

**EMERGENCY MEDICAL SERVICES AUTHORITY**

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July 2, 2009

Dan Spiess  
Northern California EMS, Inc.  
43 Hilltop Drive  
Redding, California 96003

Dear Mr. Spiess:

After a careful review, the Emergency Medical Services Authority has determined that the *Northern California 2009 EMS QI Program* is in compliance with Title 22, Division 9, Chapter 12 *EMS System Quality Improvement* and EMSA #166 *Emergency Medical Services System Quality Improvement Program Model Guidelines*.

Your annual update will be due one year from your approval date. If you have any questions regarding the plan review, please call Tom McGinnis, at (916) 322-4336, extension 424.

Sincerely,

A handwritten signature in cursive script, appearing to read "Bonnie Sinz".

Bonnie Sinz, RN  
EMS Systems Division Chief

ST:tm



**Northern California EMS, Inc.**

# **EMS QI PROGRAM**

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## Introduction

Northern California EMS, Inc. is a private, nonprofit public benefit corporation organized in 1982 to improve emergency medical care.

**Area Served:** The agency provides services under contract to the ten counties of Butte, Glenn, Lassen, Modoc, Plumas, Shasta, Sierra, Siskiyou, Tehama and Trinity. This encompasses in excess of 33,000 square miles and a resident population of approximately 580,000.

**Primary Activities:** The agency has two primary activities:

- The operation of an emergency medical communications system.
- The conduct of certain county "Local EMS Agency" responsibilities as called for in Division 2.5 of the California Health and Safety Code.

Responsibilities for the contract counties include the approval of all First Responder, EMT-I, EMT-II, EMT-P and MICN (Mobile Intensive Care Nurse) training programs, the approval of refresher courses, the certification and accreditation of the course graduates and revocation, suspension and decertification of personnel. Responsibilities also include the planning and monitoring of the areas trauma system. In general, Nor-Cal EMS monitors and regulates emergency care on behalf of its contract counties.

The communications system operated by the Corporation links together all the acute care hospitals in the ten northeastern counties of California, all ambulance services in the ten counties and several of the area's fire/rescue services.

The goal of the Nor-Cal Emergency Medical Services (EMS) Quality Improvement (EQIP) Plan is to establish a system wide program for evaluating and improving the quality of prehospital care in the Nor-Cal EMS region. This program will begin in Butte County where the components of the plan will be applied to appropriate providers, base hospitals and receiving facilities. As time and resources allow, expansion of this regional program will take place.

The development and implementation of the EQIP program (and all parts of it) is dependent on the availability of staff and the financial resources. This applies to both Nor-Cal EMS and all other entities identified in the program as participants in any way.

QI is an ongoing process in which all levels of healthcare workers are encouraged to team together without fear of management repercussion and to develop and enhance the overall system. Based on EMS community collaboration and a shared commitment to excellence, the EQIP process reveals potential areas for improvement of the EMS System, identified training opportunities, highlights outstanding clinical performance, audits compliance with treatment protocols, and reviews specific illnesses or injuries along with their associated treatments. These efforts contribute to the continued success of our emergency medical services through a systematic process of review, analysis, improvement, and evaluation.

Nor-Cal EMS is committed to the EQIP process and recognizes that greater results can be achieved by improving whole processes. We also understand that the EQIP Program is an ongoing, dynamic process that takes time to develop. A by-product of the plan is the alliance of public and private providers that offer emergency medical services within the

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Nor-Cal EMS region. This affords all participants an opportunity to work at peak capacity with energy and focus in a system that they can support, believe in, and have "ownership" in.

Nor-Cal EMS' EQIP Plan has been written in accordance with the Emergency Medical Services System Quality Improvement Program Model Guidelines (Rev. 3/04).

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## SECTION 1A - CONFIDENTIALITY

### Confidentiality of Proceedings

All proceedings, documents, and discussions of the Technical Advisory Groups and other related QI activities shall be confidential and a confidentiality statement of members will be required.

