB	2.5mg	**3mL**	Fentanyl **IN**	9mcg	**0.18mL**
Amiodarone	30mg	**0.6mL**	Glucagon IM	0.5mg	**0.5mL**
Atropine	0.12mg	**1.2mL**	Hydroxocobalamin IV/IO**	420mg	**16.8mL**
Calcium Chloride*	120mg	**1.2mL**	Lidocaine 2% IO	3mg	**0.15mL**
Dextrose 10% slow IV	30mL	**30mL**	Midazolam Agitation/Sedation **IV/IO**	0.6mg	**0.12mL**
Diphenhydramine IV/IM	6mg	**0.12mL**	Midazolam Agitation/Sedation **IN/IM**	1.2mg	**0.24mL**
DuoDote™	1 dose	**NA**	Midazolam Seizure 0-11mo **IN/IM**	1.2mg	**0.24mL**
Epinephrine **Push Dose**	6mcg	**0.6mL**	Morphine IV/IM/IO	0.6mg	**0.15mL**
Epinephrine **0.1mg/mL IV**	0.06mg	**0.6mL**	Naloxone IV/IM/IN	0.6mg	**0.6mL**
Epinephrine **1mg/mL IM**	0.06mg	**0.06mL**	Normal Saline IV Bolus	120mL	**120mL**
Epinephrine **1mg/mL NEB**	2.5mg	**2.5mL**	Sodium Bicarbonate*	6mEq	**6mL**

*Dilute 1:1 with NS
**Reconstitute 5g vial in 200ml NS

PINK

7 Kg

Length 62 – 66 cm			**5 – 6 months**		
Normal Vital Signs:	**Heart Rate:** 100-160		**Respirations:** 25-40	**Systolic BP:** >70	
Cardioversion:	7 joules		14 joules	14 joules	
Defibrillation:	14 joules		28 joules	28 joules	
Supraglottic Airway:	igel	Size 1.5	10 F gastric suction catheter		
Medication	**Dose**	**mLs**	**Medication**	**Dose**	**mLs**
Adenosine	0.7mg	**0.23mL**	Fentanyl **IV/IM**	7mcg	**0.14mL**
Albuterol NEB	2.5mg	**3mL**	Fentanyl **IN**	10.5mcg	**0.21mL**
Amiodarone	35mg	**0.7mL**	Glucagon IM	0.5mg	**0.5mL**
Atropine	0.14mg	**1.4mL**	Hydroxocobalamin IV/IO**	490mg	**19.6mL**
Calcium Chloride*	140mg	**1.4mL**	Lidocaine 2% IO	3.5mg	**0.18mL**
Dextrose 10% slow IV	35mL	**35mL**	Midazolam Agitation/Sedation **IV/IO**	0.7mg	**0.14mL**
Diphenhydramine IV/IM	7mg	**0.14mL**	Midazolam Agitation/Sedation **IN/IM**	1.4mg	**0.28mL**
DuoDote™	1 dose	**NA**	Midazolam Seizure 0-11mo **IN/IM**	1.4mg	**0.28mL**
Epinephrine **Push Dose**	7mcg	**0.7mL**	Morphine IV/IM/IO	0.7mg	**0.18mL**
Epinephrine **0.1mg/mL IV**	0.07mg	**0.7mL**	Naloxone IV/IM/IN	0.7mg	**0.7mL**
Epinephrine **1mg/mL IM**	0.07mg	**0.07mL**	Normal Saline IV Bolus	140mL	**140mL**
Epinephrine **1mg/mL NEB**	2.5mg	**2.5mL**	Sodium Bicarbonate*	7mEq	**7mL**

*Dilute 1:1 with NS
**Reconstitute 5g vial in 200ml NS

PINK

8 Kg — RED

Length 66 – 69.5 cm			7 - 8 months		
Normal Vital Signs:	**Heart Rate:** 100-160		**Respirations:** 20-40	**Systolic BP:** >70	
Cardioversion:	8 joules		16 joules	16 joules	
Defibrillation:	16 joules		32 joules	32 joules	
Supraglottic Airway:	igel	Size 1.5	10 F gastric suction catheter		

Medication	Dose	mLs	Medication	Dose	mLs
Adenosine	0.8mg	**0.27mL**	Fentanyl **IV/IM**	8mcg	**0.16mL**
Albuterol NEB	2.5mg	**3mL**	Fentanyl **IN**	12mcg	**0.24mL**
Amiodarone	40mg	**0.8mL**	Glucagon IM	0.5mg	**0.5mL**
Atropine	0.16mg	**1.6mL**	Hydroxocobalamin IV/IO**	560mg	**22.4mL**
Calcium Chloride*	160mg	**1.6mL**	Lidocaine 2% IO	4mg	**0.2mL**
Dextrose 10% slow IV	40mL	**40mL**	Midazolam Agitation/Sedation **IV/IO**	0.8mg	**0.16mL**
Diphenhydramine IV/IM	8mg	**0.16mL**	Midazolam Agitation/Sedation**IN/IM**	1.6mg	**0.32mL**
DuoDote™	1 dose	**NA**	Midazolam Seizure 0-11mo **IN/IM**	1.6mg	**0.32mL**
Epinephrine **Push Dose**	8mcg	**0.8mL**	Midazolam Seizure ≥12mo **IN/IM**	PediDOSE	-
Epinephrine **0.1mg/mL IV**	0.08mg	**0.8mL**	Morphine IV/IM/IO	0.8mg	**0.2mL**
Epinephrine **1mg/mL IM**	0.08mg	**0.08mL**	Naloxone IV/IM/IN	0.8mg	**0.8mL**
Epinephrine **1mg/mL NEB**	2.5mg	**2.5mL**	Normal Saline IV Bolus	160mL	**160mL**
			Sodium Bicarbonate*	8mEq	**8mL**

*Dilute 1:1 with NS
**Reconstitute 5g vial in 200ml NS

9 Kg — RED

Length 69 – 73 cm			9 – 10 months		
Normal Vital Signs:	**Heart Rate:** 100-160		**Respirations:** 20-40	**Systolic BP:** >70	
Cardioversion:	9 joules		18 joules	18 joules	
Defibrillation:	18 joules		36 joules	36 joules	
Supraglottic Airway:	igel	Size 1.5	10 F gastric suction catheter		

Medication	Dose	mLs	Medication	Dose	mLs
Adenosine	0.9mg	**0.3mL**	Fentanyl **IV/IM**	9mcg	**0.18mL**
Albuterol NEB	2.5mg	**3mL**	Fentanyl **IN**	13.5mcg	**0.27mL**
Amiodarone	45mg	**0.9mL**	Glucagon IM	0.5mg	**0.5mL**
Atropine	0.18mg	**1.8mL**	Hydroxocobalamin IV/IO**	630mg	**25.2mL**
Calcium Chloride*	180mg	**1.8mL**	Lidocaine 2% IO	4.5mg	**0.22mL**
Dextrose 10% slow IV	45mL	**45mL**	Midazolam Agitation/Sedation **IV/IO**	0.9mg	**0.18mL**
Diphenhydramine IV/IM	9mg	**0.18mL**	Midazolam Agitation/Sedation**IN/IM**	1.8mg	**0.36mL**
DuoDote™	1 dose	**NA**	Midazolam Seizure 0-11mo **IN/IM**	1.8mg	**0.36mL**
Epinephrine **Push Dose**	9mcg	**0.9mL**	Midazolam Seizure ≥12mo **IN/IM**	PediDOSE	-
Epinephrine **0.1mg/mL IV**	0.09mg	**0.9mL**	Morphine IV/IM/IO	0.9mg	**0.22mL**
Epinephrine **1mg/mL IM**	0.09mg	**0.09mL**	Naloxone IV/IM/IN	0.9mg	**0.9mL**
Epinephrine **1mg/mL NEB**	2.5mg	**2.5mL**	Normal Saline IV Bolus	180mL	**180mL**
			Sodium Bicarbonate*	9mEq	**9mL**

*Dilute 1:1 with NS
**Reconstitute 5g vial in 200ml NS

10 Kg — PURPLE

Length 73 – 78 cm			11 – 14 months		
Normal Vital Signs:	Heart Rate: 90-140		Respirations: 24-40	Systolic BP: >70	
Cardioversion:	10 joules		20 joules	20 joules	
Defibrillation:	20 joules		40 joules	40 joules	
Supraglottic Airway:	igel	Size 1.5	10 F gastric suction catheter		
Medication	**Dose**	**mLs**	**Medication**	**Dose**	**mLs**
Adenosine	1mg	**0.33mL**	Fentanyl **IV/IM**	10mcg	**0.2mL**
Albuterol NEB	2.5mg	**3mL**	Fentanyl **IN**	15mcg	**0.3mL**
Amiodarone	50mg	**1mL**	Glucagon IM	1mg	**1mL**
Atropine	0.2mg	**2mL**	Hydroxocobalamin IV/IO**	700mg	**28mL**
Calcium Chloride	200mg	**2mL**	Lidocaine 2% IO	5mg	**0.25mL**
Dextrose 10% slow IV	50mL	**50mL**	Midazolam Agitation/Sedation **IV/IO**	1mg	**0.2mL**
Diphenhydramine IV/IM	10mg	**0.2mL**	Midazolam Agitation/Sedation **IN/IM**	2mg	**0.4mL**
DuoDote™	1 dose	**NA**	Midazolam Seizure 0-11mo **IN/IM**	2mg	**0.4mL**
Epinephrine **Push Dose**	10mcg	**1mL**	Midazolam Seizure ≥12mo **IN/IM**	PediDOSE	-
Epinephrine **0.1mg/mL IV**	0.1mg	**1mL**	Morphine IV/IM/IO	1mg	**0.25mL**
Epinephrine **1mg/mL IM**	0.1mg	**0.1mL**	Naloxone IV/IM/IN	1mg	**1mL**
Epinephrine **1mg/mL NEB**	5mg	**5mL**	Normal Saline IV Bolus	200mL	**200mL**
			Sodium Bicarbonate*	10mEq	**10mL**

*Dilute 1:1 with NS

**Reconstitute 5g vial in 200ml NS

11 Kg — PURPLE

Length 78 – 83 cm			15 – 18 months		
Normal Vital Signs:	Heart Rate: 90-140		Respirations: 24-40	Systolic BP: >70	
Cardioversion:	11 joules		22 joules	22 joules	
Defibrillation:	22 joules		44 joules	44 joules	
Supraglottic Airway:	igel	Size 1.5	10 F gastric suction catheter		
Medication	**Dose**	**mLs**	**Medication**	**Dose**	**mLs**
Adenosine	1.1mg	**0.37mL**	Fentanyl **IV/IM**	11mcg	**0.22mL**
Albuterol NEB	2.5mg	**3mL**	Fentanyl **IN**	16.5mcg	**0.33mL**
Amiodarone	55mg	**1.1mL**	Glucagon IM	1mg	**1mL**
Atropine	0.22mg	**2.2mL**	Hydroxocobalamin IV/IO**	770mg	**30.8mL**
Calcium Chloride	220mg	**2.2mL**	Lidocaine 2% IO	5.5mg	**0.28mL**
Dextrose 10% slow IV	55mL	**55mL**	Midazolam Agitation/Sedation **IV/IO**	1.1mg	**0.22mL**
Diphenhydramine IV/IM	11mg	**0.22mL**	Midazolam Agitation/Sedation **IN/IM**	2.2mg	**0.44mL**
DuoDote™	1 dose	**NA**	Midazolam Seizure 0-11mo **IN/IM**	2.2mg	**0.44mL**
Epinephrine **Push Dose**	10mcg	**1mL**	Midazolam Seizure ≥17mo **IN/IM**	PediDOSE	-
Epinephrine **0.1mg/mL IV**	0.11mg	**1.1mL**	Morphine IV/IM/IO	1.1mg	**0.28mL**
Epinephrine **1mg/mL IM**	0.11mg	**0.11mL**	Naloxone IV/IM/IN	1.1mg	**1.1mL**
Epinephrine **1mg/mL NEB**	5mg	**5mL**	Normal Saline IV Bolus	220mL	**220mL**
			Sodium Bicarbonate	11mEq	**11mL**

**Reconstitute 5g vial in 200ml NS

12 Kg — **YELLOW**

Length 83 – 94.5 cm			**19 -35 months**		
Normal Vital Signs:	**Heart Rate:** 90-140		**Respirations:** 20-30	**Systolic BP:** >70	
Cardioversion:	12 joules		24 joules	24 joules	
Defibrillation:	24 joules		48 joules	48 joules	
Supraglottic Airway:	igel	Size 2	12 F gastric suction catheter		
Medication	**Dose**	**mLs**	**Medication**	**Dose**	**mLs**
Adenosine	1.2mg	**0.4mL**	Fentanyl **IV/IM**	12mcg	**0.24mL**
Albuterol NEB	2.5mg	**3mL**	Fentanyl **IN**	18mcg	**0.36mL**
Amiodarone	60mg	**1.2mL**	Glucagon IM	1mg	**1mL**
Atropine	0.24mg	**2.4mL**	Hydroxocobalamin IV/IO**	840mg	**33.6mL**
Calcium Chloride	240mg	**2.4mL**	Lidocaine 2% IO	6mg	**0.3mL**
Dextrose 10% slow IV	60mL	**60mL**	Midazolam Agitation/Sedation **IV/IO**	1.2mg	**0.24mL**
Diphenhydramine IV/IM	12mg	**0.24mL**	Midazolam Agitation/Sedation **IN/IM**	2.4mg	**0.48mL**
DuoDote™	1 dose	**NA**	Midazolam Seizure ≥17mo **IN/IM**	PediDose	-
Epinephrine **Push Dose**	10mcg	**1mL**	Morphine IV/IM/IO	1.2mg	**0.3mL**
Epinephrine **0.1mg/mL IV**	0.12mg	**1.2mL**	Naloxone IV/IM/IN	1.2mg	**1.2mL**
Epinephrine **1mg/mL IM**	0.12mg	**0.12mL**	Normal Saline IV Bolus	240mL	**240mL**
Epinephrine **1mg/mL NEB**	5mg	**5mL**	Sodium Bicarbonate	12mEq	**12mL**

**Reconstitute 5g vial in 200ml NS

13 Kg — **YELLOW**

Length 83 – 94.5 cm			**19 -35 months**		
Normal Vital Signs:	**Heart Rate:** 90-140		**Respirations:** 20-30	**Systolic BP:** >70	
Cardioversion:	13 joules		26 joules	26 joules	
Defibrillation:	26 joules		52 joules	52 joules	
Supraglottic Airway:	igel	Size 2	12 F gastric suction catheter		
Medication	**Dose**	**mLs**	**Medication**	**Dose**	**mLs**
Adenosine	1.3mg	**0.43mL**	Fentanyl **IV/IM**	13mcg	**0.26mL**
Albuterol NEB	2.5mg	**3mL**	Fentanyl **IN**	19.5mcg	**0.39mL**
Amiodarone	65mg	**1.3mL**	Glucagon IM	1mg	**1mL**
Atropine	0.26mg	**2.6mL**	Hydroxocobalamin IV/IO**	910mg	**36.4mL**
Calcium Chloride	260mg	**2.6mL**	Lidocaine 2% IO	6.5mg	**0.32mL**
Dextrose 10% slow IV	65mL	**65mL**	Midazolam Agitation/Sedation **IV/IO**	1.3mg	**0.26mL**
Diphenhydramine IV/IM	13mg	**0.26mL**	Midazolam Agitation/Sedation **IN/IM**	2.6mg	**0.52mL**
DuoDote™	1 dose	**NA**	Midazolam Seizure ≥17mo **IN/IM**	PediDose	-
Epinephrine **Push Dose**	10mcg	**1mL**	Morphine IV/IM/IO	1.3mg	**0.32mL**
Epinephrine **0.1mg/mL IV**	0.13mg	**1.3mL**	Naloxone IV/IM/IN	1.3mg	**1.3mL**
Epinephrine **1mg/mL IM**	0.13mg	**0.13mL**	Normal Saline IV Bolus	260mL	**260mL**
Epinephrine **1mg/mL NEB**	5mg	**5mL**	Sodium Bicarbonate	13mEq	**13mL**

**Reconstitute 5g vial in 200ml NS

14 Kg

Length 83 – 94.5 cm			**19 -35 months**		
Normal Vital Signs:	**Heart Rate:** 90-140		**Respirations:** 20-30	**Systolic BP:** >70	
Cardioversion:	14 joules		28 joules	28 joules	
Defibrillation:	28 joules		56 joules	56 joules	
Supraglottic Airway:	igel	Size 2	12 F gastric suction catheter		
Medication	**Dose**	**mLs**	**Medication**	**Dose**	**mLs**
Adenosine	1.4mg	**0.47mL**	Fentanyl **IV/IM**	14mcg	**0.28mL**
Albuterol NEB	2.5mg	**3mL**	Fentanyl **IN**	21mcg	**0.42mL**
Amiodarone	70mg	**1.4mL**	Glucagon IM	1mg	**1mL**
Atropine	0.28mg	**2.8mL**	Hydroxocobalamin IV/IO**	980mg	**39.2mL**
Calcium Chloride	280mg	**2.8mL**	Lidocaine 2% IO	7mg	**0.35mL**
Dextrose 10% slow IV	70mL	**70mL**	Midazolam Agitation/Sedation **IV/IO**	1.4mg	**0.28mL**
Diphenhydramine IV/IM	14mg	**0.28mL**	Midazolam Agitation/Sedation **IN/IM**	2.8mg	**0.56mL**
DuoDote™	1 dose	**NA**	Midazolam Seizure ≥17mo **IN/IM**	PediDose	-
Epinephrine **Push Dose**	10mcg	**1mL**	Morphine IV/IM/IO	1.4mg	**0.35mL**
Epinephrine **0.1mg/mL IV**	0.14mg	**1.4mL**	Naloxone IV/IM/IN	1.4mg	**1.4mL**
Epinephrine **1mg/mL IM**	0.14mg	**0.14mL**	Normal Saline IV Bolus	280mL	**280mL**
Epinephrine **1mg/mL NEB**	5mg	**5mL**	Sodium Bicarbonate	14mEq	**14mL**

