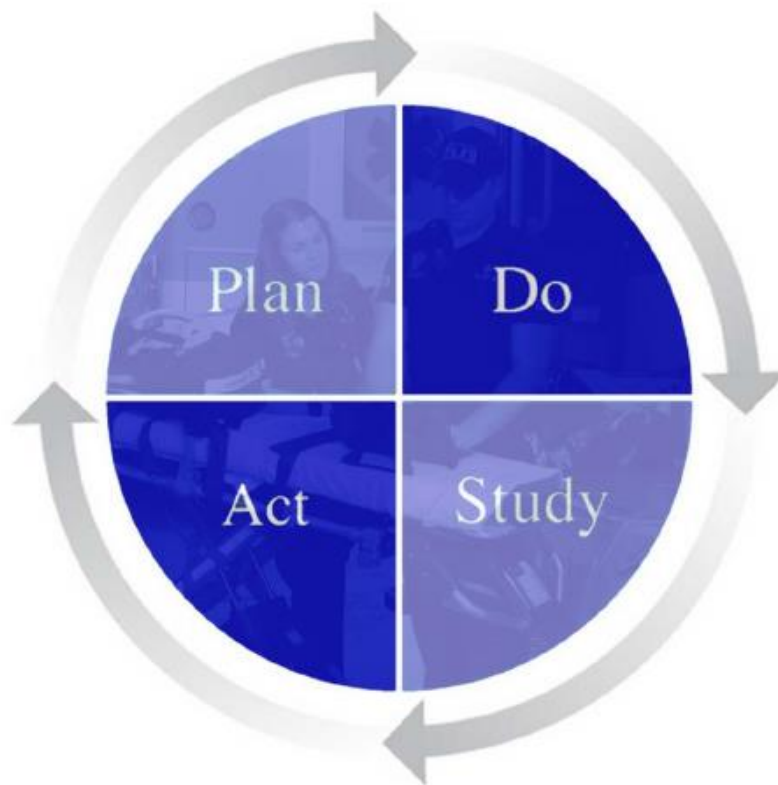




North Carolina Office of Emergency Medical Services



Quality Assurance/Quality Improvement Peer Review Support Guide

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Preface

The concepts of quality assurance, quality improvement, and peer review have been present in North Carolina EMS for many years. Quality Assurance (QA) can be defined as the planned, systemic, and structured evaluation necessary to ensure confidence that quality clinical care is delivered and is consistent with standards set by system medical control, NCCEP and NCOEMS.

Through this support document, OEMS hopes to provide you with some basic tools that will be valuable in developing, maintaining, and improving the QA/QI process in your system or agency. As EMS, and healthcare overall, changes to meet new demands, it is important that we focus on quality care that produces the best possible outcomes for our patients. That quality care comes through deliberate efforts to evaluate and improve the care our providers give to those we serve daily.

Thank you for your service to the citizens and visitors of our great state.

This document was developed by the staff of the NC Office of EMS in partnership with the EMSPIC. We would like to acknowledge the work group that headed this project, NCOEMS EMS Program Specialists Paul Allen, Anthony Davis, and Justin Bowers along with EMS Specialist Sean Kaye with the EMSPIC.

We hope this document will prove to be a valuable tool for your Peer Review, Quality Assurance and Quality Improvement programs. If you have any questions, contact your Regional NCOEMS office.

Section 1: North Carolina Peer Review Defined

Emergency Medical Services Peer Review Committee is a panel composed of EMS system representatives that are responsible for analyzing data, patient care and outcome measures to evaluate the ongoing quality of patient care, performance, and medical direction within the EMS system.

Definitions

The concepts of quality assurance, quality improvement, and peer review have been present in North Carolina EMS for many years. **Quality Assurance (QA)** can be defined as the planned, systemic, and structured evaluation necessary to ensure confidence that quality clinical care is delivered and is consistent with standards set by system medical control, NCCEP and NCOEMS. QA is the evaluation process that examines current practice.

When areas of need or desire for improvement are identified **Quality Improvement (QI)** initiatives are instituted. Quality improvement initiatives are systematic actions that are intended to lead to a measurable improvement in patient care or system operations. QI interventions may consist of educational and training initiatives, operational or process alterations, or the addition of equipment. QI initiatives must be continually reevaluated to ensure they are meeting targeted improvement goals.

