



**Whatcom County EMS
and Trauma Care
Council**

Summer

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The Continuous Quality Improvement (CQI) Program will provide leadership to the EMS community to establish best practices and collaborate with stakeholders to provide the highest quality care to the patients of Whatcom County.

**Continuous Quality Improvement (CQI)
Plan**

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Introduction

The Whatcom County EMS and Trauma Care Council (WCEMSTCC) has developed this plan in accordance with Washington State guidelines ([WAC 246-50-020](#)) to articulate the process that is used to monitor and address challenges in the quality of pre-hospital patient care in Whatcom County. The Continuous Quality Improvement (CQI) Program will provide leadership to the EMS community to establish best practices and collaborate with stakeholders to provide the highest quality care to the patients of Whatcom County.

Continuous Quality Improvement (CQI) is a process derived from a philosophy that focuses on processes rather than on individuals, and which contends that improvements can be made in most areas. Both internal and external "customers" are incorporated into that focus. The scientific method is at the core of CQI, requiring objective data to analyze and improve processes to meet the needs of those we serve and to improve the services we offer. Through the use of CQI we can offer our patients evidence-based best practices which are continually evolving to provide the highest quality, standardized care throughout Whatcom County. CQI can only function well in an environment that fosters input from all levels of personnel in the system, and that provides consistent standardized feedback to the system participants. This CQI plan describes in detail how cooperation among all Whatcom County EMS agencies will document and manage quality in the pre-hospital system.

Quality Improvement Authority and Protection

The MPD is responsible for the regulatory oversight of all Emergency Medical Services in Whatcom County. A portion of that oversight is accomplished through the CQI program ([WAC 246-976-920](#)). The MPD separates the responsibility for the components of the CQI process between the Continuous Quality Improvement Committee and the individual pre-hospital agency Quality Assurance (CQI) representative (or their alternate). The pre-hospital agency CQI representative is responsible for internal CQI processes related to personnel, equipment and supplies, safety, skills maintenance, and competency.

Participants in the CQI Committee approved by DOH under [RCW 43.70.510](#) are not subject to any action for civil damage for such CQI activity. This statute also provides confidentiality and exemption from courtroom discovery. Members of the CQI Committee are held harmless by the DOH when the function is in accordance with [RCW 18.71.215](#) and [WAC 246-50-020](#).

Overview of the EMS System and CQI

Whatcom County EMS coordinates the delivery of EMS service to the citizens of Whatcom County, responding in an area of over 2100 square miles and serving a population of approximately 187,000. The system operates in partnership with Whatcom County Fire Districts, the City of Bellingham, Whatcom Medic One, private ambulance providers, St. Joseph Hospital, and others involved in providing high quality pre-hospital medical care. EMS response in Whatcom County is tiered to ensure patients receive care by the most appropriate care provider.

Governance

The clinical CQI program for the Whatcom County EMS System employs an integrated process, incorporating all EMS stakeholders within its jurisdiction. Coordinating EMS activities, including quality improvement efforts, is the responsibility of the Whatcom County EMS and Trauma Care Council (WCEMSTCC). The Medical Program Director (MPD) is a member of the Council, and is contractually and legally responsible for quality improvement ([WAC 246-976-920](#)).

Continuous Quality Improvement (CQI) Plan

The Whatcom County CQI plan is an inclusive, multidisciplinary process that focuses on identification of system-wide opportunities for improvement. CQI refers to methods of data evaluation that consider factors such as **structure**, **process**, and **outcome**. Improvement efforts focus on identification of the root causes of problems, interventions to reduce or eliminate these causes, and the development of steps to correct inadequate or faulty processes. Additionally, the CQI plan can assist constituent groups to recognize excellence in performance and delivery of care. The goal of CQI is not disciplinary in nature, but rather to use the analysis of high quality data for ongoing educational efforts.

The Use of indicators in the CQI process

The use of indicators is one effective way to monitor the quality of patient care in the pre-hospital arena. The Whatcom County CQI program develops and uses standardized indicators, allowing agencies to uniformly review aspects of patient care, some of which may identify potential risk. Other indicators can guide targeted studies to assess the effectiveness of new processes. Additionally, there may be issues that require development of benchmarks used to measure system performance in Whatcom County. The MPD will determine, with the advice from the system stakeholders, which indicators to use. All provider agencies will measure performance against established standards of care.

CQI Committee

At the core of the Whatcom County CQI process is the Continuous Quality Improvement (CQI) Committee, a multidisciplinary group with representation from St. Joseph Hospital, provider agencies, EMS dispatch, research activities, EMT's, paramedics and the County MPD. The CQI Committee provides leadership for the clinical oversight and quality management of pre-hospital patient care in the county.

