

PREHOSPITAL CONTINUOUS QUALITY IMPROVEMENT PROGRAM

“The ability of EMS to optimally meet communities and individual patients’ needs in the future is dependent on evaluation processes that assess and improve the quality of EMS. Continuous is essential and should pervade all aspects of every EMS system.” *Theodore R. Delbridge MD, MPH*

PURPOSE: To establish a system wide Continuous Quality Improvement Program (CQI) for evaluating of prehospital EMS in the Nor-Cal EMS region. Nor-Cal EMS, base/receiving hospital/facilities, and prehospital providers are committed to establishing standards for prehospital patient care that are optimal and achievable for our region. The Prehospital CQI program will ensure these standards are met so we can provide the highest quality of prehospital care to the residents and visitors of the communities we serve.

AUTHORITY: California Administrative Code, Title 22, Division 9, Chapter 1.5, 2, 3 and the Health and Safety Code, Division 2.5, Section 1797.220

PRINCIPLES:

1. To be effective, a CQI program must foster a positive working relationship between all components of EMS system.
2. This document will allow each agency to continue meeting its own unique CQI needs as well as providing an avenue for meaningful collaboration on system wide requirements.
3. This CQI program encourages the utilization of the process that affects patient outcome most significantly.

DEFINITIONS:

1. **Certificate:** Includes, certification, accreditation and/or authorization.
2. **Evaluation:** The review and assessment of the quality and/or appropriateness of an important aspect of care for which a pre-established level of performance has been reached during monitoring activities. The review is designed to identify opportunities to improve care and develop a plan of action to address the identified opportunities to improve care.
3. **Forms:** All forms discussed in this Policy are also available @ www.norcalems.org.
4. **Important Aspects of Care:** The patient care activities within the scope of care that are of the greatest significance to the quality and/or appropriateness of patient care. The focus of monitoring and evaluation includes; activities identified as important aspects of care because of high volume, high risk (through either acts of commission or omission), and/or problem prone for patients or providers.
5. **Indicator:** A well defined objective and measurable variable used to monitor the quality of an important aspect of care and upon which data is collected.
6. **Opportunity for Improvement:** Any occasion to provide useful feedback to personnel on an important aspect of care.
7. **Threshold for Evaluation:** A pre-established level of performance related to a specific indicator of quality, of an important aspect care.
8. **Useful Feedback:** An important aspects of quality improvement, which may include but is not limited to the following:
 - a) Recognition, reward and reinforcement for a job well done.
 - b) Case review and counseling on specific issues with focused quality improvement review to monitor for recurrence over a specified period of time.
 - c) Didactic courses.

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- d) Focused quality improvement review of ongoing care, including but not limited to:



- Ø Record review
- Ø Field observation
- Ø Peer review
- Ø Case review conference
- Ø Field Care Audits
- Ø Clinical observation.

POLICY:

1. The following agencies are required to develop a CQI plan/program and participate in the regional CQI process:
 - a) First Responder (BLS), that provide the following services:
 - 1) Automated External Defibrillation.
 - 2) Combi-Tube.
 - 3) EMT-I Optional Scope.
 - 4) BLS transport services.
 - b) Advanced life support providers, which includes:
 - 1) ALS non-transport services.
 - 2) ALS transport services.
 - 3) ALS Tactical Weapons Teams and special event teams.
 - c) Emergency Medical Dispatch Centers
2. Providers shall:
 - a) Participate in the Nor-Cal EMS CQI that will include making available all relevant records for program monitoring and evaluation.
 - b) Providers will furnish Nor-Cal EMS with a copy of its CQI for approval and provide any changes as they occur.
 - c) Submit their CQI to Nor-Cal EMS for review every five years.