Peer Review in North Carolina is the system (at least quarterly) meeting where Quality Assurance is reviewed and QI initiatives are created to address wanted or needed areas of improvement.

Section 2: The Purpose of Peer Review, Quality Assurance, and Quality Improvement

North Carolina Emergency Medical Services systems should strive to deliver the best possible patient care, maximize efficiency, ensure efficacy, and promote excellence and personal accountability through peer review and continuous improvement.

Peer Review is to be held, at least, quarterly. A peer review committee should be composed of representatives from a system's EMS agencies, hospitals, first responders, communications, and other stakeholders identified in the EMS system's plan (membership should include physicians, nurses, EMS personnel, medical facility personnel, county government officials, first responder agencies, LEO, telecommunicators, and any other entities that are listed within the System Plan.

Research is limited in EMS quality improvement and standards in this area are emerging and rapidly improving. It's understood that EMS structure varies greatly and with this it is accepted that quality improvement and peer review strategies must be individualized for each system.

The concepts of peer review, quality assurance and quality improvement have been present in our 'industry' for many years. Peer review in its most basic form is an evaluation of professional work as performed by others in the same field. Quality Assurance (QA) can be defined as the planned or systemic actions necessary to provide adequate confidence that a service or product will satisfy, given the requirements for quality are defined (i.e. protocol compliance, intervention success rates, outcomes, and other targeted health and systems measurements that are deemed important to patient care). QA might be considered the evaluation of how individuals are performing. Finally, Quality Improvement (QI) can be thought of as the process of working towards higher levels of performance by continuous evaluation of system processes and design.

In the peer review quality assurance process, the committee shall examine current practices to ensure protocol compliance and system standards are being met effectively. To aid in the process the [North Carolina College of Emergency Physicians](#) has created [Standards for the Selection and Performance of EMS Performance Improvement](#) (index A). This document defines 4 areas of focus for quality improvement activities:

- 1) EMS Operations
- 2) Personnel Performance
- 3) Clinical Care
- 4) Special Topics

The EMS System may choose to measure additional topics as deemed appropriate by the medical director. Any deficiencies or issues identified as not meeting system standards by the committee or medical director should be addressed in an improvement action plan.

Quality improvement initiatives consist of systematic and continuous actions leading to measurable improvement in the delivery of prehospital care. The most important element of QI is the ability to measure. Virtually every action performed has the potential to be measured, and with the use of the ePCR data there is greater opportunity to study the system performance. Quality indicators (QI) are another important part of quality improvement.. They are the areas of the system targeted for improvement. Quality indicators can be defined as what in the process is important and is being measured. In the QI process, data collected from ePCR and other sources will be collected and examined. System quality indicators selected in the peer review process (i.e. advanced airway placement, trauma scene times, aspirin administration in the chest pain patient) will be studied. Then interventions are made to the process in an effort to improve the outcome. Most importantly, QI initiatives are continually reassessed to ensure they have had the desired outcome.

What is a focus topic for one EMS system may be less of a priority for other systems. Access to resources, disparities in population health, and geographic differences will result in how systems prioritize the QA/QI topics. Focus areas will change as training, education, and clinical care improve.

Peer review and performance improvement is a continuous process. A feedback mechanism must be developed so all providers and stakeholders are informed of the status of performance improvement initiatives. The peer review and performance improvement system must re-evaluate the selected indicators within the established time parameters to assess if there has been desired improvement. If there is no improvement, the process should be readjusted to find an effective method for achieving improvement. Several different interventions may be needed (education, training, process, and communication) to improve a focus area.

Section 3: Statutes Supporting Peer Review and Data Collection

This section specifically references Statutes related to Peer Review and Data Collection. The entire [Subchapter 13P](#) may be found online at ncems.org

Rules that apply to Peer Review and the Collection of EMS Data Quality Management of Emergency Medical Services

10A NCAC 13P .0102 DEFINITIONS

(22) "EMS Peer Review Committee" means a committee as defined in G.S. 131E-155(a)(6b).