Continuous quality improvement is achieved through assessment of clinical care, research, evidence-based implementation of initiatives, monitoring the outcomes of the changes implemented, and the ongoing study of EMS practice for continued progress. The CQI Committee works closely with the Education Committee of the WCEMSTCC to identify and implement new initiatives. The committee will review special cases, issues that have been submitted through the EMS/ED Event Report process, and the analysis of indicator data, to reveal possible trends, underscore exemplary practice, and to seek solutions for system issues.

Whatcom County EMS & Trauma Care Council (WCEMSTCC) **WAC 246-50-020 (1) (a)**

Council members are elected, representing consumers, provider agencies, companies, and other organizations involved in the delivery of pre-hospital emergency medical services in Whatcom County. The Council collects and reports information on a variety of issues to stakeholders, may recommend a course of action, or may direct the appointment of a committee to investigate an issue further and undertake specific activities. In addition, the Council is responsible for the Ongoing Training and Evaluation program (OTEP) for EMS First Responders in the county, as well as public relations and clinical research responsibilities. The CQI Committee is charged by the WCEMSTCC to perform CQI activities for the EMS system in Whatcom County.

Outline of WCEMSTCC Responsibilities related to CQI:

1. Develop and implement the local CQI plan based on DOH EMSTS Regulations.
2. Facilitate the formation of and support the activities of the Continuous Quality Improvement Committee.
3. In collaboration with provider agencies and the CQI committee, identify and develop indicators for performance and outcome measurement.
4. Maintain summary CQI reports submitted by provider agencies used to evaluate the effectiveness of the system-wide CQI plan, and provide feedback to the CQI committee regarding potential modifications.
5. Oversee the development of any indicated performance improvement processes.
6. Collaborate with the North Region EMS & Trauma Care Council and WA State DOH EMSTS to develop future indicators.
7. Facilitate the development of EMS education and training programs for provider agencies in accordance with the implementation of the CQI plan.
8. Monitor and report progress of CQI process to North Region EMS & Trauma Care Council.

CONTINUOUS QUALITY IMPROVEMENT COMMITTEE

WAC 246-50-020 (1) (b)

Purpose

- To advise and assist the Whatcom County Medical Program Director to monitor and trend quality issues that are reported by the EMS system participants
- To discuss current trends and research in EMS care that has an impact on pre-hospital care
- To review information developed through the use of clinical indicators
- To use a multidisciplinary approach for issue resolution
- To promote county-wide standardization of the quality improvement process with an emphasis on education
- To provide timely feedback to all pre-hospital caregivers on issues and trends discussed by the committee

Membership of the Committee

The make-up of this committee is designed to ensure that all stakeholders in the continuum of patient care are represented and have input into CQI efforts. All members of the CQI Committee will be required to complete a CQI Committee Application. Applications will be considered and voted upon by the general membership of the WCEMSTCC, and all approved applications will be filed with the Washington State Department of Health Office of EMS and Trauma System. Membership of this committee will be on a voluntary basis.

Officers of the CQI Committee

Committee officers are elected by committee members and shall consist of two co-chairpersons, one of which is the MPD, an EMS Quality Coordinator, and a Secretary. The Co-Chairs serve as the liaisons between EMS agencies and the rest of the medical community, as well as between the CQI Committee and the WCEMSTCC. The MPD will translate CQI Committee findings into protocol as appropriate. Following the inaugural year of the committee, the election of officers shall take place at the last meeting of the calendar year and officers shall assume duties at the first meeting of the next year. Officers shall serve for a period of two years, for up to three terms.

General Membership:

- SJH ED Outcome Coordinator (or designee)
- SJH Trauma Coordinator
- Chief or designee from each provider agency (each with one alternate delegate)
- Airlift Northwest
- Private Ambulance companies
- Dispatch/Prospect
- EMS Research Coordinator

Meeting Frequency and Attendance:

The CQI committee meets quarterly, or more frequently as needed, and reports to the WCEMSTCC at their quarterly meeting. Members shall notify the Secretary of the committee in advance of the meeting if unable to attend. Resignation from the committee shall be submitted to the office of the WCEMSTCC in writing, and shall be effective upon receipt. In accordance with the bylaws of the WCEMSTCC, you must attend a minimum of three CQI Committee meetings per year to remain a member in good standing. After a member misses two meetings within one year, voting rights will be suspended and the agency(s) represented will be notified.

Guests:

At the discretion of the CQI Committee chairperson and/or County MPD, other invitees may participate in the medical audit review of cases where their expertise is essential to make appropriate determinations. These invitees may include but are not limited to the following:

- Law Enforcement
- County EMTs
- County Paramedics
- Nurses
- Physicians
- Whatcom County Dispatch/PSAP representatives
- Stroke System Representatives
- Trauma System Representative
- Cardiac Care Representative
- Medical Examiner

Voting

Occasional issues may require a voting process. This business is conducted according to Robert's Rules of Order. A simple majority of the members (in good standing) present will constitute a decision.

