

Operational Policies**Date: 07/01/2022****Quality Assurance and Improvement Reporting****Policy #4300****I. Purpose:**

- A. To establish local documentation and reporting of medications and practices of state and county regulated procedures and protocols in Imperial County.

II. Authority:

- A. Health and Safety Code, Section 1797.220, 1798. Title 22, Section 100170.

III. Background:

- A. The California Emergency Medical Services Authority (EMSA) implemented regulations related to Quality Improvement (QI) programs for EMS services throughout the state which require the Local EMS Agencies (LEMSA) to develop integrated, multidisciplinary processes for the management of quality in their systems.
- B. The clinical QI program for the Imperial County EMS System incorporates all EMS stakeholders within its jurisdiction. The LEMSA in conjunction with the prehospital provider agencies develops and implements QI activities. In addition, each provider agency will submit an annual report of QI activities to the LEMSA. The LEMSA incorporates the provider agency QI Activity reports into its annual report of QI activities that it will review and monitor through quality assurance review. See policy ***#1100 for Agency QA plan recommendations.
- C. The included indicators were determined to be of a high priority for continuous monitoring by the Imperial County quality assurance review. This list is not intended to limit the monitoring and reporting of other performance indicators selected by EMS provider agencies. Through continuous collaboration by quality assurance and review, and in response to policy and protocol updates, identified trends in incident reports and/or complaints received by the EMS Agency, and other factors, additional performance indicators will be identified for continuous or temporary monitoring.
- D. The Clinical QA process in Imperial County EMS evaluates important aspects of prehospital patient care such as compliance with policies and patient treatment protocols. Audit filters are used to monitor compliance with standards of care. The QA process ensures a review of any care that falls outside the identified standard and implementation of improvement plans to correct deficiencies. Improvement plans are monitored for continued progress towards the identified goals.
- E. Each provider agency should have designated personnel who manage the internal quality improvement process for that agency. The provider agency QI personnel and medical directors report issues in medical management of patients to the EMS Agency Medical Director and EMS Manager upon completion of their internal QI review.

IV. Responsibilities:

- A. Responsibilities of the Imperial County EMS Agency:
 1. Develop and implement quality assurance review based on EMSA regulations.
 2. Provide logistical and administrative support for the quality assurance and review.
 3. In collaboration with provider agencies, identify and develop indicators for performance measurement.
 4. Maintain summary quality assurance reports submitted by the provider agencies.

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5. Oversee the development of any indicated Performance Improvement Processes.
 6. Facilitate the development of education and training programs for the provider agencies in relation to the implementation of the quality assurance process.
 7. Monitor and Report progress of the quality assurance process.
- B. Responsibilities of EMS agencies within Imperial County
1. In cooperation with the EMS Agency, implement quality assurance review internally.
 2. Assist in the identification of indicators needed and ensure compliance with completion of required indicators.
 3. Share results of internal QI activities as well as dissemination of appropriate information forwarded from the quality assurance review with all EMS personnel within the agency.
 4. Develop and implement a provider-specific written quality assurance plan.
 5. Review the provider-specific quality assurance annually for effectiveness in identifying and resolving provider related QI issues and revise as needed.
 6. Provide the EMS Agency with all required reports including an annual update on the provider quality assurance and review.
- V. **Reporting Clinical Indicators**
- A. Each provider agency will complete the indicators based on the care that their personnel render to the patient. Using an Excel Spread Sheet as exemplified on the next page, each provider agency will submit the required information for the clinical indicator currently in use to the EMS Agency. The EMS Agency will send the spreadsheet electronically to each provider agency.
- B. The clinical indicator information, in spreadsheet form, will be due back to Imperial County EMS Agency by the 15th business day of the following month. The Agency will review and validate the data and look for trends. Trends derived from the clinical indicators will be discussed at the quality assurance review meetings.
- C. The indicators will measure current compliance with identified best practices. If compliance is maintained or improved, the indicators may be retired and new indicators are developed through the quality assurance review.
- D. Imperial County EMS will maintain the records of the results of the clinical indicators submitted by the local provider agencies. The provider agencies will maintain all raw data collected for the clinical indicators should there be any questions about trends or identified issues
- E. The indicators required for reporting include:
1. ACS – ASA
 2. ...*** •TRA-2: Transport of Trauma Patients to a Trauma Center•HYP-1: Treatment Administered for Hypoglycemia•
 3. STR-1: Prehospital Screening for Suspected Stroke Patients•
 4. PED-3: Respiratory Assessment for Pediatric Patients•
 5. RST-4: 911 Requests for Services That Included a Lights and/or Sirens Response•
 6. RST-5: 911 Requests for Services That Included a Lights and/or Sirens Transport