§ 131E 155. Definitions.

As used in this Article, unless otherwise specified:

(6b) "Emergency Medical Services Peer Review Committee" means a panel composed of EMS program representatives to be responsible for analyzing patient care data and outcome measures to evaluate the ongoing quality of patient care, system performance, and medical direction within the EMS system. The committee membership shall include physicians, nurses, EMS personnel, medical facility personnel, and county government officials. Review of medical records by the EMS Peer Review Committee is confidential and protected under G.S. 143 518. An EMS Peer Review Committee, its members, proceedings, records and materials produced, and materials considered shall be afforded the same protections afforded Medical Review Committees, their members, proceedings, records, and materials under G.S. 131E 95.

§ 143 518. Confidentiality of patient information.

(a) Medical records compiled and maintained by the Department, hospitals participating in the statewide trauma system, or EMS providers in connection with dispatch, response, treatment, or transport of individual patients or in connection with the statewide trauma system pursuant to Article 7 of Chapter 131E of the General Statutes may contain patient identifiable data which will allow linkage to other health care based data systems for the purposes of quality management, peer review, and public health initiatives.

These medical records and data shall be strictly confidential and shall not be considered public records within the meaning of G.S. 132 1 and shall not be released or made public except under any of the following conditions:

- (1) Release is made of specific medical or epidemiological information for statistical purposes in a way that no person can be identified.
- (2) Release is made of all or part of the medical record with the written consent of the person or persons identified or their guardians.
- (3) Release is made to health care personnel providing medical care to the patient.

(4) Release is made pursuant to a court order. Upon request of the person identified in the record, the record shall be reviewed in camera. In the trial, the trial judge may, during the taking of testimony concerning such information, exclude from the courtroom all persons except the officers of the court, the parties, and those engaged in the trial of the case.

(5) Release is made to a Medical Review Committee as defined in G.S. 131E 95, 90 21.22A, or 130A 45.7 or to a peer review committee as defined in G.S. 131E 108, 131E 155, 131E 162, 122C 30, or 131D 21.1.

(6) Release is made for use in a health research project under rules adopted by the North Carolina Medical Care Commission. The Commission shall adopt rules that allow release of information when an institutional review board, as defined by the Commission, has determined that the health research project:

- a. Is of sufficient scientific importance to outweigh the intrusion into the privacy of the patient that would result from the disclosure;
- b. Is impracticable without the use or disclosure of identifying health information;
- c. Contains safeguards to protect the information from redisclosure;
- d. Contains safeguards against identifying, directly or indirectly, any patient in any report of the research project; and
- e. Contains procedures to remove or destroy at the earliest opportunity, consistent with the purposes of the project, information that would enable the patient to be identified, unless an institutional review board authorizes retention of identifying information for purposes of another research project.

(7) Release is made to a statewide data processor, as defined in Article 11A of Chapter 131E of the General Statutes, in which case the data is deemed to have been submitted as if it were required to have been submitted under that Article.

(8) Release is made pursuant to any other law.

(b) Charges, accounts, credit histories, and other personal financial records compiled and maintained by the Department or EMS providers in connection with the admission, treatment, and discharge of individual patients are strictly confidential and shall not be released. (2001 220, s. 1; 2002 179, s. 11; 2003 392, ss. 2(g), 2(h).)

§ 131E 95. Medical review committee.

(a) A member of a duly appointed medical review committee who acts without malice or fraud shall not be subject to liability for damages in any civil action on account of any act, statement or proceeding undertaken, made, or performed within the scope of the functions of the committee.

(b) The proceedings of a medical review committee, the records and materials it produces and the materials it considers shall be confidential and not considered public records within the meaning of G.S. 132 1, " 'Public records' defined", and shall not be subject to discovery or introduction into evidence in any civil action against a hospital, an ambulatory surgical facility licensed under Chapter 131E of the General Statutes, or a provider of professional health services which results from

matters which are the subject of evaluation and review by the committee. No person who was in attendance at a meeting of the committee shall be required to testify in any civil action as to any evidence or other matters produced or presented during the proceedings of the committee or as to any findings, recommendations, evaluations, opinions, or other actions of the committee or its members. However, information, documents, or records otherwise available are not immune from discovery or use in a civil action merely because they were presented during proceedings of the committee. Documents otherwise available as public records within the meaning of G.S. 132-1 do not lose their status as public records merely because they were presented or considered during proceedings of the committee. A member of the committee or a person who testifies before the committee may testify in a civil action but cannot be asked about the person's testimony before the committee or any opinions formed as a result of the committee hearings.

