



PREHOSPITAL MEDICAL ADVISORY COMMITTEE MEETING AGENDA (PMAC)

PMAC MEMBERS PER POLICY 8202:

Air Transport Provider Representative

11- Brian Harrison

American Medical Response

5- Jeremy Shumaker
Seth Dukes, MD

BLS Ambulance Service Representative

12- Lori Lopez

Cathedral City Fire Department

5- Justin Vondriska

Corona Regional Medical Center

1- Robert Steele, MD
4- Alecia Passow

County Fire Chiefs' Non-Transport ALS Provider

10- Jennifer Antonucci, Murrieta FD

County Fire Chiefs' Non-Transport BLS Provider

9- Anthony Gonzales, Calimesa FD

Desert Regional Medical Center

1- Joel Stillings, D.O.
4- Michael Muela, PLN

Eisenhower Health

1- Mandeep Daliwhal, MD (Ibanez)
4- Thomas Wofford, PLN

EMT / EMT-P Training Programs

6- Robert Fontaine, Moreno Valley College

EMT-at-Large

13 - VACANT

Paramedic-at-Large

14- Patrick Anderson, Riverside City Fire

Hemet Valley Medical Center

1- Todd Hanna, MD
4- Cindy Blenkarn

Idyllwild Fire Protection District

5- Mark Lamont

Inland Valley Regional Medical Center

1- Zeke Foster, MD
4- Daniel Sitar, PLN

JFK Memorial Hospital

1- Timothy Rupp, MD
4- Robin Boardman, PLN

Kaiser Permanente Riverside

1- Jonathan Dyreyes, MD
4- Barbara Coriell

This Meeting of PMAC is on:

Monday, February 6, 2023

9:00 AM to 11:00 AM

Ben Clark Training Center- Auditorium

1. CALL TO ORDER & HOUSEKEEPING (3 Minutes)

Andrew Pachon, MD (Chair)

2. ATTENDANCE (taken based on participant sign in sheet)

Shanna Kissel (REMSA)

3. APPROVAL OF MINUTES (3 Minutes)

November 28, 2022 Minutes— Andrew Pachon, MD (Attachment A)

4. STANDING REPORTS

4.1. Trauma System—Shanna Kissel (Attachment B)

4.2. STEMI System— Leslie Duke (Attachment C)

4.3. Stroke System— Leslie Duke (Attachment D)

5. Other Reports

5.1. Tele- 911 – Dan Bates/ Dr. Marc Eckstein

5.2. EMD Update –James Lee

5.3. Ultrasound Trial Study – Dr. Patterson

6. DISCUSSION ITEMS, UNFINISHED & NEW BUSINESS

6.1. Unfinished Business –

6.1.1. PMAC Representation

6.1.1.1. EMT-at-Large position

6.1.1.2. EMT Student position

6.1.1.3. Riverside County Police Association

6.2. Recognitions

6.3. CQI Update – Lisa Madrid

6.4. Education / Policy Update – Dustin Rascon (Attachment E)

6.5. Policy 3308 – ALS to BLS Downgrade (Attachment F)

6.6. Action Item Review

7. REQUEST FOR DISCUSSIONS

Members can request that items be placed on the agenda for discussion at the following PMAC meeting. References to studies, presentations and supporting literature must be submitted to REMSA three weeks prior to the next PMAC meeting to allow ample time for preparation, distribution and review among committee members and other interested parties.

Loma Linda University Med. Center Murrieta

- 1- Kevin Flaig, MD
- 4- Christopher Ward

Menifee Valley Medical Center

- 1- Todd Hanna, MD
- 4- Matt Johnson

Kaiser Permanente Moreno Valley

- 1- George Salameh, MD
- 4- Carol Fuste

Palo Verde Hospital

- 1- David Sincavage, MD
- 4- Katchya Currier

Parkview Community Hospital

- 1- Chad Clark, MD
- 4- Allan Patawaran

Rancho Springs Medical Center

- 1- Zeke Foster, MD
- 4- Janny Nelson

Riverside Community Hospital

- 1- Stephen Patterson, MD
- 4- Sabrina Yamashiro, PLN

Riverside County Fire Department

- 5- Richard Harvey
- 8- Jeff Stout

Riverside County Police Association

- 7- VACANT

Riverside University Health System Med. Center

- 1- Andrew Pachon (Chair)
- 4- Lori Maddox, PLN

San Geronio Memorial Medical Center

- 1- Richard Preci, MD
- 4- Angie Brady

Temecula Valley Hospital

- 1- Pranav Kachhi, MD
- 4- Amanda Walstrom

Trauma Audit Comm. & Trauma Program Managers

- 2- Stephen Kernop, TPD RUHS
- 3- Sara Edwards, TMD RUHS

Ex-officio Members:

- 1- Geoffrey Leung, MD, Public Health Officer
- 2- Reza Vaezazizi, MD, REMSA Medical Director
- 3- Bruce Barton, REMSA Director
- 4- Dan Bates, REMSA Program Chief II

Members are requested to please sit at the table with name plates in order to identify members for an accurate count of votes

Please come prepared to discuss the agenda items. If you have any questions or comments, call Evelyn Pham at (951) 358-5029 / or email PMAC@rivco.org. PMAC Agendas with attachments are available at: www.rivcoems.org. Meeting minutes are audio recorded to facilitate dictation for minutes.

8. ANNOUNCEMENTS (15 Minutes)

This is the time/place in which committee members and non-committee members can speak on items not on the agenda but within the purview of PMAC. Each announcement should be limited to two minutes unless extended by the PMAC Chairperson.

9. NEXT MEETING / ADJOURNMENT (1 Minute)

— May 15, 2023- Location: In-person TBD

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TOPIC	DISCUSSION	ACTION
1. CALL TO ORDER	PMAC Chair Dr. Seth Dukes called the meeting to order at 9:03 a.m.	
2. Virtual Attendance	Attendance taken based on participant list on Microsoft TEAMS.	
3. Approval of Minutes		The August 22, 2022 PMAC meeting minutes were approved with no changes.
4. STANDING REPORTS		
4.1. Trauma System Updates	<ol style="list-style-type: none"> 1. TAC will continue to discuss the new field triage standards from the ACS to determine if REMSA Policy #5301 needs to be updated. Changes include child unrestrained, active bleeding requiring a tourniquet, and suspicion of child abuse. 2. REMSA Policy #5304 – Trauma Center Standards remain as is, not adding Level III standards at this time. 3. RCH, IVMC, and DRMC had their ACS site verifications in October and November. Pending final outcome. 4. Trauma System Plan update was submitted to EMSA in June, approval pending until 2021 EMS plan is submit. 5. 5 of the 6 trauma centers are on ImageTrend patient registry platform which allows the outcomes of trauma patients to feed back to EMS crews. 6. REMSA designated Eisenhower Health as a Level IV Trauma Center. 	Information only.
4.2. STEMI System Updates	<ol style="list-style-type: none"> 1. STEMI System Plan update submitted to EMSA, pending approval. 2. STEMI dashboard was updated to reflect quarter 2, 2022 data related to the ImageTrend patient registry. 3. STEMI E2B project (ongoing): moving into the next steps of hospital door to balloon times. 4. STEMI Data: Agency level EMS performance measures Q3 has been distributed to the corresponding agency for auditing. 5. STEMI Center Standards Policy #5401 has been updated with new verbiage surrounding diversion in the absence of internal disaster. 6. STEMI designated hospitals have received a 2022 policy performance report. 7. STEMI quarterly meeting will consist of 1 regional meeting with ICEMA in July. 	Information only.
4.3. Stroke System Updates	<ol style="list-style-type: none"> 1. Stroke System Plan update submitted to EMSA, pending approval with EMS plan submission. 2. Stroke dashboard was updated to reflect quarter 2, 2022 data related to the ImageTrend patient registry. 3. Project (ongoing): Stroke Hospital Interfacility Transport (HIFT) Education is continuing to be developed with the 	Information only.

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	<p>assistance of stroke program managers and moving to the next steps.</p> <p>4. Stroke data: agency level EMS performance measures Q3 is being prepared and will be distributed to the corresponding agency for auditing.</p> <p>5. Stroke Center Standards Policy #5701 has been updated with new verbiage surrounding diversion in the absence of internal disaster.</p> <p>6. Stroke designated hospitals have received a 2022 policy performance report.</p> <p>7. Stroke quarterly meeting will consist of 1 regional meeting with ICEMA in May.</p>	
5. OTHER REPORTS		
5.1. EMCC Report	<p>EMCC met in October to discuss standard reports from the clinical and data team.</p> <p>Next EMCC meeting is scheduled for December.</p>	Information only.
5.2. EMD Update	<p>No current updates from EMD. The Committee will meet on November 30th, 2022.</p> <ul style="list-style-type: none"> Discussed adding to the agenda tier response regarding alpha and omega calls 	Information only.
5.3. Ultrasound Trial Study	<p>Currently still onboarding devices and getting providers trained. San Bernardino County joined in on the trail and should bring in more scans to review. The biggest hurdle is finding oversight for the ultrasound readings.</p>	Information only.
6. DISCUSSION ITEMS, UNFINISHED & NEW BUSINESS		
6.1 Unfinished Business	Unfinished business	
<p>6.1.1 PMAC Representation</p> <p>6.1.1.1 EMT-at-Large position</p>	<p>No current nominations for EMT-at-Large position. PMAC discussed the possibility of having an EMT student fill the position. After discussion, PMAC decided it would be best to keep this position as an active EMT field provider, but will add on the agenda for the next PMAC meeting to also add in a new student position to the PMAC representation.</p>	
6.2 Recognitions	Tabled to next in-person meeting.	
6.3 CQI Update	<p>REMSA reminded the agencies that CQI plans are due by December 31st, 2022, and January 31st, 2023 for the annual CQI update.</p>	Information only.
6.4 Education/Policy Update	<p>The new calculation chart will continue to be reviewed by a workgroup to update the dosing in the chart. REMSA is also seeking the guidance of a pharmacist to ensure dosing formulas are correct. Once the chart is updated, a final version of the</p>	

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	<p>current format will be presented at the January CQILT before final approval and implementation.</p> <p>Policy #1207 and #1208 (Paramedic Accreditation and Paramedic Reverification) Both policies will be combined into one (numbered #1207, still titled Paramedic Accreditation). Additionally, to align with administrative policies as well as ALS Agreements between municipalities and the County, beginning July 1st, 2023, paramedics who are applying for initial accreditation, or reverification of accreditation, will be required to submit copies of their PALS and PHTLS cards along with all other required documentation. These certifications are already submitted at the employer level and are not newly expected courses that providers are required to take. A system advisory will also go out regarding this notice before the deadline in 2023.</p> <p>Policy #6103 – Ambulance Diversion REMSA is updating the language in this administrative policy to clarify what does – and does not - constitute an internal disaster. A name change away from “Internal Disaster” is being considered as well to prevent further confusion.</p>	
<p>6.5 Policy 3308 – ALS to BLS Downgrade</p>	<p>After reviewing the data from the last couple of weeks, PMAC continued discussion regarding Policy #3308 ALS to BLS Downgrade and if it would be beneficial to continue and extend the provisional policy or let it expire today. Providers expressed their concerns with rescinding the policy today will impact the alpha and omega calls and cause disruption to the current system. It seems that most of the inappropriate downgrades may be a documentation deficiency, and not due to an action deficiency. PMAC is open to extending it once again until further data assessment is done, or until a potential new policy can be developed to replace it.</p> <p>Dr. Foster motioned to extend the policy until the next PMAC meeting on February 6, 2023. Captain Tim Buckley seconded the motion.</p> <p>PMAC voted: 0 opposed, motion passed unanimously.</p>	<p>PMAC approved Policy #3308 ALS to BLS Downgrade to be extended until February 6, 2023.</p>
<p>6.6 OG Tube/ i-Gel</p>	<p>A follow up to a CQI process for the utilization of the i-Gel and OG tube insertion. What we found in the CQI process is that further clarification is needed. A system advisory will be sent out later today pointing to the changes in language for further insight into the appropriate, and proper use and introduction to these devices. Additional resources will also be available on the website education page.</p>	<p>Information only.</p>
<p>6.7 Policy Cycle Changes</p>	<p>Moving to a once-a-year protocol update, draft policies and change requests will be reviewed at the January CQILT, starting 2023, and then pushed to PMAC in February for approval. Once</p>	<p>Information only.</p>

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	<p>approved, implementation will start on July 1st, 2023. Update cycle are for protocols only.</p> <p>Education Platform In quarter 1 or 2 of 2023, REMSA will officially launch its new LMS platform to provide education and updates along with licensing for all EMS and hospital providers. If anyone is interested in a tour, or wishes to begin using the platform now, please contact Dustin Rascon.</p>	
6.8 TIP (Trauma Intervention Program)	<p>Trauma Intervention Program (TIP) of Riverside County is looking for caring people willing to be part of a team of citizen volunteers trained to provide emotional and practical support to the victims of traumatic events. A TIP volunteer will be called to emergency scenes by local police, fire medical and hospital personnel to comfort and support families during traumatic events.</p>	Information only.
6.9 Buprenorphine Admin by EMS for Opioid Withdrawal	<p>Vanessa Lara presented on behalf of Dr. Gene Hern regarding integrating substance use disorder treatment into Emergency Medical Services. The suggestion includes paramedic-initiated Buprenorphine administration for opioid overdose or withdrawal. PMAC agrees with this suggestion, however to follow the new guideline for changes, a formal proposal needs to be presented at CQILT first and voted at the next PMAC before moving forward to fill out a LOSOP application. If approved, REMSA would like to see this as a system wide implementation process.</p>	Discussion.
6.10 IO Location Selection Preferences	<p>Dr. Dukes presented data from RHeart regarding the benefits of IO location selection. The preference in the upper extremity over the lower extremity showed significant increase in ROSC rates. PMAC discussed whether this would be more of an appropriate change for education versus policy. Dr. Dukes proposed to add in written protocol access be obtained preferentially to the upper extremity, if not possible, then the later choice would be the lower extremity. Dr. Foster motioned to move forth with Dr. Dukes proposal, Dr. Ibanez seconded the motion.</p> <p>PMAC voted: 0 opposed. Motion passed unanimously REMSA reminded PMAC that all new protocol changes must follow the new cycle change of going through a draft version at CQILT first, then final changes will be approved at PMAC for implementation on July 1st, 2023.</p>	PMAC approved adding IO location selection preference to the upper extremity over the lower extremity in written protocol.
6.11 New Chair Election	<p>Dr. Andrew Pachon, RUHS was nominated as chair for the 2023-2024 term. PMAC voted: 0 opposed. Passed unanimously. Dr. Andrew McCague, JFK was nominated as vice chair for the 2023-2024 term. PMAC voted: 0 opposed. Passed unanimously.</p>	PMAC approved Dr. Pachon as the new chair for PMAC and Dr. McCague as the vice chair for the 2023-2024 term.