Minutes

Minutes will be recorded by the Secretary at all meetings and will be distributed for review and approval by the members present at the following meeting. All copies are subsequently collected and destroyed following the meeting. One copy of the minutes will be kept in a locked cabinet in the WCEMSTCC office. Any case-specific information presented during the meetings will be de-identified and held in strict confidence among those attending the meeting. All references to identifying information will be omitted from the meeting minutes.

Confidentiality

All proceedings, documents and discussions of the Continuous Quality Improvement Committee are confidential, and thus protected from discovery in accordance with [RCW 43.70.510](#).

Guests may be invited to the CQI Committee to discuss specific cases and issues in order to assist the committee to make final case or issue determinations. Guests may only be present for the portions of the meeting about which they have been requested to review or discuss.

All members will be asked to sign a confidentiality agreement not to divulge or discuss information that would have been obtained solely through the CQI Committee membership. No information will be disclosed to parties outside this committee except as agreed to by attendees for the purposes of follow-up or resolution of system design change. Prior to the invited guests participating in the meeting, the Chairperson is responsible for explaining, and obtaining, a signed confidentiality agreement from the guest.

Patient records will be identified by a run number. All committee handouts shall be labeled "Confidential Quality Review Document/Privileged Information/Not Authorized for Distribution". Source documents will be stored in a locked cabinet, and all copies of the confidential documents and minutes will be collected at the end of the meeting and destroyed. It is the obligation of the attendees to keep all information confidential and to protect it against unauthorized intrusion, corruption, and damages.

Review and Evaluation of Information

The CQI Committee shall use current standards and actual field performance documented on incident reports and other documents as a basis for CQI evaluations. Current standards consist of, but are not limited to:

- Washington State approved curriculum
- State and Whatcom County MPD patient care protocols
- Regional Patient Care Procedures
- Whatcom County Operating Procedures
- Washington State Trauma Triage Tool
- CPR, Obstructed Airway and External Defibrillation following current nationally accepted standards.
- Infection Control Procedures following the most current approved Infectious Disease Prevention for EMS Providers curriculum

Effectiveness and Timeliness - [WAC 246-50-020 \(1\) \(b\) \(i\)](#)

The committee reviews service provided to each area of the county, ensuring that responses comply with the standards set by the WCEMSTCC. These standards are determined by political subdivision and population density, and meet or exceed the standards set in WAC 246-976-010.

Health Care Outcomes & Protocol Review - [WAC 246-50-020 \(1\) \(b\) \(ii, iv\)](#)

Protocol review is an annual process. CQI efforts inform the protocol review, and where appropriate, protocol changes are approved by the MPD and DOH, and subsequently disseminated to providers via the efforts of the Education Committee of the WCEMSTCC.

The scope of review to be conducted by the CQI Committee may include any patient encountered in the pre-hospital system of Whatcom County. Information used shall include individual medical incident and other supporting documentation, local and/or state registry data, and meeting minutes of discussions that took place. Review may include but not be limited to the following:

1. Any clinical care issue or public complaint
2. Variations from protocol/standard of care
3. Deviations from Scope of Practice
4. Medication errors
5. Complications of airway management
6. Issues with outstanding education potential

Indicators which are likely to result in the review of high risk/ low frequency or otherwise significant events are used to measure outcomes. The clinical indicator information is presented at each CQI Committee meeting to generate discussion, evaluation, and responses to any trends that are recognized. The committee is expected to provide leadership on systemic issues and/or trends to develop a system-wide approach to quality improvement, and to develop information that will be disseminated to all personnel in the system based on identified issues.

Oversight of CQI Committee - [WAC 246-50-020 \(1\) \(b\) \(iii\)](#)

As Co-Chair, the MPD serves as the liaison between EMS agencies and the rest of the medical community, as well as between the CQI Committee and the WCEMSTCC. The MPD will translate CQI Committee findings into protocol as appropriate.

CQI Reporting & Documentation

- [WAC 246-50-020 \(1\) \(b\) \(v\)](#), and [WAC 246-50-020 \(1\) \(i\)](#)

The CQI committee meets quarterly, or more frequently as needed, and reports to the WCEMSTCC at their quarterly meeting. Source documents and products of the CQI process are de-identified and used only for education and process improvements within the EMS system. All committee handouts shall be labeled "Confidential Quality Review Document/Privileged Information/Not Authorized for Distribution". Records/rosters of the CQI committee are stored in a secure location in the WCEMSTCC office, and may only be released in response to a valid court order.

Provider Agency CQI Activities: Training & Improvement

WAC 246-50-020 (1) (h, j, & f)

The provider agencies, through their internal CQI process and in conjunction with the CQI committee and MPD, are responsible for creating and monitoring programs for ongoing medical training & issue resolution, including individual performance improvement plans.