(c) Information that is confidential and is not subject to discovery or use in civil actions under this section may be released to a professional standards review organization that performs any accreditation or certification including the Joint Commission on Accreditation of Healthcare Organizations, or to a patient safety organization or its designated contractors. Information released under this subsection shall be limited to that which is reasonably necessary and relevant to the standards review organization's determination to grant or continue accreditation or certification, or the patient safety organization's or its contractors' analysis of patient safety and health care quality. Information released under this subsection retains its confidentiality and is not subject to discovery or use in any civil actions as provided under this section, and the standards review or patient safety organization shall keep the information confidential subject to this section, except as necessary to carry out the organization's patient safety, accreditation, or certification activities. For the purposes of this section, "patient safety organization" means an entity that collects and analyzes patient safety or health care quality data of providers for the purpose of improving patient safety and the quality of health care delivery and includes, but is not limited to, an entity formed pursuant to Public Law No. 109-41. (1973, c. 1111; 1981, c. 725; 1983, c. 775, s. 1; 1999-222, s. 2; 2002-179, s. 19; 2004-149, s. 2.5; 2006-144, s. 3.2.)

10A NCAC 13P .0408 EMS PEER REVIEW COMMITTEE FOR EMS SYSTEMS

The EMS Peer Review Committee for an EMS System shall:

- (1) be composed of membership as defined in G.S. 131E-155(6b).
- (2) appoint a physician as chairperson;
- (3) meet at least quarterly;
- (4) use information gained from the analysis of system data submitted to the OEMS to evaluate the ongoing quality of patient care and medical direction within the system;
- (5) use information gained from the analysis of system data submitted to the OEMS to make recommendations regarding the content of continuing education programs for all EMS personnel functioning within the EMS system;

- (6) review adult and pediatric treatment protocols of the EMS System and make recommendations to the medical director for changes;
- (7) establish and implement a written procedure to guarantee due process reviews for EMS personnel temporarily suspended by the medical director;
- (8) record and maintain minutes of committee meetings throughout the approval period of the EMS System;
- (9) establish and implement EMS system performance improvement guidelines that meet or exceed the statewide standard as defined by the "North Carolina College of Emergency Physicians: Standards for Medical Oversight and Data Collection," incorporated by reference in accordance with G.S. 150B-21.6, including subsequent amendments and editions. This document is available from the OEMS, 2707 Mail Service Center, Raleigh, North Carolina 27699-2707, at no cost; and
- (10) adopt written guidelines that address:
 - (a) structure of committee membership;
 - (b) appointment of committee officers;
 - (c) appointment of committee members;
 - (d) length of terms of committee members;
 - (e) frequency of attendance of committee members;
 - (f) establishment of a quorum for conducting business; and
 - (g) confidentiality of medical records and personnel issues.

10A NCAC 13P .0409 EMS PEER REVIEW COMMITTEE FOR SPECIALTY CARE TRANSPORT PROGRAMS

- (a) The EMS Peer Review Committee for a Specialty Care Transport Program shall:
 - (1) be composed of membership as defined in G.S. 131E-155(6b);
 - (2) appoint a physician as chairperson;
 - (3) meet at least quarterly;
 - (4) analyze program data to evaluate the ongoing quality of patient care and medical direction within the program;
 - (5) use information gained from program data analysis to make recommendations regarding the content of continuing education programs for medical crew members;
 - (6) review adult and pediatric treatment protocols of the Specialty Care Transport Programs and make recommendations to the Medical Director for changes;
 - (7) establish and implement a written procedure to guarantee due process reviews for medical crew members temporarily suspended by the Medical Director;
 - (8) record and maintain minutes of committee meetings throughout the approval period of the Specialty Care Transport Program;

(9) establish and implement EMS system performance improvement guidelines that meet or exceed the statewide standard as defined by the "North Carolina College of Emergency Physicians: Standards for Medical Oversight and Data Collection;" and

(10) adopt written guidelines that address:

- (A) structure of committee membership;
- (B) appointment of committee officers;
- (C) appointment of committee members;
- (D) length of terms of committee members;
- (E) frequency of attendance of committee members;
- (F) establishment of a quorum for conducting business; and
- (G) confidentiality of medical records and personnel issues.

