



RIVERSIDE COUNTY EMS AGENCY
MEDICATIONS & PROCEDURES REPORT
2025

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PREPARED BY RIVERSIDE COUNTY EMS AGENCY, EMERGENCY MANAGEMENT DEPARTMENT

MEDICATIONS & PROCEDURES REPORT

Riverside County Emergency Medical Services (EMS) has a dual response system in which both non-transport units (fire departments) and transport units (ambulance agencies and some fire departments) are dispatched to every 9-1-1 medical emergency. While all paramedics in Riverside County, regardless of agency type, are governed by the same treatment protocols and policies, *Medications* and *Procedures* administered to EMS patients with the same presenting symptoms, can vary. Factors influencing these differences include patient comorbidities, interventions prior to EMS arrival, patient acuity and compliance with treatment, as well as logistical factors such as which agency arrived ‘first on scene’. Secondary factors such as field crew dynamics, experience, and differences in documentation practices can also influence how medications and procedures are utilized and documented.

REMSA Policy 3303, also known as ‘Drugs and Equipment list’, describes the available medications and procedures available to Riverside County EMS providers for therapeutic intervention in the field. This report summarizes the primary medications and procedures administered by Riverside County EMS providers over the course of one year as documented in the EMS electronic patient care report (ePCR) system.

Methodology

Data

Electronic Patient Care Reports (ePCRs) were extracted from ImageTrend® Elite Report Writer between 1/1/2025 and 12/31/2025. Records for 9-1-1 non-transport and ground transport responses with one or more documented medication or procedure were included in the analysis. Each medication & procedure had to be documented as performed by a Riverside County EMS Agency credentialed provider name & ID number. This resulted in **125,026 medication ePCRs** and **237,649 procedure ePCRs** for a total of **243,947 unique ePCR records**. The *Medications Dataset* where one or more medication/drug was documented, was created from 44 data fields. The *Procedures Dataset* where one or more procedure/equipment was documented, was created from 44 data fields. Data was collected from the REMSA 2024 *Patient Care Continuum Report* dataset for ePCRs where any patient contact was made to determine the number of records where at least one medication or procedure was performed. This resulted in **415,609 ePCRs** and was used to calculate relative percentages of records where no medications or procedures were documented.

Exclusions

10,731 ePCRs (7.9%) from the Medications Dataset and **15,455 ePCRs (6.1%)** from the Procedures Dataset **were excluded** from the analysis. Exclusions were due to provider name, provider role, or provider ID being blank, or medication or procedure being documented as performed by “Other”. Additional Exclusions were for blank patient dispositions or dispositions indicating no patient contact was made (Canceled Enroute, Canceled Prior to Enroute, Canceled at Scene by Another Unit - No Patient Contact, No Patient Found, Non-Patient Transport, Standby: No Services or Support Provided, Standby: Public Safety, Fire, or EMS Operational Support Provided). No additional exclusions were made when the datasets were combined for analysis.

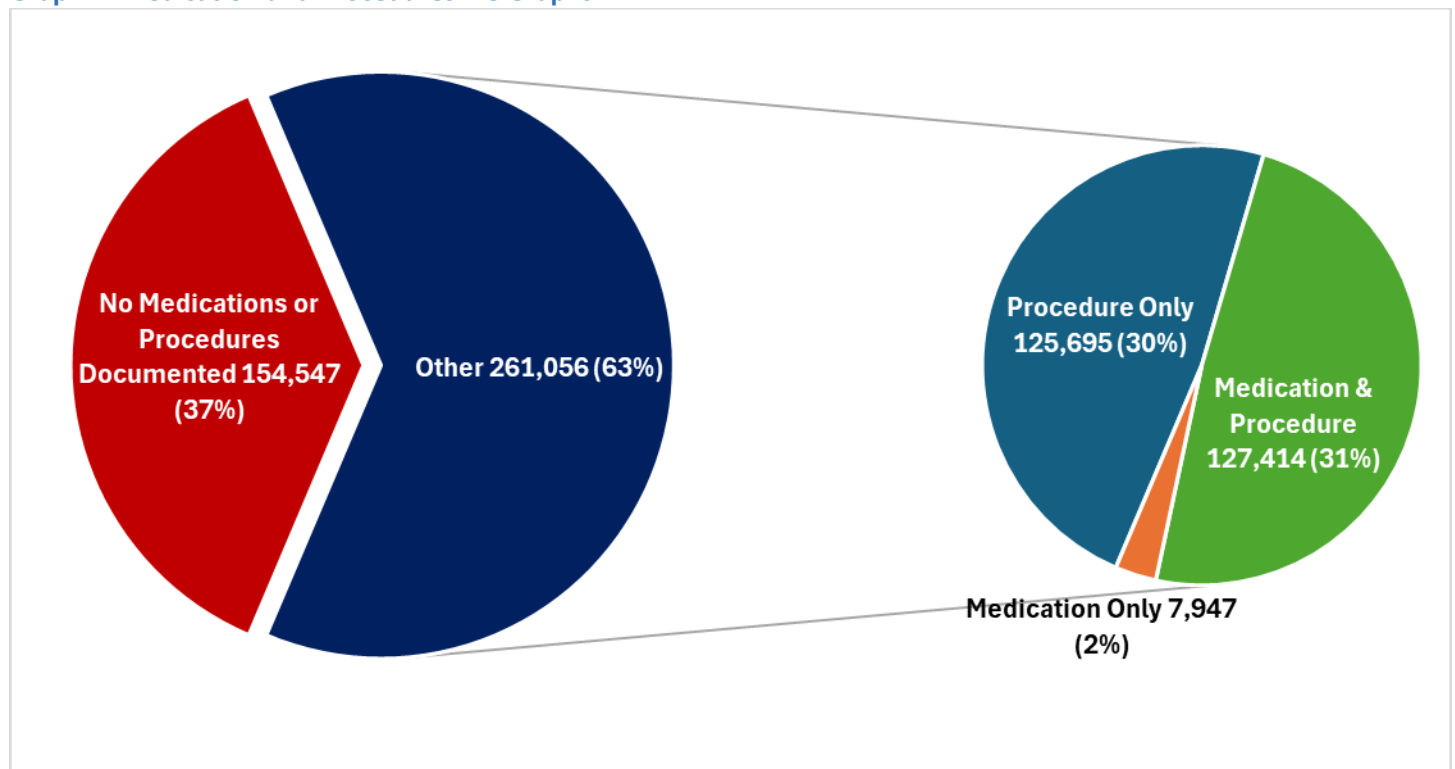
Systemwide Findings on Medications & Procedures