YELLOW

**Reconstitute 5g vial in 200ml NS

15 Kg

Length 94.5 – 107 cm			**3 – 4 years**		
Normal Vital Signs:	Heart Rate: 80-130		Respirations: 20-30	Systolic BP: >75	
Cardioversion:	15 joules		30 joules	30 joules	
Defibrillation:	30 joules		60 joules	60 joules	
Supraglottic Airway:	igel	Size 2	12 F gastric suction catheter		
Medication	**Dose**	**mLs**	**Medication**	**Dose**	**mLs**
Adenosine	1.5mg	**0.5mL**	Glucagon IM	1mg	**1mL**
Albuterol NEB <4 years	2.5mg	**3mL**	Glucopaste*	15gm	**1 dose**
Albuterol NEB ≥ 4 years	5mg	**6mL**	Hydroxocobalamin IV/IO**	1050mg	**42mL**
Amiodarone	75mg	**1.5mL**	Ketorolac slow **IV/IO***	7.5mg	**0.5mL**
Atropine	0.3mg	**3mL**	Ketorolac **IM***	7.5mg	**0.5mL**
Calcium Chloride	300mg	**3mL**	Lidocaine 2% IO	7.5mg	**0.38mL**
Dextrose 10% slow IV	75mL	**75mL**	Midazolam Agitation/Sedation **IV/IO**	1.5mg	**0.3mL**
Diphenhydramine IV/IM	15mg	**0.3mL**	Midazolam Agitation/Sedation **IN/IM**	3mg	**0.6mL**
DuoDote™	1 dose	**NA**	Midazolam Seizure ≥17mo **IN/IM**	PediDose	-
Epinephrine **Push Dose**	10mcg	**1mL**	Morphine IV/IM/IO	1.5mg	**0.38mL**
Epinephrine **0.1mg/mL IV**	0.15mg	**1.5mL**	Naloxone IV/IM/IN	1.5mg	**1.5mL**
Epinephrine **1mg/mL IM**	0.15mg	**0.15mL**	Normal Saline IV Bolus	300mL	**300mL**
Epinephrine **1mg/mL NEB**	5mg	**5mL**	Ondansetron ODT*	4mg	**1 tablet**
Fentanyl **IV/IM**	15mcg	**0.3mL**	Sodium Bicarbonate	15mEq	**15mL**
Fentanyl **IN**	22.5mcg	**0.45mL**			

*4 years or older

WHITE

**Reconstitute 5g vial in 200ml NS

16 Kg

Length 94.5 – 107 cm			**3 – 4 years**		
Normal Vital Signs:	Heart Rate: 80-130		Respirations: 20-30	Systolic BP: >75	
Cardioversion:	16 joules		32 joules	32 joules	
Defibrillation:	32 joules		64 joules	64 joules	
Supraglottic Airway:	igel	Size 2	12 F gastric suction catheter		
Medication	**Dose**	**mLs**	**Medication**	**Dose**	**mLs**
Adenosine	1.6mg	**0.53mL**	Glucagon IM	1mg	**1mL**
Albuterol NEB <4 years	2.5mg	**3mL**	Glucopaste*	15gm	**1 dose**
Albuterol NEB ≥4 years	5mg	**6mL**	Hydroxocobalamin IV/IO**	1120mg	**44.8mL**
Amiodarone	80mg	**1.6mL**	Ketorolac slow **IV/IO***	8mg	**0.53mL**
Atropine	0.32mg	**3.2mL**	Ketorolac **IM***	8mg	**0.53mL**
Calcium Chloride	320mg	**3.2mL**	Lidocaine 2% IO	8mg	**0.4mL**
Dextrose 10% slow IV	80mL	**80mL**	Midazolam Agitation/Sedation **IV/IO**	1.6mg	**0.32mL**
Diphenhydramine IV/IM	16mg	**0.32mL**	Midazolam Agitation/Sedation **IN/IM**	3.2mg	**0.64mL**
DuoDote™	1 dose	**NA**	Midazolam Seizure ≥17mo **IN/IM**	PediDose	-
Epinephrine **Push Dose**	10mcg	**1mL**	Morphine IV/IM/IO	1.6mg	**0.4mL**
Epinephrine **0.1mg/mL IV**	0.16mg	**1.6mL**	Naloxone IV/IM/IN	1.6mg	**1.6mL**
Epinephrine **1mg/mL IM**	0.16mg	**0.16mL**	Normal Saline IV Bolus	320mL	**320mL**
Epinephrine **1mg/mL NEB**	5mg	**5mL**	Ondansetron ODT*	4mg	**1 tablet**
Fentanyl **IV/IM**	16mcg	**0.32mL**	Sodium Bicarbonate	16mEq	**16mL**
Fentanyl **IN**	24mcg	**0.48mL**			

*4 years or older

WHITE

**Reconstitute 5g vial in 200ml NS

17 Kg — WHITE

Length 94.5 – 107 cm			**3 – 4 years**		
Normal Vital Signs:	Heart Rate: 80-130		Respirations: 20-30	Systolic BP: >75	
Cardioversion:	17 joules		34 joules	34 joules	
Defibrillation:	34 joules		68 joules	68 joules	
Supraglottic Airway:	igel	Size 2	12 F gastric suction catheter		
Medication	**Dose**	**mLs**	**Medication**	**Dose**	**mLs**
Adenosine	1.7mg	0.57mL	Glucagon IM	1mg	1mL
Albuterol NEB <4 years	2.5mg	3mL	Glucopaste*	15gm	1 dose
Albuterol NEB ≥4 years	5mg	6mL	Hydroxocobalamin IV/IO**	1190mg	47.6mL
Amiodarone	85mg	1.7mL	Ketorolac slow IV/IO*	8.5mg	0.57mL
Atropine	0.34mg	3.4mL	Ketorolac IM*	8.5mg	0.57mL
Calcium Chloride	340mg	3.4mL	Lidocaine 2% IO	8.5mg	0.42mL
Dextrose 10% slow IV	85mL	85mL	Midazolam Agitation/Sedation IV/IO	1.7mg	0.34mL
Diphenhydramine IV/IM	17mg	0.34mL	Midazolam Agitation/Sedation IN/IM	3.4mg	0.68mL
DuoDote™	1 dose	NA	Midazolam Seizure ≥17mo IN/IM	PediDose	-
Epinephrine Push Dose	10mcg	1mL	Morphine IV/IM/IO	1.7mg	0.43mL
Epinephrine 0.1mg/mL IV	0.17mg	1.7mL	Naloxone IV/IM/IN	1.7mg	1.7mL
Epinephrine 1mg/mL IM	0.17mg	0.17mL	Normal Saline IV Bolus	340mL	340mL
Epinephrine 1mg/mL NEB	5mg	5mL	Ondansetron ODT*	4mg	1 tablet
Fentanyl IV/IM	17mcg	0.34mL	Sodium Bicarbonate	17mEq	17mL
Fentanyl IN	25.5mcg	0.51mL			

*4 years or older

**Reconstitute 5g vial in 200ml NS

18 Kg — WHITE

Length 94.5 – 107 cm			**3 – 4 years**		
Normal Vital Signs:	Heart Rate: 80-130		Respirations: 20-30	Systolic BP: >75	
Cardioversion:	18 joules		36 joules	36 joules	
Defibrillation:	36 joules		72 joules	72 joules	
Supraglottic Airway:	igel	Size 2	12 F gastric suction catheter		
Medication	**Dose**	**mLs**	**Medication**	**Dose**	**mLs**
Adenosine	1.8mg	0.6mL	Glucagon IM	1mg	1mL
Albuterol NEB <4 years	2.5mg	3mL	Glucopaste*	15gm	1 dose
Albuterol NEB ≥4 years	5mg	6mL	Hydroxocobalamin IV/IO**	1260mg	50.4mL
Amiodarone	90mg	1.8mL	Ketorolac slow IV/IO*	9mg	0.6mL
Atropine	0.36mg	3.6mL	Ketorolac IM*	9mg	0.6mL
Calcium Chloride	360mg	3.6mL	Lidocaine 2% IO	9mg	0.45mL
Dextrose 10% slow IV	90mL	90mL	Midazolam Agitation/Sedation IV/IO	1.8mg	0.36mL
Diphenhydramine IV/IM	18mg	0.36mL	Midazolam Agitation/Sedation IN/IM	3.6mg	0.72mL
DuoDote™	1 dose	NA	Midazolam Seizure ≥17mo IN/IM	PediDose	-
Epinephrine Push Dose	10mcg	1mL	Morphine IV/IM/IO	1.8mg	0.45mL
Epinephrine 0.1mg/mL IV	0.18mg	1.8mL	Naloxone IV/IM/IN	1.8mg	1.8mL
Epinephrine 1mg/mL IM	0.18mg	0.18mL	Normal Saline IV Bolus	360mL	360mL
Epinephrine 1mg/mL NEB	5mg	5mL	Ondansetron ODT*	4mg	1 tablet
Fentanyl IV/IM	18mcg	0.36mL	Sodium Bicarbonate	18mEq	18mL
Fentanyl IN	27mcg	0.54mL			

*4 years or older

**Reconstitute 5g vial in 200ml NS

19 Kg

Length 107 – 119.5 cm			**5 – 6 years**		
Normal Vital Signs:	Heart Rate: 70-120		Respirations: 15-30	Systolic BP: >80	
Cardioversion:	19 joules		38 joules	38 joules	
Defibrillation:	38 joules		76 joules	76 joules	
Supraglottic Airway:	igel	Size 2	12 F gastric suction catheter		
Medication	**Dose**	**mLs**	**Medication**	**Dose**	**mLs**
Adenosine	1.9mg	**0.63mL**	Glucagon IM	1mg	**1mL**
Albuterol NEB	5mg	**6mL**	Glucopaste	15gm	**1 dose**
Amiodarone	95mg	**1.9mL**	Hydroxocobalamin IV/IO**	1330mg	**53.2mL**
Atropine	0.38mg	**3.8mL**	Ketorolac slow **IV/IO**	9.5mg	**0.63mL**
Calcium Chloride	380mg	**3.8mL**	Ketorolac **IM**	9.5mg	**0.63mL**
Dextrose 10% slow IV	95mL	**95mL**	Lidocaine 2% IO	9.5mg	**0.48mL**
Diphenhydramine IV/IM	19mg	**0.38mL**	Midazolam Agitation/Sedation **IV/IO**	1.9mg	**0.38mL**
DuoDote™	1 dose	**NA**	Midazolam Agitation/Sedation **IN/IM**	3.8mg	**0.76mL**
Epinephrine **Push Dose**	10mcg	**1mL**	Midazolam Seizure ≥17mo **IN/IM**	PediDose	**-**
Epinephrine **0.1mg/mL IV**	0.19mg	**1.9mL**	Morphine IV/IM/IO	1.9mg	**0.48mL**
Epinephrine **1mg/mL IM**	0.19mg	**0.19mL**	Naloxone IV/IM/IN	1.9mg	**1.9mL**
Epinephrine **1mg/mL NEB**	5mg	**5mL**	Normal Saline IV Bolus	380mL	**380mL**
Fentanyl **IV/IM**	19mcg	**0.38mL**	Ondansetron ODT	4mg	**1 tablet**
Fentanyl **IN**	28.5mcg	**0.57mL**	Sodium Bicarbonate	19mEq	**19mL**

BLUE

**Reconstitute 5g vial in 200ml NS

20 Kg

Length 107 – 119.5 cm			**5 – 6 years**		
Normal Vital Signs:	Heart Rate: 70-120		Respirations: 15-30	Systolic BP: >80	
Cardioversion:	20 joules		40 joules	40 joules	
Defibrillation:	40 joules		80 joules	80 joules	
Supraglottic Airway:	igel	Size 2	12 F gastric suction catheter		
Medication	**Dose**	**mLs**	**Medication**	**Dose**	**mLs**
Adenosine	2mg	**0.67mL**	Glucagon IM	1mg	**1mL**
Albuterol NEB	5mg	**6mL**	Glucopaste	15gm	**1 dose**
Amiodarone	100mg	**2mL**	Hydroxocobalamin IV/IO**	1400mg	**56mL**
Atropine	0.4mg	**4mL**	Ketorolac slow **IV/IO**	10mg	**0.67mL**
Calcium Chloride	400mg	**4mL**	Ketorolac **IM**	10mg	**0.67mL**
Dextrose 10% slow IV	100mL	**100mL**	Lidocaine 2% IO	10mg	**0.5mL**
Diphenhydramine IV/IM	20mg	**0.4mL**	Midazolam Agitation/Sedation **IV/IO**	2mg	**0.4mL**
DuoDote™	1 dose	**NA**	Midazolam Agitation/Sedation **IN/IM**	4mg	**0.8mL**
Epinephrine **Push Dose**	10mcg	**1mL**	Midazolam Seizure ≥17mo **IN/IM**	PediDose	**-**
Epinephrine **0.1mg/mL IV**	0.2mg	**2mL**	Morphine IV/IM/IO	2mg	**0.5mL**
Epinephrine **1mg/mL IM**	0.2mg	**0.2mL**	Naloxone IV/IM/IN	2mg	**2mL**
Epinephrine **1mg/mL NEB**	5mg	**5mL**	Normal Saline IV Bolus	400mL	**400mL**
Fentanyl **IV/IM**	20mcg	**0.4mL**	Ondansetron ODT	4mg	**1 tablet**
Fentanyl **IN**	30mcg	**0.6mL**	Sodium Bicarbonate	20mEq	**20mL**

BLUE

**Reconstitute 5g vial in 200ml NS

22 Kg

Length 107 – 119.5 cm			**5 – 6 years**		
Normal Vital Signs:	**Heart Rate:** 70-120		**Respirations:** 15-30	**Systolic BP:** >80	
Cardioversion:	22 joules		44 joules	44 joules	
Defibrillation:	44 joules		88 joules	88 joules	
Supraglottic Airway:	igel	Size 2	12 F gastric suction catheter		
Medication	**Dose**	**mLs**	**Medication**	**Dose**	**mLs**
Adenosine	2.2mg	**0.73mL**	Glucagon IM	1mg	**1mL**
Albuterol NEB	5mg	**6mL**	Glucopaste	15gm	**1 dose**
Amiodarone	110mg	**2.2mL**	Hydroxocobalamin IV/IO**	1540mg	**61.6mL**
Atropine	0.44mg	**4.4mL**	Ketorolac slow **IV/IO**	11mg	**0.73mL**
Calcium Chloride	440mg	**4.4mL**	Ketorolac **IM**	11mg	**0.73mL**
Dextrose 10% slow IV	110mL	**110mL**	Lidocaine 2% IO	11mg	**0.55mL**
Diphenhydramine IV/IM	22mg	**0.44mL**	Midazolam Agitation/Sedation **IV/IO**	2.2mg	**0.44mL**
DuoDote™	1 dose	**NA**	Midazolam Agitation/Sedation **IN/IM**	4.4mg	**0.88mL**
Epinephrine **Push Dose**	10mcg	**1mL**	Midazolam Seizure ≥17mo **IN/IM**	PediDose	-
Epinephrine **0.1mg/mL IV**	0.22mg	**2.2mL**	Morphine IV/IM/IO	2.2mg	**0.55mL**
Epinephrine **1mg/mL IM**	0.22mg	**0.22mL**	Naloxone IV/IM/IN	2mg	**2mL**
Epinephrine **1mg/mL NEB**	5mg	**5mL**	Normal Saline IV Bolus	440mL	**440mL**
Fentanyl **IV/IM**	22mcg	**0.44mL**	Ondansetron ODT	4mg	**1 tablet**
Fentanyl **IN**	33mcg	**0.66mL**	Sodium Bicarbonate	22mEq	**22mL**

BLUE

**Reconstitute 5g vial in 200ml NS

24 Kg

Length 119 – 129 cm			7 – 9 years		
Normal Vital Signs:	Heart Rate: 70-110		Respirations: 15-30	Systolic BP: >80	
Cardioversion:	24 joules		48 joules	48 joules	
Defibrillation:	48 joules		96 joules	96 joules	
Supraglottic Airway:	igel	Size 2.5	12 F gastric suction catheter		
Medication	**Dose**	**mLs**	**Medication**	**Dose**	**mLs**
Adenosine	2.4mg	**0.8mL**	Glucagon IM	1mg	**1mL**
Albuterol NEB	5mg	**6mL**	Glucopaste	15gm	**1 dose**
Amiodarone	120mg	**2.4mL**	Hydroxocobalamin IV/IO**	1680mg	**67.2mL**
Atropine	0.48mg	**4.8mL**	Ketorolac slow **IV/IO**	12mg	**0.8mL**
Calcium Chloride	480mg	**4.8mL**	Ketorolac **IM**	12mg	**0.8mL**
Dextrose 10% slow IV	120mL	**120mL**	Lidocaine 2% IO	12mg	**0.6mL**
Diphenhydramine IV/IM	24mg	**0.48mL**	Midazolam Agitation/Sedation **IV/IO**	2.4mg	**0.48mL**
DuoDote™	2 doses	**NA**	Midazolam Agitation/Sedation **IN/IM**	4.8mg	**0.96mL**
Epinephrine **Push Dose**	10mcg	**1mL**	Midazolam Seizure ≥17mo **IN/IM**	PediDose	**-**
Epinephrine **0.1mg/mL IV**	0.24mg	**2.4mL**	Morphine IV/IM/IO	2.4mg	**0.6mL**
Epinephrine **1mg/mL IM**	0.24mg	**0.24mL**	Naloxone IV/IM/IN	2mg	**2mL**
Epinephrine **1mg/mL NEB**	5mg	**5mL**	Normal Saline IV Bolus	480mL	**480mL**
Fentanyl **IV/IM**	24mcg	**0.48mL**	Ondansetron ODT	4mg	**1 tablet**
Fentanyl **IN**	36mcg	**0.72mL**	Sodium Bicarbonate	24mEq	**24mL**

ORANGE

**Reconstitute 5g vial in 200ml NS

26 Kg

Length 119 – 129 cm			7 – 9 years		
Normal Vital Signs:	Heart Rate: 70-110		Respirations: 15-30	Systolic BP: >80	
Cardioversion:	26 joules		52 joules	52 joules	
Defibrillation:	52 joules		104 joules	104 joules	
Supraglottic Airway:	igel	Size 2.5	12 F gastric suction catheter		
Medication	**Dose**	**mLs**	**Medication**	**Dose**	**mLs**
Adenosine	2.6mg	**0.87mL**	Glucagon IM	1mg	**1mL**
Albuterol NEB	5mg	**6mL**	Glucopaste	15gm	**1 dose**
Amiodarone	130mg	**2.6mL**	Hydroxocobalamin IV/IO**	1820mg	**72.8mL**
Atropine	0.5mg	**5mL**	Ketorolac slow **IV/IO**	13mg	**0.87mL**
Calcium Chloride	520mg	**5.2mL**	Ketorolac **IM**	13mg	**0.87mL**
Dextrose 10% slow IV	125mL	**125mL**	Lidocaine 2% IO	13mg	**0.65mL**
Diphenhydramine IV/IM	26mg	**0.52mL**	Midazolam Agitation/Sedation **IV/IO**	2.6mg	**0.52mL**
DuoDote™	2 doses	**NA**	Midazolam Agitation/Sedation **IN/IM**	5mg	**1mL**
Epinephrine **Push Dose**	10mcg	**1mL**	Midazolam Seizure ≥17mo **IN/IM**	PediDose	**-**
Epinephrine **0.1mg/mL IV**	0.26mg	**2.6mL**	Morphine IV/IM/IO	2.6mg	**0.65mL**
Epinephrine **1mg/mL IM**	0.26mg	**0.26mL**	Naloxone IV/IM/IN	2mg	**2mL**
Epinephrine **1mg/mL NEB**	5mg	**5mL**	Normal Saline IV Bolus	520mL	**520mL**
Fentanyl **IV/IM**	26mcg	**0.52mL**	Ondansetron ODT	4mg	**1 tablet**
Fentanyl **IN**	39mcg	**0.78mL**	Sodium Bicarbonate	26mEq	**26mL**