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7. APOT/APOD - *** reference APOT policy [@Rosyo Ramirez](#)
8. HEMS reporting for QA documentation – ETA and dispatch requirement ***

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Reporting Example	
Reporting Period:	Monthly
Numerator:	Total Number of patients encountered with symptoms suggestive of suspected Acute Coronary Syndrome which were correctly treated according to IC Treatment Protocol 9170. (N=90).
Denominator:	Total number of patients who presented with symptoms suggestive of Acute Coronary Syndrome. (D=95)
Formula:	Numerator/Denominator * 100=% (90/95) * 100= 95% Summary
Indicator	95% compliance with IC Treatment Protocol 9170 for patients who present with symptoms suggestive Acute Coronary Syndrome.

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Operational Policies**Date: 07/01/2022****Quality Assurance and Improvement Reporting****Policy #4300****Acute Coronary Syndrome (ACS) – Aspirin****DEFINITIONS:**

% Compliance: Percentage (%) of adult patients assessed by EMS personnel who present with symptoms consistent with suspected Acute Coronary Syndrome (ACS), and are treated with Aspirin (ASA) prior to hospital arrival.

Adult patient: Age >35 years

Symptoms of Including but not limited to one or more of the following suspected cardiac complaints: chest pain or pressure; chest tightness, discomfort, arm or neck pain, anginal equivalent including shortness of breath

REPORTING:

Indicator items: Total number of patients presenting with symptoms suggestive of Acute Coronary Syndrome

Total number of above identified patients who received ASA according to the chest pain/suspected ACS protocol.

% compliance rate for correct protocol use in patients presenting to EMS personnel with suspected cardiac ischemia.

Reporting formula: $N/D * 100 = \%$

Data Points:

Inclusion criteria:

- Patient age > 35 years
- Patient complains of symptoms suggestive of suspected Acute Coronary Syndrome.
- IC chest pain/suspected ACS protocol is utilized
- Appropriate aspirin dose (324 mg) is documented
- If unable to provide aspirin, document why

Numerator:

Total Number of patients encountered with symptoms suggestive of Acute Coronary Syndrome who received ASA. (N)

Denominator:

Number of patients who presented with symptoms suggestive of Acute Coronary Syndrome (D)

Reporting Period: Monthly

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Data Source: Patient Care Reports

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Operational Policies**Date: 07/01/2022****Quality Assurance and Improvement Reporting****Policy #4300****Acute Coronary Syndrome (ACS) – Pre-Hospital 12-Lead****DEFINITIONS:**

% Compliance: Percentage (%) of patients assessed by EMS personnel who present with symptoms consistent with suspected ACS, and received a 12 lead by paramedics prior to hospital arrival.

Symptoms of Including but not limited to one or more of the following suspected cardiac complaints: chest pain or pressure; chest tightness, discomfort, arm or neck pain, or anginal equivalent, including shortness of breath

REPORTING:

Indicator items: Total number of patients presenting with symptoms suggestive of Acute Coronary Syndrome

Total number of above identified patients who received 12-lead according to IC treatment protocol for chest pain/suspected ACS.

% compliance rate for correct protocol use in patients presenting to EMS Personnel with suspected cardiac ischemia.

Reporting formula: $N/D * 100 = \%$

Data Points:

Inclusion criteria:

- Patient age > 18 years
- Patient complains of symptoms suggestive of suspected Acute Coronary Syndrome.
- IC Treatment Protocol for chest pain/suspected ACS.