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6.12 2023 Meeting Dates	<p>2023 REMSA Clinical meeting dates were presented. Some meetings will be held in-person, and some will stay virtual for the time being. Quarter 2 will resume in-person meetings at Riverwalk. REMSA will also attempt including a hybrid online version.</p> <p>PMAC requested to change the May PMAC date to May 15th instead due to scheduling conflicts with other events.</p> <p>PMAC approved the new 2023 meeting dates.</p>	PMAC approved the new 2023 meeting dates.
6.13. COVID/Monkeypox Update	<p>COVID-19 State of Emergency expires in February 2023. So far hospitals have been seeing a greater impact from RSV and the Flu than COVID.</p> <p>Monkeypox vaccine is available. Cases have decreased throughout the County and State/Nation.</p>	Information only.
6.14. Action Item Review	None	
7. Request for Discussions	None	
8. Announcements	None	
9. NEXT MEETING/ADJOURNMENT	<p>Monday, February 6, 2023 (9:00 – 11:00 a.m.)</p> <p>Virtual Platform – Microsoft TEAMS</p>	Information only.

DRAFT

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PMAC Attendance:

Shanna Kissel, REMSA	Zeke Foster, MD, IVMC
Alexandra Jabr, Cal Fire	Andrew McCague, MD, JFK
Andrew Pachon, MD, RUHS	Kristie Hinz, Cal Fire
Julius Ibanez, MD, EH	Carla Bolowich, Cal Fire
Dan Bates, REMSA	Chris Douglas, Corona Fire
Christian Linneman, Cal Fire	Leslie Duke, REMSA
Seth Dukes, MD, AMR	Evelin Millsap, JFK
Sean Hakam, REMSA	Richard Harvey, Cal Fire
Catherine Farrokhi, REMSA	Robert Fontaine, MVC Edu
Stephani Harrington, REMSA	Joseph Christopher, EMD
Vanessa Hayflich, Air Methods	Sarah Lassiter, AMR
Ken Cardin, Morongo Fire	Dustin Rascon, REMSA
Cory Gorospe, Palm Springs Fire	Lisa Higuchi, AMR
Jennifer Antonucci, Murrieta Fire	Ryan Holtkamp, AMR
Sudha Mahesh, REMSA	Bryan Hanley, REMSA
James Lee, REMSA	Lori Maddox, RUHS
Kathy Cash, EH	Suzee Kolodzik, AMR
Christopher Lowder, Cal Fire	Evelyn Pham, REMSA
Noelle Toering, Riverside City Fire	Melissa Schmidt, Hemet Fire
Reza Vaezazizi, MD, REMSA	Dan Sitar, IVMC
Lisa Mackie, RUHS	Henry Olson, REMSA
Mattie Medina, Murrieta	Thomas Wofford, EH
Robin Boardman, JFK	Michael Muela, DRMC
Steven Wells, Corona Fire	Nick Ritchey, REMSA
Timothy Rupp, MD, JFK	Stephanie Zimmerman, AMR
Karleen Wade, REMSA	Richard Valenti, Cathedral City
Zak Saxton, Mercy Air	Sabrina Yamashiro, RCH
Christopher Ward, LLUMC-M	Stephen Kernop, RUHS
Tim Buckley, Soboba Fire	

FOR CONSIDERATION BY PMAC

DATE: January 20, 2023

TO: PMAC

FROM: Shanna Kissel, RN, Assistant Nurse Manager

SUBJECT: Trauma System

1. Changes to REMSA policy 5301 will be implemented July 1, 2023. Changes include: child unrestrained, active bleeding requiring a tourniquet, and suspicion of child abuse.
2. Trauma Audit Committee (TAC) will be discussing at the February TAC a Riverside county policy for the Hospital Emergency Response Team (HERT) similar to that in the ICEMA region.
3. Riverside Community Hospital, Inland Valley Medical Center, and Desert Regional Medical Center had their ACS site verifications in October and November. All 3 facilities received verification.
4. Trauma System Plan update will be resubmitted to EMSA to include activities and system changes for CY 2020- 2022. This will be submitted to EMSA the end of January.
5. Effective January 1, 2023, all 6 trauma centers are on ImageTrend Trauma patient registry/ platform which allows the outcomes of trauma patients to feed back to the EMS crews.

ACTION: PMAC should be prepared to receive the information and provide feedback to REMSA.

Date: February 6, 2023

TO: PMAC

FROM: Leslie Duke, Specialty Care Coordinator, RN

SUBJECT: STEMI System

1. STEMI System Plan update submitted to EMSA, pending approval.
2. The STEMI dashboard posted on Rivcoems.org was updated to reflect Q3 2022 data related to the Image Trend STEMI patient registry.
3. STEMI E2B project (ongoing): moving into the next steps of activation and pre-activation of incoming suspected STEMI patients.
4. STEMI Data: Agency level EMS performance measures Q4 was distributed to the corresponding agency for auditing.
5. Re-education of annual hospital requirements related to STEMI Center Administrative policies was completed during the first managers meeting of the year.
6. Quarterly STEMI Managers meeting has moved back to an in-person forum.

Next STEMI Committee meeting is on April 11th, 2023, via TEAMS conference

Action: PMAC should be prepared to receive the information and provide feedback to the EMS Agency

Date: February 6, 2022

TO: PMAC

FROM: Leslie Duke, Specialty Care Coordinator, RN

SUBJECT: Stroke System

1. Stroke System Plan update submitted to EMSA, pending approval with EMS plan submission.
2. The Stroke dashboard posted on Rivcoems.org was updated to reflect Q3 2022 data related to the Image Trend Stroke patient registry.
3. Project (ongoing): Stroke Hospital Interfacility Transport (HIFT) Education is continuing to be developed with the assistance of stroke managers and moving to the next steps.
4. Stroke Data: Agency level EMS performance measures Q4 was distributed to the corresponding agency for auditing.
5. Re-education of annual hospital requirements related to Stroke Center Administrative policies was completed during the first managers meeting of the year.
6. Quarterly Stroke Managers meeting has moved back to an in-person forum.

Next Stroke Committee meeting is on May 4th, 2023, via TEAMS conference

Action: PMAC should be prepared to receive the information and provide feedback to the EMS Agency

View results

Respondent

3

Anonymous

76:29

Time to complete

1

Name and Title *

First and Last, Title within your agency / department

Lisa Higuchi, CES Manager

2

Agency / Department *

American Medical Response

Update: Pediatric Medication Administration Language

- **REMOVAL:** prescriptive language referring to REMSA Policy #4102 (Calculation Chart) for administration of medications to pediatric patients
- **(RE)INTRODUCTION:** specific dosing formulas (mg / kg, gm / kg, etc.) for administration of medications to pediatric patients
- **PURPOSE:** Providers in the field have grown accustomed to utilizing the Calculation Chart for dosing pediatric patients. Unfortunately, after review, the Chart has been found to contain many inaccuracies and inconsistencies in both dosing and volumes listed, as well as in the formulas used to get to those doses and volumes.
 - REMSA cannot knowingly publish a treatment protocol that directs providers to incorrectly dose patients when untoward patient outcomes could occur as a result.
 - Additionally, prescribing in protocol that providers must "See REMSA Policy #4102 (Calculation Chart) for patient specific dosage and volume" prohibits agencies that wish to use alternative pediatric treatment programs from being permitted to do so.
 - Identifying the PMDR explicitly as an educational / reference tool, along with the reintroduction of specific dosing calculations within each treatment protocol for pediatric patients, will help mitigate REMSA's liability while producing more accurate dosing for the pediatric population.

<p>• For continuous or recurrent tonic-clonic seizures unrelated to eclampsia</p> <p>Adults: Midazolam 2.5 mg (0.5 mL) slow IV/IO push. MAY REPEAT ONCE. FURTHER REPETITION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> <p>**OR**</p> <p>Midazolam 5 mg (1 mL) slow IV/IO push. MAY REPEAT ONCE. FURTHER REPETITION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> <p>Pediatrics: See REMSA Policy #4102 (Calculation Chart) for patient specific dosage and volume. MAY REPEAT ONCE. FURTHER REPETITION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> <p>Changed to align with updated Calculation Chart / Pediatric Medication Dosing Resource</p>	<p>Current language in REMSA Policy #4105 (ALS Drug Index) and #4501 (Seizures)</p> <table border="1"> <tbody> <tr> <td data-bbox="407 611 634 688"> <p>Continuous or recurrent tonic-clonic seizures unrelated to eclampsia (4501)</p> <p>Adults: 2.5 mg (0.5 mL) slow IV/IO push. MAY REPEAT ONCE. FURTHER REPETITION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> <p>**OR**</p> <p>5 mg (1 mL) IM/IN. MAY REPEAT ONCE. FURTHER REPETITION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> </td> <td data-bbox="639 611 867 688"> <p>Adults: 2.5 mg (0.5 mL) slow IV/IO push. MAY REPEAT ONCE. FURTHER REPETITION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> <p>**OR**</p> <p>5 mg (1 mL) IM/IN. MAY REPEAT ONCE. FURTHER REPETITION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> </td> </tr> <tr> <td data-bbox="407 695 634 814"> <p>Pediatrics: See REMSA Policy #4102 (Calculation Chart) for patient specific dosage and volume. MAY REPEAT ONCE. FURTHER REPETITION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> <p>Patients requiring chemical restraint when physical restraints are ineffective and who pose an immediate danger to themselves or others, due to:</p> <ul style="list-style-type: none"> • Severe agitation / aggression OR • Severe distress, who are at potential risk for sudden death (4602) </td> <td data-bbox="639 695 867 814"> <p>Pediatrics: 0.1 mg / kg slow IV/IO push. MAY REPEAT ONCE. FURTHER REPETITION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> <p>**OR**</p> <p>0.2 mg / kg IM/IN. MAY REPEAT ONCE. FURTHER REPETITION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> </td> </tr> </tbody> </table>	<p>Continuous or recurrent tonic-clonic seizures unrelated to eclampsia (4501)</p> <p>Adults: 2.5 mg (0.5 mL) slow IV/IO push. MAY REPEAT ONCE. FURTHER REPETITION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> <p>**OR**</p> <p>5 mg (1 mL) IM/IN. MAY REPEAT ONCE. FURTHER REPETITION REQUIRES A BASE HOSPITAL ORDER (BHO).</p>	<p>Adults: 2.5 mg (0.5 mL) slow IV/IO push. MAY REPEAT ONCE. FURTHER REPETITION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> <p>**OR**</p> <p>5 mg (1 mL) IM/IN. MAY REPEAT ONCE. FURTHER REPETITION REQUIRES A BASE HOSPITAL ORDER (BHO).</p>	<p>Pediatrics: See REMSA Policy #4102 (Calculation Chart) for patient specific dosage and volume. MAY REPEAT ONCE. FURTHER REPETITION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> <p>Patients requiring chemical restraint when physical restraints are ineffective and who pose an immediate danger to themselves or others, due to:</p> <ul style="list-style-type: none"> • Severe agitation / aggression OR • Severe distress, who are at potential risk for sudden death (4602) 	<p>Pediatrics: 0.1 mg / kg slow IV/IO push. MAY REPEAT ONCE. FURTHER REPETITION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> <p>**OR**</p> <p>0.2 mg / kg IM/IN. MAY REPEAT ONCE. FURTHER REPETITION REQUIRES A BASE HOSPITAL ORDER (BHO).</p>
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If the dosing calculation formula (such as mg/kg) is listed in the protocol, but a provider is using an "alternative pediatric treatment program", does that mean that paramedics from different agencies could potentially be utilizing different doses?