ORANGE

**Reconstitute 5g vial in 200ml NS

28 Kg

Length 119 – 129 cm			**7 – 9 years**		
Normal Vital Signs:	**Heart Rate:** 70-110		**Respirations:** 15-30	**Systolic BP:** >80	
Cardioversion:	28 joules		56 joules	56 joules	
Defibrillation:	56 joules		112 joules	112 joules	
Supraglottic Airway:	igel	Size 2.5	12 F gastric suction catheter		
Medication	**Dose**	**mLs**	**Medication**	**Dose**	**mLs**
Adenosine	2.8mg	**0.93mL**	Glucagon IM	1mg	**1mL**
Albuterol NEB	5mg	**6mL**	Glucopaste	15gm	**1 dose**
Amiodarone	140mg	**2.8mL**	Hydroxocobalamin IV/IO**	1960mg	**78.4mL**
Atropine	0.5mg	**5mL**	Ketorolac slow **IV/IO**	14mg	**0.93mL**
Calcium Chloride	560mg	**5.6mL**	Ketorolac **IM**	14mg	**0.93mL**
Dextrose 10% slow IV	125-140mL	**125-140mL**	Lidocaine 2% IO	14mg	**0.7mL**
Diphenhydramine IV/IM	28mg	**0.56mL**	Midazolam Agitation/Sedation **IV/IO**	2.8mg	**0.56mL**
DuoDote™	2 doses	**NA**	Midazolam Agitation/Sedation **IN/IM**	5mg	**1mL**
Epinephrine **Push Dose**	10mcg	**1mL**	Midazolam Seizure ≥17mo **IN/IM**	PediDose	**-**
Epinephrine **0.1mg/mL IV**	0.28mg	**2.8mL**	Morphine IV/IM/IO	2.8mg	**0.7mL**
Epinephrine **1mg/mL IM**	0.28mg	**0.28mL**	Naloxone IV/IM/IN	2mg	**2mL**
Epinephrine **1mg/mL NEB**	5mg	**5mL**	Normal Saline IV Bolus	560mL	**560mL**
Fentanyl **IV/IM**	28mcg	**0.56mL**	Ondansetron ODT	4mg	**1 tablet**
Fentanyl **IN**	42mcg	**0.84mL**	Sodium Bicarbonate	28mEq	**28mL**

ORANGE

**Reconstitute 5g vial in 200ml NS

30 Kg — GREEN

Length 129 – 141.5 cm			10 – 12 years		
Normal Vital Signs:	Heart Rate: 60-100		Respirations: 15-20	Systolic BP: >90	
Cardioversion:	30 joules		60 joules	60 joules	
Defibrillation:	60 joules		120 joules	120 joules	
Supraglottic Airway:	igel	Size 2.5	12 F gastric suction catheter		

Medication	Dose	mLs	Medication	Dose	mLs
Adenosine	3mg	1mL	Glucagon IM	1mg	1mL
Albuterol NEB	5mg	6mL	Glucopaste	15gm	1 dose
Amiodarone	150mg	3mL	Hydroxocobalamin IV/IO**	2100mg	84mL
Atropine	0.5mg	5mL	Ketorolac slow IV/IO	15mg	1mL
Calcium Chloride	600mg	6mL	Ketorolac IM	15mg	1mL
Dextrose 10% slow IV	125-150mL	125-150mL	Lidocaine 2% IO	15mg	0.75mL
Diphenhydramine IV/IM	30mg	0.6mL	Midazolam Agitation/Sedation IV/IO	3mg	0.6mL
DuoDote™	2 doses	NA	Midazolam Agitation/Sedation IN/IM	5mg	1mL
Epinephrine Push Dose	10mcg	1mL	Midazolam Seizure ≥17mo IN/IM	PediDose	-
Epinephrine 0.1mg/mL IV	0.3mg	3mL	Morphine IV/IM/IO	3mg	0.75mL
Epinephrine 1mg/mL IM	0.3mg	0.3mL	Naloxone IV/IM/IN	2mg	2mL
Epinephrine 1mg/mL NEB	5mg	5mL	Normal Saline IV Bolus	600mL	600mL
Fentanyl IV/IM	30mcg	0.6mL	Ondansetron ODT	4mg	1 tablet
Fentanyl IN	45mcg	0.9mL	Sodium Bicarbonate	30mEq	30mL

**Reconstitute 5g vial in 200ml NS

32 Kg — GREEN

Length 129 – 141.5 cm			10 – 12 years		
Normal Vital Signs:	Heart Rate: 60-100		Respirations: 15-20	Systolic BP: >90	
Cardioversion:	32 joules		64 joules	64 joules	
Defibrillation:	64 joules		128 joules	128 joules	
Supraglottic Airway:	igel	Size 2.5	12 F gastric suction catheter		

Medication	Dose	mLs	Medication	Dose	mLs
Adenosine	3.2mg	1.07mL	Glucagon IM	1mg	1mL
Albuterol NEB	5mg	6mL	Glucopaste	15gm	1 dose
Amiodarone	160mg	3.2mL	Hydroxocobalamin IV/IO**	2240mg	89.6mL
Atropine	0.5mg	5mL	Ketorolac slow IV/IO	15mg	1mL
Calcium Chloride	640mg	6.4mL	Ketorolac IM	15mg	1mL
Dextrose 10% slow IV	125-160mL	125-160mL	Lidocaine 2% IO	16mg	0.8mL
Diphenhydramine IV/IM	32mg	0.64mL	Midazolam Agitation/Sedation IV/IO	3.2mg	0.64mL
DuoDote™	2 doses	NA	Midazolam Agitation/Sedation IN/IM	5mg	1mL
Epinephrine Push Dose	10mcg	1mL	Midazolam Seizure ≥17mo IN/IM	PediDose	-
Epinephrine 0.1mg/mL IV	0.32mg	3.2mL	Morphine IV/IM/IO	3.2mg	0.8mL
Epinephrine 1mg/mL IM	0.32mg	0.32mL	Naloxone IV/IM/IN	2mg	2mL
Epinephrine 1mg/mL NEB	5mg	5mL	Normal Saline IV Bolus	640mL	640mL
Fentanyl IV/IM	32mcg	0.64mL	Ondansetron ODT	4mg	1 tablet
Fentanyl IN	48mcg	0.96mL	Sodium Bicarbonate	32mEq	32mL

**Reconstitute 5g vial in 200ml NS

34 Kg

Length 129 – 141.5 cm			**10 – 12 years**		
Normal Vital Signs:	**Heart Rate:** 60-100		**Respirations:** 15-20	**Systolic BP:** >90	
Cardioversion:	34 joules		68 joules	68 joules	
Defibrillation:	68 joules		136 joules	136 joules	
Supraglottic Airway:	igel	Size 2.5	12 F gastric suction catheter		
Medication	**Dose**	**mLs**	**Medication**	**Dose**	**mLs**
Adenosine	3.4mg	**1.13mL**	Glucagon IM	1mg	**1mL**
Albuterol NEB	5mg	**6mL**	Glucopaste	15gm	**1 dose**
Amiodarone	170mg	**3.4mL**	Hydroxocobalamin IV/IO**	2380mg	**95.2mL**
Atropine	0.5mg	**5mL**	Ketorolac slow **IV/IO**	15mg	**1mL**
Calcium Chloride	680mg	**6.8mL**	Ketorolac **IM**	15mg	**1mL**
Dextrose 10% slow IV	125-170mL	**125-170mL**	Lidocaine 2% IO	17mg	**0.85mL**
Diphenhydramine IV/IM	34mg	**0.68mL**	Midazolam Agitation/Sedation **IV/IO**	3.4mg	**0.68mL**
DuoDote™	2 doses	**NA**	Midazolam Agitation/Sedation **IN/IM**	5mg	**1mL**
Epinephrine **Push Dose**	10mcg	**1mL**	Midazolam Seizure ≥17mo **IN/IM**	PediDose	-
Epinephrine **0.1mg/mL IV**	0.34mg	**3.4mL**	Morphine IV/IM/IO	3.4mg	**0.85mL**
Epinephrine **1mg/mL IM**	0.34mg	**0.34mL**	Naloxone IV/IM/IN	2mg	**2mL**
Epinephrine **1mg/mL NEB**	5mg	**5mL**	Normal Saline IV Bolus	680mL	**680mL**
Fentanyl **IV/IM**	34mcg	**0.68mL**	Ondansetron ODT	4mg	**1 tablet**
Fentanyl **IN**	50mcg	**1mL**	Sodium Bicarbonate	34mEq	**34mL**

GREEN

**Reconstitute 5g vial in 200ml NS

36 Kg

Length 129 – 141.5 cm			**10 – 12 years**		
Normal Vital Signs:	Heart Rate: 60-100		Respirations: 15-20	Systolic BP: >90	
Cardioversion:	36 joules		72 joules	72 joules	
Defibrillation:	72 joules		144 joules	144 joules	
Supraglottic Airway:	igel	Size 2.5	12 F gastric suction catheter		
Medication	**Dose**	**mLs**	**Medication**	**Dose**	**mLs**
Adenosine	3.6mg	**1.2mL**	Glucagon IM	1mg	**1mL**
Albuterol NEB	5mg	**6mL**	Glucopaste	15gm	**1 dose**
Amiodarone	180mg	**3.6mL**	Hydroxocobalamin IV/IO**	2520mg	**100.8mL**
Atropine	0.5mg	**5mL**	Ketorolac slow **IV/IO**	15mg	**1mL**
Calcium Chloride	720mg	**7.2mL**	Ketorolac **IM**	15mg	**1mL**
Dextrose 10% slow IV	125-180mL	**125-180mL**	Lidocaine 2% IO	18mg	**0.9mL**
Diphenhydramine IV/IM	36mg	**0.72mL**	Midazolam Agitation/Sedation **IV/IO**	3.6mg	**0.72mL**
DuoDote™	2 doses	**NA**	Midazolam Agitation/Sedation **IN/IM**	5mg	**1mL**
Epinephrine **Push Dose**	10mcg	**1mL**	Midazolam Seizure ≥17mo **IN/IM**	PediDose	-
Epinephrine **0.1mg/mL IV**	0.36mg	**3.6mL**	Morphine IV/IM/IO	3.6mg	**0.9mL**
Epinephrine **1mg/mL IM**	0.36mg	**0.36mL**	Naloxone IV/IM/IN	2mg	**2mL**

GREEN

	Epinephrine **1mg/mL NEB**	5mg	**5mL**	Normal Saline IV Bolus	720mL	**720mL**	
	Fentanyl **IV/IM**	36mcg	**0.72mL**	Ondansetron ODT	4mg	**1 tablet**	
	Fentanyl **IN**	50mcg	**1mL**	Sodium Bicarbonate	36mEq	**36mL**	

**Reconstitute 5g vial in 200ml NS

Longer than the Length-Based Resuscitation Tape

ADULT

Normal Vital Signs:	**Heart Rate:** 60-100		**Respirations:** 12-20	**Systolic BP:** >90
Cardioversion:	120 joules		150 joules	200 joules
Defibrillation:	200 joules		200 joules	200 joules
Supraglottic Airway:	igel	30-60 kg	Size 3 (12 F gastric suction catheter)	
		50-90 kg	Size 4 (12 F gastric suction catheter)	
		>90 kg	Size 5 (12 F gastric suction catheter)	

Medication	Dose	mLs	Medication	Dose	mLs
Adenosine	6 or 12mg	**2 or 4mL**	Ketorolac **IM**	30mg	**2mL**
Albuterol NEB	5mg	**6mL**	Lidocaine 2% IO	40mg	**2mL**
Amiodarone	300mg	**6mL**	Midazolam Agitation/Sedation **IV/IO**[3]	~~5~~5mg mg	**1 mL**
Aspirin	325mg	**1 tablet**	Midazolam Agitation/Sedation **IM/IN**[3]	5 or 10mg~~5mg~~	**1 or 2mL**
Atropine	1mg	**10mL**	Midazolam Seizure **>14y IV/IO**[3]	5mg	**1mL**
Calcium Chloride	1gm	**10mL**	Midazolam Seizure **IM/IN**[3]	10mg	**2mL**
Dextrose 10% slow IV[1]	125-250mL	**125-250mL**	Morphine IV/IM/IO[4]	4mg	**1mL**
Diphenhydramine IV/IM	50mg	**1mL**	Naloxone IV	0.8-2mg	**0.8-2mL**
DuoDote™	1-3 doses	**NA**	Naloxone IM	2mg	**2mL**
Epinephrine **Push Dose**	10mcg	**1mL**	Naloxone IN	2-4mg	**2-4mL**
Epinephrine **0.1mg/mL IV**	1mg	**10mL**	Nitroglycerin[5]	0.4mg	**1 dose**
Epinephrine **1mg/mL IM**	0.5mg	**0.5mL**	Normal Saline IV Bolus	1L	**1L**
Epinephrine **1mg/mL NEB**	5mg	**5mL**	Olanzapine ODT[6]	10mg	**1 tablet**
Fentanyl IV/IM/IN[2]	50mcg	**1mL**	Ondansetron ODT	4mg	**1 tablet**
Glucagon IM	1mg	**1mL**	Ondansetron IV/IM[7]	4mg	**2mL**
Glucopaste	15gm	**1 dose**	Sodium Bicarbonate	50mEq	**50mL**
Ketorolac slow **IV/IO**	15mg	**1mL**	Tranexamic Acid (TXA)[8]	1gm	**50/100mL**

BLACK

NOTES:

[1] Dextrose: **125mL IV** and reassess, if patient remains symptomatic, repeat x1 for a total of 250mL

[2] Fentanyl: **50mcg (1mL) slow IV push or IM/IN**, repeat every 5min prn, maximum total dose prior to Base Contact 150mcg

[3] Midazolam: Dose varies by indication, refer to Treatment Protocol and MCG 1317.25

~~Agitated Delirium / Behavioral / Psychiatric Crisis~~

~~**5mg (1mL) IM/IN/IV**, repeat x1 in 5 min prn, maximum total dose prior to Base contact 10mg for Agitated Delirium (Psychiatric Crisis requires Base order prior to any medication administered)~~

~~mia sedation prior to synchronized cardioversion / transcutaneous pacing~~

~~**5mg (1mL) slow IV/IO push/IM/IN**, may repeat X1 in 5 min prn, maximum total dose prior to Base contact 10mg~~

~~**10 mg (2mL) IN/IM,** contact Base for additional dosing, with Base Contact may repeat x1 to a maximum of 20mg~~

~~**5 mg (1mL) IV/IO**, if existing vascular access, repeat x1 in 2 min prn~~

[4] Morphine: **4mg (1mL) slow IV/IO push or IM**, repeat every 5min prn, maximum total dose prior to Base contact 12mg

[5] Nitroglycerin

Chest Pain – Suspected Cardiac / Chest Pain – STEMI

0.4 mg SL prn, repeat every 5min prn x2, total 3 doses, hold if SBP < 100mmHg or patient has taken sexually enhancing medication within 48 hours

Pulmonary Edema / CHF

0.4mg SL, for SBP ≥ 100mmHg; **0.8mg SL**, for SBP ≥ 150mmHg; **1.2mg SL**, for SBP ≥ 200mmHg
Repeat every 3-5 min prn x2 for persistent dyspnea, assess blood pressure prior to each administration and determine subsequent dose base on SBP as listed above. Hold if SBP

[6] Olanzapine ODT given once

[7] Ondansetron IV/IM – only for 15 years of age or older

[8] Tranexamic Acid (TXA) – 1gm(10mL) dilute in 50 or 100mL of normal saline infused over 10 minutes

(PARAMEDIC)

SUBJECT: **BEHAVIORAL / PSYCHIATRIC CRISIS PATIENT DESTINATION**

REFERENCE NO. 526

PURPOSE: To provide guidelines for the transport of patients with a primary provider impression of Behavioral/Psychiatric Crisis to the most appropriate facility that is staffed, equipped and prepared to administer medical care appropriate to the needs of the patient.

AUTHORITY: Health & Safety Code, Division 5, Sections 1797.220, 1798
California Code of Regulations, Title 22, Division 9, Chapter 5

DEFINITIONS:

Behavioral/Psychiatric Crisis: A provider impression for patients who are having a mental health crisis or a mental health emergency. This is not for anxiety or agitation secondary to medical etiology.

Emergency Medical Condition: A condition or situation in which an individual has an immediate need for medical attention. The presence of abnormal vital signs (heart rate and rhythm, respiratory rate, blood pressure, and oxygen saturation – except isolated asymptomatic hypertension) are also indications of an emergency medical condition. Patients who meet any criteria for Base Contact or Receiving Hospital Notification (Ref. No. 1200.2) are also considered to have an emergency medical condition.

Mental Health Crisis: Is a non-life-threatening situation in which an individual is exhibiting extreme emotional disturbance or behavioral distress, considering harm to self or others, disoriented or out of touch with reality, has a compromised ability to function, or is otherwise agitated and unable to be calmed. Examples of mental health crisis includes:

- Talking about suicide threats
- Talking about threatening behavior
- Self-injury, but not needing immediate medical attention
- Alcohol or substance abuse
- Highly erratic or unusual behavior
- Eating disorders
- Not taking their prescribed psychiatric medications
- Emotionally distraught, very depressed, angry or anxious

Mental Health Emergency: Is a life-threatening situation in which an individual is imminently threatening harm to self or others, severely disoriented or out of touch with reality, has a severe inability to function, or is otherwise distraught and out of control. Examples of a mental health emergency includes:

- Acting on a suicide threat
- Homicidal or threatening behavior

APPROVED:

Director, EMS Agency

Medical Director, EMS Agency

- Self-injury needing immediate medical attention
- Severely impaired by drugs or alcohol
- Highly erratic or unusual behavior that indicates very unpredictable behavior and/or inability to care for themselves

Most Accessible Receiving Facility (MAR): Is the geographically closest (by distance) 9-1-1 Receiving Hospital approved by the EMS Agency to receive patients with emergency medical conditions from the 9-1-1 system.

Psychiatric Urgent Care Center (PUCC): A mental health facility authorized by the Department of Mental Health and approved by the EMS Agency by meeting the requirements in Ref. No. 326, Psychiatric Urgent Care Center Standards.

PRINCIPLES:

1. EMS provider agencies must be approved by the Emergency Medical Services (EMS) Agency to triage patients with behavioral/psychiatric crisis to a designated PUCC.

2. Patients with a provider impression of Agitated Delirium must be transported to an emergency department for evaluation.

3. Paramedics who have completed an 8-hour educational session regarding the triage of patients to a PUCC are the only EMS personnel authorized to utilize this policy.

4. Patients exhibiting mental health crisis who meet PUCC inclusion criteria may also be released at the scene to the local law enforcement agency. Law enforcement officers are highly encouraged to transport these patients to a designated PUCC. Paramedics shall document on the EMS Report Form to whom the patient was released.

5. Patients receiving olanzapine who are cooperative and meet the criteria for screening as per *Ref. 526.1 Medical Clearance Criteria Screening Tool for Psychiatric Urgent Care Center (PUCC)*, may be transported by EMS (basic life support) or released to law enforcement to the PUCC.

6. In instances where there is a potential for the patient to harm self or others, EMS personnel shall consider seeking assistance from law enforcement.