## SECTION 1B - STRUCTURE

**EMS CQI Team – This team provides oversight and coordination of EQIP program activities. The EMS CQI Team includes, but is not limited to, the following representatives:**

1. Nor-Cal EMS Administrator, when indicated
2. Nor-Cal EMS Medical Director
3. Nor-Cal EMS CQI Managing Coordinator
4. Nor-Cal EMS Systems Director, when indicated
5. Nor-Cal EMS Trauma System Director, when indicated

### EMS CQI Team Responsibilities:

1. State EMSA EQIP participation (as time and resources allow):
  - a. Cooperate with the State of California Emergency Medical Services Authority (EMSA) in carrying out the responsibilities of the state EQIP Program.
  - b. Participation in the State EMSA Technical Advisory Group, if requested.
  - c. Cooperate with the EMSA in the development, approval, and implementation of state required and optional EMS system indicators and data collection processes.
2. Regional EQIP Responsibilities:
  - a. Oversee, coordinate, and maintain documentation of regional EQIP programs and activities.
  - b. Maintain Central Repository of local EMS data system information as it relates to EQIP activities.
  - c. Facilitate regional TAG:
    - Assign and maintain positions as required for the TAG.
    - Charter Quality Task Force(s), as indicated.
    - The coordination of monitoring and expansion of state and locally developed EMS system indicators on an annual basis or as needed.
  - d. Provide technical assistance to facilitating the EMS QI Programs (EQIP) for all approved providers in the Nor-Cal EMS region.
  - e. Provide reasonable availability of EQIP Program training and in-service education for EMS personnel under the statewide EMS QI Program.
  - f. Review and approve EQIP plans for designated EMS ground and air providers and Base Hospitals and Receiving Facilities.
  - g. Publish summary of activity and plan implementation for distribution.
  - h. Seek and maintain relationships with EMS stakeholders, this can include the following entities, as appropriate for EQIP activity:
    - State EMSA
    - Other Local EMS Agencies (LEMSAs)
    - EMS Service Providers
    - Public Health Departments

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- Base Hospitals and Receiving Facilities
- Specialty Care Centers
- Law Enforcement Agencies
- Public Safety Answering Points (PSAPs)
- EMS Dispatch Center(s)
- Constituent Stakeholder Groups

**EMS Technical Advisory Group (TAG):**

1. To begin implementation of the EQIP in the Nor-Cal EMS region, a TAG will be established.
2. This Technical Advisory Groups will meet quarterly.
3. Attendance at Regional TAG is by invitation only and per approval of the Nor-Cal EMS Medical Director. The TAG will be a multidisciplinary group and may include representatives from each of the following:
  - a. Nor-Cal EMS Representatives:
    - Medical Director
    - CQI Managing Coordinator
    - EMS System Director, when indicated
    - Trauma System Director, when indicated
  - b. Physicians; from either a Trauma Center, Base Hospital, Receiving Facility, Ground or EMS Air Medical provider.
  - c. Prehospital Care Coordinators.
  - d. Trauma Coordinators.
  - e. ALS Provider representatives.
  - f. BLS Provider/Fire representatives.
  - g. EMS Aircraft provider representatives.
  - h. Public Health Department representative.
4. Responsibilities of the TAG members include:
  - a. Attendance at TAG meetings – Each member of the team plays a vital role to the group. If unable to attend a meeting, notification to the Nor-Cal EMS CQI Managing Coordinator needs to be made.
  - b. Implement, improve and evaluate Nor-Cal EMS's EQIP Plan & Program on an ongoing basis.
  - c. Disseminate the information discussed at TAG meetings to the represented groups.
  - d. Prepare and follow-up as appropriate for TAG meetings and action items.
    - Maintain responsibility for monitoring, collecting data on, reporting on, and evaluating state and required and optional EMS System indicators from the EMS providers and Receiving Facilities within the Nor-Cal EMS region.
    - Develop, re-evaluate, expand upon, and improve locally developed EMS system indicators annually or as needed.
    - Recommend the chartering of Quality Task Forces; review reports and make recommendations to the EMS CQI Team.
  - e. Seek and maintain relationships with EMS stakeholders, this can include the following entities, as appropriate for EQIP activity:
    - State EMSA
    - Other Local EMS Agencies (LEMSAs)
    - EMS Service Providers

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- Public Health Departments
  - Base Hospitals and Receiving Facilities
  - Specialty Care Centers
  - Law Enforcement Agencies
  - Public Safety Answering Points (PSAPs)
  - EMS Dispatch Center(s)
  - Constituent Stakeholder Groups
5. All representatives will serve a term of two (2) years. Committee replacements will be selected by the EMS CQI team, if a member must discontinue service. To provide for continuity one half of the committee will be replaced after the first year. A committee member may continue to serve beyond their initial term if that committee member desires to do so and the LEMSA Medical Director approves.