(b) County government representation is not required for committee membership for approved Air Medical Programs.

History Note: Authority G.S. 143-508(b);

Section 4: Data Quality and Its Importance in Peer Review

Patient care does not stop after giving a patient care report to the emergency department. The information which is documented during patient encounters is being utilized at multiple levels by stakeholders to make evidenced based decisions on a wide range of healthcare initiatives. The information, that is being analyzed includes: time intervals, vital signs, procedures, medications, and other pertinent demographic data.

Accurate and timely data entry on patient care reports is the foundation of having an effective quality assurance and quality improvement program. Field providers must be educated on the importance of accurate documentation and timely completion of all North Carolina required data elements. Procedures, medications, and protocols should be entered using pre-formatted pull-down menus and check boxes to ensure the highest data quality. No standardized data can be collected from the narrative or free text fields.

Reference the **North Carolina College of Emergency Physicians [Standards Policy on EMS Documentation and Data Quality Policy](#)** regarding Data Submission.

Continuum has several data quality reports available to monitor and improve data quality. These include:

1. Data Quality by PCR
2. Top 25 Data Quality List
3. Data Submission Report
4. Data Quality Trendline

For assistance with data quality contact the North Carolina Office of EMS or the EMS Performance Improvement Center.

Section 5: Peer Review and Its Relationship with Training and Education

Training and education programs can benefit from an effective QI program. Education is used to share information about changes in prehospital care or emergency medicine. Training is used to ensure providers can apply knowledge obtained during educational sessions.

Procedure performance benchmarks can be designed and measured at regular intervals (i.e. intubation). A QI program may choose to measure frequency of procedures and then base EMS training and education needs on the skills performed infrequently. The EMS system may also focus on providing individual or system wide training and education where performance is below the established medical director benchmarks. Each EMS System medical director is encouraged to establish performance benchmarks on interventions and monitor compliance. The NCCEP Performance Improvement Guideline has identified several interventions where performance benchmarks should be considered by the system medical director. (Section 6)

Both education and training will frequently be utilized to address areas of need in a performance improvement plan. System education staff must be involved in the QA/QI process to ensure providers are trained to meet the performance standards set by the system medical director, or areas of concern identified through the peer review process.

Once an issue has been identified by the system, an improvement action plan is recommended, the Medical Director, education staff and peer review committee can develop the process for ensuring providers receive education and training sufficient to meeting the needs of the improvement action plan. This may be accomplished through continuing education, simulation, skills practice, case studies, or other similar interventions.

The system may also utilize findings from the quality improvement process to develop the overall system continuing education plan.

Section 6: 2018 NCCEP Performance Improvement Document

The [2018 NCCEP Performance Improvement Document](http://www.ncems.org/pdf/NCCEP-PI-Standards-October-2018.pdf) may be found on the NCOEMS website located on the Performance Improvement page.

<http://www.ncems.org/pdf/NCCEP-PI-Standards-October-2018.pdf>

The following sections are covered in the NCCEP Performance Improvement Document.