7. Any patient who meets the triage criteria for transport to a PUCC, but who requests to be transported to an emergency department of a general acute care hospital, shall be transported to the emergency department of a general acute care hospital.

8. In all cases, the health and well-being of the patient is the overriding consideration in determining patient destination. Factors to be considered include severity and stability of the patient's illness or injury; status of the receiving facility; anticipated transport time; requests by the patient, family, guardian or physician; and EMS personnel and base hospital judgment.

POLICY:

I. Responsibilities of the Paramedic

A. Complete an 8-hour educational session regarding the triage of patients to a designated PUCC

B. Comply with all patient destination policies established by the EMS Agency

II. EMS Provider Agency Requirements and Responsibilities

A. Submit a written request to the Director of the EMS Agency for approval to triage patients who meet PUCC Inclusion Criteria. The written request shall include the following:

1. Date of proposed implementation date

2. Scope of deployment (identify response units)

3. Course/Training Curriculum addressing all items in Section IV

4. Identify a representative to act as the liaison between the EMS Agency, designated PUCC(s), and the EMS Provider Agency

5. Policies and procedures listed in Section B

B. Develop, maintain and implement policies and procedures that address the following:

1. Completion of one Medical Clearance Criteria Screening Tool for each patient (see sample Ref. No. 526.1)

2. Pre-arrival notification of the PUCC

3. Patient report to a licensed health care provider or physician at the PUCC

4. Confirmation that PUCC has the capacity to accept the patient prior to transport

C. Develop a Quality Improvement Plan or Process to review variances and adverse events

D. Comply with data reporting requirements established by the EMS Agency

III. Psychiatric Urgent Care Clinic (PUCC) Patient Triage Criteria

A. Inclusion Criteria – patients who meet the following criteria may be triaged for transport to a designated PUCC provided the PUCC can be accessed within a fifteen (15) minute transport time:

1. Provider impression of behavior/psychiatric crisis; and

a. Voluntarily consented or 5150 hold; and

b. Ambulatory, does not require the use of a wheelchair; and

c. No emergent medical condition or trauma (with exception of ground level fall with injuries limited to minor abrasions below the clavicle); and

d. No focal neurological deficit

2. Age: ≥ 18 years and ≤65 years old

3. Vital Signs

a. Heart rate ≥60 bpm and ≤120 bpm

b. Respiratory rate ≥12 rpm and ≤24 rpm

c. Pulse oximetry ≥94% on room air

d. SBP ≥100 and <180 mmHg

Note: Isolated mild to moderate hypertension (i.e., SBP ≤180mmHg with no associated symptoms such as headache, neurological changes, chest pain or shortness of breath) in a patient with a history of hypertension is not a reason to exclude referral to a PUCC

4. Glasgow Coma Scale (GCS) Score of ≥14

5. If history of Diabetes Mellitus, no evidence of ketoacidosis and a blood glucose ≥60 mg/dL and <250 mg/dL

B. Exclusion Criteria – patients who meet the following conditions shall not be triaged to a PUCC, patient destination shall be in accordance with Ref. No. 502, Patient Destination or appropriate Specialty Care Center Patient Destination policy (i.e., Trauma Center, STEMI, Stroke):

1. Any emergent medical condition

2. Focal neurological deficit

3. Any injury that meet trauma center criteria or guideline

4. Complaint of chest pain, shortness of breath, abdominal/pelvic pain, or syncope

5. Open wounds or bleeding

6. Intoxication of drugs and/or alcohol

7. Suspected pregnancy

8. Requires special medical equipment

9. Intellectual or developmental disability

10. Exhibits dangerous behavior

11. Signs and symptoms of agitated delirium (Reference No. 1208, Agitated Delirium)

12. EMS personnel feels the patient is not stable enough for PUCC

IV. Paramedic Training Curriculum – the 8-hour paramedic educational session regarding the triage of patients to a PUCC shall include, at minimum, the following:

A. An overview of the curriculum, educational objectives, resources and operational structure

B. Impact of mental health crisis/emergency on local public health and emergency medical system resources

C. Overview of PUCC capabilities and resources

D. Review of mental health disorders

E. In-depth review of the Inclusion and Exclusion Criteria, and the Medical Clearance Criteria Screening Tool for PUCC

F. Legal and Ethics, include considerations for release at scene, refusal of treatment or transport (Against Medical Advice)

G. Interactions with other agencies (i.e., law enforcement, mental health professional)

H. Patient care documentation

I. Quality improvement process and sentinel event reporting

CROSS REFERENCES:

Prehospital Care Manual:

Ref. No. 326, **Psychiatric Urgent Care Center (PUCC) Standards**
Ref. No. 326.1, **Designated Psychiatric Urgent Care Center Roster**
Ref. No. 502, **Patient Destination**
Ref. No. 526.1, **Medical Clearance Criteria Screening Tool for Psychiatric Urgent Care Center**
Ref. No. 1200.3 **Provider Impressions**
Ref No. 1208 **Agitated Delirium**
Ref No. 1209 **Behavioral/Psychiatric Crisis**

SUBJECT: **MEDICAL CLEARANCE CRITERIA SCREENING TOOL FOR PSYCHIATRIC URGENT CARE CENTER (PUCC)**

REFERENCE NO. 526.1

PROCEDURE:

1. Paramedic shall assess and evaluate the patient using all the criteria listed below.
2. If ALL criteria are **Yes (Green)** – triage patient to designated Psychiatric Urgent Care Center (PUCC), only if transport time is within 15 minutes.
3. If ANY criterion is **No (Red)** – triage patient to the most accessible 9-1-1 receiving hospital.
4. MEDICAL CLEARANCE CRITERIA FOR **PUCC**

Provider Impression of Behavioral/Psychiatric Crisis	Yes ☐	No ☐
Voluntarily consented or 5150 hold	Yes ☐	No ☐
Ambulatory, does not require wheelchair and no focal neurological deficit	Yes ☐	No ☐
No emergent medical condition	Yes ☐	No ☐
Age ≥ 18 years old and ≤ 65 years	Yes ☐	No ☐
Heart Rate ≥60 and ≤120 beats per minute	Yes ☐	No ☐
Respiratory Rate ≥12 and ≤24 respirations per minute	Yes ☐	No ☐
Pulse Oximetry ≥94% on room air	Yes ☐	No ☐
SBP ≥100 and <180 mmHg	Yes ☐	No ☐
Glasgow Coma Score ≥14	Yes ☐	No ☐
If diabetes, glucose ≥60 and <250mg/dL	Yes ☐	No ☐
No injury meeting TC criteria or guidelines	Yes ☐	No ☐
No altered level of consciousness	Yes ☐	No ☐
No complaint of: chest pain, SOB, Abdominal or pelvic pain, or syncope	Yes ☐	No ☐
No open wounds or bleeding	Yes ☐	No ☐
No clinical intoxication (drugs and/or alcohol)	Yes ❒	No ❒
Not pregnant (known or suspected)	Yes ☐	No ☐
Not requiring special medical equipment	Yes ☐	No ☐
No intellectual or developmental disability	Yes ☐	No ☐
No dangerous behavior	Yes ☐	No ☐
~~No signs and symptoms of Agitated Delirium~~No midazolam administered	Yes ☐	No ☐
EMS Personnel feel patient is stable for PUCC	Yes ☐	No ☐

(EMT/ PARAMEDIC/MICN)

SUBJECT: **APPLICATION OF PATIENT RESTRAINTS** REFERENCE NO. 838

PURPOSE: To provide guidelines for emergency procedures and use of restraints in the field or during transport of patients who are violent or potentially violent, or who may harm self or others.

AUTHORITY: California Code of Regulations, Title 22, Sections 100063, 100145, 100169(a)(1,2) and (c)(1)
Welfare and Institutions Code, 5150
California Code of Regulations, Title 13, Section 1103.2
Health and Safety Code, Section 1798(a)

PRINCIPLES:

1. The safety of the patient, community, and responding personnel is of paramount concern when considering the use of restraints.

2. Staff should be properly trained in the appropriate use and application of restraints and in the monitoring of patients in restraints.

3. The application of restraints is a high-risk procedure due to the possibility of injury to both the patient and the provider; therefore, the least restrictive method that protects the patient and emergency medical services (EMS) personnel from harm should be utilized.

4. Restraints should be used in situations where the patient is potentially violent or is exhibiting behavior that is dangerous to self or others, only as necessary, when all lesser restrictive measures (e.g., verbal de-escalation) have failed.

5. EMS personnel must consider that aggressive or violent behavior may be a symptom of medical conditions such as head trauma, alcohol, substance abuse, metabolic disorders, emotional stress and, behavioral and psychiatric disorders. Base contact criteria shall be strictly adhered to for those conditions that require it.

6. Authority for scene management (e.g., controlling the activities that occur in the environment or space around the patient; ensuring bystanders are kept away; and EMS personnel are provided with a safe environment to treat the patient) shall be coordinated by law enforcement (LE), where applicable.

7. The responsibility for patient health care management rests with the highest medical authority on scene. Therefore, medical intervention and patient destination shall be determined by EMS personnel according to applicable policies.

    a. The preferred restraint modality should be coordinated with LE, when applicable.

    b. The method of restraint used should allow for adequate monitoring of vital signs and ~~shall~~ should not restrict the patient's ability to breathe freely. Restraints should not prevent ability to ~~the ability to~~ protect the ~~patient's~~ airway nor compromise neurological or vascular status.

APPROVED: _____ _____
Director, EMS Agency Medical Director, EMS Agency

8. This policy is not intended to negate the need for LE personnel to use appropriate restraint equipment approved by their respective agency to establish scene management control.

POLICY

I. Forms of Restraining Devices

A. Restraint devices applied by EMS personnel (including for the purpose of interfacility transport of psychiatric patients) must be either padded hard restraints or soft restraints (i.e., vest with ties, Velcro or seatbelt type). Both methods must be keyless and allow for quick release. Restraints shall be applied as four point padded wrist and ankle restraints, or a two-point padded wrist and belt restraint.

B. The following methods of restraint shall NOT be utilized by EMS personnel:

1. Applying hard plastic ties or any restraint device requiring a key to remove.

2. Restraining a patient's hands and feet behind their back.

3. Restraining patients in prone position.

4. Placing a patient on a gurney and then placing a device (e.g., backboard, scoop stretcher or flats) on top of the patient, referred to as "Sandwich" method.

5. Applying materials in a manner that could cause vascular, neurological or respiratory compromise (e.g., restriction of limbs, the neck or chest using gauze bandage or tape).

C. In some situations, it may be necessary for LE to apply restraints (e.g., handcuffs, flex-cuffs, herein referred to as LE-restraint), which are not approved by EMS protocols. When appropriate, patients requiring ongoing patient care or EMS transported patients should have LE-restraints discontinued in favor of an EMS approved restraint intervention.

II. Application and Monitoring of Restraints

A. A restrained patient shall never be left unattended.

B. Any restraint device used must allow for rapid removal if the patient's airway, breathing, or circulation becomes compromised.

C. Restrained extremities should be evaluated for pulse quality, capillary refill, color, temperature, nerve and motor function immediately following application and at a minimum of every 15 minutes thereafter (or more often if clinically indicated). Any abnormal findings require adjustment, removal and reapplication of restraints if necessary.

D. Restraint methods must allow the patient to straighten the abdomen and chest such that they can take full breaths.

E. Under no circumstances are patients to be transported in the prone position regardless of who applies the restraint.

F. EMS personnel must ensure that the patient's position allows for adequate monitoring of vital signs, does not compromise respiratory, circulatory, or neurological status, and does not preclude any necessary medical intervention to protect or manage the airway should vomiting occur.

G. EMS restraints shall not be attached to movable side rails of a gurney.

H. Restraint devices applied by LE require the officer's continued presence to ensure patient and scene management safety.

1. The LE officer should accompany the patient in the ambulance.

2. In the unusual event that this is not possible, the LE officer should follow by driving in tandem with the ambulance on a pre-determined route.

3. A method to alert the LE officer of any problems that may develop during transport should be discussed prior to leaving the scene.

4. If the patient is handcuffed by LE officers, consideration should be made to transition to the least restrictive restraints that are safe for the patient and responders, including consideration of transfer to EMS restraints.

III. Pharmacologic Management of the Patient in Restraints

A. A patient who has undergone physical restraint should not be allowed to continue to struggle against the restraints as this may lead to injury (i.e., rhabdomyolysis, strains, sprains, severe acidosis, cardiac ischemia).

B. Patients who are agitated while in physical restraint may receive ~~administration of medication~~midazolam by EMS personnel to reduce agitation with continued monitoring for respiratory depression, in accordance with (*TP 120~~98~~, Psychiatric/Behavioral Emergencies*) ~~and/or (*TP 1209, Agitated Delirium*)~~.

1. If the patient remains agitated in BLS care and there is an ongoing concern for patient safety, ALS upgrade shall be initiated.

2. Resuscitation and monitoring equipment, including oxygen and bag valve mask, should be ~~at the patient's side~~near the patient and accessible prior to proceeding with sedation.

~~1.~~3. Initiate monitoring of pulse oximetry, cardiac rhythm, and ~~side-stream waveform~~ capnography (when~~en~~ available) as ~~early~~soon as possible peri-/post-sedation. ~~in the restraint process.~~ Patients in restraints who receive midazolam to treat agitation must have monitoring in place prior to initiating transport.

IV. Required Documentation on the Patient Care/EMS Report Form

A. Reason restraints were applied

B. Type of restraints applied

C. Identity of agency/medical facility applying restraints

C. ~~D.~~ Assessment of the overall cardiac and respiratory status of the patient; and the circulatory, motor and neurological status of the restrained extremities at a minimum of every 15 minutes

E. Reason for removing or reapplying the restraints or any abnormal findings

V. Quality Assurance:

A. Develop a process for review of selected cases where physical restraint ~~or~~ and/or medication ~~management for sedation~~are used by EMS personnel ~~are used~~to manage agitation, with attention to the appropriateness of restraint for the patient, the type of restraint(s) used, the quality and frequency of physiologic monitoring, protocol compliance, and documentation compliance.

B. Agencies shall track the use of medications for the purpose of management of agitated patients.

CROSS REFERENCE:

Prehospital Care Manual:
Ref. No. 502, **Patient Destination**
Ref. No. 703, **ALS Unit Inventory**
Ref. No. 1200.2, **Base Contact Requirements**

DEPARTMENT OF HEALTH SERVICES
COUNTY OF LOS ANGELES

Treatment Protocol: BASE CONTACT REQUIREMENTS	Ref. No. 1200.2

PRINCIPLES:

1. Base Contact is made by paramedics to establish online medical direction for additional guidance on field care beyond what is contained in the offline treatment protocols.

2. Once the patient is no longer present and under the care of the paramedic medical direction is not needed. Therefore, this policy does not apply and Base Contact is not required.

3. Base Contact for all patients shall be made according to the requirements below and at the judgment of the treating paramedic. Access to online medical direction is not limited to those conditions listed below.

4. For children 13 to 36 months of age, Base Contact and/or transport is required, except those with no medical complaint or with isolated minor extremity injury.

5. Children less than or equal to 12 months of age must be transported in accordance with *Ref. No. 510*, regardless of provider impression or field treatment rendered, and if a parent or caregiver refuses transport, Base Contact shall be made prior to signing the patient out Against Medical Advice (AMA).

6. Base Contact criteria below still apply if the patient is on scene and refusing transport (AMA). This includes parents or legal guardians who refuse transport of a pediatric patient.

7. This document provides a quick reference list for Base Contact requirements; it does not replace the treatment protocols or the guidance there within, which shall be followed at all times unless otherwise directed by online medical direction.

GUIDELINES:

1. Base Contact is required when consultation with the base would be helpful such as:

    a. Patient presentation renders the provider impression and appropriate treatment protocol unclear

    b. Additional or unlisted treatments are required

2. Base Contact is required for children who meet transport guidelines to a Pediatric Medical Center *(Ref. 510)*

3. Base Contact is required for patients in traumatic full arrest who do not meet criteria for determination of death per *Ref. 814*. In these instances, Base Contact shall be made with the Trauma Center.

4. Base Contact is required for the following provider impressions in all patients:

~~a. Agitated Delirium~~

~~b.~~a. Anaphylaxis

~~c.~~b. Cardiac Arrest – Non-traumatic (unless patient meets determination of death by Ref. 814)

~~d.~~c. Childbirth

~~e.~~d. Dystonic Reaction

~~f.~~e. Hypotension

~~g.~~f. Respiratory Failure

~~h.~~g. Shock

~~i.~~h. Stroke / CVA / TIA

5. Additionally, Base Contact is required for the following provider impressions in pediatric patients:

   a. BRUE

   b. Chest Pain – Suspected Cardiac / Chest Pain - STEMI

   c. Pregnancy/Labor

   d. Newborn

6. Base Contact is required for the following provider impressions under the specified conditions:

   a. Airway Obstruction
      - Severe respiratory distress or respiratory arrest

   b. Altered Level of Consciousness (ALOC)
      - Persistent ALOC of unclear etiology

   c. Behavioral Crisis / Psychiatric Crisis
      - Treatment with midazolam
      - EMS concern for suicidal intent ~~but does not meet criteria for~~in person not on 5150/5585 hold and refusing voluntary treatment or transport

   ~~c.~~d. Cardiac Dysrhythmia
      - Rapid atrial fibrillation with poor perfusion
      - Symptomatic bradycardia
      - Wide complex tachycardia

   ~~d.~~e. Medical Device Malfunction
      - Ventricular Assist Device (VAD) malfunction

~~e.~~f. Overdose / Poisoning / Ingestion
- If signing out AMA

~~f.~~g. Pregnancy Complication

- >20 weeks with vaginal bleeding

~~g.~~h. Respiratory Distress (of any etiology e.g. Bronchospasm, Pulmonary Edema, Other)
- Severe respiratory distress unresponsive or not amenable to CPAP
- Unmanageable airway

~~h.~~i. Seizure
- Pregnant patient
- Status epilepticus

~~i.~~j. Submersion / Drowning
- ALOC
- Decompression illness

~~j.~~k. Traumatic Injury
- Crush syndrome
- Prolonged entrapment >30 minutes
- Trauma criteria or guidelines met
- Traumatic arrest not meeting criteria for determination of death per Ref. 814

7. Base Contact is required concurrently when the following treatments are initiated:

   a. Adenosine in pediatric patients

   b. Cardioversion

   c. Midazolam for treatment of agitation in an adult patient with behavioral/psychiatric crisis without immediate safety risk

   ~~b.~~

   ~~c.~~d. Push-dose epinephrine

   e. Transcutaneous pacing

~~d.~~

8. Base Contact is required prior to initiating the following treatments:

   a. Additional dosing of normal saline or medications (e.g., midazolam, opiate analgesia) after the maximum dose is administered per protocol

   b. Calcium chloride for patients with calcium channel blocker overdose

   c. Cardioversion of a patient with adequate perfusion, or awake with a narrow complex tachycardia, or any atrial fibrillation

   d. Midazolam for treatment of agitation in a pediatric patient with behavioral/psychiatric crisis without immediate safety risk

   e. IO placement beyond the indications listed in *MCG 1375*

f. Sodium bicarbonate for symptomatic bradycardia with suspected hyperkalemia or for dysrhythmia due to possible tricyclic antidepressant or other toxic overdose

g. Transcutaneous pacing if HR >40

DEPARTMENT OF HEALTH SERVICES
COUNTY OF LOS ANGELES

Treatment Protocol: PROVIDER IMPRESSIONS **Ref. No. 1200.3**

GENERAL RULES:

1. This is a list of all the provider impressions (PI) in alphabetical order by PI name.
2. The following columns list the associated Treatment Protocol (TP) name and number. Use the corresponding "__-P" protocol if patient ≤ 14 years of age.
3. The last column provides guideline about the use of the PI.