Out of **415,609 ePCR**s from 9-1-1 responses documenting patient contact, **261,056 (62.8%) ePCR**s documented that a medication or procedure was administered. In Graph 1, the pie chart on the left shows the breakdown in ePCR with a documented patient contact disposition and the difference between when a medication or procedure was documented and when none were documented. The pie chart on the right gives a break down for this subset of patient contacts where a medication, procedure, or both, were documented. This allows for comparison of counts for medications and procedures performed during patient contacts.

Data Clarification Note

Please note that the overall patient contact ePCR count in this report may be lower than in previous reports. During the current reporting cycle, an error was identified in prior analyses in which non-patient contact ePCR were inadvertently included in the total patient contact count. The methodology has been corrected for this report to exclude ePCR where no patient contact was made, resulting in a more accurate patient contact denominator. As a result, direct comparisons to previously published totals should be interpreted with this adjustment in mind

Graph 1: Medication and Procedures Pie Graphs



Response Unit Type

Response unit type describes the primary role of the EMS unit which responded to the EMS call (eResponse.07 & eResponse.13). These have been categorized into non-transport units (quick response vehicles such as fire engines, fire trucks, and squads) and transport units (ambulances). This allows for a comparison between the number of interventions performed for non-transport and transport units.

Table 1 and Table 2 below provide a breakdown of medications given, and procedures performed, by response unit type.

Table 1: Medications by Agency and Unit Type

Medications	Medications Given	Medication ePCRs	Total ePCRs	Medication ePCR Percentage	Average Medications Given
Non-Transport	44,725	22,060	179,234	12.3%	2.0
Blythe Volunteer Fire Department	21	20	167	12.0%	1.1
Calimesa Fire Department	350	199	2,209	9.0%	1.8
Canyon Lake Fire Department	342	179	739	24.2%	1.9
Cathedral City Fire Department	235	114	5,819	2.0%	2.1
Corona Fire Department	7,298	2,885	8,996	32.1%	2.5
Hemet Fire Department	2,135	1,105	9,748	11.3%	1.9
Idyllwild Fire Protection District	20	6	21	28.6%	3.3
Morongo Fire Department	285	145	831	17.4%	2.0
Murrieta Fire Department	157	73	8,375	0.9%	2.2
Palm Springs Fire Department	3,852	2,156	9,445	22.8%	1.8
Pechanga Fire Department	603	297	842	35.3%	2.0
Riverside City Fire Department	6,198	3,013	15,213	19.8%	2.1
Riverside County Fire Department	22,953	11,706	115,994	10.1%	2.0
Soboba Fire Department	276	162	807	20.1%	1.7
Transport	206,865	102,967	236,375	43.6%	2.0
AMR - Desert Cities	23,894	12,205	29,448	41.4%	2.0
AMR - Hemet	42,131	18,826	40,138	46.9%	2.2
AMR - Riverside	119,311	60,301	135,793	44.4%	2.0
Cathedral City Fire Department	5,671	2,916	6,398	45.6%	1.9
Idyllwild Fire Protection District	254	131	502	26.1%	1.9
Morongo Fire Department	939	482	1,318	36.6%	1.9
Riverside City Fire Department	163	84	1,358	6.2%	1.9
Riverside County Fire Department	14,502	8,022	21,420	37.5%	1.8
Grand Total	251,590	125,026	415,609	30.1%	2.0

Table 2: Procedures by Agency and Unit Type

Procedures	Procedures Performed	Procedures ePCRs	Total ePCRs	Procedure ePCR Percentage	Average Procedures Performed
Non-Transport	102,237	51,951	179,234	29.0%	2.0
Blythe Volunteer Fire Department	23	15	167	9.0%	1.5
Calimesa Fire Department	1,781	655	2,209	29.7%	2.7
Canyon Lake Fire Department	1,129	410	739	55.5%	2.8
Cathedral City Fire Department	507	376	5,819	6.5%	1.3
Corona Fire Department	11,604	5,544	8,996	61.6%	2.1
Hemet Fire Department	2,429	1,166	9,748	12.0%	2.1
Idyllwild Fire Protection District	13	6	21	28.6%	2.2
Morongo Fire Department	1,569	555	831	66.8%	2.8
Murrieta Fire Department	9,861	4,024	8,375	48.0%	2.5
Palm Springs Fire Department	6,729	3,126	9,445	33.1%	2.2
Pechanga Fire Department	1,175	447	842	53.1%	2.6
Riverside City Fire Department	22,845	12,290	15,213	80.8%	1.9
Riverside County Fire Department	41,771	22,929	115,994	19.8%	1.8
Soboba Fire Department	801	408	807	50.6%	2.0
Transport	617,621	185,703	236,375	78.6%	3.3
AMR - Desert Cities	78,375	24,476	29,448	83.1%	3.2
AMR - Hemet	125,184	33,474	40,138	83.4%	3.7
AMR - Riverside	377,057	109,975	135,793	81.0%	3.4
Cathedral City Fire Department	8,038	4,095	6,398	64.0%	2.0
Idyllwild Fire Protection District	220	104	502	20.7%	2.1
Morongo Fire Department	3,424	1,062	1,318	80.6%	3.2
Riverside City Fire Department	1,475	849	1,358	62.5%	1.7
Riverside County Fire Department	23,848	11,668	21,420	54.5%	2.0
Grand Total	719,858	237,649	415,609	57.2%	3.0

Top Medications & Procedures

Table 3 and Table 4 below gives us an idea of which medications or procedures are most commonly used in our EMS system by looking at how often they are documented in ePCRs. To be included in this list the medication or procedure had to appear in a minimum of 1% of the time in their dataset. 12 out of 30 medication classifications and 14 out of 262 procedures met this threshold for inclusion in the tables below.

