CQI Leadership Team Meeting and HEMS
January 16, 2020
4210 Riverwalk Parkway, #300, Riverside, CA 92505

Attendance:

Lisa Madrid, REMSA      Paul Duenas, PSFD
Tim Buckley, Cal Fire      Stan Hall, DRMC
Misty Plumley, REMSA      Jennifer Matthews, EMC
Nick Ritchey, REMSA      Sabrina Yamashiro, RCH
Jeff Seirup, AMR      Kay Schulz, RUHS
Holly Anderson, Cal Fire      Natalie Taylor, Cal Fire
Noelle Toering, RFD      Dan Sitar, IVMC
Steven Wells, CFD      Shanna Kissel, REMSA
Richard Blumel, AMR      Dustin Rascon, REMSA
Ryan Holkamp, AMR      Aaron Hartey, REACH
Vanessa Hayflich, Mercy Air      Desiree Estrada, Mercy Air
Liz Groneman, Mercy Air      Evelin Millsap, JFK
Patrice Shepherd, REMSA      Sudha Mehesh, REMSA
Dan Bates, REMSA      Shane Race, Mercy Air
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<th>Agenda Item</th>
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<td>1. Introduction</td>
<td>The committee introduced themselves.</td>
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<td>2. Discuss Previous Meeting Minutes</td>
<td>There were no objections to the September 19, 2019 CQILT meeting minutes.</td>
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<td>3. Action Items</td>
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| HEMS                        | HEMS data moved from an admission type spreadsheet to a Report Writer report, that merges with Cal Fire reports, and is then combined with ETA provided and actual time the airship was in the area and/or landed. We have integration accounts with Air Methods and REACH to do so. Based on this we get all records if the incident occurs in Riverside County, including IFTS. The spreadsheet shows filtering out to 911 calls only and must originate in Riverside County. Actual times from the records of what is provided is based on eTimes NEMSIS codes that are mapped over directly. Calculation time goes from first received call to time arrived at the scene. Data is being constantly updated on a daily and weekly basis. We receive about 6-8 records a day. A quick snapshot of what is happening. ETAs from September – November 2019 have been consistently reasonable. There are a few outliers that Henry will review at the next HEMS meeting. Processes that are still in the works:  
  - Working on updating ETAs, will have the closest response report to the call, working on auto launch |
- Dispatch to scene calculation time on the ePCR documentation, coming from EMS charts, eTimes03, times dispatched, not the same as PSAP
- Data presented reviewed quarterly, but can be broken down to be looked at monthly

2019 total had 170 calls, in 2018 there was 212 calls.

Mercy air announced they no longer require membership with their patients for balanced bill; went away with it in 2019. They will now assist the patients on getting their bills paid by their insurance.

- Regarding concerns with cost to patients who have private insurance. There is a gap in private insurance vs Medicare, who gets their whole cost covered for. Mercy air responded with mentioning their patient advocacy program has been successful in closing this gap. Their advocates will reach out to you after and take steps to ensure your insurance pays the bill. It has been widely successful so far. Mercy air/Air Methods is not in the practice of balance billing anymore.

Air Call App, another tool to order air service for facilities has been launched. Beginning of 2020 they will be rolling out blood with their fleets, Partnered with American Red Cross to bring blood across the country. All the equipment has been purchased and staff have been trained to give blood. They have also established relationships with high blood use centers, so there will be minimal waste. All fluid warmers are ready to provide fluid resuscitation in transfusion as well. Their primary protocol for blood is hypoglycemic shock from penetrating or blunt trauma, hemoglobin less than 7, or patient presentation of hypotension who is also technocratic. Protocol will be shared with TAC.

Questions regarding the Drug and equipment list
- HEMS providers asked regarding duplicated equipment, is there room to adjust for a limited equipment list. They would like to limit the weight in carrying items
- REMSA suggested the HEMS providers to put together a spreadsheet to share amongst the air providers first to see what can be removed without diminishing care, and then present and submit their list jointly to REMSA who can review to ensure all essential equipment is available. REMSA will be open to suggestions if all can come to a consensus. More discussion on this topic at the next HEMS meeting.

| Time off chest data collection | To ensure proper collection and reporting, time off chest data will be due in a quarterly report moving forward instead of monthly. It will be done in the same format, but also require a summation at the bottom. |
| Data | Focus CQI and gaps that needs to be addressed. Information only. |

From April 1st to December 31st, 2019, every PCR that included TXA, Ketamine administrations and epinephrine administrations has been reviewed to ensure we have the appropriated choices from the drop-down list. Epinephrine was removed as a choice and is now listed as: EPI 1-1, 1-10 or 1-100 for more accuracy. During this time period, September – December 2019 totals: 63 patients, administered 79 times, had good push dose EPI administrations, only a few were used outside of the criteria. Methodology was in place to deduplicate cases. REMSA will review further the reason for an in usage and also the outcome after administration.