Operational Quality Assurance

	Category	Specific	Definition	Loop Closure	Data Source
Operations	Call Volume	All Calls	Emergent, Non Emergent, Interfacility	To get an overall picture of system activity, trending and tracking of patterns, determination of resource utilization and needs.	Response STATS
	Resources	Vehicles	Any incident that interrupts patient care delivery or causes patient injury such as mechanical issues, crash	Any issue that impedes the delivery of service or causes patient injury	Internal Data Source
		Equipment	Any failure that interrupts patient care delivery or causes patient injury such as electronic equipment or other failure of equipment	Any issue that impedes the delivery of service or causes patient injury	
	First Responder Utilization		Use of First Responder Agency	Identify any issues needed to be addressed by targeted education such as response, patient care, skill performance, protocol compliance	Internal Data Source
	Times	All Time Intervals	Dispatch Center Time, Turn-out (Wheels Rolling), Response to scene, Time at Patient, Scene Time, Transport Time, Back in Service	Examine target times set by NCCEP and system for compliance	Response STATS
		Scene Times	For all STEMI, Stroke, Trauma, Cardiac Arrest calls	Evaluate target times set by NCCEP and/or local Medical Control for compliance	
		Delays	Dispatch, Response, Scene, Transport, ED Off-load, Back in service	Examine causes that impede the delivery of service	
	EMD		EMD Compliance per EMD Vendor Quality Management and System requirements	Identify deficiencies to be addressed by targeted education	Internal Data Source
	PCR Documentation		Element Completion of Protocols, Vital Signs (initial and 2nd set), Procedures, Destination, Crew, Incident Location, Response, Delays (Response, Scene, Transport) etc.	To ensure system meets targeted goals set by the system, NCCEP and NCOEMS	Continuum Reports
	Data Quality		Number of data errors per PCR	Examine and correct deficiencies to meet targeted goal to ensure quality data for review	Continuum Reports

Call Volume: Total Call Volume, Emergent Call Volume, Non-Emergent Call Volume, AMA Call Volume, Interfacility Call Volume

- Examine call volume to identify system activity, trending and tracking of patterns, determination of resource utilization and needs.
- This data source can be located by running a Response STATS from Continuum or your ePCR vendor reporting system.

Resources: Identify equipment and vehicle related issues that interrupts the delivery of patient care or causes patient injury. Such issues may include equipment and/or mechanical failures or vehicle crashes.

- The data source for this information should be maintained locally.

First Responder Utilization: Review the call volume for agencies, identify any issues needed to be addressed by targeted education such as response, patient care, skill performance, protocol compliance.

- First responder protocols and Scope of Practice is set by the System Medical Director.

Times: Identify average and 90% fractile time intervals to ensure compliance with targeted system, Medical Control, and NCCEP compliance goals.

All Time Intervals: [Dispatch Center Time, Turn-out \(Wheels Rolling\), Response to scene, Time at Patient, Scene Time, Transport Time, Back in Service.](#)

1. NCCEP EMS Dispatch Policy: The EMS Dispatch Center Time will be less than 90 seconds, 90% of the time, for all events identified and classified as an emergent or hot (with lights and siren) response.
2. NCCEP EMS Back In Service Time: All EMS Units transporting a patient to a medical facility shall transfer the care of the patient and complete all required operational tasks to be back in service for the next potential EMS event within 30 minutes of arrival to the medical facility, 90% of the time.
3. NCCEP EMS Wheels Rolling Time: The EMS Wheels Rolling (Turn-out) Time will be less than 90 seconds, 90% of the time, for all events identified and classified as an emergent or hot (with lights and siren) response.

Scene Times: For all STEMI, Stroke, Trauma, Cardiac Arrest calls (covered in STATS Reports).

Delays: Examine causes that impede the delivery of service to include response, scene, transport, ED off-load and back in service.

- Data Sources for time intervals (eTimes.01-eTimes.16) and delays (eResponse.08 - eResponse.11) can be found in Response STATS through Continuum and/or your ePCR vendor reporting.

EMD: Assess EMD compliance per established EMD vendor quality management and system requirements

- Data sources will be maintained internally.

PCR Documentation: Examine the overall quality of the information that is captured in ePCRs for accuracy to include but not limited to element completion of Protocols (commonly referred to as the “check boxes”), vital signs (initial and subsequent), procedures, destination, crew assignments (primary, secondary and driver roles involved in care), incident location, response, and any delays (Response, Scene, Transport).

- NCCEP Standards Policy on EMS Documentation and Data Quality- “The complete EMS documentation associated with service delivery and patient care shall be electronically recorded into a Patient Care Report (PCR) within 24 hours of the completion of the EMS event, with an EMS Data Score at/or below the state average.”
- Reference to the full NCCEP Standards Policy is linked in Section 4 of this document.
- Data Sources for this will be found in Continuum Reports.