Medication Update: Activated Charcoal

REMOVAL: Activated Charcoal from -

- Drug and Equipment List
- ALS Drug Index
- Treatment Protocol Overdose / Adverse Reaction & Toxic Exposure, Inhalation, or Ingestion

PURPOSE:

- Difficulty procuring
- Low frequency / high risk medication
- Inappropriate / under- / unapproved utilization (given without BHO, for the wrong indication, or both)

Removal of Activated Charcoal from:

- Drug and Equipment List
- ALS Drug Index
- Treatment Protocol: Overdose / Adverse Reaction
- Treatment Protocol: Toxic Exposure, Inhalation, or Ingestion

	Count of Admins (#Medications:03)	Count of BHCs (#Disposition:007)
Overdose/Poisoning/Ingestion	540	340
Behavioral / psychiatric disorder (Mental disorder)	115	97
Altered mental status	5	2
General weakness	5	3
No Medical Complaint	3	3
Respiratory distress -other	3	2
Pain, non-traumatic body pain (acute)	2	2
Traumatic injury	2	2
Cardiac arrhythmia	2	1
Abnormal uterine/vaginal bleeding	1	1
Respiratory distress - Acute bronchospasm	1	1
Chest Pain - Suspected Cardiac	1	1
Nausea	1	1
Dizziness/Vertigo	1	1
Respiratory distress-Pulmonary edema/CHF	1	1
Abdominal Pain/Problems (GI/GU)	1	1
Upper GI bleed/vomiting blood	1	1
Headache non-traumatic	1	1
Hypoglycemia (high blood sugar)	1	1
Grand Total	887	424

Reason: In 2021 & 2022 combined, there were approximately 350,000 medication administrations total (all meds)

- Activated Charcoal administration was documented 687 times (approximately 0.2% of all med administrations)
- 62.96% of the time was it given for the appropriate indication.
- 61.7% of the time it was given after receiving a BHO.

Medication Update: Adenosine

REMOVAL: BHO requirement prior to initial and repeat administrations for adults and pediatrics

PURPOSE: Shortest half-life of any permitted medication in Riverside County and can, in most instances, be drawn up and administered before the order can be obtained. Waiting to give it could, potentially, lead to untoward patient outcomes due to a delay in appropriate care.

Current language →

INDICATION	DOSAGE/ROUTE
Symptomatic supraventricular tachycardia (SVT) with Pulses (4403)	12 mg (4 mL) rapid IV/IO push. Follow immediately with 20 mL normal saline rapid IV/IO push. REPEAT/REPEAT REQUIRES A BASE HOSPITAL ORDER (BHO). INITIAL AND REPEAT PEDIATRIC ADMINISTRATION REQUIRES A BASE HOSPITAL ORDER (BHO). See REMSA Policy #4102 (Calculation Chart) for patient specific dosage and volume.

Updated language →

INDICATION	DOSAGE/ROUTE
Symptomatic supraventricular tachycardia (SVT) with Pulses (4403)	Adults: 12 mg (4 mL) rapid IV/IO push. Follow immediately with 20 mL normal saline rapid IV/IO push. MAY REPEAT ONCE. Pediatrics: 0.2 mg / kg rapid IV/IO push. Follow immediately with 20 mL normal saline rapid IV/IO push. MAY REPEAT ONCE.

Purpose: Adenosine has the shortest half-life of any permitted medication in Riverside County and can, in most instances, be drawn up and administered before the order can be obtained. Waiting to give it could, potentially, lead to untoward patient outcomes due to a delay in appropriate care.

Medication Update: Calcium Chloride

CHANGE: Change in route of administration for pediatrics to align with adults

PURPOSE: CaCl₂ can cause hypotension, syncope and significant venous irritation. Admin by IVPB is required for all patients with pulses. IV / IO administration is permitted in cardiac arrest scenarios only.

Current route is IV only

Standard Medications	Grey 3-5 kg	Pink 6-7 kg	Red 8-10 kg	Purple 10-15 kg	Yellow 12-14 kg	White 15-18 kg	Blue 19-25 kg	Orange 24-29 kg	Green 30-36 kg	Adult	
Calcium Chloride 10%	IV 1 g 10 mL	IV 80 mg 0.8 mL	IV 130 mg 1.3 mL	IV 170 mg 1.7 mL	IV 200 mg 2 mL	IV 260 mg 2.6 mL	IV 330 mg 3.3 mL	IV 420 mg 4.2 mL	IV 540 mg 5.4 mL	IV 660 mg 6.6 mL	IV 1 g 10 mL

Updated routes

Standard Medications	Grey 4-5 kg	Pink 5-7 kg	Red 8-10 kg	Purple 10-12 kg	Yellow 12-14 kg	White 15-16 kg	Blue 17-21 kg	Orange 21-29 kg	Green 32-37 kg	Gold 40-42 kg	Platinum 47-49 kg	Mercury 46-49 kg
Calcium Chloride 10%	IVPB 90 mg 0.9 mL	IVPB 120 mg 1.2 mL	IVPB 170 mg 1.7 mL	IVPB 220 mg 2.2 mL	IVPB 260 mg 2.6 mL	IVPB 310 mg 3.1 mL	IVPB 380 mg 3.8 mL	IVPB 520 mg 5.2 mL	IVPB 690 mg 6.9 mL	IVPB 820 mg 8.2 mL	IVPB 980 mg 9.8 mL	IVPB 1,150 mg 11.5 mL
Calcium Chloride 10%	IV/IO 90 mg 0.9 mL	IV/IO 120 mg 1.2 mL	IV/IO 170 mg 1.7 mL	IV/IO 220 mg 2.2 mL	IV/IO 260 mg 2.6 mL	IV/IO 310 mg 3.1 mL	IV/IO 380 mg 3.8 mL	IV/IO 520 mg 5.2 mL	IV/IO 690 mg 6.9 mL	IV/IO 820 mg 8.2 mL	IV/IO 980 mg 9.8 mL	IV/IO 1,150 mg 11.5 mL

Purpose: CaCl₂ can cause hypotension, syncope and significant venous irritation. Admin by IVPB is required for all patients with pulses.

Medication Update: Dextrose

CHANGE: Removal of D25% and D50% as concentrations for admin to adults and pediatrics.

- D25% and D50% can still be carried; however, they must be diluted to D10% prior to administration.

PURPOSE: D10% is just as effective as D50% in reversing hypoglycemic episodes but has been shown to cause less frequent instances of reflex hyperglycemia, extravasation injury, direct toxic effects of hypertonic dextrose, and potential neurotoxic effects of acute hyperglycemia as D50% administration does. Additionally, one concentration standardizes what can, and will, be administered in the field.

Current language

INDICATIONS	DOSAGE/ROUTE
Symptomatic hypoglycemia with blood glucose less than 80 mg/dL in adults or 70 mg/dL in pediatrics (4201)	Adults: 25 gm (D10%, D25% or D50%) IV/IO bolus or drip. MAY REPEAT PRN. Pediatrics: See REMSA Policy #4102 (Calculation Chart) for patient specific dosage and volume. MAY REPEAT PRN.

Updated language

INDICATIONS	DOSAGE/ROUTE
Symptomatic hypoglycemia with blood glucose less than 80 mg/dL in adults or 70 mg/dL in pediatrics (4201)	Adults: 25 gm (D10%) IV/IO bolus or drip. MAY REPEAT PRN. Pediatrics: 0.5 mg/kg (D10%) slow IV push. MAY REPEAT PRN.

Purpose: multiple studies and trials have shown that the administration of D10% is just as effective as D50% in reversing hypoglycemic episodes (Hurtubise et al., 2021); D50%, however, has been found to cause significantly higher blood glucose concentrations both in the prehospital setting and upon hospital arrival (Weant et al., 2019) and may also have theoretical risks including extravasation injury, direct toxic effects of hypertonic dextrose, and potential neurotoxic effects of acute hyperglycemia (Hern et al., 2016). Additionally, one concentration standardizes what can, and will, be administered in the field.

Medication Update: Oral Glucose

CHANGE: Administration to patients weighing less than 10 kg will change from "BHO" to "**NOT PERMITTED.**"

PURPOSE:

- Dosing oral glucose accurately can be difficult.
- Administration of oral glucose in the very young (i.e., less than 1yo population) is a choking hazard.

Purpose:
 *Dosing oral glucose accurately can be difficult.
 *Administration of oral glucose in the very young (i.e., less than 1yo population) is a choking hazard.

Current language →

→ New language

INDICATIONS	DOSAGE/ROUTE
BLS care providers: Symptomatic hypoglycemia with blood glucose less than 80 mg/dL in adults or 70 mg/dL in pediatrics (4201)	MAY ONLY BE ADMINISTERED TO ALERT, COOPERATIVE PATIENTS WITH AN INTACT GAG REFLEX. Adults: 15 gm (1 tube) PO. MAY REPEAT PRN. Pediatrics: See REMSA Policy #4102 (Calculation Chart) for patient specific dosage and volume. MAY REPEAT PRN.
ALS care providers: Symptomatic hypoglycemia with blood glucose less than 80 mg/dL in adults or 70 mg/dL in pediatrics. WHEN UNABLE TO ADMINISTER DEXTROSE OR GLUCAGON (4201)	MAY ONLY BE ADMINISTERED TO ALERT, COOPERATIVE PATIENTS WITH AN INTACT GAG REFLEX. Adults: 15 gm (1 tube) PO. MAY REPEAT PRN. Pediatrics: • NOT PERMITTED FOR PATIENTS WEIGHING LESS THAN 10 kg. • Patients weighing 10 – 29 kg: as tolerated, PO. MAY REPEAT PRN. • Patients weighing 30 kg or greater: 15 gm (1 tube) PO. MAY REPEAT PRN.

Medication Update: Glucagon

CHANGE: Dosing schedule modification for pediatrics only & new formula for beta blocker / CaCl2 blocker overdose

PURPOSE: to align with Rady Children's Glucagon admin protocol / pharmacist recommended dosing

INDICATIONS	DOSAGE/ROUTE
Symptomatic hypoglycemia with blood glucose less than 80 mg/dL in adults or 70 mg/dL in pediatrics. WHEN UNABLE TO ADMINISTER IV/IO DEXTROSE (4201)	Adults: 1 mg (1 mL) IV/IM. FURTHER REPEATS REQUIRES A BASE HOSPITAL ORDER (BHO). Pediatrics: For patients weighing 21 kg or less: 0.5 mg (0.5 mL). For patients weighing 22 kg or more: 1 mg (1 mL). FURTHER REPEATS REQUIRES A BASE HOSPITAL ORDER (BHO).
Suspected esophageal food impaction (4406)	Adults: 1 mg (1 mL) IV/IM. Pediatrics: For patients weighing 21 kg or less: 0.5 mg (0.5 mL). For patients weighing 22 kg or more: 1 mg (1 mL).
Suspected beta blocker or calcium channel blocker overdose (4601)	INITIAL AND REPEAT DOSES FOR ADULTS AND PEDIATRICS REQUIRES A BASE HOSPITAL ORDER (BHO) Adults: 1 mg (1 mL) IV/IO/IM. Pediatrics: 50 mcg / kg IV/IO/IM. MAX SINGLE DOSE IS 1 MG.

NOTE: no change in adult dosing but a new row is required to separate 4201 language and 4406 language because of the BHO requirement

Updated language



New dosing required for beta blocker / CaCl₂ blocker overdose

Medication Update: Lidocaine

CHANGE: Adult dosing

- FROM: 1-1.5 mg / kg with repeat at half the dose
- TO: 1 mg / kg with repeat at 0.5 mg / kg

PURPOSE: to create a uniform dose for all adults

<p>Current language </p> <p>Purpose: To create a uniform dose for all adults</p> <p>Updated language </p>	<p>INDICATIONS</p> <p>Symptomatic tachycardia with pulses (4403)</p> <p>Cardiac arrest with VF or VT <u>WHEN AMIODARONE IS UNAVAILABLE</u> (4405)</p>	<p>INITIAL AND REPEAT DOSES FOR ADULTS AND PEDIATRICS REQUIRES A BASE HOSPITAL ORDER (BHO)</p> <p>Adults: 1-1.5 mg / kg slow IV/IO push followed by the second dose (half of the initial dose) 8-10 minutes later, to a max of 3 mg / kg.</p> <p>Pediatrics: See REMSA Policy #4102 (Calculation Chart) for patient specific dosage and volume.</p>
	<p>INDICATIONS</p> <p>Symptomatic tachycardia with pulses (4403)</p> <p>Cardiac arrest with VF or VT <u>WHEN AMIODARONE IS UNAVAILABLE</u> (4405)</p>	<p>INITIAL AND REPEAT DOSES FOR ADULTS AND PEDIATRICS REQUIRES A BASE HOSPITAL ORDER (BHO)</p> <p>Adults: 1 mg / kg slow IV/IO push followed by a second dose (0.5 mg / kg) 8-10 minutes later, to a max of 3 mg / kg.</p> <p>Pediatrics: Initial and repeat dose: 1 mg / kg slow IV/IO push followed by a second dose 8-10 minutes later.</p>


Medication Update: Ondansetron ODT

CHANGE: dosing schedule modification for pediatrics only

- FROM: 1-1.5 mg / kg with repeat at half the dose
- TO: 1 mg / kg with repeat at 0.5 mg / kg

PURPOSE:

- Administration of Zofran ODT in the very young (i.e., less than 1yo population) is a choking hazard.
- To align with Rady Children's Ondansetron ODT admin protocol / pharmacist recommended dosing

<p>Current language </p> <p>Purpose: *Administration of Zofran ODT in the very young (i.e., less than 1yo population) is a choking hazard. *To align with Rady Children's Ondansetron ODT admin protocol / pharmacist recommended dosing</p>	<p>INDICATIONS</p> <p>Nausea and / or vomiting (4203)</p>	<p>DOSAGE/ROUTE</p> <p>Adults: 4 mg PO (1 ODT). MAY REPEAT TWICE TO MAX 12 MG. FURTHER REPECTION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> <p>**Q6**</p> <p>2 mL IV solution slow IV/IO push or IM. MAY REPEAT TWICE TO MAX 12 MG. FURTHER REPECTION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> <p>Pediatrics: See REMSA Policy #4102 (Calculation Chart) for patient specific dosage and volume. MAY REPEAT TWICE. FURTHER REPECTION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> <p>ADMINISTRATION OF ONDANSETRON ODT TO PEDIATRIC PATIENTS WEIGHING LESS THAN 9 KG (<20 LBS) REQUIRES A BASE HOSPITAL ORDER (BHO).</p>
	<p>INDICATIONS</p> <p>Nausea and / or vomiting (4203)</p>	<p>DOSAGE/ROUTE</p> <p>Adults: 4 mg PO (1 ODT). MAY REPEAT TWICE TO MAX 12 MG. FURTHER REPECTION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> <p>**Q6**</p> <p>2 mL IV solution slow IV/IO push or IM. MAY REPEAT TWICE TO MAX 12 MG. FURTHER REPECTION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> <p>Pediatrics: NOT PERMITTED FOR PATIENTS WEIGHING LESS THAN 10 KG. Patients weighing 10 kg or greater: 4 mg PO (1 ODT). MAY REPEAT TWICE TO MAX 12 MG.</p> <p>**Q6**</p> <p>0.1 mg / kg IV solution slow IV/IO push or IM. MAY REPEAT TWICE. FURTHER REPECTION REQUIRES A BASE HOSPITAL ORDER (BHO).</p>

Update: REMSA Policy #1105 (Paramedic Internship)

Includes new definitions, eligibility criteria, paramedic student placement requirements and documentation requirements.