Numerator:

Total Number of patients encountered with symptoms suggestive of Acute Coronary Syndrome who a 12 lead was performed on. (N)

Denominator:

Number of patients who presented with symptoms suggestive of Acute Coronary Syndrome (D)

Reporting Period: Monthly

Data Source: Patient Care Reports

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Treatment Administered for Hypoglycemia

DEFINITIONS:

% Compliance: Percentage (%) of patients received treatment to correct their hypoglycemia originating from a 911 response

Hypoglycemia: Glucose level <80 mg/dL (adult), 60mg/dL (child) or 45mg/dL (neonate)

REPORTING:

Indicator items: *Total number of patients with hypoglycemia*

Total number of above identified patients who received treatment according to the corresponding protocol.

% compliance rate for correct protocol use in patients presenting to EMS personnel with hypoglycemia.

Reporting formula: $N/D * 100 = \%$

Data Points: *Inclusion criteria:*

- Hypoglycemia

Numerator:

Total number of patients who received treatment to correct hypoglycemia originating from a 911 response. (N)

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Denominator:

Number of patients who presented with hypoglycemia (D)

Reporting Period: *Monthly*

Data Source: *Patient Care Reports*

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Suspected Acute Stroke Glucose Monitoring

DEFINITIONS

% Compliance: Percentage (%) of patients assessed by EMS personnel as suspecting acute stroke and receive glucose testing.

Acute suspected

Stroke: Any change in a patient’s neurological state displaying neurological deficit

REPORTING

Indicator item: % Compliance glucose testing rate per total cases

Reporting formula: $N/D * 100 = \%$

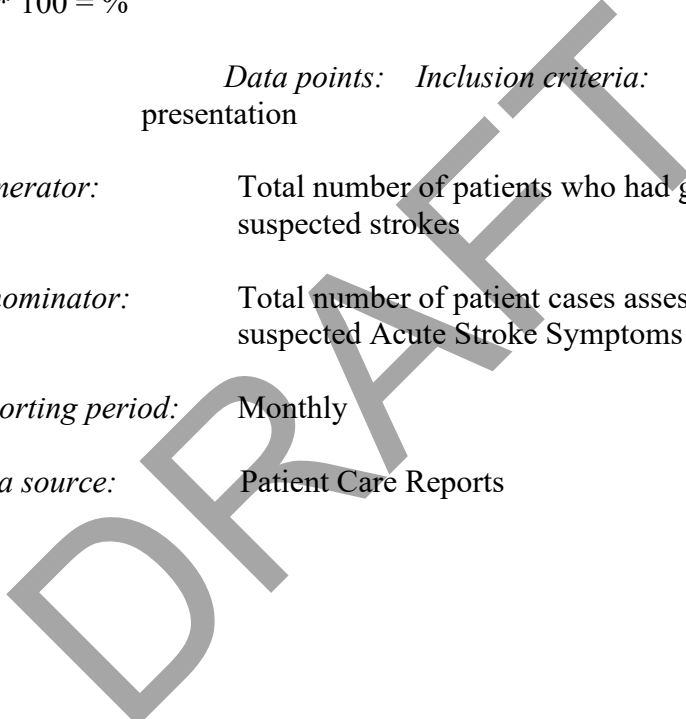
Data points: Inclusion criteria: Patient concerning for stroke presentation

Numerator: Total number of patients who had glucose testing on all suspected strokes

Denominator: Total number of patient cases assessed by EMS personnel as suspected Acute Stroke Symptoms

Reporting period: Monthly

Data source: Patient Care Reports



Operational Policies**Date: 07/01/2022****Quality Assurance and Improvement Reporting****Policy #4300****Acute Stroke – Stroke Scale Assessment Documentation****DEFINITIONS:**

% Compliance: Percentage (%) of patients assessed by EMS personnel who present with symptoms consistent with suspected Acute Stroke and received a Stroke Scale Assessment documented prior to hospital arrival.