Data Quality: Call data entered into each ePCR are essential parts of the performance improvement process. The data must be accurate to be able to assess not only the individual provider but also the agency and system performance as well. Accurate information on interventions, medications, times, etc... all play a vital role in evaluating the EMS system as a whole.

The data provides information to local, regional and state agencies for the ongoing evaluation of protocol, procedural and pharmacological efficacy.

- Agency data quality reports can be accessed in Continuum. (Depending on user rights) These reports will assist in showing where the data quality issues are. Contact your NCOEMS regional office or the EMSPIC for further assistance.

Personnel

Personnel	Category	Specific	Definition	Loop Closure	Data Source
	EMS Personnel Credentialing	Credentials Renewed Locally	Number of EMS personnel in the system that had their credentials renewed locally during the quarter (include EMD personnel)	Discuss any recredentialing issues experienced during the period and implement plans to avoid lapses	Internal and/or Continuum Reports
		Credentials Due to Expire	Number of EMS personnel in the system due to expire during next quarter (Include EMD personnel)	Evaluate plan to review all expiring credentials for recredentialing eligibility	

EMS Personnel Credentialing: Assess system provider credentials regarding:

- ***Credentials Renewed Locally:*** Number of EMS personnel in the system that renewed credentials locally during the current quarter (including EMD personnel).
- ***Credentials Due to Expire:*** Number of EMS personnel in the system due to expire during next quarter (including EMD personnel).

Tracking the system's affiliated providers whose credentials are set to expire during the next quarter will help the system/agency in the overall recredentialing process (e.g. prevent lapses in credentials, ensures providers are meeting the system's educational requirements, etc.).

NCOEMS requires the minimum number of continuing education hours and topics to be covered for recredentialing. Required recredentialing hours for the levels are:

- Paramedic 120 hrs.
- Advanced EMT 100 hrs.
- EMT 80 hrs.
- EMR 32 hrs.

Each EMS system may require additional education hours, beyond the minimum hours listed above, to include local topics for the system's affiliated providers to be completed prior to being recredentialed by the system. All recredentialing requirements must be reflected in the education section of the system's plan.

Clinical Quality Assurance

	Category	Specific	Definition	Loop Closure	Data Source
Clinical	Skill Competency	Airway	Agency and provider success rate for ET, BIAD, BVM, NIPPV, Chest Decompression, Surgical/Needle Cricothyrotomy, Drug Assisted Intubation, NPA/OPA	Ensure system is meeting skill competency goals. Identify technicians not meeting system standards for targeted education.	Continuum Reports
		Cardiac	Cardiac Monitoring, 12 lead, CPR Manual/Mechanical, Pacing, Cardioversion, Defib, AED, Impedance Threshold Device		
		Vascular	IV, IO, Central Line, Port Access		
		Trauma	Spinal Motion Restriction (C-Spine, LBB, Vest type), traction, extremity, Pelvic Binder/Sling, Tourniquet		
	Medications Complications	Adverse event	Any medication error or adverse event	Identify events for discussion and address preventable care issues	Internal Reports

Skill Competency: Assess system, agency, and provider success rates for procedures regarding:

- **Airway:** ET, BIAD, BVM, CPAP/BIPAP, Chest Decompression, Surgical/Needle Cricothyrotomy, RSI, NPA/OPA, Impedance Threshold Device
- **Cardiac:** 4-lead, 12-lead, CPR Manual/Mechanical, Pacing, Cardioversion, Defib, AED use.
- **Vascular:** IV, IO, Central Line, Port Access
- **Trauma:** Splinting to include Spinal motion restriction, traction, extremity, Pelvic Binder/Sling, Tourniquet

To ensure system is meeting skill competency goals. Identify technicians not meeting system standards for targeted education.

Compliance target goals will be set by system Medical Director

- Data Sources for this information can be obtained from Continuum reports and/or from ePCR vendor reporting.

Medications Complications: Review any medication error or adverse event. The objective of this process is to identify preventable care issues.