CQI TOOLS

A recognized tool to facilitate the CQI process is the FOCUS-PDSA:

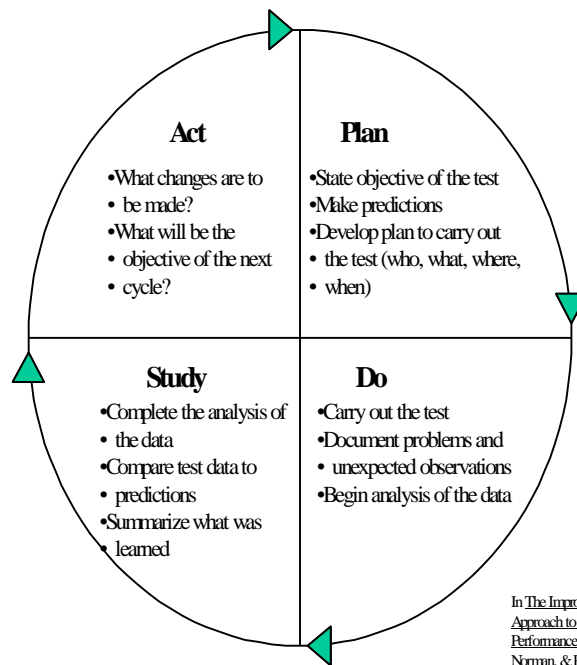
- | | | |
|---|---|---|
| Ø | F | <u>Find</u> a process to improve. |
| Ø | O | <u>Organize</u> an effort to work on improvement. |
| Ø | C | <u>Clarify</u> current knowledge of the process. |
| Ø | U | <u>Understand</u> processes variation and capability. |
| Ø | S | <u>Select</u> a strategy for further improvement. |
| | | |
| Ø | P | <u>Plan</u> a change or test aimed at improvement. |
| Ø | D | <u>Do</u> – carry out the change or test. |
| Ø | S | <u>Study</u> the results, what was learned, what went wrong. |
| Ø | A | <u>Act</u> – adopt the change, or abandon it, or run through the cycle again. |

The Plan-Do-Study-Act Cycle is one of the essential elements in the FOCUS-PDSA, is one of the most common system evaluation and improvement models used in EMS.

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The Plan-Do-Study-Act Cycle (PDSA)



CQI PLANS

1. At a minimum all CQI programs should include:
 - a) Statement of the CQI program goals and objectives. The programs goals and objectives should include the following (Appendix A, is the Health Care Criteria for Performance Excellence of the Baldrige National Quality Program should be reviewed as they provide core values and concepts of CQI):
 - ∅ To recognize, reward and reinforce positive behavior.
 - ∅ To define standards, evaluate methodologies and utilize the evaluation results for continued system improvement.
 - ∅ To establish performance standards and indicators related to these aspects of care.
 - ∅ To establish thresholds for evaluation related to the indicators
 - ∅ To collect and organize data.
 - ∅ To recognize, develop, and enhance opportunities for improvement.
 - ∅ To take action to improve care.
 - ∅ Establish a peer review process on monthly patient care reports (PCR).
 - ∅ To assess the effectiveness of remedial actions and document improvement.
 - ∅ To communicate relevant information among the participating agencies and the Regional Committees.
 - b) Description of how the CQI program is integrated into the organization.
 - c) Description of how the CQI program is integrated into the Nor-Cal EMS system.
 - d) Method to document those processes used in CQI activities.
 - e) Common data base from which to compare and contrast data system participants.

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- f) Methods to retrieve data from participating non-base receiving hospital regarding patient diagnoses and disposition.



2. Prehospital Provider Contributions:
 - a) Implementation and maintenance of an CQI program in conjunction with assigned base hospital and receiving hospitals/facilities.
 - b) Evaluations of prehospital care performance standards.
 - c) Collection of outcome data on all patients brought to the base hospital and receiving hospitals/facilities.
3. Nor-Cal EMS Contributions:
 - a) Implementation and maintenance of an CQI program in conjunction with the prehospital providers.
 - b) Provide multidisciplinary team approach for regional CQI issues.
 - c) Assist in the ongoing monitoring and evaluation of clinical and organizational performance.
 - d) Provide information to support system improvement of those processes that are important to the quality of patient care.
 - e) Provide confidential patient outcome and informational system reports to assist in improving the functions targeted by the CQI program.