A complete alphabetical list of medications and procedures is available in Tables 5 and 6 in the following section.

Table 3: Top Medications

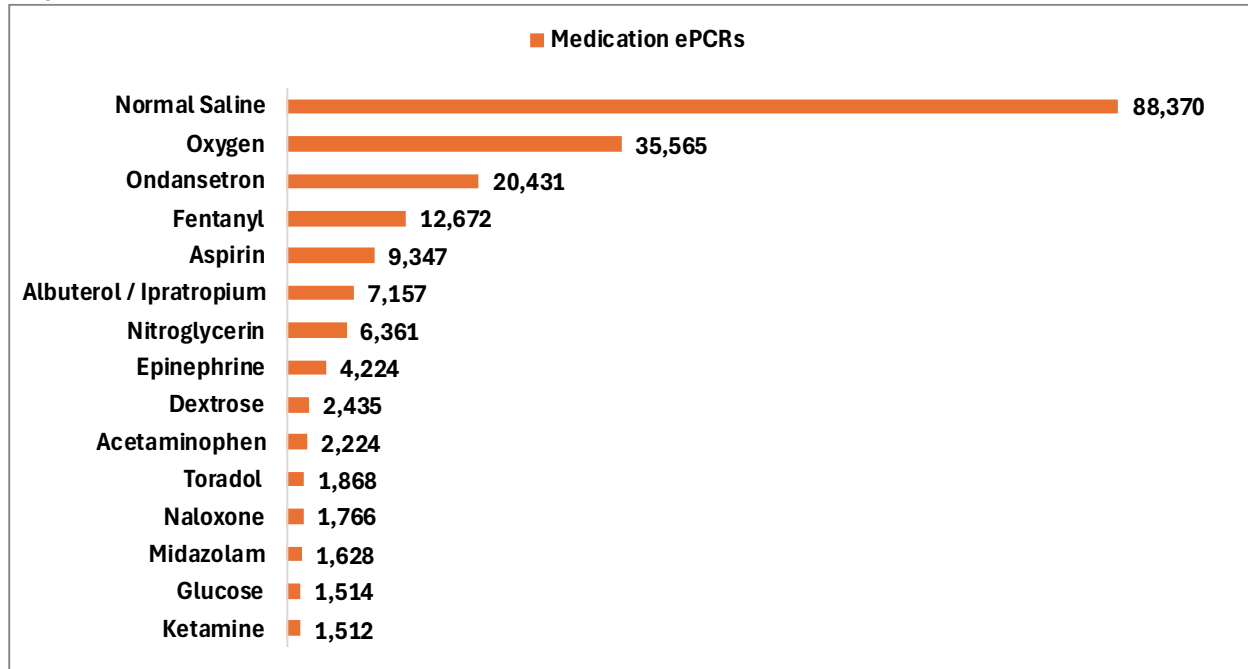
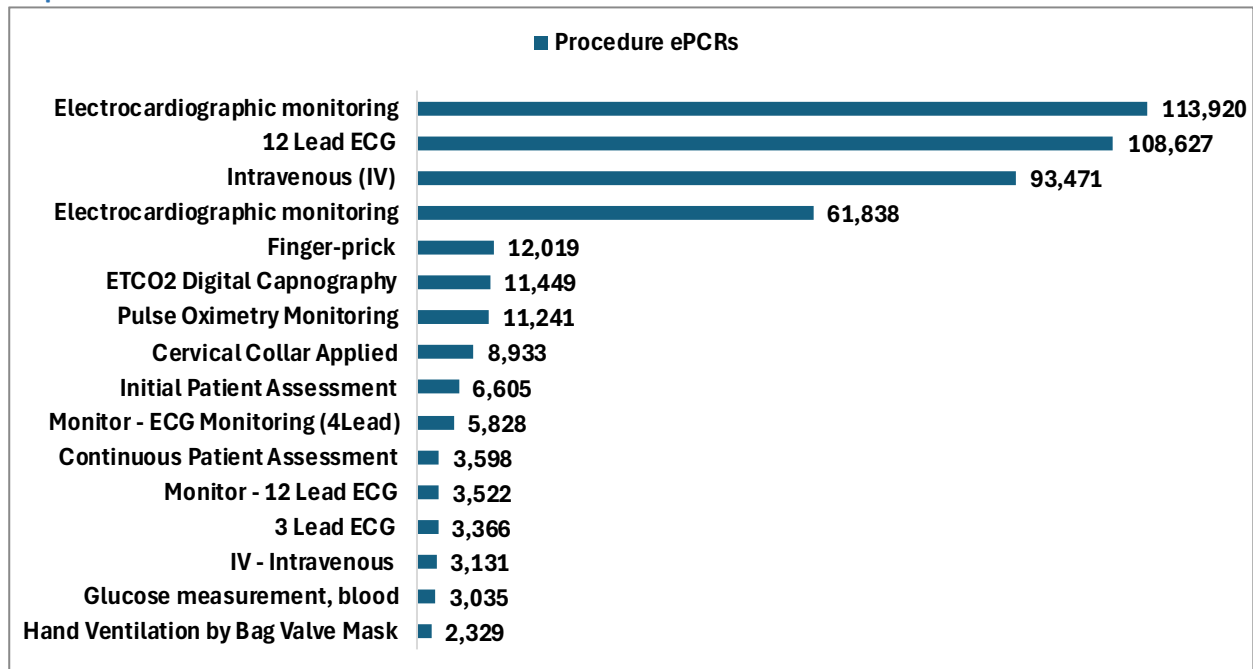


Table 4: Top Procedures



Findings by Medications Administered & Procedures Performed

In 2025, a total of 30 medication classifications were identified as administered in the ePCR system by EMS. A total of 262 unique procedures were identified as performed and grouped into 15 categories. Variability in procedure classifications during 2025 reflects system-level standardization changes rather than changes in clinical practice patterns.