See email attachment (doc titled: "1105 v2.5")

Page 1 - under "Definitions and Descriptions", where the minimum requirements for being a paramedic preceptor have changed - unclear on the intent of the addition of the first bullet point, "Unrestricted paramedic license in California with a minimum of two (2) years of academic or clinical experience in emergency medicine within the last five (5) years." Who is this describing? And is there no requirement to be employed by a REMSA authorized ALS provider at any time, for this category? The current policy states 2 yrs as a paramedic with a REMSA ALS provider OR 5 years as a paramedic with one year with a REMSA ALS provider, which is reasonable and sufficient, so I am hoping we can discuss the rationale behind this proposed change.

Page 2, under "Paramedic Field Internship" - the bullet stating "Completing the comprehensive documentation of the patient contacts utilizing an EHR system under the preceptor's supervision." I think this should be clarified so that it's clear that the intern is NOT able to complete the the host agency's PCR.

Page 3, near the top: "The provider agency internship coordinator willact as the student's liaison offering support and advisement during the internship." What type of support and advisement is intended here, and how is this the same or different from the support / advisement of the EMS Training Program's field liaison?

Page 3, "Paramedic Training Programs based outside of Riverside County seeking to place a student intern with a Riverside County based provider agency must...." The current policy references the REMSA / ICEMA region rather than just Riverside County. AMR has provided the majority of preceptors for both the REMSA and ICEMA regions for a many years, and routinely utilizes preceptors from both Riverside and San Bernardino Counties to accomplish that. The number of available preceptors in any given operation / county changes constantly throughout the year depending on length of time for individual internship completion and hiring / training needs. Moving away from a REMSA / ICEMA regional approach will be needlessly cumbersome and cause delays in intern placement because we will no longer be able to use preceptors in either county without going through this additional process.

Update: REMSA Policy #3308 (ALS to BLS Downgrade)

Included new eligibility criteria based on:

- Primary / Secondary impression
- Vitals Signs
- Pediatric Patients

See email attachment (doc titled: "3308d v3")

Update: REMSA Policy #4101 (Introduction to Treatment Protocols)

CHANGE: Update language to identify the Pediatric Medication Dosing Resource as an optional reference tool

Current language	<ul style="list-style-type: none"> • Standing orders <p>REMSA treatment protocols include standing orders for medications and procedures, which apply to both adult and pediatric patients. Medications, concentrations, dosages, volumes, energy settings and advanced airway sizes for pediatric patients can be found in Policy #4102 (REMSA Calculation Chart). Adult medication dosing and energy settings are embedded in each associated treatment protocol.</p>
Updated language	<ul style="list-style-type: none"> • Standing orders <p>REMSA treatment protocols include standing orders for medications and procedures, which apply to both adult and pediatric patients. Medication dosing for adult and pediatric patients, and energy settings for adults, are embedded in each associated treatment protocol. Indications, medications, and concentrations, as well as references to appropriate dosages, volumes, energy settings, and advanced airway sizes for pediatric patients can be found in the Pediatric Medication Dosing Resource (here: X20)</p>

Update: REMSA Policy #4405 (Cardiac Arrest)

- **Change in Epi Drip inclusion criteria)**

PROPOSAL:

- An emphasis should be placed on prepping an Epinephrine Infusion if the EtCo2 Value is above 20 mmHg at ANY time during the arrest so if ROSC is achieved and Hypotension exists, treatment can occur without delay.
- Hypotension be defined as SBP less than 90 mmHg and / or MAP less than 65 mmHg and the end goal to be MAP greater than 65 mmHg.

PURPOSE:

- Current available RHeART Data suggests that our average initial EtCO2 value in the patient subset where ROSC is obtained, for any length of time, is 27 mmHg during the onset of the arrest management. Yet, 48.70% of those patients (n= 347 at time of proposal) experience hypotension or re-arrest during the encounter.
- The relationship between MAP and CPP drives resuscitation guidelines to recommend maintaining a MAP greater than or equal to 65 mm Hg. Assuming a normal ICP, this threshold should guarantee a CPP of 55 to 60, the minimum needed to prevent cerebral ischemic injury.

<p>WHEN PATIENT'S SYSTOLIC BP IS LESS THAN 90 MMHG AND EtCO2 IS GREATER THAN 20 MMHG; EPINEPHRINE DRIP Adults: 0.4 mg (0.4 ml, 1:1000) IVPB, infused in 100 ml normal saline</p> <p>**OR**</p> <p>0.2. mg (0.2 ml, 1:1000) IVPB, infused in 50 ml normal saline.</p> <p>RATE WILL BE CONTROLLED VIA DIAL-A-FLOW. INCREASE DOSING EVERY 2-3 MINUTES, TO MAX 10 MCG/MIN, TO ACHIEVE OR MAINTAIN SYSTOLIC BP OF 90 MMHG OR GREATER.</p> <ul style="list-style-type: none"> • Begin infusion at 1 mg/min (15 ml/hr) then increase to • 2 mcg/min (30 ml/hr) then increase to • 4 mcg/min (60 ml/hr) then increase to • 10 mcg/min (150 ml/hr) <p>IF MAX DOSING HAS BEEN REACHED AND A SYSTOLIC OF 90 MMHG HAS NOT BEEN ACHIEVED, BEGIN ADMINISTERING 0.01 MG (1ml) 1:100,000 (PUSH DOSE EPINEPHRINE) PRN EVERY 1-5 MINUTES IN ADDITION TO THE DRIP UNTIL A SYSTOLIC OF 90 OR GREATER IS ATTAINED.</p>	<p>WHEN PATIENT'S SYSTOLIC BP IS LESS THAN 90 MMHG AND/OR MAP < 65 MMHG. IF EtCO2 IS > 20 MMHG DURING THE CARDIAC ARREST, AN EPINEPHRINE INFUSION SHOULD BE PREPARED IN CASE OF ROSC. EPINEPHRINE DRIP Adults: 0.4 mg (0.4 ml, 1:1000) IVPB, infused in 100 ml normal saline</p> <p>**OR**</p> <p>0.2. mg (0.2 ml, 1:1000) IVPB, infused in 50 ml normal saline.</p> <p>RATE WILL BE CONTROLLED VIA DIAL-A-FLOW. INCREASE DOSING EVERY 2-3 MINUTES, TO MAX 10 MCG/MIN, TO ACHIEVE OR MAINTAIN SYSTOLIC BP OF 90 MMHG OR GREATER.</p> <ul style="list-style-type: none"> • Begin infusion at 1 mg/min (15 ml/hr) then increase to • 2 mcg/min (30 ml/hr) then increase to • 4 mcg/min (60 ml/hr) then increase to • 10 mcg/min (150 ml/hr) <p>IF MAX DOSING HAS BEEN REACHED AND A SYSTOLIC OF 90 MMHG HAS NOT BEEN ACHIEVED, BEGIN ADMINISTERING 0.01 MG (1ml) 1:100,000 (PUSH DOSE EPINEPHRINE) PRN EVERY 1-5 MINUTES IN ADDITION TO THE DRIP UNTIL A SYSTOLIC OF 90 OR GREATER IS ATTAINED. NORMAL SALINE SHOULD BE GIVEN CONCURRENTLY AS CLINICALLY INDICATED.</p>
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Update: REMSA Policy #4601 (Overdose / Adverse Reaction)

PROPOSAL:

- To permit REMSA-approved first response agency BLS personnel to carry and administer Naloxone utilizing AdaptPharma's pre-filled intranasal delivery device (4 mg / 0.1 mL).

PURPOSE:

- To increase the availability of Naloxone in the field in the event that no ALS apparatus or ambulance is readily available to respond to a medical air where Naloxone is needed and BLS personnel arrive on scene first.

View results

Respondent

1

Anonymous

28:37

Time to complete

1

Name and Title *

First and Last, Title within your agency / department

Cynthia Tait, RN, EMT-P, PHN, MPH

2

Agency / Department *

Center for Healthcare Education, Inc

Update: Pediatric Medication Administration Language

- **REMOVAL:** prescriptive language referring to REMSA Policy #4102 (Calculation Chart) for administration of medications to pediatric patients
- **(RE)INTRODUCTION:** specific dosing formulas (mg / kg, gm / kg, etc.) for administration of medications to pediatric patients
- **PURPOSE:** Providers in the field have grown accustomed to utilizing the Calculation Chart for dosing pediatric patients. Unfortunately, after review, the Chart has been found to contain many inaccuracies and inconsistencies in both dosing and volumes listed, as well as in the formulas used to get to those doses and volumes.
 - REMSA cannot knowingly publish a treatment protocol that directs providers to incorrectly dose patients when untoward patient outcomes could occur as a result.
 - Additionally, prescribing in protocol that providers must "See REMSA Policy #4102 (Calculation Chart) for patient specific dosage and volume" prohibits agencies that wish to use alternative pediatric treatment programs from being permitted to do so.
 - Identifying the PMDR explicitly as an educational / reference tool, along with the reintroduction of specific dosing calculations within each treatment protocol for pediatric patients, will help mitigate REMSA's liability while producing more accurate dosing for the pediatric population.

<p>• For continuous or recurrent tonic-clonic seizures unrelated to eclampsia</p> <p>Adults: Midazolam 2.5 mg (0.5 mL) slow IV/IO push. MAY REPEAT ONCE. FURTHER REPETITION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> <p>**OR**</p> <p>Midazolam 5 mg (1 mL) MAY REPEAT ONCE. FURTHER REPETITION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> <p>Pediatrics: See REMSA Policy #4102 (Calculation Chart) for patient specific dosage and volume. MAY REPEAT ONCE. FURTHER REPETITION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> <p>Changed to align with updated Calculation Chart / Pediatric Medication Dosing Resource</p>	<p>Current language in REMSA Policy #4105 (ALS Drug Index) and #4501 (Seizures)</p> <table border="1"> <tbody> <tr> <td data-bbox="409 611 634 688"> <p>Continuous or recurrent tonic-clonic seizures unrelated to eclampsia (4501)</p> </td> <td data-bbox="643 611 863 688"> <p>Adults: 2.5 mg (0.5 mL) slow IV/IO push. MAY REPEAT ONCE. FURTHER REPETITION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> </td> </tr> <tr> <td data-bbox="409 695 634 772"> <p>Patients requiring chemical restraint when physical restraints are ineffective and who pose an immediate danger to themselves or others, due to:</p> <ul style="list-style-type: none"> • Severe agitation / aggression OR • Severe distress, who are at potential risk for sudden death (4602) </td> <td data-bbox="643 695 863 772"> <p>**OR**</p> <p>5 mg (1 mL) IM/IN. MAY REPEAT ONCE. FURTHER REPETITION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> </td> </tr> <tr> <td data-bbox="409 779 634 877"></td> <td data-bbox="643 779 863 877"> <p>Pediatrics: 0.1 mg / kg slow IV/IO push. MAY REPEAT ONCE. FURTHER REPETITION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> <p>**OR**</p> <p>0.2 mg / kg IM/IN. MAY REPEAT ONCE. FURTHER REPETITION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> </td> </tr> </tbody> </table>	<p>Continuous or recurrent tonic-clonic seizures unrelated to eclampsia (4501)</p>	<p>Adults: 2.5 mg (0.5 mL) slow IV/IO push. MAY REPEAT ONCE. FURTHER REPETITION REQUIRES A BASE HOSPITAL ORDER (BHO).</p>	<p>Patients requiring chemical restraint when physical restraints are ineffective and who pose an immediate danger to themselves or others, due to:</p> <ul style="list-style-type: none"> • Severe agitation / aggression OR • Severe distress, who are at potential risk for sudden death (4602) 	<p>**OR**</p> <p>5 mg (1 mL) IM/IN. MAY REPEAT ONCE. FURTHER REPETITION REQUIRES A BASE HOSPITAL ORDER (BHO).</p>		<p>Pediatrics: 0.1 mg / kg slow IV/IO push. MAY REPEAT ONCE. FURTHER REPETITION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> <p>**OR**</p> <p>0.2 mg / kg IM/IN. MAY REPEAT ONCE. FURTHER REPETITION REQUIRES A BASE HOSPITAL ORDER (BHO).</p>
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May repeat once in what time period? Suggest "maybe repeat once after XXX minutes if seizure is refractive to first dose."