RESPONSIBILITIES

First Responder Agencies: Each participating first responder agency will assign qualified personnel to carry out the following responsibilities:

1. Prospective:
 - a) Provide EMS orientation to new personnel.
 - b) Ensure personnel are meeting Nor-Cal EMS training requirements (i.e., SPORTS, Skills competencies, etc.).
 - c) Establish an in-house quality improvement process.
 - d) Assist Nor-Cal EMS in the development and revision of performance standards.
 - e) Assist Nor-Cal EMS in the development and of performance indicators.
 - f) Review and revise in-house policies as necessary.
 - g) Actively participate in the revision of Nor-Cal EMS Policies and Procedures.
2. Concurrent:
 - a) Provide continuing education and skills training.
 - b) Provide field observation.
 - c) Communicate predetermined relevant performance and education information to Nor-Cal EMS.
3. Retrospective:
 - a) Recognize, reward and reinforce the positive provision of prehospital care.
 - b) Educate and counsel personnel who do not meet established thresholds.
 - c) Provide CQI review for personnel as necessary.
 - d) Participate in Nor-Cal EMS outcome studies of specific patient populations (disease entities) and treatment modalities.
 - e) Participate in the Nor-Cal EMS standardized CQI program.
 - f) A minimum of thirty (30) calls (or all if < 30) must be reviewed each month by the EMS Coordinator or by the designated peer review staff. The review will include at a minimum the following:
 - ∅ All patients that are transported code 3 to the hospital (ambulance providers only).
 - ∅ Code 2 response that results in code 3 transport (ambulance providers only).
 - ∅ Patient complaints.
 - ∅ Cardiac arrests.
 - ∅ Do Not Resuscitate orders.

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- ∅ Patient refusals (against medical advice).
- ∅ AED placement or usage. Providers shall ensure that AED portion of the PCR form has been completed and submitted as required.
- ∅ Combi-Tube attempt or placement (providers shall ensure that a completed **Skills/Medication Usage Form** has been submitted as required).



- ∅ Any call that the provider is required to submit documentation as part of a trial study.
- g) All prehospital calls identified in 3(f) shall be the subject of a focused prehospital care review. Each run call should be reviewed for the following indicators:
 - ∅ Documentation that is complete, accurate, appropriate and legible.
 - ∅ Base contact criteria met and failure to contact base recognized (EMT-I optional scope only).
 - ∅ Treatment is appropriate and does not deviate from established Nor-Cal EMS Policies and Procedures.

ALS Agencies: Each participating ALS agency will assign qualified personnel to carry out the following responsibilities:

1. Prospective:

- a) Provide EMS orientation to new personnel.
- b) Provide training in the Nor-Cal EMS optional scope of practice, which is in excess of the State of California basic scope.
- c) Ensure personnel are meeting Nor-Cal EMS training requirements (i.e., SPORTS, Skills competencies, etc.).
- d) Establish an in-house CQI process.
- e) Assist Nor-Cal EMS and the assigned base hospital in the development and revision of performance standards.
- f) Assist Nor-Cal EMS and the assigned base hospital in the development and of performance indicators.
- g) Review and revise in-house policies as necessary.
- h) Actively participate in the revision of Nor-Cal EMS Policies and Procedures.

2. Concurrent:

- a) Provide or participate in monthly continuing education and skills training.
- b) Provide at a minimum, annual field observation of all ALS personnel.
- c) Monitor field to hospital communications.
- d) Communicate predetermined relevant performance and education information to assigned base hospital and Nor-Cal EMS.

3. Retrospective:

- a) Recognize, reward and reinforce the positive provision of prehospital care.
- b) Educate and counsel personnel who do not meet established thresholds.
- c) Provide CQI review for ALS personnel at a minimum:
 - ∅ Pre-accreditation (paramedics only): Weekly or consult weekly with assigned Field Training Officer (FTO).
 - ∅ Accredited/Certified/Authorized less than one (1) year – quarterly reviews.
 - ∅ Accredited/Certified/Authorized more than one (1) year – semi-annual reviews.
- d) Participate in Nor-Cal EMS outcome studies of specific patient populations (disease entities) and treatment modalities.
- e) Participate in the Nor-Cal EMS standardized CQI program.
- f) A minimum of thirty (30) calls (or all if < 30) must be reviewed each month by the ALS Coordinator or by the designated peer review staff. The review will include at a minimum the following:
 - ∅ All patients that are transported code 3 to the hospital (ambulance providers only).