In 2025, there was an average of 2.0 medications per medication ePCR and 1.9 procedures per procedure ePCR. These averages exclude ePCRs with no medication or procedure documented.

During 2025, the California EMS Information System (CEMSIS) implemented standardized lists of approved medications and procedures, along with a revised categorization framework for reporting procedures. Historically, procedures were grouped locally by specific intervention type, resulting in approximately 65 reporting categories. Under the updated CEMSIS structure, procedures are consolidated into 15 standardized categories organized by clinical domain.

As agencies transitioned throughout the year, both legacy local classifications and new standardized classifications were used concurrently within the ePCR system. This resulted in multiple versions or classifications of the same medication or procedure appearing in the dataset. The reduction in reporting categories reflects improved statewide standardization rather than a decrease in procedural scope. Beginning in 2026, with full alignment to the CEMSIS-approved lists and categorization framework, the data is expected to reflect improved consistency and fewer duplicate or legacy classifications. Year-over-year comparisons should be interpreted with consideration of this structural change in methodology.

Table 5 and Table 6 below are presented in alphabetical order and provide a breakdown of these findings. “Count” refers to the number of times a medication was administered or a procedure was performed. “ePCRs” refers to the number of patient contact ePCRs in which the medication or procedure appears. “ePCR Percentage” represents the proportion of medication ePCRs or procedure ePCRs in which the medication or procedure was documented. The sum of “% of ePCRs” will exceed 100% because multiple medications or procedures may be documented within a single ePCR.

Table 5: Medications Administered

Medications	Medications Given	Medication ePCRs	Medication ePCR Percentage
Acetaminophen	2,227	2,224	1.8%
(AP) Acetaminophen (Tylenol) (315263)	3	3	0.1%
Acetaminophen (161)	64	64	2.9%
Acetaminophen (Tylenol) (161)	2,156	2,153	96.8%
Tylenol (202433)	4	4	0.2%
Adenosine	543	459	0.4%
Adenosine (296)	18	16	3.5%
Adenosine (Adenocard) (296)	525	443	96.5%
Albuterol / Ipratropium	10,872	7,157	5.7%
(AP) Ipratropium (Atrovent) (358595)	1	1	0.0%
Albuterol (Proventil) (435)	5,583	4,622	64.6%
Albuterol (Proventil) Inhaler (90 µg / Metered Dose) (745682)	27	27	0.4%
Albuterol / Ipratropium (Combivent, DuoNeb) (214199)	3,316	3,304	46.2%
Ipratropium (7213)	2	2	0.0%
Ipratropium (Atrovent) (7213)	1,925	1,920	26.8%
Nebulized Albuterol with Oxygen (435)	18	13	0.2%
Amiodarone	499	381	0.3%
Amiodarone (Cordarone) (703)	499	381	100.0%
Aspirin	9,365	9,346	7.5%

Aspirin (1191)	9,365	9,346	100.0%
Atropine / Pralidoxime	588	526	0.4%
Atropine (1223)	581	520	98.9%
Atropine / pralidoxime (Duodote) (1659108)	3	2	0.4%
Atropine / Pralidoxime (DuoDote) Auto-Injector (2.1 mg / 600 mg) (809819)	3	3	0.6%
Atropine / Pralidoxime (Mark-I) Auto-Injector (2 mg / 600 mg) (727414)	1	1	0.2%
Benadryl	4	4	0.0%
Benadryl (3498)	4	4	100.0%
Blood Products	8	6	0.0%
Packed Red Blood Cells (PRBCs)	1	1	16.7%
Transfusion Monitoring: Blood Product (Initiated by facility)	2	1	16.7%
Transfusion of packed red blood cells (procedure)	5	4	66.7%
Calcium	233	230	0.2%
Calcium Chloride (1901)	220	217	94.3%
calcium chloride 10 % 10 ML Prefilled Syringe (828527)	13	13	5.7%
Dextrose	2,484	2,435	1.9%
dextrose 10 % per 500 ML Injection (1795477)	1	1	0.0%
Dextrose 10% (D10) (244099)	2,406	2,359	96.9%
Dextrose 10% Water (237648)	2	2	0.1%
Dextrose 10% Water (D10) (1795477)	69	67	2.8%
Dextrose 25% Water (D25) (260258)	6	6	0.2%
Diphenhydramine	948	939	0.8%
Diphenhydramine (Benadryl) (3498)	948	939	100.0%
Epinephrine	10,538	4,225	3.4%
Epi for Anaphylaxis/Resp Distress (1mg/mL) (328316)	10	10	0.2%
Epi for CARDIAC ARREST (0.1MG/ML) (317361)	238	81	1.9%
Epi for CARDIAC ARREST (1:10,000) (317361)	9	4	0.1%
Epi PUSH DOSE (0.01 MG/ML) (330545)	116	55	1.3%
Epi PUSH DOSE (1:100,000) (330545)	5	2	0.0%
Epi PUSH-DOSE (0.01mg/mL) (330545)	1	1	0.0%
Epinephrine (3992)	4	2	0.0%
Epinephrine (Epipen) Auto-Injector (0.15 mg) (727386)	4	4	0.1%
Epinephrine (Epipen) Auto-Injector (0.3 mg) (727347)	4	4	0.1%
Epinephrine 1:1,000 (1 mg/mL) (328316)	562	457	10.8%
Epinephrine 1:10,000 (0.1 mg/mL) (317361)	6,391	2,359	55.8%
Epinephrine 1:100,000 (Push Dose Epi) (330545)	3,164	1,500	35.5%
Epinephrine Diluted to 1:10,000 (Alternative Medication) (727373)	4	4	0.1%
Epinephrine Diluted to 1:100,000 (Alternative Medication) (1233778)	26	16	0.4%
Fentanyl	20,550	12,671	10.1%
Fentanyl (4337)	57	37	0.3%
Fentanyl (Sublimaze) (4337)	20,493	12,635	99.7%
Glucagon	450	444	0.4%
Glucagon (4832)	447	441	99.3%
Glucagon Auto-Injector (791870)	3	3	0.7%
Glucose	1,602	1,514	1.2%