Medication Update: Activated Charcoal

REMOVAL: Activated Charcoal from -

- Drug and Equipment List
- ALS Drug Index
- Treatment Protocol Overdose / Adverse Reaction & Toxic Exposure, Inhalation, or Ingestion

PURPOSE:

- Difficulty procuring
- Low frequency / high risk medication
- Inappropriate / under- / unapproved utilization (given without BHO, for the wrong indication, or both)

Removal of Activated Charcoal from:

- Drug and Equipment List
- ALS Drug Index
- Treatment Protocol: Overdose / Adverse Reaction
- Treatment Protocol: Toxic Exposure, Inhalation, or Ingestion

	Count of Admins (#Medications:03)	Count of BHCs (#Disposition:007)
Overdose/Poisoning/Ingestion	540	340
Behavioral / psychiatric disorder (Mental disorder)	115	97
Altered mental status	5	2
General weakness	5	3
No Medical Complaint	3	3
Respiratory distress -other	3	2
Pain, non-traumatic body pain (acute)	2	2
Traumatic injury	2	2
Cardiac arrhythmia	2	1
Abnormal uterine/vaginal bleeding	1	1
Respiratory distress - Acute bronchospasm	1	1
Chest Pain - Suspected Cardiac	1	1
Nausea	1	1
Dizziness/Vertigo	1	1
Respiratory distress-Pulmonary edema/CHF	1	1
Abdominal Pain/Problems (GI/GU)	1	1
Upper GI bleed/vomiting blood	1	1
Headache non-traumatic	1	1
Hypoglycemia (high blood sugar)	1	1
Grand Total	887	424

Reason: In 2021 & 2022 combined, there were approximately 350,000 medication administrations total (all meds)

- Activated Charcoal administration was documented 687 times (approximately 0.2% of all med administrations)
- 62.96% of the time was it given for the appropriate indication.
- 61.7% of the time it was given after receiving a BHO.

agree with removal

Medication Update: Adenosine

REMOVAL: BHO requirement prior to initial and repeat administrations for adults and pediatrics

PURPOSE: Shortest half-life of any permitted medication in Riverside County and can, in most instances, be drawn up and administered before the order can be obtained. Waiting to give it could, potentially, lead to untoward patient outcomes due to a delay in appropriate care.

Current language →

Updated language →

INDICATION	DOSAGE/ROUTE
Symptomatic supraventricular tachycardia (SVT) with Pulses (4403)	12 mg (4 mL) rapid IV/IO push. Follow immediately with 20 mL normal saline rapid IV/IO push. REPEAT/REPEAT REQUIRES A BASE HOSPITAL ORDER (BHO). INITIAL AND REPEAT PEDIATRIC ADMINISTRATION REQUIRES A BASE HOSPITAL ORDER (BHO). See REMSA Policy #4102 (Calculation Chart) for patient specific dosage and volume.
Symptomatic supraventricular tachycardia (SVT) with Pulses (4403)	Adults: 12 mg (4 mL) rapid IV/IO push. Follow immediately with 20 mL normal saline rapid IV/IO push. MAY REPEAT ONCE. Pediatrics: 0.2 mg / kg rapid IV/IO push. Follow immediately with 20 mL normal saline rapid IV/IO push. MAY REPEAT ONCE.

Purpose: Adenosine has the shortest half-life of any permitted medication in Riverside County and can, in most instances, be drawn up and administered before the order can be obtained. Waiting to give it could, potentially, lead to untoward patient outcomes due to a delay in appropriate care.

May repeat once if SVT rhythm does not convert - no delay on repeating this medication

Medication Update: Calcium Chloride

CHANGE: Change in route of administration for pediatrics to align with adults

PURPOSE: CaCl₂ can cause hypotension, syncope and significant venous irritation. Admin by IVPB is required for all patients with pulses. IV / IO administration is permitted in cardiac arrest scenarios only.

Current route is IV only

Standard Medications	Grey 3-5 kg	Pink 6-7 kg	Red 8-9 kg	Purple 10-11 kg	Yellow 12-14 kg	White 15-18 kg	Blue 19-23 kg	Orange 24-29 kg	Green 30-36 kg	Adult
Calcium Chloride 10%	IV 1g 10 mL	IV 80 mg 0.8 mL	IV 130 mg 1.3 mL	IV 170 mg 1.7 mL	IV 200 mg 2 mL	IV 260 mg 2.6 mL	IV 330 mg 3.3 mL	IV 420 mg 4.2 mL	IV 540 mg 5.4 mL	IV 660 mg 6.6 mL

Updated routes

Standard Medications	Grey 4.5 kg	Pink 5.7 kg	Red 6.9 kg	Purple 10.12 kg	Yellow 12.14 kg	White 15.16 kg	Blue 17.21 kg	Orange 21.29 kg	Green 32.37 kg	Light 40.42 kg	Teal 47.49 kg	Magenta 46.49 kg
Calcium Chloride 10%	IVPB 90 mg 0.9 mL	IVPB 120 mg 1.2 mL	IVPB 170 mg 1.7 mL	IVPB 220 mg 2.2 mL	IVPB 260 mg 2.6 mL	IVPB 310 mg 3.1 mL	IVPB 380 mg 3.8 mL	IVPB 520 mg 5.2 mL	IVPB 690 mg 6.9 mL	IVPB 820 mg 8.2 mL	IVPB 980 mg 9.8 mL	IVPB 1,150 mg 11.5 mL
Calcium Chloride 10%	IV/IO 90 mg 0.9 mL	IV/IO 120 mg 1.2 mL	IV/IO 170 mg 1.7 mL	IV/IO 220 mg 2.2 mL	IV/IO 260 mg 2.6 mL	IV/IO 310 mg 3.1 mL	IV/IO 380 mg 3.8 mL	IV/IO 520 mg 5.2 mL	IV/IO 690 mg 6.9 mL	IV/IO 820 mg 8.2 mL	IV/IO 980 mg 9.8 mL	IV/IO 1,150 mg 11.5 mL

Purpose: CaCl₂ can cause hypotension, syncope and significant venous irritation. Admin by IVPB is required for all patients with pulses.

I have no expertise with this medication for pediatrics - no comment

Medication Update: Dextrose

CHANGE: Removal of D25% and D50% as concentrations for admin to adults and pediatrics.

- D25% and D50% can still be carried; however, they must be diluted to D10% prior to administration.

PURPOSE: D10% is just as effective as D50% in reversing hypoglycemic episodes but has been shown to cause less frequent instances of reflex hyperglycemia, extravasation injury, direct toxic effects of hypertonic dextrose, and potential neurotoxic effects of acute hyperglycemia as D50% administration does. Additionally, one concentration standardizes what can, and will, be administered in the field.

Current language

INDICATIONS	DOSAGE/ROUTE
Symptomatic hypoglycemia with blood glucose less than 80 mg/dL in adults or 70 mg/dL in pediatrics (4201)	Adults: 25 gm (D10%, D25% or D50%) IV/IO bolus or drip. MAY REPEAT PRN. Pediatrics: See REMSA Policy #4102 (Calculation Chart) for patient specific dosage and volume. MAY REPEAT PRN.

Updated language

INDICATIONS	DOSAGE/ROUTE
Symptomatic hypoglycemia with blood glucose less than 80 mg/dL in adults or 70 mg/dL in pediatrics (4201)	Adults: 25 gm (D10%) IV/IO bolus or drip. MAY REPEAT PRN. Pediatrics: 0.5 mg/kg (D10%) slow IV push. MAY REPEAT PRN.

Purpose: multiple studies and trials have shown that the administration of D10% is just as effective as D50% in reversing hypoglycemic episodes (Hurtubise et al., 2021); D50%, however, has been found to cause significantly higher blood glucose concentrations both in the prehospital setting and upon hospital arrival (Weant et al., 2019) and may also have theoretical risks including extravasation injury, direct toxic effects of hypertonic dextrose, and potential neurotoxic effects of acute hyperglycemia (Hern et al., 2016). Additionally, one concentration standardizes what can, and will, be administered in the field.

Concur with study on D10% AND UPDATED LANGUAGE

Medication Update: Oral Glucose

CHANGE: Administration to patients weighing less than 10 kg will change from "BHO" to "**NOT PERMITTED.**"

PURPOSE:

- Dosing oral glucose accurately can be difficult.
- Administration of oral glucose in the very young (i.e., less than 1yo population) is a choking hazard.

Purpose:

*Dosing oral glucose accurately can be difficult.

*Administration of oral glucose in the very young (i.e., less than 1yo population) is a choking hazard.

Current language →

INDICATIONS	DOSAGE/ROUTE
BLS care providers: Symptomatic hypoglycemia with blood glucose less than 80 mg/dL in adults or 70 mg/dL in pediatrics (4201)	MAY ONLY BE ADMINISTERED TO ALERT, COOPERATIVE PATIENTS WITH AN INTACT GAG REFLEX. Adults: 15 gm (1 tube) PO. MAY REPEAT PRN. Pediatrics: See REMSA Policy #4102 (Calculation Chart) for patient specific dosage and volume. MAY REPEAT PRN.
ALS care providers: Symptomatic hypoglycemia with blood glucose less than 80 mg/dL in adults or 70 mg/dL in pediatrics. WHEN UNABLE TO ADMINISTER DEXTROSE OR GLUCAGON (4201)	Adults: 15 gm (1 tube) PO. MAY REPEAT PRN. Pediatrics: See REMSA Policy #4102 (Calculation Chart) for patient specific dosage and volume. MAY REPEAT PRN.

New language →

INDICATIONS	DOSAGE/ROUTE
BLS care providers: Symptomatic hypoglycemia with blood glucose less than 80 mg/dL in adults or 70 mg/dL in pediatrics (4201)	MAY ONLY BE ADMINISTERED TO ALERT, COOPERATIVE PATIENTS WITH AN INTACT GAG REFLEX. Adults: 15 gm (1 tube) PO. MAY REPEAT PRN. Pediatrics: <ul style="list-style-type: none"> • NOT PERMITTED FOR PATIENTS WEIGHING LESS THAN 10 kg. • Patients weighing 10 – 29 kg: as tolerated, PO. MAY REPEAT PRN. • Patients weighing 30 kg or greater: 15 gm (1 tube) PO. MAY REPEAT PRN.
ALS care providers: Symptomatic hypoglycemia with blood glucose less than 80 mg/dL in adults or 70 mg/dL in pediatrics. WHEN UNABLE TO ADMINISTER DEXTROSE OR GLUCAGON (4201)	Adults: 15 gm (1 tube) PO. MAY REPEAT PRN. Pediatrics: See REMSA Policy #4102 (Calculation Chart) for patient specific dosage and volume. MAY REPEAT PRN.

70 mg/dl is not life threatening - why this high threshold for pediatrics?

Medication Update: Glucagon

CHANGE: Dosing schedule modification for pediatrics only & new formula for beta blocker / CaCl2 blocker overdose

PURPOSE: to align with Rady Children's Glucagon admin protocol / pharmacist recommended dosing

INDICATIONS	DOSAGE/ROUTE	
Symptomatic hypoglycemia with blood glucose less than 80 mg/dL in adults or 70 mg/dL in pediatrics. WHEN UNABLE TO ADMINISTER IV/IO DEXTROSE (4201)	Adults: 1 mg (1 mL) IV/IM. FURTHER REPEATS REQUIRES A BASE HOSPITAL ORDER (BHO). Pediatrics: For patients weighing 21 kg or less: 0.5 mg (0.5 mL). For patients weighing 22 kg or more: 1 mg (1 mL). FURTHER REPEATS REQUIRES A BASE HOSPITAL ORDER (BHO).	<p>NOTE: no change in adult dosing but a new row is required to separate 4201 language and 4406 language because of the BHO requirement</p> <p>Updated language</p> <p>New dosing required for beta blocker / CaCl₂ blocker overdose</p>
Suspected esophageal food impaction (4406)	Adults: 1 mg (1 mL) IV/IM. Pediatrics: For patients weighing 21 kg or less: 0.5 mg (0.5 mL). For patients weighing 22 kg or more: 1 mg (1 mL).	
Suspected beta blocker or calcium channel blocker overdose (4601)	Adults: 1 mg (1 mL) IV/IO/IM. Pediatrics: 50 mcg / kg IV/IO/IM. MAX SINGLE DOSE IS 1 MG.	



70 mg/dl is not life threatening - why this high threshold for pediatrics?

