



# Quality Improvement Program

## **2023 Plan Annual Update**

*Prepared By:*

Sacramento County

Department of Health Services

Division of Public Health

Emergency Medical Services Agency

**SACRAMENTO COUNTY  
 QUALITY IMPROVEMENT PROGRAM PLAN  
 2022 ANNUAL UPDATE  
 April 04, 2024**

In accordance with State of California Code of Regulations (CCR), Title 22 – Division 9, Chapter 12, and Sacramento County EMS Agency (SCEMSA) submits this Emergency Medical Services (EMS) System Quality Improvement Program Plan Update.

**Quality Improvement Program (QIP)**

The Quality Improvement Plan (QIP) conducts comprehensive evaluations of prehospital patient care, involving stakeholders from diverse sectors including communications, public and private Advanced Life Support (ALS) transportation, EMS training, and hospital emergency departments. By thorough review of prehospital patient care data, the QIP identifies areas for improvement. It then implements targeted process enhancements and provides relevant training and education initiatives. Additionally, the QIP recognizes and celebrates outstanding performance and excellence in patient care delivery.

**Description of Agency**

SCEMSA is located at 9616 Micron Ave, Suite 960, Sacramento, CA and oversees the hospitals’ emergency departments and prehospital emergency medical providers servicing Sacramento County. SCEMSA does not hold any Exclusive Operating Area (EOA) agreements. SCEMSA is an equal opportunity county and strives for equality and transparency within the Agency.

**Sacramento County EMS System providers include:**

EMS Providers

- Twenty-five (25) approved prehospital public and private EMS Providers.
  - Fourteen (14) Advanced Life Support (ALS)
  - Eight (8) Basic Life Support (BLS)
  - Two (2) Standby Event Services as BLS

Acute Hospitals

- Nine (9) hospitals this includes four (4) base hospitals and 3 trauma centers:

Base Hospitals	Trauma Centers
1. Kaiser South	1. Kaiser South
2. Mercy San Juan	2. Mercy San Juan
3. Methodist	3. UC Davis
4. UC Davis	

Training and Education

- Forty-six (46) Training and Continuing Education Programs consisting of Emergency Medical Responder, Emergency Medical Technician, Paramedic, Mobile Intensive Care Nurse, Continuing Education, and CCR Title 22, Division 9, Chapter 1.5 Optional Scope program that includes Naloxone administration by Law Enforcement First Responders.

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**Overview**

SCEMSA is committed to establishing and maintaining consistent documentation standards, striving to enhance the quality and precision of data reporting capabilities to not only meet but surpass the standards set by the EMS Authority and the State of California. Currently, seven (7) electronic patient care report (ePCR) platforms are in operation, with each provider submitting data to the CA EMS Information System (CEMSIS). SCEMSA actively monitors documentation compliance and tracks improvements through comprehensive quality improvement audits and intuitive documentation dashboards.

**2023 Update**

The Technical Advisory Group (TAG) is a multi-stakeholder group that advises on the QIP. TAG remains dedicated to enhancing data collection and documentation procedures to ensure the delivery of top-tier data for quality improvement efforts. This commitment was demonstrated through the provision of quarterly reports and feedback to stakeholders, underscoring the TAG's ongoing focus on optimizing practices.

2023 TAG fulfillment:

- Achieved significant improvement in documentation of response mode through targeted Quality Improvement initiatives.
- Conducted comprehensive reviews of dispatch-initiated CPR and subsequent patient outcomes.
- Emphasized collaboration and improvement across specialty committees, the Technical Advisory Group, and emergency department (ED) personnel.
- Evaluated IV access success rates and optimal IV site location.
- Prioritized the transition to NEMSIS 3.5 to ensure all providers completed transition prior to the January 1, 2024, deadline.

2024 Targets:

- Fostering provider participation in the quarterly meetings in 2023 we will begin rotating provider presentations of internal projects in an effort to promote engagement and communication while having an opportunity to highlight best practices.
- Continue to monitor newly established policies and procedures to determine efficacy and alignment with intent.
- In collaboration with County hospitals SCEMSA will work towards a patient outcome focus and facilitate the dissemination of information regarding patient outcome to the transporting agency and personnel.

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Ambulance Patient Offload Times (APOT)

In 2023 Sacramento County hospitals experienced sustained high levels of APOT. These reports are readily accessible on SCEMSA’s website and are updated bi-weekly.