Glucose (4850)	1,558	1,473	97.3%
Glucose Oral Gel (377980)	41	38	2.5%
Oral Glucose Paste (4850)	3	3	0.2%
Ketamine	1,856	1,512	1.2%
(MD) Ketamine 50 MG/ML (330468)	3	3	0.2%
Ketamine (6130)	1,741	1,422	94.0%
Ketamine 10 MG/ML (330467)	112	87	5.8%
Ketorolac	68	67	0.1%
Ketorolac (35827)	7	7	10.4%
Ketorolac (Toradol) (35827)	61	60	89.6%
Lidocaine	150	150	0.1%
Lidocaine (Xylocaine) (6387)	142	142	94.7%
lidocaine 2 % Injectable Solution (317567)	8	8	5.3%
Lorazepam	1	1	0.0%
Lorazepam (Ativan) (6470)	1	1	100.0%
Magnesium Sulfate	129	129	0.1%
Magnesium Sulfate (6585)	129	129	100.0%
Midazolam	1,894	1,627	1.3%
Midazolam (6960)	5	4	0.2%
Midazolam (Versed) (6960)	1,889	1,623	99.8%
Naloxone	3,196	1,767	1.4%
Buprenorphine 8mg / Naloxone 2mg (Suboxone) (1010602)	1	1	0.1%
Naloxone (Narcan) (7242)	3,062	1,678	95.0%
Naloxone (Narcan) Auto-Injector (727348)	120	82	4.6%
Naloxone Nasal Spray [Narcan] (1725061)	1	1	0.1%
Narcan (7242)	12	5	0.3%
Nitroglycerin	10,626	6,361	5.1%
Nitroglycerin (0.4 mg) (316365)	7,527	5,733	90.1%
Nitroglycerin (4917)	75	67	1.1%
Nitroglycerin Paste 2% (242946)	2,791	2,781	43.7%
Nitroglycerin Spray/Tablet (4917)	233	189	3.0%
Normal Saline	108,176	88,369	70.7%
Normal Saline (125464)	3,318	2,165	2.4%
Normal Saline (313002)	104,856	86,205	97.6%
Sodium Chloride (9863)	2	2	0.0%
Ondansetron	22,944	20,431	16.3%
Ondansetron (26225)	49	48	0.2%
ondansetron (as ondansetron hydrochloride) 4 MG Disintegrating Oral Tablet (104894)	131	131	0.6%
Ondansetron (Zofran) (26225)	22,764	20,268	99.2%
Oxygen	39,109	35,565	28.4%
Oxygen (7806)	39,109	35,565	100.0%
Sodium Bicarbonate	385	380	0.3%
Sodium Bicarbonate (36676)	10	10	2.6%
Sodium Bicarbonate (CARES) (36676)	76	75	19.7%
Sodium Bicarbonate 8.4% (237363)	299	295	77.6%
Sterile Water	4	4	0.0%
Sterile Water (107129)	4	4	100.0%

Toradol	1,877	1,868	1.5%
Toradol (35827)	1,877	1,868	100.0%
Tranexamic Acid	264	253	0.2%
Tranexamic Acid (TXA, Lysteda) (10691)	264	253	100.0%
Grand Total	251,590	125,026	100.0%

Table 6: Procedures Performed

Procedures	Procedures Performed	Procedure ePCRs	Procedure ePCR Percentage
Airway	388	378	0.1%
Airway Opened (232664002)	202	200	52.1%
Bougie, device (physical object) (26128008)	1	1	0.3%
Use of Bougie / Introducer Stylet (397874007)	185	179	47.7%
Airway-Advanced	1,873	1,296	0.3%
(AP) Trach Care (41351007)	1	1	0.1%
Airway - Endotracheal Intubation (397874007)	7	7	0.4%
Airway - Foreign Body Removal (232707004)	1	1	0.1%
Airway - i-Gel Insertion (713535007)	10	10	0.5%
Airway - Indirect Laryngoscopy (Video) (673005)	9	7	0.5%
Airway - Intubation (Orotracheal) (232674004)	46	45	2.5%
Airway - Laryngeal Mask Airway (424979004)	2	2	0.1%
Airway - Secure Endotracheal Tube with Holder (TubeTamer) (429184008)	8	8	0.4%
Airway Clearance by Finger Sweep (232706008)	2	2	0.1%
Assess Airway Device Cuff Pressure (448464001)	1	1	0.1%
Check Endotracheal Tube for Security (225717008)	6	6	0.3%
Cricoid Pressure Applied (241726007)	1	1	0.1%
Direct Laryngoscopy (78121007)	4	4	0.2%
Endotracheal Intubation-Video Laryngoscopy (itSNOMED.003)	38	37	2.0%
ETT Intubation (450601000124103)	1	1	0.1%
Extubation of trachea (309812005)	1	1	0.1%
Foreign Body Removed from Airway (232707004)	15	14	0.8%
iGel Insertion (405640005)	198	197	10.6%
Laryngeal Mask Airway (424979004)	26	22	1.4%
Laryngoscopy (28760000)	20	18	1.1%
Laryngoscopy with Foreign Body Removal (19433002)	8	4	0.4%
Orogastric Tube Insertion (235425002)	115	115	6.1%
Orogastric Tube Maintenance (235448007)	2	2	0.1%
Orogastric Tube Removal (235439002)	5	5	0.3%
Orotracheal Intubation (232674004)	1,167	1,106	62.3%
Removal of Foreign Body (10849003)	3	3	0.2%
Remove Endotracheal Tube (271280005)	11	11	0.6%
Reposition Endotracheal Tube (225716004)	1	1	0.1%
Secure Endotracheal Tube by Hand (429618000)	8	8	0.4%
Secure Endotracheal Tube with Holder (429184008)	59	59	3.2%
Secure Endotracheal Tube with Tape (428626000)	2	2	0.1%