Provider Impression (PI) Name	PI Code	Treatment Protocol (TP)	TP Code	Guidelines for use of PI
Abdominal Pain/Problems (GI/GU)	ABOP	GI/GU Emergencies	1205 1205-P	For any pain or problem in the abdominal/flank region that does not have a more specific PI, includes post-surgical complications.
~~Agitated Delirium~~	~~AGDE~~	~~Agitated Delirium~~	~~1208~~ ~~1208-P~~	~~For Agitated Delirium only. NOT for psychiatric emergencies or other causes of agitation without delirium.~~
Airway Obstruction/ Choking	CHOK	Airway Obstruction	1234 1234-P	For any upper airway emergency including choking, foreign body, swelling, stridor, croup, and obstructed tracheostomy
Alcohol Intoxication	ETOH	Overdose/ Poisoning/Ingestion	1241 1241-P	For alcohol intoxication if it is the primary problem. Use of secondary PI if the patient has another acute emergency.
Allergic Reaction	ALRX	Allergy	1219 1219-P	For any simple allergic reaction that is isolated to the skin (hives/ urticarial only) and does not meet definition of anaphylaxis
ALOC - Not Hypoglycemia or Seizure	ALOC	ALOC	1229 1229-P	For altered mental status not attributed to a more specific PI (i.e., cause unknown). Use as secondary PI when cause known.
Anaphylaxis	ANPH	Allergy	1219 1219-P	For anaphylaxis.
Behavioral/ Psychiatric Crisis	PSYC	Behavioral/ Psychiatric Crisis	1209 1209-P	For psychiatric crisis that is the primary problem. NOT for anxiety/agitation secondary to medical etiology ~~,~~, u~~-u~~se PI related to medical issue. ~~For patients with Severe Agitation with ALOC use PI Behavioral/ Psychiatric Crisis and PI ALOC~~
Body Pain – Non Traumatic	BPNT	General Medical	1202 1202-P	For pain not related to trauma that is not localized to chest, abdomen, head, or extremity.
BRUE	BRUE	BRUE	1235-P	For a brief resolved unexplained event (BRUE). Patient must be ≤12 months of age and back to baseline on assessment.
Burns	BURN	Burns	1220 1220-P	For any burn injury to skin. For inhalation injury use PI Inhalation Injury. Use with PI Traumatic Injury if other trauma present.
Carbon Monoxide	COMO	Carbon Monoxide Exposure	1238 1238-P	For suspected or known carbon monoxide exposure.

Treatment Protocol: PROVIDER IMPRESSIONS **Ref. No. 1200.3**

Provider Impression (PI) Name	PI Code	Treatment Protocol (TP)	TP Code	Guidelines for use of PI
Cardiac Arrest – Non-traumatic	CANT	Cardiac Arrest	1210 1210-P	For non-traumatic cardiac arrest in which any resuscitation is initiated, NOT dead on arrival.
Cardiac Dysrhythmia	DYSR	Cardiac Dysrhythmia – Bradycardia	1212 1212-P	For any bradycardic rhythm <60bpm.
Cardiac Dysrhythmia	DYSR	Cardiac Dysrhythmia – Tachycardia	1213 1213-P	For any tachydysrhythmia and for sinus tachycardia (ST) of unclear etiology. NOT for ST secondary to known cause – use more specific PI (e.g., Fever)
Chest Pain – Not Cardiac	CPNC	General Medical	1202 1202-P	For musculoskeletal and pleuritic pain and any chest pain that is NOT of possible cardiovascular etiology.
Chest Pain – STEMI	CPMI	Cardiac Chest Pain	1211	For any suspected STEMI, with or without chest pain.
Chest Pain – Suspected Cardiac	CPSC	Cardiac Chest Pain	1211	For any chest pain/symptom that is of possible cardiovascular etiology but NOT STEMI (e.g., NSTEMI, pericarditis, dissection).
Childbirth (Mother)	BRTH	Childbirth (Mother)	1215 1215-P	For delivery or imminent delivery of a fetus beyond the first trimester (12 weeks). For <12 weeks use PI Pregnancy Complications.
Cold / Flu Symptoms	COFL	General Medical	1202 1202-P	For minor respiratory illness in a patient without shortness of breath or wheezing; must have normal respiratory rate and O_2 sat (if available).
Diarrhea	DRHA	GI/GU Emergencies	1205 1205-P	For diarrhea without bleeding. NOT for melena, use PI Upper GI Bleeding.
Dizziness/Vertigo	DIZZ	Dizziness/Vertigo	1230 1230-P	For lightheadedness or vertigo, without syncope.
DOA – Obvious Death	DEAD	Cardiac Arrest	1210 1210-P	For non-traumatic cardiac arrest found dead on arrival such that no resuscitation is initiated.
Dystonic Reaction	DYRX	Dystonic Reaction	1239 1239-P	For suspected dystonic reaction (i.e., reaction, typically from antipsychotic medications, causing abnormal contraction of head and neck muscles.)
Electrocution	ELCT	Electrocution	1221 1221-P	For any electrocution injury.
ENT / Dental Emergencies	ENTP	ENT / Dental Emergencies	1226 1226-P	For a problem located in the ear, nose, throat area, except NOT epistaxis – use PI Epistaxis, NOT airway obstruction – use PI Airway Obstruction.
Epistaxis	NOBL	ENT / Dental Emergencies	1226 1226-P	For any bleeding from the nares.
Extremity Pain/ Swelling – Non-Traumatic	EXNT	General Medical	1202 1202-P	For pain, swelling, or other non-traumatic problem of an extremity, includes rashes and non-traumatic bleeding (e.g., varicose vein bleed).

Treatment Protocol: PROVIDER IMPRESSIONS **Ref. No. 1200.3**

Provider Impression (PI) Name	PI Code	Treatment Protocol (TP)	TP Code	Guidelines for use of PI
Eye Problem – Unspecified	EYEP	Eye Problem	1228 1228-P	For any pain or problem of the eye or periorbital region, use with PI Traumatic Injury if a traumatic mechanism.
Fever	FEVR	Fever	1204 1204-P	For reported or tactile fever that is NOT suspected sepsis. For sepsis use PI Sepsis.
Genitourinary Disorder – Unspecified	GUDO	GI/GU Emergencies	1205 1205-P	For urinary or genital related complaints, or for sexual assault, except NOT vaginal bleeding – use PI Vaginal Bleeding, NOT trauma-related – use PI Traumatic Injury.
HazMat Exposure	DCON	HAZMAT	1240 1240-P	For any hazardous material (chemical) exposure. May use with another PI (e.g., Inhalation Injury or Burns) when applicable.
Headache – Non-Traumatic	HPNT	General Medical	1202 1202-P	For non-traumatic headache or head pain.
Hyperglycemia	HYPR	Diabetic Emergencies	1203 1203-P	For patients with primary concern for hyperglycemia and/or associated symptoms (blurred vision, frequent urination or thirst) without more specific PI and those requiring field treatment. DO NOT list for incidental finding of hyperglycemia related to another illness.
Hypertension	HYTN	General Medical	1202 1202-P	For patients with primary concern for hypertension without symptoms related to a more specific PI. For symptomatic patients, use related PI as primary (e.g., Headache – Non-traumatic) and Hypertension as secondary. DO NOT list for incidental finding of hypertension.
Hyperthermia	HEAT	Hyperthermia (Environmental)	1222 1222-P	For environmental exposure causing hyperthermia, e.g., heat exhaustion and heat stroke, drugs may also be a contributing factor.
Hypoglycemia	HYPO	Diabetic Emergencies	1203 1203-P	For glucose <60mg/dL.
Hypotension	HOTN	Shock / Hypotension	1207 1207-P	For SBP <90mmHg in adults or below normal for size ~~<70mmHg~~per 1309~~<70mmHg~~ in children with transient low BP or rapidly responds to fluid resuscitation and without signs of shock.
Hypothermia / Cold Injury	COLD	Hypothermia / Cold Injury	1223 1223-P	For environmental exposures causing hypothermia and/or frostbite injury.
Inhalation Injury	INHL	Inhalation Injury	1236 1236-P	For any signs/symptoms related to inhaling a gas or substance other than smoke or carbon monoxide.
Lower GI Bleeding	LOGI	GI/GU Emergencies	1205 1205-P	For bleeding from the rectum and/or bright red bloody stools.

Treatment Protocol: PROVIDER IMPRESSIONS **Ref. No. 1200.3**

Provider Impression (PI) Name	PI Code	Treatment Protocol (TP)	TP Code	Guidelines for use of PI
Medical Device Malfunction – Fail	FAIL	Medical Device Malfunction	1206 1206-P	For a medical device that fails, including VADs, insulin pumps, and shunts. Usually for internal devices, may be used for vent failure if patient is asymptomatic. For symptomatic patients, use PI related to symptoms (e.g., Automated Internal Defibrillator firing – use PI associated with complaint such as Cardiac Dysrhythmia – Tachycardia).
Nausea / Vomiting	NAVM	GI/GU Emergencies	1205 1205-P	For any nausea or vomiting without blood. Not for adverse reaction to opiate administration by EMS, manage with primary PI/TP.
Newborn	BABY	Newborn/Neonatal	1216-P	For any newborn deliveries in the field.
No Medical Complaint	NOMC	Assessment	1201	For patients without any medical, psychiatric or traumatic complaint and no signs of illness on assessment. Usually reserved for non-transports.
Overdose/ Poisoning/Ingestion	ODPO	Overdose/ Poisoning/ Ingestion	1241 1241-P	For any intentional or unintentional overdose/poisoning by any route, includes illicit substances and prescription medications, overdose and/or adverse reactions.
Palpitations	PALP	General Medical	1202 1202-P	For any patient complaint of palpitations (e.g., rapid heart rate beat, skipped beats, chest fluttering) with normal rate and rhythm on the ECG.
Pregnancy Complications	PREG	Pregnancy Complication	1217 1217-P	For any pregnancy-related condition that is not labor. Includes vaginal bleeding in pregnancy, hypertension, and complications of delivery.
Pregnancy / Labor	LABR	Pregnancy Labor	1218 1218-P	For contractions without imminent childbirth.
Respiratory Arrest / Failure	RARF	Respiratory Distress	1237 1237-P	For patients requiring positive-pressure ventilation and/or hypoxia despite 100% oxygen.
Respiratory Distress / Bronchospasm	SOBB	Respiratory Distress	1237 1237-P	For COPD/asthma exacerbations and any bronchospasms/wheezing not from pulmonary edema.
Respiratory Distress / Other	RDOT	Respiratory Distress	1237 1237-P	For patients with pulmonary disease that is not edema or bronchospasm, includes suspected pneumonia, PE, pneumothorax and non-pulmonary and unknown causes of respiratory distress.
Respiratory Distress / Pulmonary Edema / CHF	CHFF	Pulmonary Edema / CHF	1214	For congestive heart failure exacerbation.
Seizure – Active	SEAC	Seizure	1231 1231-P	For seizure witnessed by EMS, whether treated or not.

Treatment Protocol: PROVIDER IMPRESSIONS **Ref. No. 1200.3**

Provider Impression (PI) Name	PI Code	Treatment Protocol (TP)	TP Code	Guidelines for use of PI
Seizure – Postictal	SEPI	Seizure	1231 1231-P	For any seizure that stopped prior to EMS arrival and there is no further seizure activity during EMS contact.
Sepsis	SEPS	Fever / Sepsis	1204 1204-P	For patients with suspected sepsis (i.e., signs suggestive of sepsis including fever, tachycardia, suspected infection).
Severe Agitation with ALOC	SAAL	Behavioral/ Psychiatric Crisis	1209 1209-P	Severe agitation with altered mental status due to suspected psychiatric and/or substance-related cause ~~with delirium and/or combativeness~~ that prevents critical EMS clinical evaluation~~s~~ and/or treatment ~~, compromises airway control, or~~and endangers the patient, ~~caregiver~~ EMS clinicians and/or bystanders. ~~For psychiatric crisis that is the primary problem.~~ NOT for anxiety/agitation secondary to medical etiology – use PI related to medical issue for medical agitation. ~~For patients with Severe Agitation with ALOC use PI Behavioral/ Psychiatric Crisis and PI ALOC~~
Shock	SHOK	Shock / Hypotension	1207 1207-P	For patients with poor perfusion not rapidly responsive to IV fluids.
Smoke Inhalation	SMOK	Inhalation Injury	1236 1236-P	For patients with smoke inhalation.
Stings / Venomous Bites	STNG	Stings / Venomous Bites	1224 1224-P	For snakes, scorpion, insects, and marine envenomations (stingrays, jelly fish). NOT for animal bites, use PI traumatic injury.
Stroke / CVA / TIA	STRK	Stroke / CVA / TIA	1232 1232-P	For suspected stroke or transient ischemic attack (stroke symptoms that resolve rapidly).
Submersion / Drowning	DRWN	Submersion	1225 1225-P	For any submersion injury, including drowning and dive (decompression) emergencies.
Syncope / Near Syncope	SYNC	Syncope / Near Syncope	1233 1233-P	For syncope (transient loss of consciousness). NOT for cardiac arrest, use PI Cardiac Arrest – Non-traumatic only.
Traumatic Arrest – Blunt	CABT	Traumatic Arrest	1243 1243-P	For cardiac arrest with blunt traumatic mechanism, including those declared deceased in the field by Ref. 814. NOT for trauma sustained after cardiac arrest, use PI Cardiac Arrest – Non- traumatic.
Traumatic Arrest – Penetrating	CAPT	Traumatic Arrest	1243 1243-P	For cardiac arrest with penetrating traumatic mechanism, including those declared deceased in the field by Ref. 814.

Treatment Protocol: PROVIDER IMPRESSIONS **Ref. No. 1200.3**

Provider Impression (PI) Name	PI Code	Treatment Protocol (TP)	TP Code	Guidelines for use of PI
Traumatic Injury	TRMA	Traumatic Injury	1242 1242-P 1244 1244-P	For any trauma-related injury including crush injury and conducted electrical weapons (CEW). May use in addition to another PI when medical condition also present (e.g., for syncope with trauma – use PI Syncope and PI Traumatic Injury; for CEW use in patient with ~~agitated delirium~~severe ~~-~~ agitation – use PI ~~Agitated Delirium~~Behavioral/ Psychiatric Crisis or PI Severe Agitation with ALOC~~-~~ as appropriate, and also PI Traumatic Injury).
Upper GI Bleeding	UPGI	GI/GU Emergencies	1205 1205-P	For vomiting blood or coffee ground emesis, and for melena (i.e., black, tarry stools).
Vaginal Bleeding	VABL	GI/GU Emergencies	1205 1205-P	For vaginal bleeding in the NON-pregnant patient. For vaginal bleeding in pregnancy use PI Pregnancy Complications.
Weakness – General	WEAK	General Weakness	1202 1202-P	For nonfocal weakness, general malaise, and any nonspecific 'sick' symptoms.

DEPARTMENT OF HEALTH SERVICES
COUNTY OF LOS ANGELES

Treatment Protocol: BLS UPGRADE TO ALS ASSESSMENT **Ref. No. 1200.4**

DEFINITIONS:

Emergency Medical Condition: A condition or situation in which an individual has an immediate need for medical attention. The presence of abnormal vital signs (heart rate and rhythm, respiratory rate, blood pressure - except isolated asymptomatic hypertension, oxygen saturation) are also indications of an emergency medical condition. Patients who meet any criteria for Base Contact or Receiving Hospital Notification are also considered to have an emergency medical condition.

Extremis: A life-threatening, time-critical situation (e.g., unmanageable airway, uncontrollable hemorrhage) that, without immediate stabilization, could result in serious and immediate jeopardy to the health of an individual (in the case of a pregnant woman, the health of the woman or her unborn child), such that the patient's life would be jeopardized by transportation to any destination but the most accessible receiving center (MAR) or for pediatrics the emergency department approved for pediatrics (EDAP).

PRINCIPLES:

1. ALS providers, as compared to BLS providers, have additional assessment skills and equipment that allow a more thorough evaluation of patients in the field to determine whether an emergency medical condition is present.

2. Patients with an emergency medical condition require transport to the emergency department and may benefit from ALS care prehospital.

3. Patients released on scene are at increased risk of having a bad outcome.

4. BLS providers should always use their judgment when considering need for an ALS assessment. While this document lists when ALS assessment is required prior to transport or release at the scene, BLS providers need not be limited by this list and should request an ALS response whenever they feel it necessary.

5. For patients in extremis or for those patients for which waiting for ALS may be longer than transport to the ED, BLS providers may transport to the closest facility if, in their judgment, this will provide the most rapid ALS care for the patient.

GUIDELINES:

1. If the patient has an emergency medical condition as defined above and a BLS unit is alone on scene, the BLS unit should immediately consider whether an ALS assessment is required. If en route, the ALS unit should not be cancelled.

2. Any adult or pediatric patient with a provider impression requiring Base Contact as defined in Ref. 1200.2 requires ALS assessment and transport unless otherwise directed by online medical control.

3. Additionally, an ALS assessment is required for pediatric patients who meet transport guidelines to a Pediatric Medical Center and pediatric patients in labor. An ALS assessment with Base Contact is required for patients 13-36 months of age who are not transported (unless no medical

complaint or with isolated minor extremity injury). Patients ≤12 months require transport.

4. Finally, patients with the following high-risk features also require an ALS assessment regardless of provider impression. The ALS assessment will determine the provider impression and the level of transport required.

    a. The following abnormal vital signs sustained or deteriorating over two measurements 5 minutes apart:

        i. For adults:
            a. HR ≥ 120
            b. SBP < 90
            c. RR ≥ 24
            d. O_2 Sat <94% (<88% for COPD patients) – If patient on home O_2, as measured on usual O_2 flow rate (If pulse oximetry is available)

        ii. For pediatrics, as per *MCG 1309*

    b. Chief complaints including:

        i. Acute focal neurologic symptoms

        ii. Altered mental status

        iii. Chest pain (medical cause)

        ~~iii.~~iv. Severe agitation ~~receiving medication management with IM/IN/IV medications~~requiring medication

        ~~iv.~~v. Shortness of breath

        ~~v.~~vi. Syncope/Near syncope

        ~~vi.~~vii. Vaginal bleeding in pregnancy greater than or equal to 20 weeks

DEPARTMENT OF HEALTH SERVICES
COUNTY OF LOS ANGELES

Treatment Protocol: BEHAVIORAL / PSYCHIATRIC CRISIS **Ref. No. 1209**

Base Hospital Contact: Required for all patients with agitation requiring midazolam.