The reports include:

- Ambulance Patient Offload Times (APOT) per Month for Sacramento County
- Ambulance Patient Offload Times (APOT) per Month by Hospital
- Ambulance Patient Offload Times (APOT) Previous Calendar Week per Hospital

Each report provides the APOT 90<sup>th</sup> percentile, the average APOT and the patient count for the specified timeframe. Additionally, stakeholders receive a monthly report which includes APOT 1 (Figure1), APOT 2 and APOT-3 (Figure 3). The APOT 3 metric illustrates the total accumulated time spent on APOT in minutes, impacting EMS providers by reducing available unit hours for emergency calls.

SCEMSA utilizes destination policy#5050 allowing the offload of stable patients meeting specific criteria to the hospital Emergency Department (ED) waiting room, a practice employed 411 times in 2023. Hospital staff have adopted similar policies and initiated the transfer of stable patients to ED waiting room. The Emergency department-initiated transfers to ED waiting room are not included in the 2023 utilization figure. Both EMS and hospital practices actively aid in providing relief of excess APOT hours.

While the Assess and Refer policy #5054 for low Acuity Patients remains in effect since its establishment in 2022, its utilization remains low. SCEMSA continues to work diligently with our hospital partners to decrease APOT times throughout County Emergency Departments.

**Monthly APOT-1 per Month 2022 vs 2023**

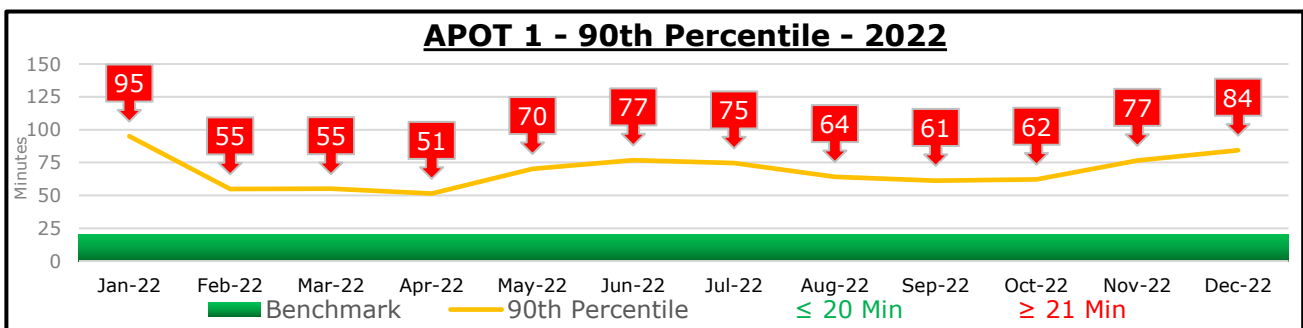


Figure- 2a.

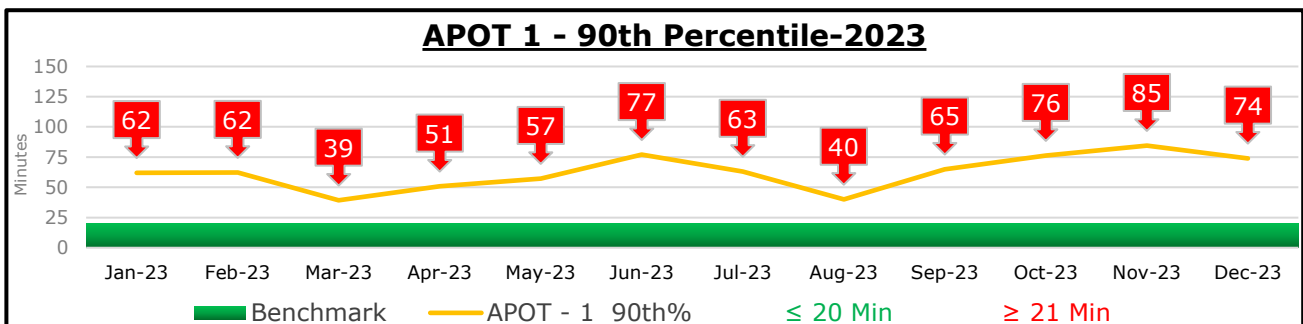


Figure- 2b.