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- ∅ Code 2 response that results in code 3 transport (ambulance providers only).
- ∅ Patient complaints.
- ∅ Patient refusals (against medical advice).
- ∅ Cardiac arrests.
- ∅ Do Not Resuscitate orders.
- ∅ Scene delay of > 20 minutes for a trauma patient.
- ∅ Random focused audits of BLS runs.



- Ø Audit critical skills and optional scope medications (providers shall ensure that a completed **Skills/Medication Usage Form** has been submitted as required):
 - ü Pleural decompression.
 - ü Intraosseous infusion.
 - ü Advanced airway attempt or placement.
 - ü Magnesium Sulfate.
 - ü Pre-Existing Vascular Access.
 - ü Pralidoxime Chloride (2 – PAM).
 - ü Potassium Chloride (less than or equal to 40 miliequivalents per liter for IFT's only).
 - ü Nasogastric intubation and gastric suction.
 - ü Oxytocin/Pitocin.
 - ü Procanimide.
 - ü Verapamil.
 - ü Blood and blood products (for IFT's only).
 - ü External cardiac pacing.
 - ü Intravenous Heparin (for IFT's only).
 - ü Intravenous Nitroglycerin (for IFT's only).
- g) All prehospital calls identified in 3(f) shall be the subject of a focused prehospital care review. Each run call should be reviewed for the following indicators:
 - Ø Documentation that is complete, accurate, appropriate and legible.
 - Ø Base contact criteria met and failure to contact base.
 - Ø Treatment is appropriate and does not deviate from established Nor-Cal EMS Policies and Procedures.

MEDICAL DISPATCH CENTERS: Each medical dispatch center will assign qualified personnel to carry out the following responsibilities:

1. Prospective:
 - a) Provide EMS orientation to new personnel.
 - b) Assist Nor-Cal EMS, base hospitals, ALS providers and first responder agencies in the development and of performance indicators.
 - c) Ensure personnel are meeting Nor-Cal EMS training requirements (i.e., SPORTS, Skills competencies, etc.).
 - d) Establish an in-house quality improvement process and committee.
 - e) Assist Nor-Cal EMS in the development and revision of performance standards.
 - f) Review and revise in-house policies as necessary.
 - g) Actively participate in the revision of Nor-Cal EMS Policies and Procedures.
2. Concurrent:
 - a) Provide continuing education and dispatch skills training.
 - b) Provide supervision of dispatch personnel.
 - c) Communicate predetermined relevant performance and education information to Nor-Cal EMS.
3. Retrospective:
 - a) Recognize, reward and reinforce the positive provision of prehospital care.
 - b) Educate and counsel personnel who do not meet established thresholds.

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- c) Provide CQI review for personnel as necessary.
- d) Participate in Nor-Cal EMS outcome studies of specific patient populations (disease entities) and treatment modalities.
- e) Participate in the Nor-Cal EMS standardized CQI program.
- f) A minimum of thirty (30) calls (or all if < 30) must be reviewed each month by the designated peer review staff.

NOR-CAL EMS: Nor-Cal EMS will assign qualified personnel to carry out the following responsibilities:



1. Prospective:
 - a) Provide personnel orientation guidelines.
 - b) Review the CQI systems management of first responders, ALS providers, and medical dispatch centers.
 - c) Assist CQI program participants in the development of performance standards.
 - d) Develop and assist CQI program participants in the development of performance indicators.
 - e) Coordinate the provision of, or directly provide the necessary training for implementation of new procedures.
 - f) Provide clear and progressive EMS policies and procedures with biennial review and revision as needed.
 - g) Assist in coordination the EMS Communications System to guarantee maximum performance at all times.
 - h) Certify, accredited and/or authorize first responders, EMT-Is, EMT-IIs, paramedics, MICNs and field MICNs.
2. Concurrent:
 - a) Act a resource for CQI program participants.
 - b) Provide central information center for educational activities.
 - c) Provide analysis of data received from participants in the CQI program.
 - d) Coordinate region wide CQI activities.
 - e) Communicate to CQI program participants the predetermined relevant systems information and statistics.
3. Retrospective:
 - a) Evaluate CQI program participants utilizing identified indicators.
 - b) Recognize, reward and reinforce the positive provision of prehospital care.
 - c) Take appropriate action with first responder, ALS providers, receiving hospitals/facilities, medical dispatch centers that do not meet established thresholds.
 - d) Perform certificate review and disciplinary action in accordance with State Regulations and Nor-Cal EMS Policies and Procedures.
 - e) Provide statistical analysis and identify trends in prehospital care.
 - f) Initiate and participate in outcome studies on specific patient populations (disease entities) and treatment modalities.

REVIEW PROCESS

PEER REVIEW COMMITTEE:

1. Each provider should establish an in-house peer review committee. The peer review process should be used to evaluate, monitor and report on the quality of care in the agency. Peer review committees should be used to review patient care reports monthly. Appendix B is the recommended form to use for the monthly review.
2. The peer review committee should in addition to reviewing runs should perform the following functions:

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- ∅ Review scope of practice and make recommendations to agency CQI representative.
 - ∅ Develop criteria for identifying potential problems before patient care is comprised.
 - ∅ Identify concurrent system problems involving patient care.
 - ∅ Develop and recommended to Nor-Cal EMS criteria for correcting potential or real problems.
 - ∅ Monitor effectiveness of corrective action strategies through re-audit activities. It shall not be the function of this committee to become directly involved in the certification review process or investigating any complaints, this authority lies with Nor-Cal EMS.
3. The peer review committee is a confidential committee. All proceeding, documents and discussions of the Peer Review Committee are confidential. All members shall sign a confidentiality agreement not to divulge of discuss information that has been obtained through the Peer Review Committee.



4. Providers who do not have enough members to form a separate committee to review PCR's, can use the same concept but on an individual basis. The agency CQI representative will distribute PCR's to each prehospital provider each month for review. The person reviewing the forms should be the same level of certifications as the individual that wrote the form. The forms should not be discussed with any other personnel.
5. The CQI representative is responsible for providing counseling and education to the individual providers.

REPORTING:

Opportunity for Improvement: Any opportunity for improvement involves issues that do not violate regulations or protocols but need some type of remedial counseling/instruction. These items should be placed on Opportunity for Improvement Form (Appendix C). All reports and additional comments are considered confidential documents and should not be part of or referenced in the PCR.

1. Each participating agency CQI representative will receive and review all opportunities for improvement related to that agencies personnel. If the issue involves the CQI representative, the form will be forwarded to the Nor-Cal EMS CQI Director. If an agency representative receives or becomes aware of an issue about an individual from another agency, they will inform the designated representative from the other agency. The designated representatives of participating services are titled as follows:
 - a) First Responder Agencies – EMS Coordinator
 - b) ALS Provider Agencies – ALS Coordinator
 - c) Base Hospital – Prehospital Care Coordinator
 - d) Receiving Hospital/Receiving Facilities – Receiving Hospital Coordinator ALS Coordinator
 - e) Medical Dispatch Center – EMD Coordinator
2. The designated representative for the identification and resolution of opportunities for improvement within thirty (30) days of discovery. If extenuating circumstances warrant an extension of the thirty (30) day limit, the designated representative shall contact Nor-Cal EMS CQI Director. The Nor-Cal EMS CQI Director shall notify the Regional Medical Director within seven (7) days of receiving any preliminary report of an opportunity for improvements.
3. The designated representative will maintain detailed documentation that may be reviewed by Nor-Cal EMS. The designated representative will provide useful feedback to personnel. The designated representative may involve first responders, ALS, medical dispatch centers, receiving hospitals/facilities, base hospital and Nor-Cal EMS in useful feedback regarding opportunities of improvement.
4. Agency representatives should, as part of the opportunity for improvement, should ensure that the prehospital provider is counseled and a plan of remediation is outlined. This plan should be written down and signed by all parties.