Suction Endotracheal Tube (225715000)	83	66	4.4%
Tracheostomy Care/Monitoring (410213006)	3	3	0.2%
Vomit Removed from Airway (225713007)	9	8	0.5%
Airway-Basic	8,297	5,576	1.2%
Nasal Cannula (371907003)	1	1	0.0%
NPA- Nasopharyngeal Airway Insertion (182692007)	1	1	0.0%
Airway - CPAP (47545007)	58	48	0.7%
Airway - Hand Ventilation by Bag Valve Mask BVM (425696007)	71	71	0.9%
Airway - Nasopharyngeal Airway Insertion NPA (182692007)	32	32	0.4%
Airway - Oral Suction (230040009)	21	20	0.3%
Airway - Oropharyngeal Airway Insertion OPA (7443007)	55	55	0.7%
Airway Suctioned (230040009)	750	674	9.0%
Blow by oxygen mask (physical object) (425478008)	2	2	0.0%
CPAP (47545007)	1,170	1,111	14.1%
CPAP Titration (446573003)	397	286	4.8%
Hand Ventilation (11140008)	612	600	7.4%
Hand Ventilation by Bag Valve Mask (425447009)	2,397	2,329	28.9%
Hand Ventilations via BVM Mask (425447009)	28	28	0.3%
Heimlich Maneuver (Airway) (23690002)	3	3	0.0%
Mouth-to-Mask/Mouth Ventilation (243180002)	20	20	0.2%
Nasopharyngeal Airway (182692007)	1,075	1,064	13.0%
Non-Rebreather Mask (371908008)	1	1	0.0%
Nonrebreather oxygen mask (physical object) (427591007)	71	71	0.9%
Non-rebreathing oxygen face mask (physical object) (463225005)	24	24	0.3%
Oropharyngeal Airway (7443007)	1,234	1,218	14.9%
Oxygen - Nasal Cannula (371907003)	19	19	0.2%
Oxygen - Non-Rebreather Mask (371908008)	13	13	0.2%
Oxygen administration by mask (371908008)	3	3	0.0%
Oxygen administration by nasal cannula (371907003)	9	9	0.1%
Oxygen administration by nasal cannula (371907003)	24	24	0.3%
Oxygen nasal cannula (physical object) (336623009)	142	141	1.7%
Oxygen Prior to This Unit's Care (57485005)	35	35	0.4%
Respiratory Secretion Precautions (409525007)	7	7	0.1%
Suction (230040009)	5	4	0.1%
Suction Newborn (18540005)	17	16	0.2%
Assessment	52,497	38,537	7.3%
Airway - Reassess of ET tube by Auscultation (432028000)	5	4	0.0%
ALS Assessment (422440002)	3	3	0.0%
Assessment - Assess of higher cerebral function (32908001)	12	12	0.0%
Assessment - Examination of cervical spine (284405008)	27	27	0.1%
Assessment - Glucose measurement, BGL Check (33747003)	351	333	0.7%
Assessment - Physical assessment (81375008)	108	108	0.2%
Assessment - Suicide risk assessment (225337009)	1	1	0.0%
Assessment - Telemedicine consultation with patient (448337001)	5	5	0.0%
Blood Glucose (166888009)	5	5	0.0%
Butterfly Ultrasound (Prehospital Study) (399064001)	27	22	0.1%
Capnograph waveform (observable entity) (250863006)	2	2	0.0%