1. Perform initial assessment of scene and patient situation for safety ❶

2. Attain law enforcement (LE) assistance prior to approaching a patient if a weapon is visualized or the patient threatens violence or for potential assistance with application of an involuntary psychiatric hold ❶❷

3. Approach patient with caution, assess for agitation and use verbal de-escalation as needed *(MCG 1307, Care of the Psychiatric Patient with Agitation)*❸

4. Evaluate for medical conditions, including those that may present with psychiatric features ❹

5. Initiate basic and/or advanced airway maneuvers prn
   Prepare in advance to support ventilations prn for any patient who receives midazolam sedation❺

6. Administer **Oxygen** prn *(MCG 1302)*

7. Pre-plan approach to physical restraint; apply restraints when indicated *(Ref. No. 838, Application of Patient Restraints)* ❻

8. Manage ongoing agitation based on patient's condition

9. For COOPERATIVE PATIENTS:

   Olanzapine 10mg Oral Disintegrating Tablet (ODT); given once *(MCG 1317.32)*

10. For UNCOOPERATIVE PATIENTS who pose a potential safety risk to self and/or EMS personnel:

    Consider **Midazolam 5mg (1mL) IM/IN/IV** ❺❼
    CONTACT BASE concurrent with administration
    With Base orders may repeat q5 min prn, to a maximum total dose of 20mg

11. For SEVERE AGITATION WITH ALOC who pose an IMMEDIATE RISK to self and/or EMS personnel:

    Administer **Midazolam 5mg (1mL) IM/IN/IV**❺❼, repeat prn x1 in 5 min, or
    Administer **Midazolam ~~5mg~~10mg (~~1mL~~2mL) IM/IN~~/IV~~** ❺❼❽
    May administer 5mg with repeat prn or 10mg single dose considering size of patient and level of risk, m~~Repeat x1 in 5 min prn, m~~aximum ~~total dose~~ 10mg prior to Base Contact

    CONTACT BASE for additional sedation
    With Base orders may repeat up to a maximum total dose of 20mg

    Normal Saline 1L IV rapid infusion
    Reassess after each 250mL increment for evidence of volume overload (pulmonary edema); stop infusion if pulmonary edema develops

12. Initiate cardiac monitoring on all patients in restraint and/or post-sedation *(MCG 1308)* 5 9 8
    Pre-position monitor prior to sedation; continuously monitor airway and breathing peri- and post-sedation
    Assess for dysrhythmia or interval widening

13. **CONTACT BASE** for QRS > 0.12 sec or heart rate < 50 to discuss need to administer **Sodium Bicarbonate 50mEq (50mL) IV** 10 9

14. If patient's skin is hot to touch or has a measured fever with suspected hyperthermia (i.e., measured temperature greater than 39C or 102F), initiate cooling measures

15. Establish vascular access prn *(MCG 1375)*

    Check blood glucose prn 11 10
    If glucose < 60 mg/dL or > 400 mg/dL treat in conjunction with *TP 1203, Diabetic Emergencies*

16. Evaluate for physical trauma; if present treat in conjunction with *TP 1244, Traumatic Injury*

17. Evaluate for possible suicide attempt 12 11
    For potential overdose, obtain patient and bystanders information about ingestions and treat in conjunction with *TP 1241, Overdose/Poisoning/Ingestion*

18. If concern for suicidal intent in persons not on a 5150/5585 hold and refusing voluntary treatment or transport, **CONTACT BASE** (*MCG 1306*)

19. Evaluate for acute mental health and/or substance abuse crises
    Obtain relevant clinical history regarding patient's current psychiatric diagnoses, psychiatric and other medications, and any recent alcohol or recreational drug ingestions
    Obtain and document relevant third party or collateral data 12 [13]

20. Patients who respond to verbal de-escalation or are treated only with olanzapine for agitation, and are now cooperative, and who meet criteria in *Ref. No. 526, Behavioral/Psychiatric Crisis Patient Destination* and *Ref. 526.1 Medical Clearance Criteria Screening Tool for Psychiatric Urgent Care Center*, may be transported by Basic Life Support (BLS) or law enforcement (LE) to the MAR or to a Psychiatric Urgent Care Center.

21. Patients, evaluated by EMS personnel not yet approved for alternate destination transport, who receive olanzapine for agitation and are otherwise stable, and do not have an emergency medical condition, may be transported by BLS or law enforcement to the MAR only.

SPECIAL CONSIDERATIONS

❶ Scene safety includes the assessment for the presence of firearms or weapons, including observations and direct inquiry with the patient and any available/relevant third parties (e.g., family, caregivers, or witnesses). If a weapon is found on the scene, EMS personnel should notify all members on the scene, and contact law enforcement (LE) immediately.

❷ Psychiatric, including mental health and substance abuse, emergencies are medical emergencies, and as such are best treated by EMS personnel. Those patients with psychiatric emergencies presenting with agitation, violence, threats of harm to self or others, or criminal activity are best managed by an EMS and LE co-response.

❸ Always attempt verbal de-escalation first and avoid applying restraints to patients who do not present a threat to self or EMS personnel (*Ref. No. 838, Application of Patient Restraints)*

❹ Many medical causes of psychiatric symptoms exist:

- Agitation *(see MCG 1307)*
  - Acute pain
  - Head trauma
  - Infection
  - Encephalitis or Encephalopathy
  - Exposure to environmental toxins
  - Metabolic derangement
  - Hypoxia
  - Thyroid disease or other hormone irregularity
  - Neurological disease
  - Toxic levels of medications
  - Alcohol or recreational drugs: intoxication or withdrawal
  - Exacerbation of a primary psychiatric illness
  - Autism Spectrum Disorder
- Psychosis
  - Delirium
  - Chronic neurological disease (dementia, seizures, parkinsonism, brain tumor)
  - Steroid use, other medication reactions
  - Alcohol or recreational drugs: intoxication or withdrawal
- Mania
  - Delirium
  - Thyrotoxicosis
  - Alcohol or recreational drugs: intoxication or withdrawal
- Anxiety
  - Respiratory disease
  - Cardiac disease
  - Thyroid disease
  - Toxic levels of medications
  - Alcohol or recreational drugs: intoxication or withdrawal
- Depression
  - Reaction to medication
  - Chronic disease or chronic pain

Hormonal variations
Subclinical / clinical hypothyroidism
Alcohol or recreational drugs: intoxication or withdrawal

❺ Medications used for pharmacologic management of agitation may cause respiratory depression; administer only when necessary for the safety of the patients and/or EMS personnel. Apnea can occur suddenly and with little warning. Resuscitation equipment (oxygen and bag-mask ventilator) should be positioned near the patient and readily available prior to sedation. Every individual who receives restraint and/or midazolam pharmacologic management should be continuously monitored and transported for additional clinical assessment and treatment.

❻ Use of restraints in severely agitated patients is associated with an increased risk of sudden death. Avoid using restraints in patients who do not present a threat to self or to EMS personnel. Monitor patients closely when restraints are applied. Never secure or transport a patient in restraints in prone position.

❼ The IM or IN route is preferred unless an IV has been previously established.

❽ Patients who are larger in size (e.g., ≥100kg) and/or pose a greater risk for harm due to their level of agitation and violence may require the higher dose of midazolam for adequate sedation. Patients in need of sedation who are smaller, frail, elderly or already exhibiting signs of fatigue should preferentially be treated with a 5mg dose, repeating if necessary, to reduce risk of oversedation and potential for apnea.

❾ Patients who are agitated while in physical restraint and have the potential for injury due to the degree of agitation, should receive medication by EMS personnel to reduce agitation with continued monitoring for respiratory depression, in accordance with *Ref 838, Application of Patient Restraints*.

❿ ~~❾~~ Several drugs that may cause agitation and present similarly to a psychiatric crisis may also cause life threatening cardiac arrhythmias after intentional or accidental overdose. These arrhythmias are often preceded by prolonged QRS intervals (> 0.12 sec) or bradycardia. Cocaine intoxication is strongly associated with severe agitation and may also produce cardiac effects similar to Tricyclic antidepressant (TCA) overdose (widened QRS progressing to malignant arrhythmia). These patients may require a large dose of sodium bicarbonate to prevent sudden cardiac death. Consult Base Physician immediately to discussion administration of Sodium Bicarbonate; may repeat x1 if QRS remains > 0.12 sec after initial sodium bicarbonate. Treat in conjunction with *TP 1241, Overdose / Poisoning / Ingestion*

⓫ ~~❿~~ Agitation may be present after a seizure, or in the setting of hypo/hyperglycemia. Consider checking glucose early if the patient is a known diabetic or demonstrates clinical evidence of hypoglycemia, but only if safe to do so.

⓬ ~~⓫~~ It is important to assess for any evidence of suicide attempt. If there is concern for overdose, ask the patient or bystanders to provide information on agents used (specifically what, when, and how much). Collect and transport any medication vials, or additional pills). This will assist in determining necessary antidote treatment and monitoring at the hospital. This information is often lost, if not obtained immediately on scene.

~~12~~ [13] Patients with acute mental health or substance abuse crises may not be capable or willing to provide reliable information; therefore, it is important to obtain third party collateral information about the patient's condition (e.g., from family, caregivers, witnesses), including names and contact information for persons knowledgeable about the patient's illness, treatment and medications.

Medical Control Guideline: Care of the Patient with Agitation

DEFINITIONS:

Agitation: A hyper-aroused state (ranging in severity from anxious and cooperative to violent and combative) in which the individual exhibits excessive, repeated, and purposeless motor or verbal behaviors (e.g., pacing, fidgeting, clenching fists or teeth, prolonged staring, picking at clothing or skin, responding to internal stimuli such as hallucinations, threatening or carrying out violent acts).

Delirium: An acute change in mental state due to an underlying medical condition characterized by confusion, disorientation, reduced awareness of the environment, and disordered thinking.

Autism Spectrum Disorder: A disorder diagnosed in childhood, but continuing into adulthood, with a wide range of severity involving difficulty with social communication and interaction, repetitive patterns of behavior, and narrowed interests or activities. Some patients have very little ability to communicate, or comprehend verbal and nonverbal communication, while others may communicate and are intelligent. Individuals are often sensitive (fearful/reactive) to environmental stimulation and depend on routines.

Bipolar Disorder: An episodic illness in which patients experience periods of elation or "high" mood (mania or hypomania), and periods of depression. Manic episodes are characterized by decreased sleep, lots of energy, rapid speech and ideas, impulsive and reckless decision-making (e.g., buying expensive objects, quitting a job, going on sudden unplanned trips) and an inflated view of oneself (grandiosity).

Delusion: A false belief that is firmly held despite objective and obvious contradictory proof or evidence. Delusions can be dangerous when the patient has a fixed idea that causes them to act violently.

Dementia: An illness generally diagnosed in older adults, associated with progressive cognitive decline including memory loss and an inability to carry out tasks or basic functions (i.e., driving, using a phone, dressing/grooming). The condition ranges in severity with some patients having little ability to speak, communicate, to those with less severe forms may be able to communicate well and manage their own care needs.

Major Depressive Disorder: An episodic illness in which a person feels profound sadness, a lack of enjoyment, and other symptoms that may include impairments in sleep, energy, appetite, motivation, concentration, and socialization. These patients often feel hopeless and are especially likely to think about or try to commit suicide.

Disorganized behaviors: A set of behaviors or actions that do not appear to accomplish anything meaningful (e.g., laughing to self, lying motionless and unresponsive to people around them, pacing or repeatedly sitting/standing without any clear reason, staring at the wall, or object with a blank expression). They can be seen with a variety of conditions including psychosis, autism, dementia, and mania.

Disorganized Speech: A speech pattern that is extremely difficult to follow, such as garbled or non-sense speech, telling a story that jumps illogically from one topic to the next, making up new words, or highly repetitive speech (e.g., muttering to self with repetitive phrases).

Hallucinations: Patients experience sensing things that other people cannot hear, see, or smell (infrequent). Most commonly this means a patient is “hearing voices” or “seeing things”. This can be dangerous if the patient is experiencing hallucinations that command them to harm themselves, other people, or carry out dangerous acts. Hallucinations can be a symptom of psychosis or drug intoxication, but can be associated with other conditions like mania, depression, dementia and delirium.

Iatrogenic escalation: Escalation of a patient’s agitated state caused by EMS / healthcare personnel either inadvertently, or deliberately, by acting in ways that the patient does not expect or desire (e.g., restricting a patient’s freedom to move (cornering the patient), taking away patient belongings or invalidating, confronting, arguing with, or intimidating a patient).

Intellectual Disability: A range of disability from mild to severe, characterized by significant limitations in intellectual functioning (learning, reasoning, problem solving, planning) and adaptive behavior (everyday social skills like communication, and practical skills like living independently).

Paranoia: A state of suspicion or mistrust of people or institutions, such as hospitals/healthcare personnel, law enforcement or security.

Psychosis: A state where a person loses contact with reality. Common diagnoses or terms of psychotic illness include: “Schizophrenia”, “Psychotic disorder”, “Acute psychotic episode”, “Schizoaffective disorder” (a combination of schizophrenia and bipolar disorder), “delusional disorder”. The symptoms of a psychotic illness are commonly: hallucinations, delusions, paranoia and/or disorganized behaviors and speech.

Self-injurious behaviors: Behaviors or violent acts directed at oneself, occurring in many psychiatric disorders which may include depression or bipolar disorder, psychosis, drug abuse, and personality disorder (patients are often trying to distract themselves from extreme emotional pain they feel). (Also referred to as: Non-suicidal self-injury)

PRINCIPLES:

1. Psychiatric emergencies, including those related to mental health and substance abuse, are medical emergencies, and as such are best treated by EMS personnel who are trained, equipped, and experienced to evaluate and manage medical patients.

2. A proportion of prehospital psychiatric emergencies involve acute behavioral agitation, violence, threats of harm to self or others, or criminal activity. Such patients are best managed by an EMS and law enforcement (LE) co-response.

3. The overarching goal in management of acute behavioral agitation is to help the patient regain control over their behaviors so that they can participate in their evaluation and treatment.

4. EMS personnel should maintain the patient’s dignity to the extent possible, including use of the least restrictive method of restraint or intervention to facilitate clinical patient assessment, medically indicated treatment, and safe transport to a hospital.

5. Agitation has varying presentations on a spectrum, ranging in severity from anxious and cooperative to violent and combative. The patient may not have the ability to understand the situation or the dangers of their behavior or comply with directions because they lack insight and/or self-awareness.

6. The potential causes of agitation are numerous and varied and can include medical and/or psychiatric and/or substance abuse conditions. Agitation can also be unrelated to a medical/psychiatric condition, in such cases agitation may be used by a person "instrumentally" as a means of achieving a goal.

7. Physical restraint and pharmacologic management of agitation when providing EMS care are primarily indicated to protect a patient, the public, and other EMS personnel from injury.

8. The decision for EMS personnel to use pharmacologic intervention to treat agitation is a critical health care decision. (Note: "chemical restraint" is not a preferred terms). Medications with sedating effects administered during or after application of restraints has the potential to exacerbate acidosis and asphyxia.

9. Persons who lack decision-making capacity, or unaccompanied minors, are assessed and treated with implied consent (Ref. No. 834 – *Patient Refusal of Treatment/Transport and Treat and Release at Scene*).

10. LE officers, whenever available, should be involved in cases in which a patient poses a threat to themselves, the public, and/or EMS personnel.

GUIDELINES:

1. Initial Approach to Scene Safety:
   A. Evaluation of the agitated patient should start from a safe and sensible distance *(See MCGs 1307.1 and 1307.2)*.

   B. If EMS personnel are in danger of harm, they should retreat to a safe location and await the arrival of LE.
      i. Safety is paramount and at no time should EMS personnel jeopardize their safety by engaging with an agitated patient unless they feel that they have the knowledge, tools, and skills to do so.

   C. The first EMS and/or LE responders should organize their approach by identifying a lead who is responsible for communicating with the patient and coordinating the actions of the rest of the team.

   D. If there is no safe option for retreat, EMS personnel who are being physically attacked may defend themselves as permitted by local law. EMS personnel should not show aggression or retaliate against the patient.

   E. The goals of EMS care are to determine whether the patient is a candidate for verbal de-escalation (the preferred first step in managing agitation), if physical restraint is indicated, if pharmacologic intervention is indicated, and ultimately to provide an assessment for acute medical and psychiatric conditions.

   F. The flowchart in *MCG 1307.1* describes the initial approach to the scene of an agitated patient.

2. Verbal De-escalation:

   A. All EMS personnel shall be trained, capable, and competent in verbal de-escalation techniques, (e.g., using the "ERASER" mnemonic, see *MCG 1307.2*).

B. The use of appropriate de-escalation techniques should take precedence and be attempted prior to physical restraint and/or administration of pharmacologic management, whenever possible and clinically appropriate.

C. EMS personnel should not directly question or confront a patient's psychotic symptoms (e.g., hallucinations, delusions, paranoia, or behaviors) as it may worsen the patient's agitation.

D. EMS personnel should remain self-aware and not allow themselves to react to provocative patients because this can lead to iatrogenic escalation of agitation.

3. Assessment of Agitation:

A. EMS personnel shall attempt to perform an appropriate patient assessment to identify and manage clinical conditions that may be contributing to a patient's agitated, combative, or violent behavior. The table in *MCG 1307.3* describes potential clinical scenarios where a patient presents with agitation and provides guidance on use of verbal de-escalation.

4. Pharmacologic management may be required for the safety of the patient, EMS personnel and/or public when verbal de-escalation techniques are ineffective (*TP 1209 or 1209-P,Behavioral/Psychiatric Crisis*).

A. Apnea may occur rapidly and without warning after pharmacologic intervention.

B. Patient monitoring should be implemented any time parenteral pharmacologic intervention is performed. Resuscitation and monitoring equipment, including oxygen and bag valve mask, should be positioned near the patient and readily accessible prior to proceeding with sedation. Monitoring of pulse oximetry, cardiac rhythm, and capnography (when available) should be implemented as soon as possible and prior to initiation of transport.

C. Monitoring is not required for agitated patients who are cooperative and voluntarily accept oral medications.

5. Use of Restraints:

A. If determined that the patient is not an appropriate candidate for verbal de-escalation (i.e., after failed attempts at verbal de-escalation, or acute medical situation requires immediate intervention) or when managing a patient who re-escalates to agitated behavior after verbal de-escalation, physical restraint may be required in conjunction with pharmacologic management (*Ref. No. 838, Application of Patient Restraints*).

6. Co-Response with Law Enforcement:

A. At all times, EMS personnel should act as an advocate for the safety, medical monitoring, and clinical care of the patient.

B. In some situations, it may be necessary for LE to apply restraint techniques or interventions (e.g., handcuffs or flex cuffs, herein referred to as LE restraint).
   a. Patients requiring ongoing care and/or EMS transport that are in LE restraints shall be managed in accordance with *Ref. No. 838, Application of Patient*

Restraints, with preference for discontinuing LE restraint in favor of EMS approved restraint interventions when appropriate.

C. Patients who are in LE custody or who are under arrest must always have a LE officer present or immediately available during EMS transport.