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- a) Counseling and Remediation: Counseling and remediation are an important aspect of CQI and include, but are not limited to the items listed under the useful feedback definition. Recurrence of issues at any level may require increased counseling, monitoring and/or additional remediation.
- b) Written Agreements: Written agreements will include, but not limited to:
 - ∅ Identification of the specific opportunity to improve.
 - ∅ Identification of specific written future expectations including the expected time frames for successful completion.
 - ∅ Consequences for failure to comply.
 - ∅ Personnel will sign the written agreement.

Investigation Requests: The designated representative from each agency will forward all investigation requests to the Nor-Cal EMS CQI Director as required by the Nor-Cal EMS **Incident**



Reporting Policy.

1. Any of the following items shall be considered evidence of a threat to the public health, safety and welfare and may result in the denial, suspension, probation, or revocation of a certificate by Nor-Cal EMS:
 - a) Violations of State Regulations
 - b) Violation of Nor-Cal EMS Policies and Procedures.
 - c) Gross negligence.
 - d) Repeated negligent acts.
 - e) Incompetence.
 - f) Fraud in the procurement of any certification under division 2.5.
 - g) The commission of any fraudulent, dishonest, or corrupt act, which is substantially related to the qualifications, functions, and duties of prehospital personnel.
 - h) Violating or attempting to violate any federal or state statute or regulation, which regulates narcotics, dangerous drugs, or controlled substances?
 - i) Functioning outside the supervision of medical control in the field care system operating at the local level, except as authorized by any other license or certification/accreditation.
 - j) Demonstration of irrational behavior or occurrence of a physical disability to the extent that a reasonable and prudent person would have reasonable cause to believe that the ability to perform the duties normally expected may be impaired.
 - k) Any action, which may be added or amended to California regulation.
 - l) Conviction of any crime, which is substantially related to the qualifications, functions, and duties of prehospital personnel. The record of such conviction or a certified copy will be conclusive evidence of such conviction.
 - m) Violating or attempting to violate directly or indirectly, or assisting or abetting the violation of, or conspiring to violate, any provisions of Division 2.5 of the Health and Safety Code or of the regulations promulgated by the State Emergency Medical Service Authority pertaining to prehospital personnel.
 - n) Addiction to the excessive use of, or misuse of, alcoholic beverages, narcotics, legal or illegal drugs or controlled substances.
 - o) Unprofessional conduct exhibited by any of the following:
 - ∅ The failure to maintain the confidentiality of patient medical information, except, as disclosure is otherwise permitted or required by law.

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- ∅ The mistreatment or physical abuse of any patient resulting from forces in excess of what a reasonable and prudent individual trained and acting in similar capacity engaged in the performance of his/her duties would use if confronted with a similar circumstance. Nothing in this section will be deemed to prohibit an EMT-I, EMT-II, Paramedic or MICN from assisting a peace officer, or a peace officer who is acting in the dual capacity of peace officer and EMT-I, EMT-II, Paramedic or MICN, from using that force that is reasonably necessary to effect a lawful arrest or detention.
 - ∅ The commission of any sexuality related offenses specified under Section 290 of the Penal Code.
2. Incidents and/or complaints must be submitted on the Nor-Cal EMS Confidential Investigation Request Form. The reporting party must sign and date the form. Nor-Cal EMS does not accept verbal or anonymous complaints.

EXEMPLARY PERFORMANCE

Along with the reporting of deficiencies in the EMS system, reporting outstanding performance is as equally important. The Nor-Cal EMS Exemplary Form has been developed as a means of reporting



outstanding performance by any caregiver functioning in the EMS system. Caregiver can include bystanders (citizens) on scene to surgeons in our trauma centers.

The report must demonstrate an exceptional performance by the caregiver and beyond the actions expected during normal duties. The performance must be witnessed and documented by an individual that was on scene. Reports that are submitted will be used in the positive recognition column of the Nor-Cal EMS newsletter and to determine the annual exemplary performance recognition. Providers are encouraged to submit reports as they occur and do not wait until they are requested.