Symptoms of suspected stroke Including but not limited to one or more of the following complaints: unilateral weakness, paresthesia, facial droop, difficulty speaking, vision changes, balance or ambulation issues. (BEFAST) @Katherine Staats for order

REPORTING:

Indicator items: Total number of patients presenting with symptoms suggestive of Acute Stroke

Total number of above identified patients who received a Stroke Scale Assessment according to IC treatment protocol for altered mental status.

% compliance rate for correct protocol use in patients presenting to EMS Personnel with suspected Acute Stroke.

Reporting formula: $N/D * 100 = \%$

Data Points:

Inclusion criteria:

- Patient complains of symptoms suggestive of suspected Acute Stroke.
- IC Treatment Protocol for altered mental status.

Numerator:

Total Number of patients encountered with symptoms suggestive of Acute Stroke who a Stroke Assessment (N)

Denominator:

Number of patients who presented with symptoms suggestive of Acute Stroke (D)

Reporting Period: Monthly

Data Source: Patient Care Reports

Operational Policies**Date: 07/01/2022****Quality Assurance and Improvement Reporting****Policy #4300****Performance of Skills – Endotracheal Intubation****DEFINITIONS:**

% Compliance: Percentage (%) of adult, or adult-sized, patients who received successful endotracheal intubation within two attempts in a prehospital setting.

Adult patient: Patient age > 14 years old (or patients qualifying by size greater than pediatric length-based tape)

REPORTING:

Indicator items: Total number of all events with endotracheal intubation attempts

% compliance rate for successful endotracheal intubations as defined as successful within 2 (two) attempts.

Reporting formula: $N/D * 100 = \%$

Data Points:

Inclusion criteria:

- Patient age > 14 years or size greater than pediatric length-based tape
- Patient receiving endotracheal intubation attempts

Numerator:

Total Number of patients encountered with a successful endotracheal intubation within 2 attempts. (N)

Denominator:

Number of patients who received an endotracheal intubation attempt. (D)

Reporting Period: Monthly

Data Source: Patient Care Reports; Intubation Validation Form

Operational Policies**Date: 07/01/2022****Quality Assurance and Improvement Reporting****Policy #4300****Out-of-Hospital Cardiac Arrest – Return of Spontaneous Circulation****DEFINITIONS:**

% Compliance: Percentage (%) of patients who experience cardiac arrest have return of spontaneous circulation (ROSC) prior to arrival or receiving facility.

Resuscitation: Any time an EMS provider provides chest compressions.

REPORTING:

Indicator items: Total number of patients presenting with resuscitation due to cardiac arrest

% rate for patients who had ROSC after resuscitation prior to arrival of receiving facility.

Reporting formula: $N/D * 100 = \%$

Data Points:**Inclusion criteria:**

- Patient experiencing cardiac arrest with initiation of chest compressions prior to arrival of receiving facility.

Numerator:

Total Number of patients with ROSC after initiation of chest compressions by EMS providers prior to arrival to receiving facility. (N)

Denominator:

Number of patients who received resuscitative measures with chest compressions by EMS prior to arrival to receiving facility (D)

Reporting Period: Monthly

Data Source: Patient Care Reports

Operational Policies**Date: 07/01/2022*****Quality Assurance and Improvement Reporting*****Policy #4300****Out-of-Hospital Cardiac Arrest Utilization of Automated External Defibrillation (AED)****DEFINITIONS:**

% Compliance: Percentage (%) of patients who experience cardiac arrest and resuscitation who received defibrillation by automatic or semi-automatic external defibrillator and performed by on duty EMS personnel.

Resuscitation: Any time an EMS provider provides chest compressions.

REPORTING:

Indicator items: Total number of patients presenting with cardiac arrest and receive resuscitation measures by on duty EMS personnel.

% rate for patients who received defibrillation during an out of hospital resuscitation with an AED by on duty EMS personnel.

Reporting formula: $N/D * 100 = \%$

Data Points:**Inclusion criteria:**

- Patient experiencing cardiac arrest with EMS provision of chest compressions prior to arrival of receiving facility.