### Quality Task Force

A Quality Task Force is an ad-hoc committee developed by the EMS CQI Team or by the TAG for the purpose of finding a solution to a specific improvement need.

1. This Task Force may be comprised of personnel from previously stated bodies or may include consultants or experts from other agencies as needed. Each Quality Task Force will be assigned one specific project and be disbanded upon completion of the project.
2. Each Quality Task Force will be chaired by a member of the Technical Advisory Team (TAG).
3. Responsibilities of Quality Task Force Members:
  - a. To develop a performance improvement plan based on the objective as identified by the EMS CQI Team or the TAG.
  - b. Report back findings and recommendations to the EMS CQI Team or TAG for implementation.

### External EMS Participants

Nor-Cal EMS may find it necessary to call on expertise from external resources to address a specific aspect of the EMS System. These resources will be utilized within the EMS CQI Team, TAG or Quality Task Force for their expertise and their guidance as it relates to their respective field. External EMS participants will be required to adhere to the same responsibilities as the group within whose confines they are operating. External participants may include, but are not limited to:

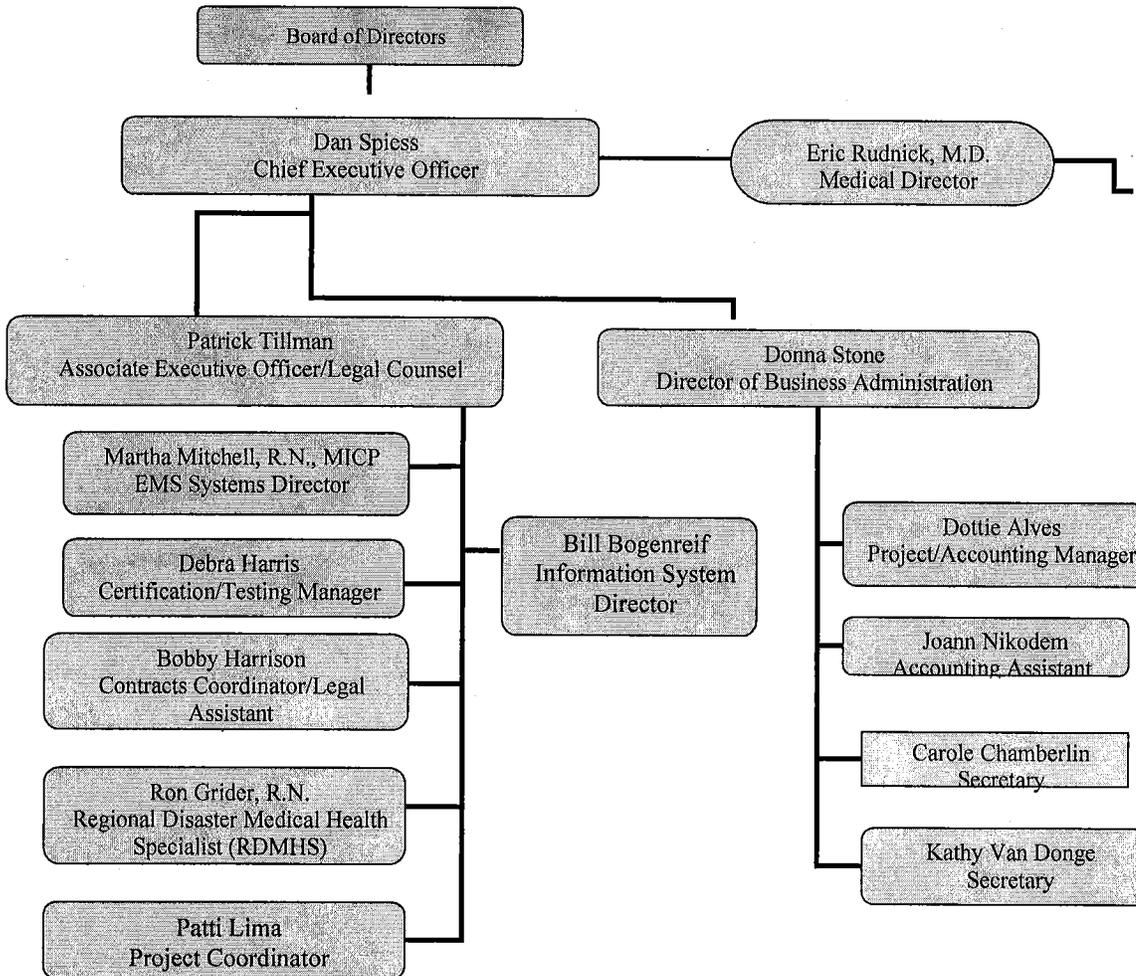
1. Base Hospital Medical Directors
2. Public Health Agencies
3. Law Enforcement Agencies
4. Local and Regional Dispatch Agencies
5. First Responder Agencies
6. Public Safety Answering Points (PSAPs)
7. Communication Centers
8. County Coroner
9. Other EMS Aircraft providers or their Medical Directors
10. Skilled nursing facility representatives
11. California State Department of Corrections
12. Physician Specialists
13. Community Groups
14. Other EMS participants or their Medical Directors