Medical Control Guideline: COMMON ETIOLOGIES OF AGITATION, FIELD PRESENTATION, LIKELIHOOD VERBAL DE-ESCALATION **Ref. No. 1307.3**

	Etiology / Cause	General Description or Examples	Candidate for Verbal De-escalation?
1	Autism spectrum disorder	History of such provided by bystanders/collaterals; repetitive behaviors, odd or highly limited or immature speech, awkward social interaction / communication, inflexibility of being out of a routine, hypersensitive to external stimulation.	Yes. High likelihood of success; use extensively
2	Intellectual disability	Varied presentation, may have childlike speech and demeanor, may have caretakers despite being an adult, some intellectual disabilities co-occur with reliable physical findings / stigmata (e.g., Down syndrome).	Yes. High likelihood of success; use extensively
3	Emotional dysregulation	Can occur with many conditions such as bipolar disorder, depression, dementia, autism, or acute stress or trauma. Free from altered mental status; highly emotional, potentially angry, frightened, or stressed beyond ability to cope.	Yes. High likelihood of success; use extensively
4	Intoxication - Alcohol	Odor of alcoholic beverage, unstable gait / balance, slurred speech, family/bystander report of alcohol ingestion, emotional swings, relatively acute onset	Consider a short trial
5	Intoxication - stimulants / amphetamines	Tachycardia, mydriasis, hypertension, psychosis, delusions or paranoia, hallucinations, sleeplessness, hyperactivity, or drug paraphernalia found on scene	Consider a short trial
6	Traumatic brain injury	Physical findings or history consistent with trauma, other findings of injury, repetitive questions, grogginess or confusion.	Consider a short trial
7	Seizure / post-ictus	Oral trauma, bladder or bowel incontinence, altered mental status, may improve over time without intervention	Consider a short trial
8	Cerebral Vascular Accident (CVA)	Acute onset, loss of speech, pupillary changes, hemiparesis, confusion, known risk factors for CVA, hypertension	Consider a short trial
9	Dementia	Typically found in older age patients, impaired memory (especially short-term memory), impaired ability to make plans or carry out tasks.	Consider a short trial
10	Psychosis	Paranoia, delusions, hallucinations, disorganized speech or behaviors, typically free from altered mental status	Consider, may be highly effective in certain cases
11	Acute Mania (Bipolar Disorder)	Exhibiting euphoric mood or irritability, elevated sense of oneself / grandiosity, rapid speech, impulsive and risky behaviors or decision making	Consider, may be highly effective in certain cases
12	Instrumental Violence	Agitation used as a tool for achieving a goal; no confusion or underlying medical or psychiatric cause, be aware of persons engaged in potential criminal behavior or in police custody	Consider a short trial; involve law enforcement
13	Delirium	Altered mental status and agitation with waxing and waning course; confusion; poor attention; may be disoriented	Consider potential causes, refer to protocol (TP 1229); if verbal de-escalation ineffective, consider medication administration (*TP 1209)*
~~14~~	~~Agitated Delirium~~	~~Highly agitated, impervious to pain, unresponsive to verbal commands, unusual superhuman strength / lack of fatiguing, often sheds clothing due to hyperthermia, diaphoretic, combative~~	~~No, pharmacologic management and early intervention important. See TP 1208~~
15	Hypoxia	Altered mental status, changes in skin color, low pulse oximetry readings, respiratory distress	No, treat underlying cause
16	Hypoglycemia	Diaphoresis, pale pallor, confusion, ataxia, declining mental status	No, treat underlying cause

Medical Control Guideline: DRUG REFERENCE – MIDAZOLAM **Ref. No. 1317.25**

Classification

Sedative, benzodiazepine

LA County Prehospital Indications

~~Agitated Delirium: patients requiring restraints for patient and provider safety~~
Behavioral / Psychiatric Crisis / Severe Agitation: patients requiring restraints for patient and provider safety
Cardiac Dysrhythmia: sedation prior to and/or during synchronized cardioversion or transcutaneous pacing
Sedation and amnestic agent for patients receiving manual/mechanical ventilation if already intubated
Seizure – Active

Other Common Indications (Not authorized for EMS administration in LA County)

None

Adult Dose

~~Agitated Delirium /~~ Behavioral / Psychiatric Crisis

5mg (1mL) IM/IN/IV, repeat x1 in 5 min prn, maximum total dose prior to Base contact 10mg ~~for Agitated Delirium (Psychiatric Crisis requires Base order prior to any medication administered)~~

Cardiac Dysrhythmia - sedation prior to synchronized cardioversion / transcutaneous pacing

5mg (1mL) slow IV/IO push/IM/IN, may repeat x1 in 5 min prn, maximum total dose prior to Base contact 10mg

Seizure - Active

10mg (2mL) IM/IN, contact Base for additional dosing, **or**
5mg (1mL) IV/IO, repeat x1 in 2 min prn if existing vascular access, ~~,~~ maximum total dose prior to Base contact 10 mg

~~With Base Contact may repeat as above up to a maximum total dose of 20mg~~ Severe agitation with ALOC

5mg (1mL) IM/IN/IV, repeat x1 in 5 min prn, **or**
10mg (2mL) IM/IN single dose considering size of patient and level of risk, maximum total dose prior to Base Contact 10mg

For all indications, w~~W~~ith Base Contact may repeat as above up to a maximum total dose of 20mg

Pediatric Dose

~~Agitated Delirium /~~ Behavioral / Psychiatric Crisis / Severe Agitation

0.1mg/kg (5mg/mL) IV or **0.2mg/kg (5mg/mL) IM/IN**, dose per *MCG 1309*, repeat x1 in 5 min, maximum single dose 5mg, maximum total dose prior to Base contact 10mg ~~for Agitated Delirium~~ (Severe agitation with ALOC who pose an IMMEDIATE RISK, may administer prior to Base Contact. Behavioral/ Psychiatric Crisis require~~s~~ a Base order prior to ~~any medication administered~~midazolam administration.)

Cardiac Dysrhythmia - sedation prior to synchronized cardioversion / transcutaneous pacing

0.1mg/kg (5mg/mL) IV/IO or **0.2mg/kg (5mg/mL) IM/IN**, dose per *MCG 1309*, repeat dosing every 5 min prn per Base order, maximum single dose 5mg

Seizure - Active

0-~~16~~ 11 months (Gray, Pink~~, Red~~)
0.2mg/kg (5mg/mL) IM/IN, dose per *MCG 1309*
Repeat x1 in 2 min prn, up to 2 doses prior to Base contact

12-16 months (Red if age unknown)
1.25 mg or 0.25mL IM/IN repeat x1 in 2 min prn
Repeat x1 in 2 min prn, up to 2 doses prior to Base contact

17 months – 5 years (Purple, Yellow, White if age unknown)
2.5 mg or 0.5mL IM/IN repeat x1 in 2 min prn
Repeat x1 in 2 min prn, up to 2 doses prior to Base contact

6-11 Years (Blue, Orange, Green if age unknown)
5mg or 1mL IM/IN repeat x1 in 2 min prn
Repeat x1 in 2 min prn, up to 2 doses prior to Base contact

≥12 years (Longer than the length-based tape if age unknown)
10 mg or 2mL IM/IN repeat x1 in 2 min prn,
Single dose prior to Base contact

May repeat **Midazolam** as above, maximum total of 3 doses or 20 milligrams, whichever is less

Mechanism of Action

Binds to receptors at several sites within the CNS, potentiates GABA receptor system which produces anxiolytic, anticonvulsant, muscle relaxant, and amnesic effects.

Pharmacokinetics

Onset 3-5 min IV, 15-20 min IM, 6-14 min IN
Duration 1-6 hours IV/IM

Contraindications

Respiratory depression
Shock / Poor perfusion (see prehospital considerations)

Interactions

Risk of respiratory or central nervous system depression, increases when used with diphenhydramine, fentanyl, morphine, or other opiate or sedative medications

Adverse Effects

Hypotension
Respiratory depression / arrest

Prehospital Considerations

- Closely monitor respiratory and cardiac function after administration
- Caution in patients with suspected ~~alcohol~~ intoxication as midazolam can increase the risk for respiratory depression
- For patients with ~~agitated delirium~~severe agitation and violent behavior, IM/IN administration is recommended over IV for the initial dose for the safety of EMS personnel.
- If available, waveform $EtCO_2$ monitoring should be instituted after administration.
- For patients who are poorly perfusing and require sedation for safety (e.g., prevent inadvertent extubation) or require a painful procedure (e.g., transcutaneous pacing), one should use judgment in consultation with Base.

Medical Control Guideline: TREATMENT PROTOCOL QUALITY IMPROVEMENT FALLOUT DATA DICTIONARY

DEFINITION:

Fallout: a deviation from an established standard.

PRINCIPLES:

1. An EMS QI program incorporating the Treatment Protocols is essential to effectively evaluate the quality of prehospital care as well as the efficiency in providing emergency medical services.

2. A collaborative relationship between Base Hospitals and EMS Provider Agencies is necessary for a comprehensive and effective quality improvement (QI) program.

3. Base Hospitals and EMS Provider Agencies shall evaluate the appropriate utilization of the Treatment Protocols based on the fallouts outlined below.

GUIDELINES:

I. EMS PROVIDER AGENCY

1. ALL TREATMENT PROTOCOLS

   a. Provider Impression (PI)
      - Primary PI not documented
      - Primary PI clinically incorrect
      - Secondary PI not documented when appropriate

   b. Treatment Protocol (TP)
      - Designated TP for PI not used
      - Secondary TP for secondary PI not used when appropriate

   c. Airway (AW)
      - Adult - Unresponsive requiring Bag-Mask-Ventilation (BMV) and oropharyngeal airway not used
      - Advanced airway (ET tube, supraglottic airway) not used for ineffective BMV
      - Advanced airway used prior to resuscitation goals met for patients in cardiac arrest
      - Capnography not used for any positive pressure ventilation
      - Positive pressure ventilation required and not performed

   d. Oxygen (O_2) (O2)
      - Does not receive O_2 and O_2 sat <94% (<88% COPD), unless newborn or pediatric congenital heart disease
      - Meets criteria for high flow O_2 and patient does not receive
      - Receives O_2 and O_2 sat >94% and patient does not meet criteria for high flow O_2

- Pediatric – Newborn or pediatric congenital heart disease receive inappropriate O_2 as per MCG 1302

e. Pain (PN)
- Pain level not recorded
- Pain score ≥ 7 and pain not addressed
- Pain treated and not reassessed
- Incorrect dose of pain medication administered

f. Base Contact (BA)
- Base contact not made when specified by Ref. No. 1200.1 or by specific protocol used

g. Receiving Hospital Notification (NT)
- No notification to receiving hospital as per Ref. No. 1200.1

h. Transport (TS)
- Advanced Life Support (ALS) transport not made when indicated by Ref. No. 1200.1

i. Destination (DS)
- Failure to transport to a specialty center when indicated
- Transport to the wrong specialty center; includes Trauma Center, STEMI Receiving Center, Perinatal Center, Emergency Department Approved for Pediatrics, Pediatric Medical Center, Primary Stroke Center and Comprehensive Stroke Center.
- Transport to the incorrect stroke center level based on mLAPSS, LAMS and Last Known Well Time

j. Documentation (DO)
- Erroneous Provider Impression or Treatment Protocol documentation due to data entry error alone

k. Color Code Drug Doses (DD)
- Pediatric – for children ≤ 14 years weight (kg) and Color Code not documented
- Pediatric – for children ≤ 14 years weight (kg) or Color Code incorrect

l. Fluid Administration (FL)
- Adult – Normal Saline 1L not administered for poor perfusion or other protocol-specific indication (unless contraindicated because of pulmonary edema or multi-system trauma patient)
- Pediatric – Normal Saline 20mL/kg not administered for poor perfusion or other protocol-specific indication
- Patient not reassessed after each Normal Saline 250mL and fluids continued

m. Ondansetron (ON)
- Pediatric – Ondansetron 4mg ODT given to patient < 4 years old
- Not administered when indicated

2. TP 1202 / 1202-P – GENERAL MEDICAL
As per “All Treatment Protocols”

3. TP 1203 / 1203-P – DIABETIC EMERGENCIES

   a. Glucose (GL)
      - Blood glucose not checked

   b. Low Blood Glucose (LG)
      - Blood glucose < 60 and not treated

4. TP 1204 / 1204-P – FEVER / SEPSIS
   As per "All Treatment Protocols"

5. TP 1205 / 1205-P – GI/GU EMERGENCIES
   As per "All Treatment Protocols"

6. TP 1206 / 1206-P – MEDICAL DEVICE MALFUNCTION
   As per "All Treatment Protocols"

7. TP 1207 / 1207-P – SHOCK / HYPOTENSION

   a. Vascular Access (VA)
      - Vascular access not attempted for patient
      - Intraosseous line not attempted when Intravenous Line cannot be established and Intraosseous Line indicated per MCG 1375
      - Intraosseous Line placed without indication as per MCG 1375

   b. Cardiac Monitoring (CM)
      - Cardiac monitoring not initiated

   c. Fluid Administration (FL)
      - Any universal fallout as specified above
      - Additional Normal Saline 1L for adults or 20mL/kg for pediatrics not administered for persistent poor perfusion after initial NS infusion (unless contraindicated or withheld by Base order)

   d. Push-Dose Epinephrine (PD)
      - Base contact not made to discuss or Push-Dose Epinephrine not initiated for persistent poor perfusion or poor perfusion with pulmonary edema

~~8. TP 1208 / 1208-P – AGITATED DELIRIUM~~

~~a. Sedation (SE)~~
~~- Adult – Midazolam not administered in patient requiring restraints or for provider safety~~
~~- Pediatric – Base contact not made to discuss Midazolam administration in patients requiring restraints or for provider safety~~
~~- Pediatric – Midazolam administered without Base order~~
~~- Midazolam administered in patient not meeting criteria (not requiring restraints or not agitated with 2 or more of confusion, diaphoresis, tactile fever, tachycardia)~~

~~9.~~8. TP 1209 / 1209-P – BEHAVIORAL / PSYCHIATRIC CRISIS

   ~~a.~~ Sedation (SE)

~~b. Base contact not made to discuss~~ Midazolam ~~not administered in patient requiring restraints or for provider safety~~

a.

~~- Midazolam administered in patient not meeting criteria (not requiring restraints for patient or provider safety~~

- Midazolam administered without Base order for patients not presenting an immediate threat to safety for patients, the public or EMS personnel

b. Cardiac Monitoring (CM)

Cardiac Monitoring not initiated peri- or immediately post-sedation for patient treated with midazolam

~~Midazolam administered without Base order for patients with GCS ≥ 14~~

~~Pediatric – Base contact not made to discuss Midazolam administration in patients requiring restraints or for provider safety~~

~~Pediatric – Midazolam administered without Base order~~

~~10.~~9. TP 1210 / 1210-P – CARDIAC ARREST

a. Scene (SD)
   - Patient transported prior to at least 20 minutes of on-scene resuscitation

b. Vascular Access (VA)
   - Vascular Access not attempted for patient
   - Intraosseous Line not attempted when intravenous line cannot be established and Intraosseous Line indicated per MCG 1375

c. Capnography (WC)
   - Waveform capnography is not used throughout resuscitation

d. Defibrillation (DF)
   - Adult – Defibrillation biphasic at 200J not performed immediately for shockable rhythm
   - Pediatric – Defibrillation at 2J/kg not performed immediately for shockable rhythm
   - Pediatric – Repeat defibrillation at 4J/kg not performed when indicated
   - Defibrillation performed for non-shockable rhythm

e. Epinephrine (EP)
   - Epinephrine administered prior to defibrillation x 2 for shockable rhythm
   - Epinephrine not administered after defibrillation x 2 for shockable rhythm
   - Epinephrine not administered for PEA/Asystole

f. Amiodarone (AM)
   - Amiodarone not administered for persistent or recurrent V-Fib/V-Tach without pulses
   - Amiodarone administered for rhythm besides persistent V-Fib/V-Tach without pulses

g. 12-Lead ECG (EC)
   - 12-Lead ECG not performed after Return of Spontaneous Circulation (ROSC) per MCG 1308
   - 12-Lead ECG paramedic interpretation not documented
   - 12-Lead ECG software interpretation not documented

h. Fluid Administration (FL)
- Normal Saline not administered for PEA/Asystole
- Normal Saline not administered for SBP <90 after ROSC

i. Push-Dose Epinephrine (PD)
- Adult – Push-dose epinephrine not administered for SBP <90mmHg after 250mL Normal Saline for ROSC
- Pediatric – Push-dose epinephrine not administered for SBP <70mmHg after Normal Saline 20mL/kg for ROSC

~~11.~~10. TP 1211 – CARDIAC CHEST PAIN

a. Cardiac Monitoring (CM)
- Cardiac Monitoring not initiated

b. 12-Lead ECG (EC)
- 12-Lead ECG not performed as per MCG 1308
- 12-Lead ECG paramedic interpretation not documented
- 12-Lead ECG software interpretation not documented

c. Aspirin (AS)
- Aspirin not administered for alert patient (unless documented that patient is allergic to Aspirin/has contraindication to receiving Aspirin)
- Aspirin administered to a pediatric patient

d. Nitroglycerin (NG)
- Nitroglycerin given for SBP <100mmHg
- Nitroglycerin given when patient has taken sexually enhancing drugs within 48 hours
- Nitroglycerin given without assessing for sexually enhancing drugs
- Nitroglycerin not given despite chest pain and no documentation as to why withheld
- Nitroglycerin given to a pediatric patient

~~12.~~11. TP 1212 / 1212P – CARDIAC DYSRHYTHMIA – BRADYCARDIA

a. Cardiac Monitoring (CM)
- Cardiac Monitoring not initiated

b. 12-Lead ECG (EC)
- 12-Lead ECG not performed as per MCG 1308
- 12-Lead ECG paramedic interpretation not documented
- 12-Lead ECG software interpretation not documented

c. Chest Compressions (CC)
- Pediatric - Chest compressions not performed for pulse <60bpm with persistent poor perfusion after O_2 and BMV
- Pediatric - Chest compressions continued after pulse >60bpm

d. Epinephrine (EP)

- Pediatric – Epinephrine administered without O_2 and BMV/airway management for poor perfusion
- Pediatric – Epinephrine not administered for persistent poor perfusion after O_2 and BMV
- Pediatric – Epinephrine not administered at correct dose

e. Atropine (AT)
- Adult – Atropine not administered for poor perfusion (unless immediate Transcutaneous Pacing (TCP) is indicated and initiated)
- Pediatric – Atropine not administered for suspected AV Block or increased vagal tone (unless immediate TCP indicated and initiated)

f. Transcutaneous Pacing (TCP) (TC)
- TCP not initiated for HR ≤ 40 with continued poor perfusion as per MCG 1365