- Data for this will be kept internally

Special Topics Quality Assurance

Special Topics	Category	Specific	Definition	Loop Closure	Data Source
	Special Patient Population	High Utilization	Any person accessing EMS at least four times in a consecutive 30 day period.	Discuss appropriateness of EMS use from a patient care perspective. If inappropriate identify plan to address	Internal/Continuum Reports
		Repeat Patient	Patients with multiple EMS Transports within 48 hour time period	Evaluate patient care event and discuss any EMS care related issue that may have contributed. Develop and implement plan to address any identified issue	
		AMA/Refusal	High risk and AMA refusals	Define high risk refusals and develop/implement strategies to mitigate risk of undesirable outcomes	
		Cancelled Calls	Review events where EMS was re-dispatched to scene after cancellation by First Responder		
		Multi-patient events	Events as defined by System Response Plan that extend beyond routine operations	Discuss and address any identified issues post event and adjust plan as needed	
					Internal Reports
	High Risk Procedure	Drug Assisted Intubation (DAI)	Appropriate use and outcome of Drug Assisted Intubation	Conduct 100% review of appropriateness and care associated with procedure. Address any identified issues. Ensure DAI cases are forwarded to NC OEMS for review monthly.	Continuum Reports
		Chest Decompression	Appropriate use and outcome of chest decompression		
		Cardioversion	Appropriate use and outcome of cardioversion		
		Restrained Patients	Any patient restrained physically, chemically, or in custody of Law Enforcement.	Review to ensure compliance with system protocols, policy and procedure.	Continuum Reports Internal Reports
	High Acuity	STEMI	Examine system STEMI Care	To ensure protocol compliance and address any identified issues	STATS Internal Data Source
		Stroke	Examine system Stroke Care		
		Trauma	Examine system Trauma Care		
		Pediatrics	Examine system Pediatric Care		
		Sepsis	Examine system Sepsis Care		
	Community Paramedic		All systems with a Community Paramedic Program. (MIHC exempt)	Discuss objectives of the mission as defined by the system	Internal Reports
	Pilot Programs		Any Pilot program approved by NCEP and NCOEMS	Review to ensure compliance with protocols, procedures and policies set for the program.	Internal and/or Continuum Reports
	Special Operations		Tactical, Wilderness, High Angle, Confined Space, Mass Gathering	Discuss any special operations deployments to identify and address any issues	Internal

Special Patient Population: Review calls to help identify population of high risk calls:

- **High Utilization:** Anyone utilizing EMS service at least four times in a 30-day period
- **Repeat Patient:** Patients with multiple EMS Transports within 48-hour time period
- **AMA/Refusal:** Evaluate all high risk and AMA refusals
- **Cancelled Calls:** Where EMS was cancelled by first responders prior to EMS arrival, and all events where EMS was recalled.
- **Multi-patient events:** Events as defined by the System Response Plan that extend beyond routine operations.

High Risk Procedures: Review calls to determine appropriate use and outcomes. Conduct 100% review of HRP and other procedures identified by the medical director.

- **Drug Assisted Intubation:** Appropriate use and outcome of Drug Assisted Intubation
All Drug Assisted Intubations (DAI) are to be forwarded to the NCOEMS for review monthly.
- **Chest Decompression:** Appropriate use and outcome of chest decompression
- **Cardioversion:** Appropriate use and outcome of cardioversion
- **Cricothyrotomy:** Appropriate use and outcome of cricothyrotomy
- **Restrained Patients:** Any calls where a patient was restrained physically, chemically or in custody of Law Enforcement should be reviewed to ensure compliance with system protocols, policy, and procedure.

High Acuity: Conduct 100% review to ensure protocol compliance and address any identified issues.

- **STEMI**
- **Stroke**
- **Trauma**
- **Pediatrics**
- **Sepsis**

Community Paramedic: All systems with a Community Paramedic program (non-system affiliated MIHC exempt) must review their program objectives to ensure they are being met.

Pilot Programs: Any Pilot Program approved by NCCEP and NCOEMS must be reviewed to ensure compliance with protocols, procedures and policies set for the program.

Special Operations: Any operations outside of the normal day to day to include but not limited to; Tactical, Wilderness, High Angle, Confined Space, and Mass Gathering should be reviewed.