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# SECTION 1C - LEMSA CQI ORGANIZATIONAL DESCRIPTION

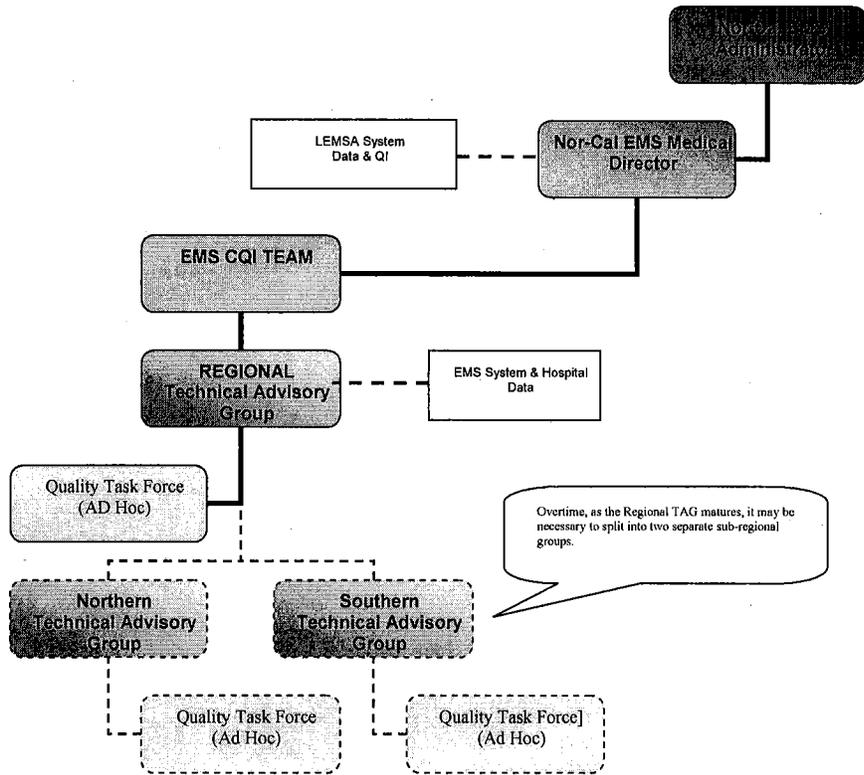
*Mission Statement*  
 "LEMSA monitors and oversees quality emergency medical services through leadership, innovation and collaboration with the communities we serve."