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**Excess Hours per Month 2021 vs 2022**

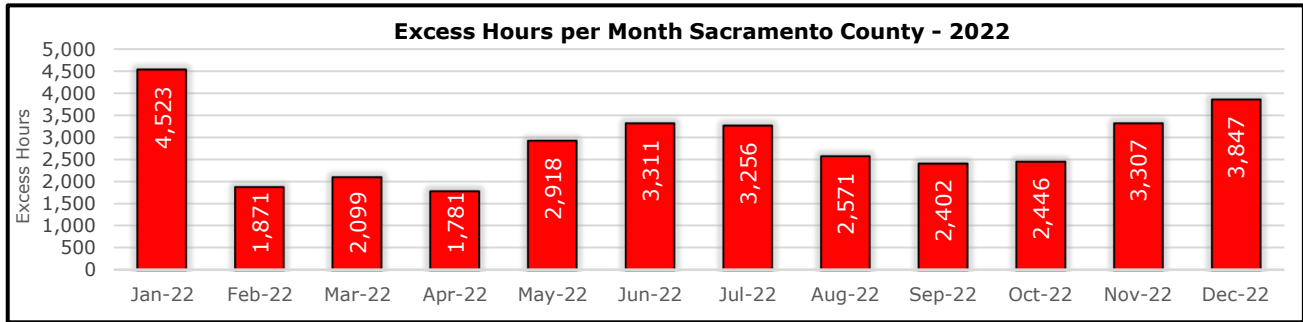


Figure- 3a

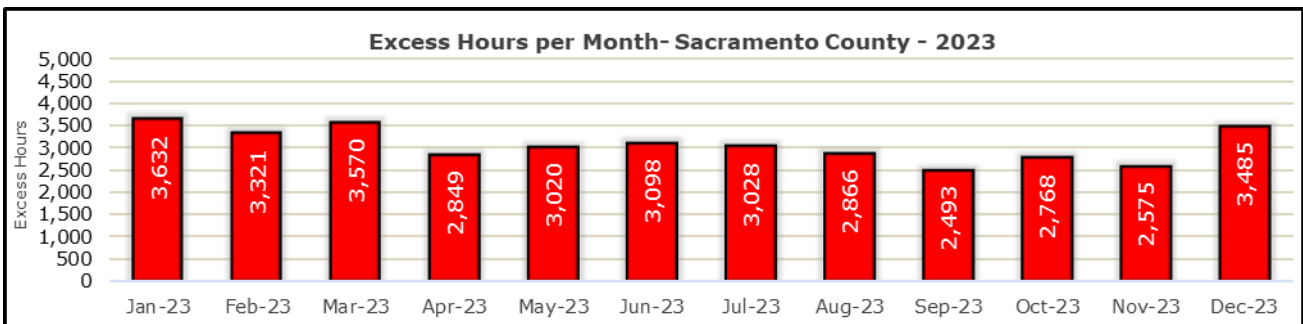


Figure- 3b

**Core Measures:**

SCEMSA evaluates the Core Measures on a quarterly basis and submits the annual report as required by the Emergency Medical Services Authority. Figure 4 below illustrates the Core Measures for Sacramento County prehospital providers for NEMSIS v3.4 and v3.5. In addition to quarterly and annual evaluations, SCEMSA generates Core Measure individual reports for each provider to assist with identifying opportunities for improvement.

California Core Quality Measures Data - CY 2023						NEMSIS v 3.5.0
Measure ID #	Measure Name	Numerator Value (Subpopulation)	Denominator Value (Population)	Reported Value (%)	Reporting Period (January-December 2023)	Notes
TRA-2	Transport of Trauma Patients to a Trauma Center	22	23	96%		
HYP-1	Treatment Administered for Hypoglycemia	4	7	57%		
STR-1	Prehospital Screening for Suspected Stroke Patients	40	40	100%		
PED-3	Respiratory Assessment for Pediatric Patients	1	1	100%		
RST-4	911 Requests for Services That Included a Lights and/or Sirens Response	670	850	79%		
RST-5	911 Requests for Services That Included a Lights and/or Sirens Transport	135	812	17%		

Figure- 4a.