Cardiac - Vagal Maneuver (128968000)	13	9	0.0%
Cardiac Arrest - Central pulses present (ROSC) (425598000)	6	6	0.0%
Central pulses present (ROSC) (425598000)	221	177	0.4%
Check Endotracheal Tube Position by Auscultation (432028000)	35	32	0.1%
Continuous Patient Assessment (422618004)	3,604	3,598	6.9%
ETCO2 Colorimetric Detection (428482009)	332	318	0.6%
ETCO2 Digital Capnography (425543005)	11,494	11,449	21.9%
Finger-prick (278450005)	12,327	12,019	23.5%
Glucose measurement, blood (33747003)	1,559	1,494	3.0%
Glucose measurement, blood (33747003)	3,183	3,035	6.1%
Glucose measurement, post glucose dose (104690002)	4	4	0.0%
Glucose measurement, post glucose dose (104690002)	1	1	0.0%
Initial Patient Assessment (315639002)	6,616	6,605	12.6%
Monitor - Capnograph waveform (250863006)	328	325	0.6%
Monitor - Carboxyhemoglobin measurement (19821003)	2	2	0.0%
Newborn Continuous Patient Assessment (423589000)	11	11	0.0%
Orthostatic Vital Signs (425058005)	577	574	1.1%
Patient Assessment (Triage) (245581009)	24	23	0.0%
Pulse Oximetry Monitoring (284034009)	11,269	11,241	21.5%
Taking patient vital signs (61746007)	2	2	0.0%
Telemedicine consultation with patient (448337001)	46	46	0.1%
Telemedicine consultation with patient (448337001)	42	42	0.1%
Vagal Maneuver (128968000)	255	226	0.5%
Blood Administration	11	9	0.0%
Intravenous blood transfusion of packed cells (180207008)	1	1	9.1%
Intravenous blood transfusion of packed cells (180207008)	1	1	9.1%
Transfusion of blood product (116859006)	4	2	36.4%
Transfusion of blood product (116859006)	1	1	9.1%
Transfusion of whole blood (33389009)	2	2	18.2%
Trauma - Transfusion of Blood Product (116859006)	2	2	18.2%
Cardiac	519,797	212,272	72.2%
**DEF - Defibrillation (426220008)	2	2	0.0%
*3 Lead ECG monitoring (428803005)	2	2	0.0%
12 Lead ECG (268400002)	132,518	108,627	25.5%
3 Lead ECG (428803005)	3,371	3,366	0.6%
Automated External Defibrillator Placement (463194009)	73	73	0.0%
Cardiac Arrest - Automated External Defib (AED) (233169004)	1	1	0.0%
Cardiac Arrest - Defibrillation (426220008)	36	18	0.0%
Cardiac Arrest - Manual CPR (89666000)	69	61	0.0%
Cardiac Arrest - Mechanical Device CPR (Lucas, Autopulse) (429283006)	5	5	0.0%
Cardiac Monitor Surveillance (88140007)	41	41	0.0%
Cardiac Monitoring (46825001)	1,061	497	0.2%
Cardiac Pacing (18590009)	194	153	0.0%
Cardiopulmonary resuscitation discontinued due to return of spontaneous circulation (situation) (426970003)	45	30	0.0%
Cardioversion (250980009)	136	99	0.0%
Cardioversion (Synchronized) (250980009)	1	1	0.0%

CPR (89666000)	1	1	0.0%
Defibrillation (426220008)	1,509	554	0.3%
ECG Transmission (422952004)	49	49	0.0%
Electrocardiogram lead (physical object) (257467001)	1,803	1,798	0.3%
Electrocardiographic monitoring (46825001)	125,274	61,838	24.1%
Electrocardiographic monitoring (46825001)	235,353	113,920	45.3%
ITD - Impedance Threshold Device (itSNOMED.047)	1	1	0.0%
Manual CPR (89666000)	1,976	1,773	0.4%
Mechanical Device CPR (429283006)	195	185	0.0%
Monitor - 12 Lead ECG (268400002)	4,358	3,522	0.8%
Monitor - Cardioversion (Synchronized) (250980009)	2	2	0.0%
Monitor - ECG Monitoring (4Lead) (46825001)	11,707	5,828	2.3%
Montior - Trans-Cutaneous Pacing (18590009)	14	11	0.0%
Chest Thoracic	109	87	0.0%
Needle Chest Decompression (182705007)	105	84	96.3%
Trauma - Needle Thoracostomy (182705007)	4	3	3.7%
GI/GU	2	2	0.0%
Airway - Orogastric Tube Insertion (235425002)	1	1	50.0%
Monitoring of J-tube (302353008)	1	1	50.0%
Metabolic	424	401	0.1%
Active External Cooling (431774007)	187	178	44.1%
Active External Warming (431949004)	110	106	25.9%
Enviromental - Cooling Measures (431774007)	5	5	1.2%
Enviromental - Warming Measures for Patient (431949004)	7	7	1.7%
Giving oral fluid (225285007)	14	14	3.3%
Giving oral fluid (225285007)	32	32	7.5%
Hypoglycemic - Provision of food (710925007)	5	5	1.2%
Provision of food (710925007)	18	18	4.2%
Provision of food (710925007)	46	46	10.8%
Misc	12,085	7,668	1.7%
Restraints (386423001)	8	5	0.1%
Adult limb restraint (physical object) (468315000)	2	2	0.0%
Airborne Precautions (409524006)	1	1	0.0%
Ambulance Requested (185406000)	5	5	0.0%
Aspiration Precautions (386519006)	1	1	0.0%
Assessment - Use of de-escalation technique (711037002)	1	1	0.0%
Assist with Toileting (313420001)	9	9	0.1%
Blood and Fluids Precautions (65011002)	13	13	0.1%
Comfort care management (385897008)	31	31	0.3%
Comfort care management (385897008)	75	74	0.6%
Comfort Measures (133918004)	448	448	3.7%
Comfort Survivors (171007003)	12	12	0.1%
Contact Precautions (409529001)	8	8	0.1%
Decontamination (409530006)	12	12	0.1%
Environmental Management for Comfort (386284008)	15	15	0.1%
Environmental Management for Safety (385873004)	23	23	0.2%
Eye Bandaging (225692006)	12	11	0.1%
Eye Irrigation (49999004)	61	61	0.5%