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SECTION 1C - LEMSA CQI ORGANIZATIONAL DESCRIPTION, continued



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## SECTION IIA - DATA COLLECTION AND REPORTING

1. The EMS CQI Team examined our strategic challenges and goals to select relevant indicators and ensure that data elements required by the state are being monitored.
2. Nor-Cal EMS is committed to integrating data systems to automate system reports. In the interim, Ad Hoc reports will be compiled in order to collect data for the EQIP process. All stakeholders will be required to submit reports and necessary documentation for selected indicators on a quarterly basis. Reports will be made available to all stakeholders. The TAG will meet quarterly to review results and may recommend selection of different indicators.
3. Data collection and reporting are two of the most important elements in the EQIP process. The data collected must be valid, reliable, and standardized with all other system participants. Nor-Cal EMS encourages the sharing of data through summary reports among all EMS system participants. The following are the elements required by the state, the specific information that will be monitored, and how each relates to the Nor-Cal EMS's strategic goals.

## SECTION IIB - NOR-CAL EMS STRATEGIC GOALS / INDICATORS

### Strategic Goals:

1. Establish a system-wide integration of e-PCR data systems
2. Establish a system-wide CQI process and develop individual CQI programs for providers to cultivate standardization of QI processes
3. Promote the timely and compassionate provision of high quality emergency services to the NCEMS region
4. Formulate CQI agreements with all emergency ambulance providers and receiving facilities
5. Develop and implement hospital receiving center content
6. Evaluate that the level of patient care is consistent with policies and field treatment guidelines
7. Evaluate and update local scope of practice using regional protocols
8. Evaluate and recommend updated patient care treatment equipment to reflect the established standard of care
9. Evaluate system-wide performance and compliance of certification and recertification processes
10. Review the system to ensure that our partners are engaging with the community through offering educational opportunities

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<b>INDICATORS:</b>						
Operational Area	Index Code from State Appendix M Core Indicators	Indicators (Appearing in State Appendix M)	Specific information to be monitored	Method of Collection	Nor-Cal EMS Required Indicator (yes/no)	Strategic Goal Affected
Personnel		ED-1 Section 4  ED-1G	<ol style="list-style-type: none"> <li>1. Maximize turn around time for certification and recertification at NCEMS</li> <li>2. Prior to any CE provider agency being approved, they will have to submit 100% of the required documentation. The EMSA will then be notified of the approved provider.</li> </ol>	<ol style="list-style-type: none"> <li>1. NCEMS is becoming electronic in regards to EMT-I certification, CPR compliance and CEUs. Soon we will have the capability to monitor submission dates and track the date the card was issued. Working with IT to develop system methodology for electronic collection query</li> <li>2. Checklist and manual audit</li> </ol>	<p>Yes</p> <p>Yes</p>	<ol style="list-style-type: none"> <li>1. Establish a system-wide integration of e-PCR data systems</li> <li>2. Evaluate system-wide performance and compliance of certification and recertification processes</li> </ol>

Operational Area	Index Code from State Appendix M Core Indicators	Indicators (Appearing in State Appendix M)	Specific information to be monitored	Method of Collection	Nor-Cal EMS Required Indicator (yes/no)	Strategic Goal Affected
Equipment and Supplies	N/A	SK-1	Provide data on number of ALS responders in NCEMS region appropriately using 12 lead capability	<ol style="list-style-type: none"> <li>1. Monitor percent of 12 lead use through PCR audit</li> <li>2. Provide needs assessment on 12 lead equipment being used in the field through survey tool. Confirm challenges with acquisition of equipment. If 12 lead not currently used, what is the expected date of implementation</li> </ol>	No	<p>7. Promote the timely and compassionate provision of high quality emergency services to the NCEMS region</p> <p>10. Evaluate that the level of patient care is consistent with policies and field treatment guidelines</p> <p>12. Evaluate and recommend updated patient care treatment equipment to reflect the established standard of care</p>
Documentation	N/A	SK-1	Provide data on number of providers planning to be e-PCR compliant. Confirm challenges, timeline and estimated implementation date	<p>Survey (Survey Monkey) to include data on: 1. Do you intend to get it? What are current implementation plans? What are impediments to success? What specific program/system are you planning to use?</p>	No	<p>1. Establish a system-wide integration of e-PCR data systems</p>