California Core Quality Measures Data - CY 2023						NEMSIS v3.4.0
Measure ID #	Measure Name	Numerator Value (Subpopulation)	Denominator Value (Population)	Reported Value (%)	Reporting Period (January-December 2023)	Notes
TRA-2	Transport of Trauma Patients to a Trauma Center	2,077	2,135	97%		
HYP-1	Treatment Administered for Hypoglycemia	1,476	2,116	70%		
STR-1	Prehospital Screening for Suspected Stroke Patients	4,139	4,331	96%		
PED-3	Respiratory Assessment for Pediatric Patients	584	584	100%		
RST-4	911 Requests for Services That Included a Lights and/or Sirens Response	159,909	237,889	67%		
RST-5	911 Requests for Services That Included a Lights and/or Sirens Transport	11,237	106,635	11%		

Figure- 4b.

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Medical and Operational Advisory Committee (MAC/OAC)

The MAC/OAC includes all stakeholders and provides input on education, training, quality improvement, and data collection. The MAC/OAC conduct quarterly policy review which are effective on July 1<sup>st</sup> each year. When applicable, SCEMSA makes administrative edits as necessary with revised policy becoming effective immediately.

Accomplishments in 2023 include:

- Addressing system challenges
- Policy reviews and updates
- Extended Optional Scope Policy Reviews
- Implementation of policies
- Education and training for new equipment

New Policies

1. Advanced Life Support (ALS) Paramedic Interfacility Transfer (IFT) Optional Skills Transferring Hospital Requirements this policy adds an option for the utilization of any of the following Paramedic IFT optional skills:
  - Monitoring of magnesium sulfate, nitroglycerin (NTG), heparin, and/or amiodarone infusions.
  - Monitoring of blood transfusions.
  - Utilization of automatic transport ventilators (ATV)
2. Paramedic Monitoring of Blood Transfusions During Interfacility Transfers (IFT) - provides parameters for paramedic monitoring of blood transfusions during IFTs.
3. Paramedic Monitoring of Magnesium Sulfate, Nitroglycerin, Heparin, and/or Amiodarone Infusions During Interfacility Transports (IFT)- provides parameters for paramedic monitoring of magnesium sulfate, nitroglycerin (NTG), heparin, and/or amiodarone infusions during IFTs.

Education and Training Programs

- Managed and regulated 46 training and continuing education programs.
- Approved 3 new programs an Emergency Medical Technician Program and Narcan Training Program.
- Reapproved 26 existing programs to maintain quality standards.
- Implemented monitoring of EMS Narcan administrations, providing weekly data reports to local Police Departments.
- Launched the "Leave Narcan Behind" initiative, extending Narcan distribution and training to fire and EMS Departments to enhance community safety and response capabilities.

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Figure 5 illustrates Narcan use by EMS ambulance providers for opioid overdose per month in Sacramento County for 2021-2023. When comparing the overdose incidence, we see an average overdose increase rate of approximately 8% per year. Figure 6 is a map of the incidence of opiate overdoses in Sacramento County for 2021-2023. An Example of the weekly reports shared with law enforcement to aid in