Medication Update: Lidocaine

CHANGE: Adult dosing

- FROM: 1-1.5 mg / kg with repeat at half the dose
- TO: 1 mg / kg with repeat at 0.5 mg / kg

PURPOSE: to create a uniform dose for all adults

<p>Current language </p> <p>Purpose: To create a uniform dose for all adults</p> <p>Updated language </p>	<p>INDICATIONS</p> <p>Symptomatic tachycardia with pulses (4403) Cardiac arrest with VF or VT <u>WHEN AMIODARONE IS UNAVAILABLE</u> (4405)</p>	<p>INITIAL AND REPEAT DOSES FOR ADULTS AND PEDIATRICS REQUIRES A BASE HOSPITAL ORDER (BHO)</p> <p>Adults: 1-1.5 mg / kg slow IV/IO push followed by the second dose (half of the initial dose) 8-10 minutes later, to a max of 3 mg / kg.</p> <p>Pediatrics: See REMSA Policy #4102 (Calculation Chart) for patient specific dosage and volume.</p>
	<p>INDICATIONS</p> <p>Symptomatic tachycardia with pulses (4403) Cardiac arrest with VF or VT <u>WHEN AMIODARONE IS UNAVAILABLE</u> (4405)</p>	<p>INITIAL AND REPEAT DOSES FOR ADULTS AND PEDIATRICS REQUIRES A BASE HOSPITAL ORDER (BHO)</p> <p>Adults: 1 mg / kg slow IV/IO push followed by a second dose (0.5 mg / kg) 8-10 minutes later, to a max of 3 mg / kg.</p> <p>Pediatrics: Initial and repeat dose: 1 mg / kg slow IV/IO push followed by a second dose 8-10 minutes later.</p>

Lidocaine should be 1 Mg/KG for all ages


Medication Update: Ondansetron ODT

CHANGE: dosing schedule modification for pediatrics only

- FROM: 1-1.5 mg / kg with repeat at half the dose
- TO: 1 mg / kg with repeat at 0.5 mg / kg

PURPOSE:

- Administration of Zofran ODT in the very young (i.e., less than 1yo population) is a choking hazard.
- To align with Rady Children's Ondansetron ODT admin protocol / pharmacist recommended dosing

<p>Current language </p> <p>Purpose: *Administration of Zofran ODT in the very young (i.e., less than 1yo population) is a choking hazard. *To align with Rady Children's Ondansetron ODT admin protocol / pharmacist recommended dosing</p>	<p>INDICATIONS</p> <p>Nausea and / or vomiting (4203)</p>	<p>DOSAGE/ROUTE</p> <p>Adults: 4 mg PO (1 ODT). MAY REPEAT TWICE TO MAX 12 MG. FURTHER REPEATION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> <p>**Q6**</p> <p>2 mL IV solution slow IV/IO push or IM. MAY REPEAT TWICE TO MAX 12 MG. FURTHER REPEATION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> <p>Pediatrics: See REMSA Policy #4102 (Calculation Chart) for patient specific dosage and volume. MAY REPEAT TWICE. FURTHER REPEATION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> <p>ADMINISTRATION OF ONDANSETRON ODT TO PEDIATRIC PATIENTS WEIGHING LESS THAN 9 KG (<20 LBS) REQUIRES A BASE HOSPITAL ORDER (BHO)</p>
	<p>INDICATIONS</p> <p>Nausea and / or vomiting (4203)</p>	<p>DOSAGE/ROUTE</p> <p>Adults: 4 mg PO (1 ODT). MAY REPEAT TWICE TO MAX 12 MG. FURTHER REPEATION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> <p>**Q6**</p> <p>2 mL IV solution slow IV/IO push or IM. MAY REPEAT TWICE TO MAX 12 MG. FURTHER REPEATION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> <p>Pediatrics: NOT PERMITTED FOR PATIENTS WEIGHING LESS THAN 10 KG. Patients weighing 10 kg or greater: 4 mg PO (1 ODT). MAY REPEAT TWICE TO MAX 12 MG.</p> <p>**Q6**</p> <p>0.1 mg / kg IV solution slow IV/IO push or IM. MAY REPEAT TWICE. FURTHER REPEATION REQUIRES A BASE HOSPITAL ORDER (BHO).</p>

Update: REMSA Policy #1105 (Paramedic Internship)

Includes new definitions, eligibility criteria, paramedic student placement requirements and documentation requirements.

See email attachment (doc titled: "1105 v2.5")

Update: REMSA Policy #3308 (ALS to BLS Downgrade)

Included new eligibility criteria based on:

- Primary / Secondary impression
- Vitals Signs
- Pediatric Patients

See email attachment (doc titled: "3308d v3")

Update: REMSA Policy #4101 (Introduction to Treatment Protocols)

CHANGE: Update language to identify the Pediatric Medication Dosing Resource as an optional reference tool

The image shows a comparison of two versions of text. The top version, labeled 'Current language' with a red arrow, reads: 'Standing orders: REMSA treatment protocols include standing orders for medications and procedures, which apply to both adult and pediatric patients. Medications, concentrations, dosages, volumes, energy settings and advanced airway sizes for pediatric patients can be found in Policy #4102 (REMSA Calculation Chart). Adult medication dosing and energy settings are embedded in each associated treatment protocol.' The bottom version, labeled 'Updated language' with a green arrow, reads: 'Standing orders: REMSA treatment protocols include standing orders for medications and procedures, which apply to both adult and pediatric patients. Medication dosing for adult and pediatric patients, and energy settings for adults, are embedded in each associated treatment protocol. Indications, medications, and concentrations, as well as references to appropriate dosages, volumes, energy settings, and advanced airway sizes for pediatric patients can be found in the Pediatric Medication Dosing Resource (here: XXX)'. The updated version uses blue highlights for the new phrasing.

Update: REMSA Policy #4405 (Cardiac Arrest)


- **Change in Epi Drip inclusion criteria)**

PROPOSAL:

- An emphasis should be placed on prepping an Epinephrine Infusion if the EtCo2 Value is above 20 mmHg at ANY time during the arrest so if ROSC is achieved and Hypotension exists, treatment can occur without delay.
- Hypotension be defined as SBP less than 90 mmHg and / or MAP less than 65 mmHg and the end goal to be MAP greater than 65 mmHg.

PURPOSE:

- Current available RHeart Data suggests that our average initial EtCO2 value in the patient subset where ROSC is obtained, for any length of time, is 27 mmHg during the onset of the arrest management. Yet, 48.70% of those patients (n= 347 at time of proposal) experience hypotension or re-arrest during the encounter.
- The relationship between MAP and CPP drives resuscitation guidelines to recommend maintaining a MAP greater than or equal to 65 mm Hg. Assuming a normal ICP, this threshold should guarantee a CPP of 55 to 60, the minimum needed to prevent cerebral ischemic injury.

<p>WHEN PATIENT'S SYSTOLIC BP IS LESS THAN 90 MMHG AND EtCO2 IS GREATER THAN 20 MMHG; EPINEPHRINE DRIP Adults: 0.4 mg (0.4 ml, 1:1000) IVPB, infused in 100 ml normal saline</p> <p>**OR**</p> <p>0.2. mg (0.2 ml, 1:1000) IVPB, infused in 50 ml normal saline.</p> <p>RATE WILL BE CONTROLLED VIA DIAL-A-FLOW. INCREASE DOSING EVERY 2-3 MINUTES, TO MAX 10 MCG/MIN, TO ACHIEVE OR MAINTAIN SYSTOLIC BP OF 90 MMHG OR GREATER.</p> <ul style="list-style-type: none"> • Begin infusion at 1 mg/min (15 ml/hr) then increase to • 2 mcg/min (30 ml/hr) then increase to • 4 mcg/min (60 ml/hr) then increase to • 10 mcg/min (150 ml/hr) <p>IF MAX DOSING HAS BEEN REACHED AND A SYSTOLIC OF 90 MMHG HAS NOT BEEN ACHIEVED, BEGIN ADMINISTERING 0.01 MG (1ml) 1:100,000 (PUSH DOSE EPINEPHRINE) PRN EVERY 1-5 MINUTES IN ADDITION TO THE DRIP UNTIL A SYSTOLIC OF 90 OR GREATER IS ATTAINED.</p>		<p>WHEN PATIENT'S SYSTOLIC BP IS LESS THAN 90 MMHG AND/OR MAP < 65 MMHG. IF EtCO2 IS > 20 MMHG DURING THE CARDIAC ARREST, AN EPINEPHRINE INFUSION SHOULD BE PREPARED IN CASE OF ROSC. EPINEPHRINE DRIP Adults: 0.4 mg (0.4 ml, 1:1000) IVPB, infused in 100 ml normal saline</p> <p>**OR**</p> <p>0.2. mg (0.2 ml, 1:1000) IVPB, infused in 50 ml normal saline.</p> <p>RATE WILL BE CONTROLLED VIA DIAL-A-FLOW. INCREASE DOSING EVERY 2-3 MINUTES, TO MAX 10 MCG/MIN, TO ACHIEVE OR MAINTAIN SYSTOLIC BP OF 90 MMHG OR GREATER.</p> <ul style="list-style-type: none"> • Begin infusion at 1 mg/min (15 ml/hr) then increase to • 2 mcg/min (30 ml/hr) then increase to • 4 mcg/min (60 ml/hr) then increase to • 10 mcg/min (150 ml/hr) <p>IF MAX DOSING HAS BEEN REACHED AND A SYSTOLIC OF 90 MMHG HAS NOT BEEN ACHIEVED, BEGIN ADMINISTERING 0.01 MG (1ml) 1:100,000 (PUSH DOSE EPINEPHRINE) PRN EVERY 1-5 MINUTES IN ADDITION TO THE DRIP UNTIL A SYSTOLIC OF 90 OR GREATER IS ATTAINED. NORMAL SALINE SHOULD BE GIVEN CONCURRENTLY AS CLINICALLY INDICATED.</p>
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Systolic BP of 90mmHg or greater is generic and invalid. What is the source of the MAP? Handheld BP which requires the provider to do a mathematical calculation or machine BP?

Update: REMSA Policy #4601 (Overdose / Adverse Reaction)

PROPOSAL:

- To permit REMSA-approved first response agency BLS personnel to carry and administer Naloxone utilizing AdaptPharma's pre-filled intranasal delivery device (4 mg / 0.1 mL).

PURPOSE:

- To increase the availability of Naloxone in the field in the event that no ALS apparatus or ambulance is readily available to respond to a medical air where Naloxone is needed and BLS personnel arrive on scene first.

agree

View results

Respondent

2

Anonymous

14:28

Time to complete

1

Name and Title *

First and Last, Title within your agency / department

Holly Anderson- EMS Specialist, Riverside County Fire Dept.

2

Agency / Department *

Riverside County Fire Dept.

Update: Pediatric Medication Administration Language

- **REMOVAL:** prescriptive language referring to REMSA Policy #4102 (Calculation Chart) for administration of medications to pediatric patients
- **(RE)INTRODUCTION:** specific dosing formulas (mg / kg, gm / kg, etc.) for administration of medications to pediatric patients
- **PURPOSE:** Providers in the field have grown accustomed to utilizing the Calculation Chart for dosing pediatric patients. Unfortunately, after review, the Chart has been found to contain many inaccuracies and inconsistencies in both dosing and volumes listed, as well as in the formulas used to get to those doses and volumes.
 - REMSA cannot knowingly publish a treatment protocol that directs providers to incorrectly dose patients when untoward patient outcomes could occur as a result.
 - Additionally, prescribing in protocol that providers must “See REMSA Policy #4102 (Calculation Chart) for patient specific dosage and volume” prohibits agencies that wish to use alternative pediatric treatment programs from being permitted to do so.
 - Identifying the PMDR explicitly as an educational / reference tool, along with the reintroduction of specific dosing calculations within each treatment protocol for pediatric patients, will help mitigate REMSA’s liability while producing more accurate dosing for the pediatric population.

• For continuous or recurrent tonic-clonic seizures unrelated to eclampsia
 Adults: Midazolam 2.5 mg (0.5 mL) slow IV/IO push. **MAY REPEAT ONCE. FURTHER REPEATITION REQUIRES A BASE HOSPITAL ORDER (BHO).**

****OR****

Midazolam 5 mg (1 mL) **MAY REPEAT ONCE. FURTHER REPEATITION REQUIRES A BASE HOSPITAL ORDER (BHO).**

Pediatrics: See REMSA Policy #4102 (Calculation Chart) for patient specific dosage and volume. **MAY REPEAT ONCE. FURTHER REPEATITION REQUIRES A BASE HOSPITAL ORDER (BHO).**

↓

Changed to align with updated Calculation Chart / Pediatric Medication Dosing Resource

Current language in REMSA Policy #4105 (ALS Drug Index) and #4501 (Seizures)

Continuous or recurrent tonic-clonic seizures unrelated to eclampsia (4501) Patients requiring chemical restraint when physical restraints are ineffective and who pose an immediate danger to themselves or others, due to: <ul style="list-style-type: none"> • Severe agitation / aggression OR • Severe distress, who are at potential risk for sudden death (4602) 	Adults: 2.5 mg (0.5 mL) slow IV/IO push. MAY REPEAT ONCE. FURTHER REPEATITION REQUIRES A BASE HOSPITAL ORDER (BHO). **OR** 5 mg (1 mL) IM/IN. MAY REPEAT ONCE. FURTHER REPEATITION REQUIRES A BASE HOSPITAL ORDER (BHO). Pediatrics: 0.1 mg / kg slow IV/IO push. MAY REPEAT ONCE. FURTHER REPEATITION REQUIRES A BASE HOSPITAL ORDER (BHO). **OR** 0.2 mg / kg IM/IN. MAY REPEAT ONCE. FURTHER REPEATITION REQUIRES A BASE HOSPITAL ORDER (BHO).
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No comment

Medication Update: Activated Charcoal

REMOVAL: Activated Charcoal from -

- Drug and Equipment List
- ALS Drug Index
- Treatment Protocol Overdose / Adverse Reaction & Toxic Exposure, Inhalation, or Ingestion

PURPOSE:

- Difficulty procuring
- Low frequency / high risk medication
- Inappropriate / under- / unapproved utilization (given without BHO, for the wrong indication, or both)

Removal of Activated Charcoal from:

- Drug and Equipment List
- ALS Drug Index
- Treatment Protocol: Overdose / Adverse Reaction
- Treatment Protocol: Toxic Exposure, Inhalation, or Ingestion

	Count of Admins (eMedications.03)	Count of BHCs (eDisposition.007)
Overdose/Poisoning/Ingestion	540	340
Behavioral / psychiatric disorder (Mental disorder)	115	97
Altered mental status	5	2
General weakness	5	3
No Medical Complaint	3	3
Respiratory distress -other	3	2
Pain, non-traumatic body pain (acute)	2	2
Traumatic injury	2	2
Cardiac arrhythmia	2	1
Abnormal uterine/vaginal bleeding	1	1
Respiratory distress - Acute bronchospasm	1	1
Chest Pain - Suspected Cardiac	1	1
Nausea	1	1
Dizziness/Vertigo	1	1
Respiratory distress-Pulmonary edema/CHF	1	1
Abdominal Pain/Problems (GI/GU)	1	1
Upper GI bleed/vomiting blood	1	1
Headache non-traumatic	1	1
Hypoglycemia (high blood sugar)	1	1
Grand Total	887	424

Reason: In 2021 & 2022 combined, there were approximately 350,000 medication administrations total (all meds)

- Activated Charcoal administration was documented 687 times (approximately 0.2% of all med administrations)
- 62.96% of the time was it given for the appropriate indication.
- 61.7% of the time it was given after receiving a BHO.