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Operational Area	Index Code from State Appendix M Core Indicators	Indicators (Appearing in State Appendix M)	Specific Information to be Monitored	Method of Collection	Nor-Cal EMS Required Indicator (yes/no)	Strategic Goal Affected
Skills Maintenance and Competency	M-193 M-195	SK1A, B	1. Audit frequency of successful oral intubations performed annually per licensed personnel and % of insertion per total attempts	1. Audit e-PCR data for rate of successful oral intubation in adults (CQI reports generated by provider agencies)	Yes	3. Promote the timely and compassionate provision of high quality emergency services to the NCEMS region
	M-44	CA-1 C	2. Audit appropriate AED use in region - % of total incidents in pulseless V-tach, V-fib	2. Audit e-PCR data for utilization of AED on any patient which met criteria	Yes	6. Evaluate that the level of patient care is consistent with policies and field treatment guidelines
Transportation and Facilities	N/A	TR-1	1. Audit number of calls in which aeromedical transport was requested 2. Determine percentage of calls that were critical trauma	Audit aeromedical call records and/or system provider CQI reports	Yes	6. Evaluate that the level of patient care is consistent with policies and field treatment guidelines

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Operational Area	Index Code from State Appendix M Core Indicators	Indicators (Appearing in State Appendix M)	Specific information to be monitored	Method of Collection	Nor-Cal EMS Required Indicator (yes/no)	Strategic Goal Affected
Public Education and Prevention	N/A	PP1	Audit number of public education events that provider agencies provide or take part in	Survey for provider agencies	No	10. Review the system to ensure that our partners are engaging with the community through offering educational opportunities
Risk Management	N/A	Appendix A	Audit number of provider agencies that have their CQI plan approved and updated	Survey NCEMS records	No	3. Establish a system-wide CQI process and develop individual CQI programs for providers to cultivate standardization of QI processes 8. Formulate CQI agreements with all emergency ambulance providers and receiving facilities

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### SECTION III - EVALUATION OF INDICATORS

1. The EMS CQI Managing Coordinator will analyze the quality indicators for presentation to the TAG.
2. Presentation of quality indicator analyses will most frequently be in a run chart, a Pareto chart, or a histogram format. This will enable the TAG to easily identify trends and to rapidly interpret the data.
3. Utilizing the processes outlined in Appendix F of the EMS System Quality Improvement Program Model Guidelines, the TAG will meet at least quarterly to evaluate and discuss the data provided by the EMS CQI Managing Coordinator and incorporate the following activities when indicated:
  - a. Review of prior meeting action items.
  - b. Presentation of indicators and results/trends. For each indicator that the TAG reviews, the following process will be followed:
    - Identify the objectives.
    - Present indicators and related EMS information.
    - Compare performance with goals or benchmarks.
    - Discuss performance with peers/colleagues.
    - Determine whether improvement or further evaluation is required.
    - Establish plan based upon decision.
    - Charter Quality Task Force, if indicated.
    - Assign responsibility for post-decision action plan.
  - c. Examine correlations between/among trends
  - d. Acknowledgement of positive trends; discussion of unsatisfactory trends.
  - e. Receive reports from Quality Task Force(s), if any.
  - f. Summarize action items identified at this meeting.
  - g. Recommend training/educational needs.
  - h. Evaluation of the meeting.
  - i. Discuss possible revisions needed to regional indicators.
  - j. Provide input to the EMS CQI Team to update the Improvement Priorities (A, B, or C) on the Process List in the CQI Plan, Section IC.