Numerator:

Total Number of patients who were defibrillated utilizing an AED by on duty EMS personnel during cardiac arrest resuscitation. (N)

Denominator:

Number of patients who received resuscitative measures with chest compressions by EMS prior to arrival to receiving facility (D)

Reporting Period: Monthly

Operational Policies**Date: 07/01/2022****Quality Assurance and Improvement Reporting****Policy #4300****Medications and Procedures under Local Optional Scope of Practice**

(IV Tranexamic Acid, IV acetaminophen, IV/IM/IO ketorolac, IV hydroxocobalamin, amyl nitrate with IV sodium thiosulfate and sodium nitrate)

****These medications should be submitted through separate reports, and not as a combined total.******DEFINITIONS:**

% Compliance: Percentage (%) of patients who are administered these medications and all parameters for administration, including appropriately identified contraindications (Ex: age, pregnancy or vital signs) are utilized.

REPORTING:

Indicator items: Total number of patients receiving the above medications by on duty EMS personnel.

% rate for patients who appropriately received the medications, appropriately following inclusion criteria, and contraindications.

Reporting formula: $N/D * 100 = \%$

*Data Points:**Inclusion criteria:*

- Patients meeting criteria for the individual local optional scope of practice medications

Numerator:

Total Number of patients who correctly received these medications with all inclusion criteria and contraindications met. (N)

Denominator:

Number of patients who received any of these medications by EMS prior to arrival to receiving facility (D)

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Need to add:

911 REQUESTS FOR SERVICES THAT INCLUDED A LIGHTS AND/OR
SIRENS TRANSPORT

28911 REQUESTS FOR SERVICES THAT INCLUDED A LIGHTS AND/OR
SIRENS RESPONSE

RESPIRATORY ASSESSMENT FOR PEDIATRIC PATIENTS

TRANSPORT OF TRAUMA PATIENTS TO A TRAUMA CENTER

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Operational Policies**Date: 07/01/2022****Quality Assurance and Improvement Reporting****Policy #4300****VI. Evaluation of Clinical Indicators**

- A. Clinical indicators are completed monthly by the provider agencies and the results are sent electronically to the EMS Agency (the EMS Medical Director and EMS Manager) for analysis. The EMS Agency compiles indicator data and documents compliance with the measured criteria in graph form.
- B. The EMS agency sends the results of the analysis back to the provider agencies each month with a graph that demonstrates the mean county rate of compliance with the measured indicators, the agency's specific compliance as it relates to the county's mean compliance and the comparison of agency and county compliance. (See figures 1, 2 and 3).
- C. The compliance threshold for each criteria measured is set at 90%. Once the mean county compliance meets and sustains at 90% consistently for 6 months, the clinical indicator will be retired and new indicators will replace the existing indicators

VII. Methods for Improvement

- A. The provider agencies, through their internal QI process, are responsible for creating and monitoring issue resolution programs in conjunction with the EMS agency Medical Director, up to and including individual performance improvement plans, education and training, standardized education and if necessary discipline.
- B. The involvement of all stakeholders in the Quality Assurance Committee ensures that a multidisciplinary approach to issue resolution exists. As trends in issues are identified through quality assurance review, and may elect to refer issues to the EMS Training/ Education subcommittees to address specific issues and develop solutions.
- C. Should an issue arise outside of the specifically collected indicators or filters, notification of the issue will be directed by the EMS agency to the provider agencies. The EMS Agency in collaboration with the provider agencies will explore the issue's root causes as well develop solutions. Any of the advisory committees can be a forum for discussion of these issues.

VIII. Quality Assurance Issues and Concerns:

- A. Major issues identified will be investigated by the EMS Education and Training Advisory Group (members of the prior committee) via a Root Cause Analysis method in order to find the "Root Cause" of the problem versus apply a punitive action against the providers. Analysis will be reported to the Agency for further actions and recommendations. Individual Performance Improvement Plans will be coordinated between the Agency, QI representative, BH representative and the provider.

APPROVED:

Signature on FileKatherine Staats, M.D. FACEP
EMS Medical Director