Ketamine administrations methodology includes all data pulled from Report Writer directly from the PCRs. There is a 2-milligram deviation based on patient’s weight for labeling of overdose and underdoses based on the administration given. Anything 2.5 milligrams higher or lower is considered an overdose or underdose. There were 1,212 administrations from April 1st – December 31st, 2019; 173 of those, about 14% were either over or underdose. 108 were overdoses, and 65 underdoses. Looking
further into the geriatric population, of the total administrations, there were about 31% that are 65 years old and older. Of the 371 in geriatric, 13 were treated and transported with documented GCS of 15, and 13 with a GCS of 14, roughly 4% of the entire population with arrival to ED with GCS less than 14. Major takeaway from the data revealed a problem with not administering or calculating the correct dosages. 173 errors were audited and reviewed. The provider was given a feedback sheet notifying them via email to prevent future errors. The feedback form includes the incident number, date, summary of what was discussed, and protocol and education presented to the party responsible and request for loop closure. Providers were reminded of the need to carry ketamine as a requirement after it was passed in LSOP.

TXA out of 104 documented and identified administrations, about 59% of them were either inappropriate administrations or documented poorly. Issue with most of them were that the field crews were disregarding the inclusion criteria, which was hypotension and tachycardia, along with inconsistency in documentation of vital signs. On 7 occasions there were base station orders for patients to receive TXA that did not meet criteria as well. In the context of a trauma patient, the biggest problem of giving TXA, is giving it too late. We would rather see it given more often to benefit over who needs it. Gap identified as TXA administration needing improvement on their documentation. Missed opportunity reporting will be back up as part of CQI.

Cardiac Arrest Report data from April to today was reviewed. Total incidents are 3061. ROSC rates from 3rd to 4th quarter has been declining. Time off chest data will continue to be monitored to dig down into recent changes. 92% of our cases happen prior to EMS arrival, which could play into the ROSC piece. Disposition treated and transported at 24%, pronounced in the field 76%. By STEMI centers those that were transported, 53% were transported to STEMI centers and 46% to non-STEMI centers. Data reviewed further was broken down by trauma and medical.
There were 659 incidents with a median age 40-42, within the zone breakdown NW sees the most cases. A brief mention to the group to document other, when referring to burns etc., to make sure field providers are hitting yes for possible injury to fall under trauma. Odometer reading avg 12 miles. Out of 120 total transported, 85 went to trauma centers, 35 went to non-trauma centers. Base hospital contact was at about 30%. 4th quarter times for dispatch to patient contact time was about 10 minutes. First CPR to determination of death was between 16-17 minutes. More education will be put forth on this piece to improve times. All data reviewed are coming directly from the ePCRs on Elite.

Data reviewed here will be shared at TAC and also be posted on the CQI page on REMSA.US along with the minutes.

| CORE Measures | CORE Measures were submitted and approved. Lisa met with the state in December last year and went through the manual to redefine the elements that did not make sense. A rough draft came back as a useable manual, however REMSA is still working on a more standardized manual and as soon as the manual is approved, it will be shared sometime this year with the CQI group. | Information only. |
| 4. Case Review | Case review tabled to next meeting. | Discussion. |
| 5. System Issues | None at the time. | Information only. |
| 6. Protocol/Policy Update | Policy change that was proposed from REMSA to remove requirement for Base Hospital contact for sexual assault patients was discussed. How can our policy best address concerns with where to transport patient, whether it be the nearest hospital or directly to a facility with specialty care for SART patients? Feedback was received and discussed at PMAC. In order to make a decisive policy change that would best benefit the patient, request from PMAC was for more information sharing and gathering so that all are on the same page with how SART services were provided in the county. This includes discussing the assessment and clinical treatment for the patient while |
limiting the involvement with the investigative law and enforcement piece.

Yvonne (RUHS) and Jennifer (Eisenhower) presented on their facilities processes in handling sexual assault patients to provide us with a better understanding of how they handle these cases. At RUHS, majority of our patients are brought in by law enforcement or private vehicle. RUHS covers central Riverside County cases; anything east goes to Eisenhower; cases in the south goes to Friends of Nurses SoCal. Both RUHS and Eisenhower have written protocols regarding strangulation and are the only two in all Inland Empire that handle these cases with proper screening. They comply with all state laws, including the new state law that passed January 1st, 2020 that requires hospitals that don’t have a SART team, to have a written protocol in place of how to handle these cases. AB-538 – Sexual Assault Exams, Section 1. Section 1281 of the Health and Safety Code is amended in 2020 to read: Either must have a SART team, or they shall adopt a protocol for the immediate referral of these victims to a local hospital that so complies, and shall notify local law enforcement agencies, the district attorney, and local victim assistance agencies of the adoption of the referral protocol.