Face mask/covering for Patient (465635009)	7	7	0.1%
Gurney - Comfort Measures (133918004)	6	6	0.0%
Gurney - Restraints (386423001)	96	74	0.8%
Intravenous (IV) Infusion Prior to This Unit's Care (14152002)	28	26	0.2%
Isolation (40174006)	1	1	0.0%
Leave behind Naloxone kit (left with patient/family/friend) (715740004)	5	5	0.0%
Lubrication (257883005)	2	2	0.0%
Moved Patient (56469005)	2,179	1,519	18.0%
Nebulizer (56251003)	2	2	0.0%
Notifications (185087000)	2	2	0.0%
Notifications (185087000)	10	9	0.1%
Notify Coroner (363049002)	69	68	0.6%
Physical Restraint (386423001)	2,465	1,992	20.4%
Physical Restraint Checked and Maintained (35497000)	1,418	1,066	11.7%
Physician contact management (410142006)	1	1	0.0%
Police Requested (184966003)	10	10	0.1%
Position of Comfort (225994009)	1,065	1,063	8.8%
Psycho-spiritual Comforting (385728004)	228	228	1.9%
Report to Nurse (385775004)	1,188	1,186	9.8%
Report to Physician (304562007)	757	756	6.3%
Safety Management (712991000)	13	13	0.1%
Standard Precautions (409522005)	1,656	1,652	13.7%
Time of death (observable entity) (398299004)	139	139	1.2%
Trauma - Eye Irrigation (49999004)	1	1	0.0%
Musculoskeletal	12,498	11,657	1.7%
Ice Pack (229583009)	5	4	0.0%
Air Splint Applied (274475000)	354	345	2.8%
Application of skeletal traction via the femur (239656007)	3	3	0.0%
Application of skeletal traction via the femur (239656007)	1	1	0.0%
C-Collar (49689007)	84	84	0.7%
Cervical Collar Applied (49689007)	8,952	8,933	71.6%
Cervical Spine Stabilization (398041008)	385	384	3.1%
Chemically-activated Ice Pack Treatment (229583009)	26	26	0.2%
Cold/Ice Pack treatment (229585002)	357	342	2.9%
Cold/Ice Pack treatment (229585002)	683	669	5.5%
Extraction splint device (physical object) (421925007)	7	7	0.1%
Immobilization using short extrication splint (451031000124108)	1	1	0.0%
Manual Cervical Spine Stabilization (449199004)	178	178	1.4%
Sling Applied (182558000)	269	267	2.2%
Sling Maintained (81533008)	11	11	0.1%
Spinal Immobilization - Backboard (426498007)	1	1	0.0%
Spinal Immobilization (Cervical) (398041008)	3	2	0.0%
Splint (79321009)	2	2	0.0%
Splint Applied (79321009)	568	557	4.5%
Splint Maintained (10442004)	25	24	0.2%
Traction Maintained (48035000)	3	3	0.0%
Traction Splint Applied (302488007)	53	53	0.4%

Trauma - Cervical Collar Applied (398041008)	268	268	2.1%
Trauma - Cold/Ice Pack treatment (229585002)	33	33	0.3%
Trauma - Immobilization using Short Extrication Splint (707794004)	2	2	0.0%
Trauma - Pelvic Stabilization or Pelvic Sling (182556001)	1	1	0.0%
Trauma - Simple Splint (79321009)	10	10	0.1%
Trauma - Sling Applied (182558000)	14	14	0.1%
Trauma - Traction Splint (302488007)	1	1	0.0%
Trauma - Vacuum Splint Applied (427996005)	19	19	0.2%
Vacuum Splint Applied (427996005)	179	169	1.4%
Not Recorded	47	42	0.0%
117350	13	12	27.7%
377515	1	1	2.1%
Not Recorded (7701003)	32	28	68.1%
OT - Other (422618004)	1	1	2.1%
OB	13	13	0.0%
Childbirth (236973005)	11	11	84.6%
OBGYN - Childbirth (236973005)	2	2	15.4%
Soft Tissue	3,584	3,067	0.5%
(AP) Wound Care (225358003)	1	1	0.0%
Burn Care (133901003)	15	13	0.4%
Burn Dressing Applied (90660004)	29	21	0.8%
Chemical Hemostatic Agent for Bleeding (372045002)	4	4	0.1%
Direct Pressure for Bleeding (447686008)	354	347	9.9%
Hemostatic agent applied (QuikClot or other dressing) (713147009)	13	11	0.4%
Occlusive Wound Dressing (22206003)	54	46	1.5%
Pressure Dressing for Bleeding (26906007)	252	242	7.0%
Pressure to Artery for Bleeding (233419004)	5	5	0.1%
Removal of Foreign Body from Skin (302421003)	4	2	0.1%
Removal of Ring from Finger (426509009)	3	3	0.1%
Tourniquet for Bleeding (20655006)	86	79	2.4%
Trauma - Hemostatic Dressing (372045002)	2	2	0.1%
Trauma - Occlusive Dressing Application (22206003)	4	4	0.1%
Trauma - Pressure Dressing/Direct Pressure for Bleeding (26906007)	33	32	0.9%
Trauma - Simple Wound Dressing (225358003)	44	42	1.2%
Trauma - Tourniquet (20655006)	3	2	0.1%
Wound Care (225358003)	125	122	3.5%
Wound Dressing (182531007)	2,321	2,142	64.8%
Wound Irrigation (225116006)	232	222	6.5%
Vascular	108,233	99,333	15.0%
Intraosseous (IO) (430824005)	2,297	2,208	2.1%
Intraosseous Insertion (430824005)	6	5	0.0%
Intravenous (IV) (392230005)	101,356	93,471	93.6%
Intravenous Insertion (392230005)	268	253	0.2%
IO - Intraosseous Insertion (EZ-IO, BIG) (430824005)	82	80	0.1%
IV - External Jugular Vein Catheterization (405427009)	3	3	0.0%
IV - Intravenous (392230005)	3,361	3,131	3.1%
IV Cath. (External Jugular) (405427009)	1	1	0.0%
IV Catheter Care (410109005)	604	574	0.6%

IV Catheter Removal (424287005)	94	93	0.1%
Monitoring of Intraosseous (IO) Access (708010003)	3	3	0.0%
Monitoring of Intraosseous (IO) Access (708010003)	5	5	0.0%
Venous Catheter Removal (424287005)	1	1	0.0%
Venous Puncture (396540005)	152	140	0.1%
Grand Total	719,858	237,649	100.0%

Data in this report is provided by the efforts of the Riverside County EMS System and its EMS Providers in ensuring quality care and documentation of patient encounters.

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