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## SECTION IV - PERFORMANCE IMPROVEMENT

1. Approach to performance improvement must be adaptable and applied to each situation as it is identified. It must be systematic and based upon evidence and should also be team oriented and be done in a way that does not overwhelm the process due to size and complexity. Small wins are sometimes the basis for the larger wins.
2. Once a need for improvement in performance has been identified by the regional TAG, the FOCUS-PDSA model will be implemented. FOCUS-PDSA involves the following steps:
  - a. **Find** a process to improve, as identified by the TAG.
  - b. **Organize** a team that knows the process – the CQI Team will form Task Force(s) as needed and review process documents.
  - c. **Clarify** current knowledge of the process – review indicator trends relevant to the process, collect other information.
  - d. **Understand** causes of process variation utilizing tools such as fishbone diagrams, Pareto analyses, etc.
  - e. **Select** process improvement to reduce or eliminate cause(s).
  - f. **Plan** – State objective of the test, make predictions, develop plan to carry out the test (who, what where, when & how).
  - g. **Do** - Carry out the test, document problems and unexpected observations, begin analysis of the data.
  - h. **Study** - Complete the analysis of the data, compare the test data to predictions, and summarize what was learned.
  - i. **Act** - What changes are to be institutionalized? New policy implementation or policy change identified? What will be the objective of the next cycle? What, if any, re-education or training is needed to effect the changes?
3. Once an Action Plan has been implemented, the results of the improvement plan will be measured. Changes to the system will be standardized and/or integrated. A plan for monitoring future activities will be established.
4. During its quarterly or other meetings, the TAG will identify indicators that signal a need for improvement and make recommendations to develop Quality Task Forces, as needed.
  - a. The EMS CQI team will select members and charter the Task Force with specific objectives for improvement.
  - b. Every effort must be made to incorporate changes region wide.
  - c. The FOCUS-PDSA model will be implemented to conduct improvement planning and prepare recommendations or a report for review by the EMS CQI team. The EMS CQI team will modify or accept and implement recommendations of the Quality Task Force and prepare the report for distribution to the TAG. The CQI team will also disband the Quality Task Force at the appropriate time.

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## SECTION V - SYSTEM INTEGRATION (Training and Education)

### 1. Training and Education:

- a. Once the decision to take action or to solve a problem has occurred, training and education are critical components that will need to be addressed. Education needs will be identified in reports given at the quarterly TAG, monthly EMS CQI team meetings, and ad hoc Quality Task Force Meetings.
- b. Nor-Cal EMS will make recommendations for educational offerings region wide based on reports from these groups. Needs identified in these same ways will be taken into consideration when planning EMS conferences in the Nor-Cal EMS region.
- c. The EMS CQI Team member responsible for educational oversight ensures that providers submit documentation that all training requirements have been met by all EMS system participants, usually twice per year and on an as-needed basis. This is accomplished via training memos, training program development, or by train-the-trainer programs. Providers are ultimately responsible for ensuring that staff is adequately trained. Rosters and training records shall be available to Nor-Cal EMS upon request.

### 2. Policy Implementation and/or revisions:

- a. When an Action Plan by the EMS CQI Team, TAG, or Quality Task force has been recommended, Nor-Cal EMS will take those recommendations and incorporate them as directed by the Nor-Cal EMS Medical Director.
- b. The EMS CQI Team member responsible for following through on the system or policy revisions will report back to the TAG regarding progress.
- c. Any new or revised policy DRAFTS will be drafted and taken back to the Technical Advisory Group meetings for discussion with the possibility of additional changes being made based on those discussions. The policy will then be posted on the Nor-Cal EMS website at [www.norcalems.org](http://www.norcalems.org) for a 30 day provider comment period. ***This process does not include policies falling into the emergency approval process for Nor-Cal EMS.*** Final changes to the policy may be based on provider comments received during the comment period.
- d. The new or improved policy can then be implemented once training and education of system participants (if indicated) has been completed.
- e. Additional revisions may be needed to comply with State or Federal mandates, these revisions may be presented at the TAG.

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**SECTION VI - PLAN UPDATE**

1. As part of the update, the CQI Coordinator, the TAG, and the CQI Team will offer recommendations for changes needed in the CQI plan for the coming year, including priority improvement goals/objectives, indicators monitored, improvement plans, how well goals/objectives were met, and whether follow-up is needed. The following format will be the template for the update:

Indicators Monitored	Key Findings/Priority Issues Identified	Improvement Action Plan/Plans for Further Action	Were Goals Met? Is Follow-up Needed?

2. A current CQI Program update will be submitted to the State EMS Authority every five (5) years.

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