No comment

Medication Update: Adenosine

REMOVAL: BHO requirement prior to initial and repeat administrations for adults and pediatrics

PURPOSE: Shortest half-life of any permitted medication in Riverside County and can, in most instances, be drawn up and administered before the order can be obtained. Waiting to give it could, potentially, lead to untoward patient outcomes due to a delay in appropriate care.

Current language →

INDICATION	DOSAGE/ROUTE
Symptomatic supraventricular tachycardia (SVT) with Pulses (4403)	12 mg (4 mL) rapid IV/IO push. Follow immediately with 20 mL normal saline rapid IV/IO push. FURTHER REPEITION REQUIRES A BASE HOSPITAL ORDER (BHO). INITIAL AND REPEAT PEDIATRIC ADMINISTRATION REQUIRES A BASE HOSPITAL ORDER (BHO). See RENSA Policy #4102 (Calculation Chart) for patient specific dosage and volume.

Updated language →

INDICATION	DOSAGE/ROUTE
Symptomatic supraventricular tachycardia (SVT) with Pulses (4403)	Adults: 12 mg (4 mL) rapid IV/IO push. Follow immediately with 20 mL normal saline rapid IV/IO push. MAY REPEAT ONCE. Pediatrics: 0.2 mg / kg rapid IV/IO push. Follow immediately with 20 mL normal saline rapid IV/IO push. MAY REPEAT ONCE.

Purpose: Adenosine has the shortest half-life of any permitted medication in Riverside County and can, in most instances, be drawn up and administered before the order can be obtained. Waiting to give it could, potentially, lead to untoward patient outcomes due to a delay in appropriate care.

No comment

Medication Update: Calcium Chloride

CHANGE: Change in route of administration for pediatrics to align with adults

PURPOSE: CaCl₂ can cause hypotension, syncope and significant venous irritation. Admin by IVPB is required for all patients with pulses. IV / IO administration is permitted in cardiac arrest scenarios only.

Current route is IV only

Standard Medications	Grey 3-5 kg	Pink 6-7 kg	Red 8-9 kg	Purple 10-11 kg	Yellow 12-14 kg	White 15-18 kg	Blue 19-23 kg	Orange 24-29 kg	Green 30-36 kg	Adult	
Calcium Chloride 10%	IV 1 g 10 mL	IV 80 mg 0.8 mL	IV 130 mg 1.3 mL	IV 170 mg 1.7 mL	IV 200 mg 2 mL	IV 260 mg 2.6 mL	IV 330 mg 3.3 mL	IV 420 mg 4.2 mL	IV 540 mg 5.4 mL	IV 660 mg 6.6 mL	IV 1 g 10 mL

Updated routes

Standard Medications	Grey 4-5 kg	Pink 5-7 kg	Red 8-9 kg	Purple 10-11 kg	Yellow 12-14 kg	White 15-18 kg	Blue 17-21 kg	Orange 21-29 kg	Green 32-37 kg	Gold 40-42 kg	Platinum 47-49 kg	Mercury 46-49 kg
Calcium Chloride 10%	IVPB 90 mg 0.9 mL	IVPB 120 mg 1.2 mL	IVPB 170 mg 1.7 mL	IVPB 220 mg 2.2 mL	IVPB 260 mg 2.6 mL	IVPB 330 mg 3.3 mL	IVPB 380 mg 3.8 mL	IVPB 520 mg 5.2 mL	IVPB 690 mg 6.9 mL	IVPB 820 mg 8.2 mL	IVPB 880 mg 8.8 mL	IVPB 1.55 g 15.5 mL

Purpose: CaCl₂ can cause hypotension, syncope and significant venous irritation. Admin by IVPB is required for all patients with pulses.

No comment

Medication Update: Dextrose

CHANGE: Removal of D25% and D50% as concentrations for admin to adults and pediatrics.

- D25% and D50% can still be carried; however, they must be diluted to D10% prior to administration.

PURPOSE: D10% is just as effective as D50% in reversing hypoglycemic episodes but has been shown to cause less frequent instances of reflex hyperglycemia, extravasation injury, direct toxic effects of hypertonic dextrose, and potential neurotoxic effects of acute hyperglycemia as D50% administration does. Additionally, one concentration standardizes what can, and will, be administered in the field.

Current language

INDICATIONS	DOSAGE/ROUTE
Symptomatic hypoglycemia with blood glucose less than 80 mg/dL in adults or 70 mg/dL in pediatrics (4201)	Adults: 25 gm (D10%, D25% or D50%) IV/IO bolus or drip. MAY REPEAT PRN. Pediatrics: See REMSA Policy #4102 (Calculation Chart) for patient specific dosage and volume. MAY REPEAT PRN.

Updated language

INDICATIONS	DOSAGE/ROUTE
Symptomatic hypoglycemia with blood glucose less than 80 mg/dL in adults or 70 mg/dL in pediatrics (4201)	Adults: 25 gm (D10%) IV/IO bolus or drip. MAY REPEAT PRN. Pediatrics: 0.5 mg/kg (D10%) slow IV push. MAY REPEAT PRN.

Purpose: multiple studies and trials have shown that the administration of D10% is just as effective as D50% in reversing hypoglycemic episodes (Hurtubise et al., 2021); D50%, however, has been found to cause significantly higher blood glucose concentrations both in the prehospital setting and upon hospital arrival (Weant et al., 2019) and may also have theoretical risks including extravasation injury, direct toxic effects of hypertonic dextrose, and potential neurotoxic effects of acute hyperglycemia (Hern et al., 2016). Additionally, one concentration standardizes what can, and will, be administered in the field.

No comment

Medication Update: Oral Glucose

CHANGE: Administration to patients weighing less than 10 kg will change from "BHO" to "**NOT PERMITTED.**"

PURPOSE:

- Dosing oral glucose accurately can be difficult.
- Administration of oral glucose in the very young (i.e., less than 1yo population) is a choking hazard.

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 *Administration of oral glucose in the very young (i.e., less than 1yo population) is a choking hazard.

Current language →

→ New language

INDICATIONS	DOSAGE/ROUTE
BLS care providers: Symptomatic hypoglycemia with blood glucose less than 80 mg/dL in adults or 70 mg/dL in pediatrics (4201)	MAY ONLY BE ADMINISTERED TO ALERT, COOPERATIVE PATIENTS WITH AN INTACT GAG REFLEX. Adults: 15 gm (1 tube) PO. MAY REPEAT PRN. Pediatrics: See REMSA Policy #4102 (Calculation Chart) for patient specific dosage and volume. MAY REPEAT PRN.
BLS care providers: Symptomatic hypoglycemia with blood glucose less than 80 mg/dL in adults or 70 mg/dL in pediatrics WHEN UNABLE TO ADMINISTER DEXTROSE OR GLUCAGON (4201)	MAY ONLY BE ADMINISTERED TO ALERT, COOPERATIVE PATIENTS WITH AN INTACT GAG REFLEX. Adults: 15 gm (1 tube) PO. MAY REPEAT PRN. Pediatrics: • NOT PERMITTED FOR PATIENTS WEIGHING LESS THAN 10 kg. • Patients weighing 10 – 29 kg: as tolerated, PO. MAY REPEAT PRN. • Patients weighing 30 kg or greater: 15 gm (1 tube) PO. MAY REPEAT PRN.

No comment

Medication Update: Glucagon

CHANGE: Dosing schedule modification for pediatrics only & new formula for beta blocker / CaCl2 blocker overdose

PURPOSE: to align with Rady Children's Glucagon admin protocol / pharmacist recommended dosing

INDICATIONS	DOSAGE/ROUTE
Symptomatic hypoglycemia with blood glucose less than 80 mg/dL in adults or 70 mg/dL in pediatrics WHEN UNABLE TO ADMINISTER IV/IO DEXTROSE (4201)	Adults: 1 mg (1 mL) IV/IM. FURTHER REPEATS REQUIRES A BASE HOSPITAL ORDER (BHO). Pediatrics: For patients weighing 21 kg or less: 0.5 mg (0.5 mL). For patients weighing 22 kg or more: 1 mg (1 mL). FURTHER REPEATS REQUIRES A BASE HOSPITAL ORDER (BHO).
Suspected esophageal food impaction (4406)	Adults: 1 mg (1 mL) IV/IM. Pediatrics: For patients weighing 21 kg or less: 0.5 mg (0.5 mL). For patients weighing 22 kg or more: 1 mg (1 mL).
Suspected beta blocker or calcium channel blocker overdose (4601)	INITIAL AND REPEAT DOSES FOR ADULTS AND PEDIATRICS REQUIRES A BASE HOSPITAL ORDER (BHO) Adults: 1 mg (1 mL) IV/IO/IM. Pediatrics: 50 mcg / kg IV/IO/IM. MAX SINGLE DOSE IS 1 MG.

NOTE: no change in adult dosing but a new row is required to separate 4201 language and 4406 language because of the BHO requirement

Updated language

New dosing required for beta blocker / CaCl₂ blocker overdose



No comment

Medication Update: Lidocaine

CHANGE: Adult dosing

- FROM: 1-1.5 mg / kg with repeat at half the dose
- TO: 1 mg / kg with repeat at 0.5 mg / kg

PURPOSE: to create a uniform dose for all adults

<p>Current language </p> <p>Purpose: To create a uniform dose for all adults</p> <p>Updated language </p>	<table border="1"> <tr> <th>INDICATIONS</th> <th>DOSAGE/ROUTE</th> </tr> <tr> <td>Symptomatic tachycardia with pulses (4403) Cardiac arrest with VF or VT <u>WHEN AMIODARONE IS UNAVAILABLE</u> (4405)</td> <td> <p>INITIAL AND REPEAT DOSES FOR ADULTS AND PEDIATRICS REQUIRES A BASE HOSPITAL ORDER (BHO)</p> <p>Adults: 1-1.5 mg / kg slow IV/IO push followed by the second dose (half of the initial dose) 8-10 minutes later, to a max of 3 mg / kg.</p> <p>Pediatrics: See REMSA Policy #4102 (Calculation Chart) for patient specific dosage and volume.</p> </td> </tr> </table>	INDICATIONS	DOSAGE/ROUTE	Symptomatic tachycardia with pulses (4403) Cardiac arrest with VF or VT <u>WHEN AMIODARONE IS UNAVAILABLE</u> (4405)	<p>INITIAL AND REPEAT DOSES FOR ADULTS AND PEDIATRICS REQUIRES A BASE HOSPITAL ORDER (BHO)</p> <p>Adults: 1-1.5 mg / kg slow IV/IO push followed by the second dose (half of the initial dose) 8-10 minutes later, to a max of 3 mg / kg.</p> <p>Pediatrics: See REMSA Policy #4102 (Calculation Chart) for patient specific dosage and volume.</p>
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No comment



Medication Update: Ondansetron ODT

CHANGE: dosing schedule modification for pediatrics only

- FROM: 1-1.5 mg / kg with repeat at half the dose
- TO: 1 mg / kg with repeat at 0.5 mg / kg

PURPOSE:

- Administration of Zofran ODT in the very young (i.e., less than 1yo population) is a choking hazard.
- To align with Rady Children's Ondansetron ODT admin protocol / pharmacist recommended dosing

<p>Current language </p> <p>Purpose: *Administration of Zofran ODT in the very young (i.e., less than 1yo population) is a choking hazard. *To align with Rady Children's Ondansetron ODT admin protocol / pharmacist recommended dosing</p>	<table border="1"> <tr> <th>INDICATIONS</th> <th>DOSAGE/ROUTE</th> </tr> <tr> <td>Nausea and / or vomiting (4203)</td> <td> <p>Adults: 4 mg PO (1 ODT). MAY REPEAT TWICE TO MAX 12 MG. FURTHER REPEATION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> <p>**Q6**</p> <p>2 mL IV solution slow IV/IO push or IM. MAY REPEAT TWICE TO MAX 12 MG. FURTHER REPEATION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> <p>Pediatrics: See REMSA Policy #4102 (Calculation Chart) for patient specific dosage and volume. MAY REPEAT TWICE. FURTHER REPEATION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> <p>ADMINISTRATION OF ONDANSETRON ODT TO PEDIATRIC PATIENTS WEIGHING LESS THAN 9 KG (<20 LBS) REQUIRES A BASE HOSPITAL ORDER (BHO).</p> </td> </tr> </table>	INDICATIONS	DOSAGE/ROUTE	Nausea and / or vomiting (4203)	<p>Adults: 4 mg PO (1 ODT). MAY REPEAT TWICE TO MAX 12 MG. FURTHER REPEATION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> <p>**Q6**</p> <p>2 mL IV solution slow IV/IO push or IM. MAY REPEAT TWICE TO MAX 12 MG. FURTHER REPEATION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> <p>Pediatrics: See REMSA Policy #4102 (Calculation Chart) for patient specific dosage and volume. MAY REPEAT TWICE. FURTHER REPEATION REQUIRES A BASE HOSPITAL ORDER (BHO).</p> <p>ADMINISTRATION OF ONDANSETRON ODT TO PEDIATRIC PATIENTS WEIGHING LESS THAN 9 KG (<20 LBS) REQUIRES A BASE HOSPITAL ORDER (BHO).</p>
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No comment

Update: REMSA Policy #1105 (Paramedic Internship)

Includes new definitions, eligibility criteria, paramedic student placement requirements and documentation requirements.