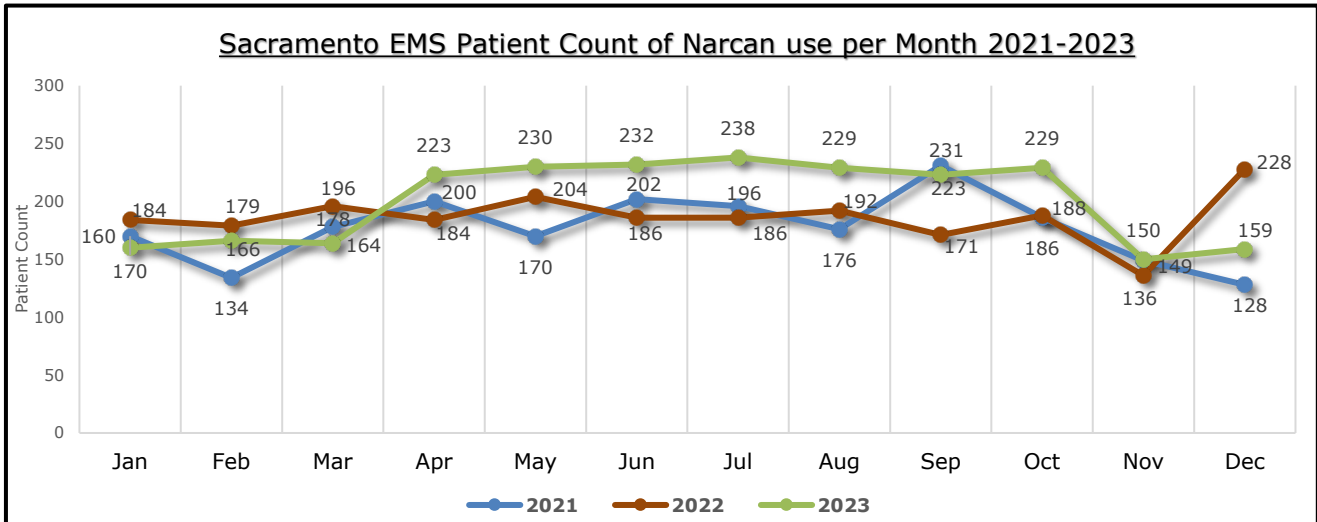


Figure- 5

Figure 6 is a map of the incidence of opiate overdoses in Sacramento County where Narcan was administered for 2021-2023. This is an example of the weekly reports shared with law enforcement.

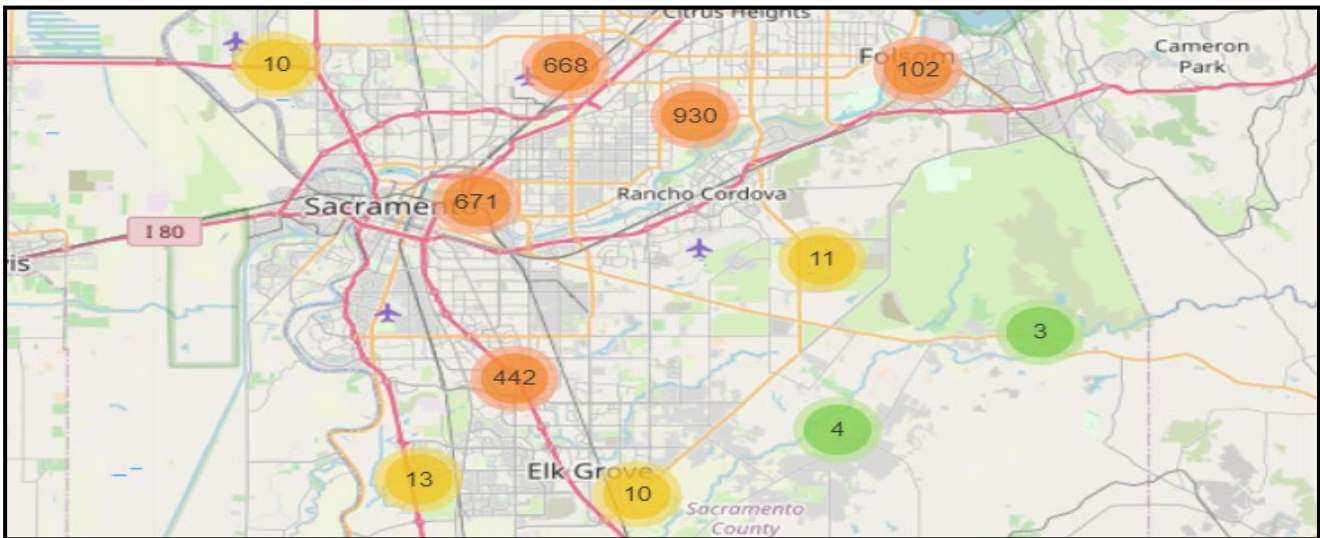


Figure- 6

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Documentation Guidelines

SCEMSA has updated documentation guidelines to reflect the changes that became effective after the NEMESIS v3.5 update. All CEMSIS reports were also updated to reflect changes.

**2024 Plan**

SCEMSA works on improving reporting capabilities and provider accountability to meet or exceed the State of California standards while continuing to build relationships with EMS providers and hospitals throughout the region. Areas of focus include:

- Monitoring APOT times
- Education
- Training
- Documentation Practices
- Monitoring of Core Measures performance indicators
- Feedback to stakeholders.

SCEMSA will continue to collaborate with stakeholders to identify and address system needs. As well, continue to work in identifying solutions to assist in reducing APOT times in the region.