If the patient arrives at Eisenhower, patient will be screened in the ER then SART will be contacted. If they arrive by EMS, it is a requirement for medical screening, EMTALA. If patient is a walk-in, they can decline. Medical assessment is always above forensics at the hospitals.

Reagarding pediatric child abuses cases, RUHS does 24/7 exams. Normally, acute child abuse exams are done within 24 hours. If there is a pediatric exam done by others, they will complete the same pediatric form that we do.

Next step: how do we best address this in EMS protocol with our proposed changes for spring 2020 to remove the sexual assault contact piece from base hospital contact requirement. REMSA requested CQILT for input. Overall, CQILT concluded with no need for any protocol changes at this time. Focus should be on
medical examination, medical screening requests and allow law enforcement and hospital to drive their own protocols to drive any follow up referrals to SART team involvement, differential transportation is not justified.

For our next PMAC meeting we will be discussing this presentation/information sharing, when policy changes present again in the Fall, the proposed change will come up again to take BH contact requirement out. In the meantime, we can educate and train that medical complaints get treated, trauma criteria’s goes to trauma centers as appropriate, and we are making sure that we are mindful of forensic collection pieces. No changes now for Spring 2020.

Stakeholder comment phase open and closed.
List presented:
- For stroke, base hospital contact requirement will be removed and replaced with pre-notification to the closest stroke receiving center.
- For the eclampsia piece, versed intranasal dose is now the same as the IM versed dose. REMSA did go back to review cases, and make sure the calculation chart was reflecting/supporting the base hospital orders or appropriate protocols. Found 2 gaps, amiodarone dosing, for stable patients with a pulse, and preeclampsia prophylaxis for magnesium sulfate. We didn’t have language in the calculation chart that was clear, so now the calculation chart has a new row for amiodarone, for v-tach that has a pulse. The eclampsia row will be edited to read preeclampsia.
- King airway taken out for OHCA, 6 months of data will be collected and reviewed to determine if we should keep it at all.
- Submersion piece, in Fall taken out near drowning and replaced with non-fatal drowning. Spring made it through stakeholder comment. Add CPAP use in adult non-fatal submersion patients.

No changes to EMS protocol regarding transporting of sexual assault patients for Spring 2020. Continued discussion at the next PMAC meeting in February 2020.
- 12-lead changes, ACS protocol and performance standard, the language for when to transmit the 12-lead was shortened and standardized. Must all be transmitting it, especially if hospital requests for the 12-lead.
- Discussion in reference to supraglottic airways. With newer tools on the market that also comes with a cost, unless they show significant promise, the providers were reminded to continue focus on BVM and managing airway with BLS strategies.
- Change the Broslow tape to commercially standardized length-based tapes.
  - Any protocol that mentions the color gray, went back and tried to put in less than 3 kilos
- Prehospital/base hospital notification navigating with the ePCR workgroup
- SIRS and Sepsis
  - Proposed a change adding SIRS criteria to the secondary exam in the universal patient protocol
  - CQILT felt the need to approach this in a more data driven manner. Currently we do not mandate that everyone carry a thermometer. We can focus on the detection of fever, not the actual measurement of fever as different devices can vary.
  - A request for opportunity to add reference material for sepsis was sent in
  - Starting a project to look at education on identification and early recognition of sepsis was suggested
  - Will include education that goes along with the new sepsis updates, but no new protocol changes at this point
- BLS suction request, manual vs battery will swap. Changing it in the drug and equipment list on the first response side.
- Data collection on postpartum hemorrhage for TXA use will either be present in February or May PMAC.
- LVAD or mechanical circulator support device policy

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<td>AMR inquired about EMS compass. REMSA responded that they are following CORE measures not compass.</td>
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<td>PUC train to trainer dates: Jan 22, 23, 24, and 30th more in February. Calendar invites will be sent out today.</td>
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<td>Cal Fire demonstration of scope page, asked if REMSA can set that as agency specific? REMSA is still working on it. Dustin can send agency specific information to providers directly if they request the data.</td>
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<td><strong>Next CQILT and HEMS meeting is on April 16, 2020</strong>, from 9:00 a.m. - Noon.</td>
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