See email attachment (doc titled: "1105 v2.5")

No comment

Update: REMSA Policy #3308 (ALS to BLS Downgrade)

Included new eligibility criteria based on:

- Primary / Secondary impression
- Vitals Signs
- Pediatric Patients

See email attachment (doc titled: "3308d v3")

•Policy 3308-

(pg. 1) under ALS to BLS DOWNGRADE ELIGIBILITY- PRIMARY / SECONDARY IMPRESSION-

#5. Hypoglycemia that persists after oral glucose administration- What is the time frame post administration of glucose is "persistent?" We would like to see a time listed here (i.e. 3-5 min).

#9. Seizure (active and or presenting as postictal)- This needs to be all seizures regardless of active or postictal. The likelihood of re-seizing is unknown there for the risk is too high. We would like to see this say, "Seizure(s)."

(pg. 1) under ALS to BLS DOWNGRADE ELIGIBILITY-VITAL SIGN ELEGIBILITY-

In the first paragraph, last sentence- "Trending vitals signs require A MINIMUM OF TWO SETS during the patient encounter." We would like a time to be associated with this to support what constitutes trending. Current protocol says vitals should be 5 min apart for critical patients and 15 for non-critical, so since this is a ALS to BLS downgrade we would like to see the initial and final set of vitals to be at least 5 min apart (how did you find the patient and how did you leave the patient).

#1 & 2. Blood Glucose (BGL) is less than 60 or greater than 250- we would like to see some language that supports this patient being abnormal in some way based on the assessment findings to make the BGL an exclusion for downgrade.

(pg. 2) under ALS to BLS DOWNGRADE ELIGIBILITY-VITAL SIGN ELEGIBILITY-

8,9, & 10- What is the time frame for sustained? We would like this to have a time frame on it such as 5 min.

8,9, & 10- There needs to be adult and peds (ages 1-10) values listed here. The peds value needs to be based off of the high and low ranges using the following formulas- $70+(\text{age} \times 2)$ for the low and $90+(\text{age} \times 2)$ for the high. Please state these formulas in this policy and we would like to see them in all policies that relate to peds blood pressures.

(pg. 2) under GENERAL CONSIDERATION PRIOR TO DOWNGRADE-

Patients who have received ALS interventions, or those who would likely benefit from ALS interventions(s), cannot downgraded to a BLS level of care- we would like this to say "(see skills policy 4104 for all ALS skills)." The reason for this is that there is too much discrepancy with current medics thinking that a 12 lead is a diagnostic tool and not a skill. Policy 4104 clearly states on pg. 2/21 that an ECG is a skill, pg. 3/21 that a 12 Lead is a skill, and so on.

Update: REMSA Policy #4101 (Introduction to Treatment Protocols)

CHANGE: Update language to identify the Pediatric Medication Dosing Resource as an optional reference tool

<p>Current language</p>	<p>• Standing orders REMSA treatment protocols include standing orders for medications and procedures, which apply to both adult and pediatric patients. Medications, concentrations, dosages, volumes, energy settings and advanced airway sizes for pediatric patients can be found in Policy #4102 (REMSA Calculation Chart). Adult medication dosing and energy settings are embedded in each associated treatment protocol.</p>
<p>Updated language</p>	<p>• Standing orders REMSA treatment protocols include standing orders for medications and procedures, which apply to both adult and pediatric patients. Medication dosing for adult and pediatric patients, and energy settings for adults, are embedded in each associated treatment protocol. Indications, medications, and concentrations, as well as references to appropriate dosages, volumes, energy settings, and advanced airway sizes for pediatric patients can be found in the Pediatric Medication Dosing Resource (here: XXX).</p>

No comment

Update: REMSA Policy #4405 (Cardiac Arrest)

• Change in Epi Drip inclusion criteria)

PROPOSAL:

- An emphasis should be placed on prepping an Epinephrine Infusion if the EtCo2 Value is above 20 mmHg at ANY time during the arrest so if ROSC is achieved and Hypotension exists, treatment can occur without delay.
- Hypotension be defined as SBP less than 90 mmHg and / or MAP less than 65 mmHg and the end goal to be MAP greater than 65 mmHg.

PURPOSE:

- Current available RHeaRT Data suggests that our average initial EtCO2 value in the patient subset where ROSC is obtained, for any length of time, is 27 mmHg during the onset of the arrest management. Yet, 48.70% of those patients (n= 347 at time of proposal) experience hypotension or re-arrest during the encounter.
- The relationship between MAP and CPP drives resuscitation guidelines to recommend maintaining a MAP greater than or equal to 65 mm Hg. Assuming a normal ICP, this threshold should guarantee a CPP of 55 to 60, the minimum needed to prevent cerebral ischemic injury.

<p>WHEN PATIENT'S SYSTOLIC BP IS LESS THAN 90 MMHG AND EtCO2 IS GREATER THAN 20 MMHG; EPINEPHRINE DRIP Adults: 0.4 mg (0.4 ml, 1:1000) IVPB, infused in 100 ml normal saline</p> <p>**OR**</p> <p>0.2. mg (0.2 ml, 1:1000) IVPB, infused in 50 ml normal saline.</p> <p>RATE WILL BE CONTROLLED VIA DIAL-A-FLOW. INCREASE DOSING EVERY 2-3 MINUTES, TO MAX 10 MCG/MIN, TO ACHIEVE OR MAINTAIN SYSTOLIC BP OF 90 MMHG OR GREATER.</p> <ul style="list-style-type: none"> • Begin infusion at 1 mg/min (15 ml/hr) then increase to • 2 mcg/min (30 ml/hr) then increase to • 4 mcg/min (60 ml/hr) then increase to • 10 mcg/min (150 ml/hr) <p>IF MAX DOSING HAS BEEN REACHED AND A SYSTOLIC OF 90 MMHG HAS NOT BEEN ACHIEVED, BEGIN ADMINISTERING 0.01 MG (1ml) 1:100,000 (PUSH DOSE EPINEPHRINE) PRN EVERY 1-5 MINUTES IN ADDITION TO THE DRIP UNTIL A SYSTOLIC OF 90 OR GREATER IS ATTAINED.</p>	<p>WHEN PATIENT'S SYSTOLIC BP IS LESS THAN 90 MMHG AND/OR MAP < 65 MMHG. IF EtCO2 IS > 20 MMHG DURING THE CARDIAC ARREST, AN EPINEPHRINE INFUSION SHOULD BE PREPARED IN CASE OF ROSC. EPINEPHRINE DRIP Adults: 0.4 mg (0.4 ml, 1:1000) IVPB, infused in 100 ml normal saline</p> <p>**OR**</p> <p>0.2. mg (0.2 ml, 1:1000) IVPB, infused in 50 ml normal saline.</p> <p>RATE WILL BE CONTROLLED VIA DIAL-A-FLOW. INCREASE DOSING EVERY 2-3 MINUTES, TO MAX 10 MCG/MIN, TO ACHIEVE OR MAINTAIN SYSTOLIC BP OF 90 MMHG OR GREATER.</p> <ul style="list-style-type: none"> • Begin infusion at 1 mg/min (15 ml/hr) then increase to • 2 mcg/min (30 ml/hr) then increase to • 4 mcg/min (60 ml/hr) then increase to • 10 mcg/min (150 ml/hr) <p>IF MAX DOSING HAS BEEN REACHED AND A SYSTOLIC OF 90 MMHG HAS NOT BEEN ACHIEVED, BEGIN ADMINISTERING 0.01 MG (1ml) 1:100,000 (PUSH DOSE EPINEPHRINE) PRN EVERY 1-5 MINUTES IN ADDITION TO THE DRIP UNTIL A SYSTOLIC OF 90 OR GREATER IS ATTAINED. NORMAL SALINE SHOULD BE GIVEN CONCURRENTLY AS CLINICALLY INDICATED.</p>
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No comment

Update: REMSA Policy #4601 (Overdose / Adverse Reaction)

PROPOSAL:

- To permit REMSA-approved first response agency BLS personnel to carry and administer Naloxone utilizing AdaptPharma's pre-filled intranasal delivery device (4 mg / 0.1 mL).

PURPOSE:

- To increase the availability of Naloxone in the field in the event that no ALS apparatus or ambulance is readily available to respond to a medical air where Naloxone is needed and BLS personnel arrive on scene first.

No comment



3308d	ALS to BLS Downgrade
Operational Policy	



Last Reviewed: January 4, 2023	Last Revised: January 10, 2023
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PURPOSE

To establish criteria for downgrading from an advanced life support (ALS) level of care to a basic life support (BLS) level of care in the pre-hospital setting.

APPLICATION

The intent of this policy is to permit first response agencies to downgrade the level of care a patient will receive during transport so that the maximum number of ALS transport ambulances and / or ALS first response apparatus are able to remain in service, and available, to respond to other medical aid requests. If / when an ALS transport ambulance arrives on scene before a first response agency apparatus, and the ALS transport paramedic determines that additional ALS assistance is not required **AND** the patient’s condition meets the criteria below, the patient should be transported by that ambulance. Excluding patients that have met Assess and Refer criteria related to behavioral health emergencies who have been referred out of the 911 system, it is not appropriate for an ALS transporting unit to wait at the scene for a BLS transporting unit when the paramedic is able to provide a BLS level of care.

AUTHORITY

- [California Health and Safety Code - Division 2.5: Emergency Medical Services \[1797.204.\]](#)
- [California Health and Safety Code - Division 2.5: Emergency Medical Services \[1797.206.\]](#)
- [California Code of Regulations, Title 22, Chapter 4, Article 8, and Section 100170](#)

ALS to BLS DOWNGRADE ELIGIBILITY – PRIMARY / SECONDARY IMPRESSION

If at any point during the ALS assessment or in the presence of an ALS scene provider the patient exhibits any of the following conditions, the patient is no longer considered eligible for ALS to BLS transition and care must be provided by an ALS provider.

1. Acute altered mental status (excluding patients whose mentation is GCS 14 or lower as their baseline)
2. Acute cardiac dysrhythmias
3. Any patient requiring specialty care services (Trauma, Stroke, STEMI)
4. Airway obstruction
5. Hypoglycemia that persists after oral glucose administration
6. Influenza-like illness which falls outside of the vital sign eligibility criteria listed below
7. Overdose, poisoning, or ingestion
8. Pregnancy / OB delivery-related complications
9. Seizures (active and / or presenting as postictal)
10. Suspected cardiac chest pain
11. Water-related submersion incidents

ALS to BLS DOWNGRADE ELIGIBILITY – VITAL SIGN ELIGIBILITY

If at any point during the ALS assessment, or in the presence of an ALS scene provider, the trend of the patient’s vital signs falls OUTSIDE of the parameters listed below, the patient cannot be downgraded to a BLS level of care. Trending vital signs require A MINIMUM OF TWO SETS during the patient encounter.

1. Blood Glucose (BGL) is less than 60 mg/dl OR reads “LO”
2. Blood Glucose (BGL) is greater than 250 mg/dl OR reads “HI”
3. Pulse oximetry (SpO2) of 93% saturation or below
4. Pulse rate is less than 60 beats per minute
5. Pulse rate is greater than 120 beats per minute
6. Respiratory rate of 10 breaths a minute or below
7. Respiratory rate of 24 breaths a minute or more

8. Sustained systolic blood pressure greater than 180 mmHg
9. Sustained systolic blood pressure less than 90 mmHg
10. Sustained diastolic blood pressure greater than 100 mmHg
11. Temperature is less than 93.2°F
12. Temperature is greater than 101°F

ALS to BLS DOWNGRADE ELIGIBILITY – PEDIATRIC PATIENTS

If at any point during the ALS assessment of a pediatric patient, or in the presence of an ALS scene provider, the patient's vital signs fall OUTSIDE of the parameters listed below, the patient cannot be downgraded to a BLS level of care.

1. Acute altered mental status (altered for the patient)
2. Acute cardiac dysrhythmias
3. Apparent life-threatening event / brief resolved unexplained event (ALTE / BRUE) in the pediatric population
4. Evidence of poor perfusion and / or cyanosis
5. Severe respiratory distress
6. Status epilepticus
7. Systolic blood pressure less than 50 mmHg (4 years of age and under)
8. Systolic blood pressure less than 60 mmHg (5 to 12 years of age)
9. Systolic blood pressure less than 70 mmHg (13 years of age and over)

GENERAL CONSIDERATIONS PRIOR TO DOWNGRADE

- Patients who require immediate medical attention will be transported to the closest most appropriate hospital.
- Patients who have received ALS interventions, or those who would likely benefit from ALS intervention(s), cannot be downgraded to a BLS level of care.
- Patients, parents, or guardians must be alert, oriented, and acting appropriately for their age and do not present with any significant impairment due to drugs, alcohol, organic causes, or mental illness.

DOCUMENTATION REQUIREMENTS WHEN DOWNGRADING FROM ALS to BLS

In addition to the minimum NEMIS requirements, the following must be documented in the ePCR:

- After selecting *Patient Treated and Care Transferred to Another EMS Unit* as the disposition, “**BLS**” must be selected as the *Transporting Ambulance Level of Care* in the “Ground Transport” panel
- Physical exam findings (must include a full head-to-toe exam within the Assessment Panel)
- Treatments provided, if any
- All pertinent findings and observations

CONTINUOUS QUALITY IMPROVEMENT

All patient dispositions where the level of care was downgraded from ALS to BLS will undergo a minimum of 50% CQI by the ALS service provider who initiated the downgrade.