~~13.~~12. TP 1213 / 1213-P – CARDIAC DYSRHYTHMIA – TACHYCARDIA

a. Cardiac Monitoring (CM)
- Cardiac Monitoring not initiated

b. 12-Lead ECG (EC)
- 12-Lead ECG not performed as per MCG 1308
- 12-Lead ECG paramedic interpretation not documented
- 12-Lead ECG software interpretation not documented

c. Valsalva (VL)
- Valsalva not attempted for supraventricular tachycardia (SVT)/narrow complex with adequate perfusion

d. Adenosine (AD)
- Adenosine not administered for SVT/narrow complex with adequate perfusion when Valsalva fails
- Adenosine not administered for SVT/narrow complex in alert patient with poor perfusion
- Adenosine not administered for Wide-Complex Regular Monomorphic Tachycardia with adequate perfusion
- Adenosine dosing incorrect for poor perfusion
- Adenosine given for Wide-Complex Irregular tachycardia

e. Synchronized Cardioversion (SC)
- Synchronized Cardioversion not performed for SVT/narrow complex with persistent poor perfusion
- Synchronized Cardioversion not performed for SVT/narrow complex with ALOC
- Synchronized Cardioversion not performed for Wide-Complex Regular Monomorphic Tachycardia with poor perfusion if adenosine fails and IV not immediately available
- Synchronized Cardioversion not performed for Wide-Complex Irregular Tachycardia with poor perfusion

~~14.~~13. TP 1214 – PULMONARY EDEMA / CHF

a. Continuous Positive Airway Pressure (CPAP) (CP)

- CPAP not administered for moderate to severe respiratory distress (SBP ≥ 90mmHg and no contraindications)
- CPAP administered to patient with contraindications

b. Cardiac Monitoring (CM)
- Cardiac monitoring not initiated

c. Vascular Access (VA)
- Vascular Access not attempted for patient
- Intraosseous Line not attempted when intravenous line cannot be established and Intraosseous Line indicated per MCG 1375
- Intraosseous Line placed without indication as per MCG 1375

d. Nitroglycerin (NG)
- Nitroglycerin not administered
- Nitroglycerin given for SBP <100mmHG
- Nitroglycerin given when patient has taken sexually enhancing drugs within 48 hours
- Nitroglycerin given without assessing for sexually enhancing drugs
- Nitroglycerin dose incorrect for SBP

e. Albuterol (AL)
- Albuterol not given for patient with wheezing despite CPAP

~~15.~~14. TP 1215 / 1215-P – CHILDBIRTH MOTHER

a. Vascular Access (VA)
- Vascular Access attempt delays transport

b. Amniotic Sac (AN)
- Amniotic sac showing with presenting crown and sac rupture not performed and/or documented

c. Fundal Massage (FM)
- Fundal massage not performed after placenta delivery

d. Destination (DS)
- Incorrect transport destination based on gestational age

~~16.~~15. TP 1216-P – NEWBORN / NEONATAL RESUSCITATION

a. Amniotic Sac (AN)
- Amniotic sac showing with presenting crown and sac rupture not performed and/or documented

b. Vascular Access (VA)
- Vascular Access not attempted for a child who does not respond to initial resuscitation and BMV
- Vascular Access attempt delays transport

c. Chest Compressions (CC)
- Chest compressions not performed for pulse <60bpm after BMV for 30 seconds

- Chest compressions continued after pulse >60bpm

d. Epinephrine (EP)
- Epinephrine not administered for <60bpm once chest compressions begun
- Epinephrine not administered at correct dose

~~17.~~16. TP 1217 / 1217-P – PREGNANCY COMPLICATION

a. Vascular Access (VA)
- Vascular Access not attempted
- Vascular Access attempt delays transport

b. Amniotic Sac (AN)
- Amniotic sac showing with presenting crown and sac rupture not performed and/or documented

c. Abnormal Delivery (AB)
- Abnormal delivery not managed per protocol

d. Tranexamic Acid (TX)
- TXA administered when not indicated or contraindicated
- TXA not administered when indicated
- Improper administration of TXA (rate/dose/route)

~~18.~~17. TP 1218 / 1218-P – PREGNANCY LABOR
As per “All Protocols”

~~19.~~18. TP 1219 / 1219-P – ALLERGY

a. Epinephrine (EP)
- Epinephrine not administered for anaphylaxis
- Epinephrine not administered at correct dose
- Epinephrine not administered every 10min x 2 for persistent symptoms
- Epinephrine administered by incorrect route
- More than 3 doses of epinephrine administered

b. Vascular Access (VA)
- Vascular Access not attempted for patient with anaphylaxis
- Intraosseous Line not attempted when Intravenous Line cannot be established in patients in anaphylactic shock
- Intraosseous Line placed without indication as per MCG 1375

c. Albuterol (AL)
- Albuterol not given for patient with wheezing

~~20.~~19. TP 1220 / 1220-P – BURNS

a. Clothing (CL)
- Clothing (jewelry) not removed from affected area

b. Burn Management (BM)

- Burn type not identified
- Burn not managed by protocol for type

c. Warming Measures (WM)
- Measures not taken to keep patient warm

~~21.~~20. TP 1221 / 1221-P – ELECTROCUTION

a. Cardiac Monitoring (CM)
- Cardiac Monitoring not initiated

b. Clothing (CL)
- Clothing (jewelry) not removed from affected area

~~22.~~21. TP 1222 / 1222-P – HYPERTHERMIA (ENVIRONMENTAL)

a. Cardiac Monitoring (CM)
- Cardiac Monitoring not initiated

b. Cooling Measures (CO)
- Cooling measures not initiated

~~23.~~22. TP 1223 / 1223-P – HYPOTHERMIA / COLD INJURY

a. Cardiac Monitoring (CM)
- Cardiac Monitoring not initiated

b. Warming Measures (WM)
- Warming measure not initiated

~~24.~~23. TP 1224 / 1224-P – STINGS / VENOMOUS BITES

a. Venomous Bite (VB)
- Bite not managed by protocol for type

~~25.~~24. TP 1225 / 1225-P – SUBMERSION

a. Cardiac Monitoring (CM)
- Cardiac Monitoring not initiated

b. Warming Measures (WM)
- Warming measures not initiated

~~26.~~25. TP 1226 / 1226-P – ENT / DENTAL EMERGENCIES

a. Control Bleeding (CB)
- Bleeding control with direct pressure not attempted when indicated

b. Tooth Avulsion (TA)
- Avulsed tooth not placed in Normal Saline

~~27.~~26. TP 1227 – Omitted

~~28.~~27. TP 1228 / 1228-P – EYE PROBLEM

a. Shield Eye (SH)
   - Globe rupture suspected and eye not shielded

b. Burn Management (BM)
   - Burn type not identified
   - Chemical burn not irrigated with Normal Saline 1L
   - Thermal burn not covered with dry dressing

c. Ondansetron (ON)
   - Ondansetron not administered to nauseated patient with suspected globe rupture

~~29.~~28. TP 1229 / 1229-P – ALOC

a. Cardiac Monitoring (CM)
   - Cardiac monitoring not initiated

b. Vascular Access (VA)
   - Vascular Access not attempted for patient
   - Intraosseous Line not attempted when Intravenous Line cannot be established and Intraosseous Line indicated as per MCG 1375
   - Intraosseous Line placed without indication as per MCG 1375

c. Glucose (GL)
   - Blood Glucose not checked

d. Modified Los Angeles Prehospital Stroke Screen (mLAPSS) (ML)
   - Adult – mLAPSS not performed when GCS is adequate for patient cooperation
   - Pediatric – Neurological exam not performed/documented

~~30.~~29. TP 1230 / 1230-P – DIZZINESS / VERTIGO

a. Glucose (GL)
   - Blood Glucose not checked

b. Modified Los Angeles Prehospital Stroke Screen (mLAPSS) (ML)
   - Adult – mLAPSS not performed for vertigo
   - Pediatric – Neurological exam not performed/documented

~~31.~~30. TP 1231 / 1231-P – SEIZURE

a. Midazolam (MD)
   - Midazolam not administered for active seizure
   - Midazolam dose incorrect
   - Midazolam frequency incorrect

b. Glucose (GL)
   - Blood Glucose not checked for persistent ALOC

~~32.~~31. TP 1232 / 1232-P – STROKE / CVA / TIA

a. Cardiac Monitoring (CM)
   - Cardiac Monitoring not initiated

b. Vascular Access (VA)
   - Vascular Access not attempted for patients with Los Angeles Motor Score (LAMS) 4 or 5

c. Glucose (GL)
   - Blood Glucose not checked

d. Modified Los Angeles Prehospital Stroke Screen (mLAPSS) (ML)
   - mLAPSS not performed if GCS ≥ 8
   - mLAPSS not documented

e. Los Angeles Motor Score (LAMS) (LA)
   - LAMS not performed for positive mLAPSS
   - LAMS not documented for positive mLAPSS

f. Last Known Well Time (LK)
   - Last Known Well Time not documented

~~33.~~32. TP 1233 / 1233-P – SYNCOPE / NEAR SYNCOPE

a. Cardiac Monitoring (CM)
   - Cardiac monitoring not initiated

b. 12-Lead ECG (EC)
   - 12-Lead ECG not performed as per MCG 1308
   - 12-Lead ECG paramedic interpretation not documented
   - 12-Lead ECG software interpretation not documented

~~34.~~33. TP 1234 / 1234-P – AIRWAY OBSTRUCTION

a. Obstructed Airway (OA)
   - > 1 year old - abdominal thrusts not performed in conscious patient who is unable to speak
   - < 1 year old – back blows/chest thrusts not performed in conscious patient
   - Chest compressions not initiated on patient that loses consciousness
   - Laryngoscopy not performed to visualize potential obstruction if chest compressions fail to dislodge foreign body
   - Visible foreign body removal not attempted with McGill forceps if laryngoscopy performed

b. Unmanageable Airway (UA)
   - Immediate MAR transport not initiated

c. Cardiac Monitoring (CM)
   - Cardiac Monitoring not initiated

d. Epinephrine (EP)

- Epinephrine neb not administered for stridor with respiratory distress
- Epinephrine IM not administered for visible airway/tongue swelling
- Epinephrine not administered at correct dose
- Epinephrine not administered by correct route for indication
- Epinephrine not administered at correct frequency
- Epinephrine neb administered more than 2 times

e. Tracheostomy Management (TM)
- Suctioning not attempted
- Inner cannula not removed and cleaned if present
- Tracheostomy not removed and replaced when indicated

~~35.~~34. TP 1235-P – BRUE

Cardiac Monitoring (CM)
- Cardiac monitoring not initiated

~~36.~~35. TP 1236 / 1236-P – INHALATION INJURY

a. Remove from Environment (RE)
- Patient not removed from environment for ongoing exposure

b. Epinephrine (EP)
- Epinephrine neb not administered for stridor with respiratory distress
- Epinephrine not administered at correct dose
- Epinephrine not administered at correct frequency
- Epinephrine neb administered more than 2 times

c. Albuterol (AL)
- Albuterol not given for patient with wheezing/bronchospasm

d. Continuous Positive Airway Pressure (CPAP) (CP)
- CPAP not administered for moderate to severe respiratory distress (SBP ≥ 90mmHg, no contraindications, and patient size > length-based resuscitation tape)
- CPAP administered to patient with contraindications

~~37.~~36. TP 1237 / 1237-P – RESPIRATORY DISTRESS

a. Continuous Positive Airway Pressure (CPAP) (CP)
- CPAP not administered for moderate to severe respiratory distress (SBP ≥ 90mmHg, no contraindications, and patient size > length-based resuscitation tape)
- CPAP administered to patient with contraindications

b. Albuterol (AL)
- Albuterol not given for patient with wheezing

c. Epinephrine (EP)
- Epinephrine IM not administered for deteriorating respiratory status despite albuterol
- Epinephrine not administered at correct dose

d. Needle Thoracostomy (NE)
   - Needle Thoracostomy not performed when indicated as per MCG 1335
   - Needle Thoracostomy performed when not indicated as per MCG 1335

~~38.~~37. TP 1238 / 1238-P – CARBON MONOXIDE EXPOSURE

a. Remove from Environment (RE)
   - Patient not removed from environment for ongoing exposure

~~39.~~38. TP 1239 / 1239-P – DYSTONIC REACTION

a. Diphenhydramine (DP)
   - Dystonic reaction not recognized
   - Diphenhydramine not administered

~~40.~~39. TP 1240 / 1240-P – HAZMAT

a. Clothing (CL)
   - Clothing not removed

b. Decontaminate (DC)
   - Decontamination not performed as indicated

c. Irrigation (IR)
   - Eyes not flushed when indicated
   - Eye not irrigated with at least 1L Normal Saline

d. Cardiac Monitoring (CM)
   - Cardiac Monitoring not initiated

e. Nerve Agent Exposure (NA)
   - DuoDote not administered per protocol

f. Organophosphate Exposure (OG)
   - Atropine not administered as indicated per protocol

g. Radiologic Exposure (RA)
   - Detection device not utilized for suspected contamination
   - Cause of contamination not determined (if contamination confirmed)
   - Treatment not initiated for life threatening conditions in conjunction with decontamination (treatment delayed for decontamination)

~~41.~~40. TP 1241 / 1241-P – OVERDOSE / POISONING / INGESTION

a. Naloxone (NL)
   - Naloxone not administered for hypoventilation/apnea in suspected opiate overdose
   - Incorrect dose used for administration route

b. Glucose (GL)
   - Blood Glucose not checked

c. Antidote (AE)
- Correct antidote not administered when available for suspected exposure

~~42.~~41. TP 1242 / 1242-P – CRUSH INJURY / SYNDROME

a. Hospital Emergency Response Team (HERT) (HT)
- HERT not activated for anticipated prolonged entrapment (>30 minutes) or when otherwise indicated

b. Vascular Access (VA)
- Vascular Access not attempted
- No discussion with base for Intraosseous Line if unable to establish Intravenous Line
- Intraosseous Line placed without indication as per MCG 1375

c. Fluid Administration (FL)
- Adult – Normal Saline not administered as soon as possible prior to release
- Adult – Less than 2L Normal Saline administered (unless contraindicated or hospital arrival prior to completion)
- Pediatric – Normal Saline 20mL/kg not administered as soon as possible and prior to release
- Pediatric – greater than 40mL/kg Normal Saline administered without base order
- Patient not assessed after each Normal Saline 250mL and fluids continued unless contraindicated

d. Cardiac Monitoring (CM)
- Cardiac monitoring not initiated

e. Warming Measures (WM)
- Measures not taken to keep patient warm

f. Hyperkalemia (HK)
- Calcium Chloride not administered when evidence of hyperkalemia
- Sodium Bicarbonate not administered when evidence of hyperkalemia
- Albuterol not administered when evidence of hyperkalemia
- Medications administered at wrong dose and/or route

g. Crush Syndrome (CS)
- Potential for Crush Syndrome not identified
- Calcium Chloride not administered when risk for crush syndrome
- Sodium Bicarbonate not administered when risk for crush syndrome
- Albuterol not administered when risk for crush syndrome
- Medications administered at wrong dose and/or route
- Medications administered at wrong time (not administered just prior to release of entrapment)

h. Tranexamic Acid (TX)
- TXA administered when not indicated or contraindicated
- TXA not administered when indicated
- Improper administration of TXA (rate/dose/route)

~~43.~~42. TP 1243 / 1243-P – TRAUMATIC ARREST

a. Scene (SD)
   - Patient transport delay

b. Control Bleeding (CB)
   - Bleeding control not attempted when indicated
   - Tourniquet not applied when indicated as per MCG 1370

c. Needle Thoracostomy (NE)
   - Needle Thoracostomy not performed when indicated as per MCG 1335
   - Needle Thoracostomy performed when not indicated as per MCG 1335

d. Defibrillation (DF)
   - Adult - Defibrillation biphasic at 200J not performed immediately for shockable rhythm
   - Pediatric – Defibrillation not performed immediately for shockable rhythm as per MCG 1309
   - Defibrillation performed for non-shockable rhythm

e. Spinal Motion Restriction (SMR) (SR)
   - Backboard used solely for purpose of SMR
   - Transport delayed for SMR

f. Vascular Access (VA)
   - Vascular Access not attempted
   - Intraosseous Line not attempted when Intravenous Line cannot be established as per MCG 1375
   - Transport delayed for vascular access

g. Fluid Administration (FL)
   - Normal Saline not administered by rapid infusion
   - Less than 2L Normal Saline initiated

~~44.~~43. TP 1244 / 1244-P – TRAUMATIC INJURY

a. Scene (SD)
   - Patient transport delayed

b. Control Bleeding (CB)
   - Bleeding control not attempted when indicated
   - Tourniquet not applied when indicated as per MCG 1370

c. Needle Thoracostomy (NE)
   - Needle Thoracostomy not performed when indicated as per MCG 1335
   - Needle Thoracostomy performed when not indicated as per MCG 1335

d. Spinal Motion Restriction (SMR) (SR)
   - Backboard used solely for the purpose of SMR
   - Transport delayed for SMR
   - SMR not performed when indicated as per MCG 1360

- SMR performed when not indicated and potentially harmful as per MCG 1360
- Alert patient not rolled off backboard for transport (unless safety concern)

e. Ondansetron (ON)
- Ondansetron not administered to nauseated patient with suspected traumatic brain injury

f. Fluid Administration (FL)
- Inappropriate fluid administration for patient condition
- Fluids not ordered when indicated or inadequate volume of fluids ordered

g. Tranexamic Acid (TX)
- TXA administered when not indicated or contraindicated
- TXA not administered when indicated
- Improper administration of TXA (rate/dose/route)

II. BASE HOSPITAL

1. ALL BASE CONTACTS

a. Provider Impression (PI)
- Primary PI in discussion with paramedics is clinically incorrect and/or not supported with documented data
- Primary PI not documented
- Secondary PI not documented when appropriate

b. Treatment Protocol (TP)
- Designated TP for PI not used
- Secondary TP for secondary PI not used when appropriate
- Base hospital orders deviate from treatment protocol standards without documented clinical rationale

c. Critical Interventions

i) Synchronized Cardioversion (SC)
- Inappropriate cardioversion (indication, energy, timing)
- Cardioversion not ordered when indicated

ii) Push-Dose Epinephrine (PD)
- Inappropriate administration of push-dose epinephrine (indication, dose, timing)
- Push-dose epinephrine not ordered when indicated

iii) Transcutaneous Pacing (TCP) (TC)
- Inappropriate administration of TCP (indication, settings, timing)
- TCP not ordered when indicated

iv) Fluid Administration (FL)
- Inappropriate fluid administration for patient condition
- Fluids not ordered when indicated or inadequate volume of fluids ordered

v) Pain (PN)
- Inappropriate pain management treatment (indication, dose, frequency)
- Pain management not ordered when indicated

d. Transport (TS)
- Advanced Life Support (ALS) transport not made when indicated by Ref. No. 1200.1 (i.e. inappropriate BLS downgrade)

e. Destination (DS)
- Not directing transport to a specialty center when indicated
- Directing transport to the wrong specialty center; includes Trauma Center, Perinatal Center, STEMI Receiving Center, Primary and Comprehensive Stroke Centers, Emergency Department Approved for Pediatrics and Pediatric Medical Center.
- Directing transport to the incorrect stroke center level based on mLAPSS, LAMS and Last Known Well Time

f. Termination of Resuscitation (TR)
- Cardiac Resuscitation terminated without meeting Ref. 814 criteria
- Cardiac arrest transported when meets Ref. 814 criteria and judgement for transport not described