Each provider agency will submit reports of clinical indicators based on the care that their personnel render to the patient. Using an Excel spreadsheet as exemplified below, each provider agency will submit the required information for the clinical indicator currently in use to the CQI Committee on a quarterly basis. The CQI Committee and MPD will review and validate the data and look for trends. Trends derived from the clinical indicators will be discussed at the quarterly CQI Committee meeting. Reports of the clinical data will be compiled by the CQI Committee and sent back to the provider agencies.

The indicators will measure current compliance with identified best practices. If compliance is maintained or improved, the indicators may be retired and new indicators are developed. The WCEMSTCC will maintain the records of the results of the clinical indicators submitted by the local provider agencies. The provider agencies will maintain all raw data (de-identified) collected for the clinical indicators should there be any questions about trends or identified issues.

The involvement of all stakeholders in the CQI Committee ensures that a multidisciplinary approach to issue resolution exists. As trends in issues are identified, the CQI Committee may elect to form subcommittees to address specific issues and develop solutions. Should a significant issue arise outside of the specifically collected indicators or EMS/ED Report process, the CQI Committee and/or MPD will notify provider agencies. The MPD and CQI Committee, in collaboration with the Education Committee and provider agencies, will explore the issue's root causes as well as develop solutions.

Once a decision to take action or to solve a problem is made by the committee, standardized training and education appropriate to the skill level and service goals are addressed through the Education Committee of the WCEMSTCC. Each provider agency has designated training personnel who work in conjunction with the Education Committee to ensure that pre-hospital care personnel engage in appropriate training or remediation.

Annual updates to the patient treatment protocols are constructed by the MPD and EMS Council in conjunction with the CQI and Educations Committees and formulated into a standardized teaching plan prior to their implementation. All training materials are made available to each agency, as well as posted on the WCEMSTCC website.

Outline of Provider Agency Responsibilities related to CQI:

1. Designate personnel who manage the internal quality improvement process for that agency. The pre-hospital agency representative is responsible for internal CQI processes related to personnel, equipment and supplies, safety, skills maintenance, and competency.
2. In cooperation with the Whatcom EMS Council, implement an internal CQI Plan and provide education to all personnel within the agency regarding CQI responsibilities.
3. Assist in the identification of indicators needed and ensure compliance with the county CQI plan.
4. Share results of internal CQI activities with the CQI committee, as well as disseminate appropriate information forwarded from the CQI committee to all EMS personnel within the agency.
5. Maintain records of CQI activities for review and action regarding exemplary practice, unanticipated events, and utilization management.
6. Review internal CQI efforts regularly for effectiveness in identifying and resolving provider related CQI issues, and revise as needed.

Quarterly Reports:

A report of CQI activities from each EMS Agency will be forwarded at least quarterly to the CQI Committee. Clinical performance indicators are reported electronically to the CQI Committee for analysis. The indicator data are compiled and the CQI Committee documents compliance with the measured criteria. The quarterly report will also contain recommendations for system changes, requests for study projects, trends of note, and successes. Any reported issue that appears to be solely an agency/employment issue will be referred back to the provider agency for action. There will be no information in this quarterly report that will identify a patient or provider.

Example Spreadsheet for Data Collection by Provider Agencies:

Data is collected through the use of Excel spreadsheets that the CQI Committee makes available to the provider agencies.

Below is an example of the data collection tool.

Clinical Indicator – Suspected Acute Cardiac Ischemia (tab)

Date	Run #	ASA	NTG	Lopressor	12 lead Interp	STEMI	Comment

Additional tabs in the Excel workbook may be supplied to collect data regarding e.g. stroke, trauma, CPR, Diabetic emergencies, COPD, etc.

EMS/ED Event Reporting:

All EMS providers are provided a reliable means of submitting a comment or concern regarding patient care, patient management, crew interaction, safety, hospital staff interaction, public perception, or any other issue (positive **or** negative) related to one specific EMS activity to the CQI representative in their respective agency and/or the CQI Committee using the EMS/ED Event Report form. Reportable issues include, but are not limited to:

1. Exemplary practice with significant educational potential
2. Actions outside of the scope of practice of pre-hospital personnel.
3. Public complaints
4. Protocol compliance issues related to:
 - a. Administration of medications
 - b. Invasive procedures
 - c. Defibrillation/cardioversion
 - d. Airway Management
 - e. Other patient treatments

All EMS/ED Event reports shall be thoroughly researched and documented by the agency(s) involved before presentation at the CQI Committee meeting.

MPD Responsibilities

Certification of EMS Personnel - [WAC 246-50-020 \(1\) \(c\)](#)

WCEMSTCC staff use a defined checklist to ensure that personnel requesting initial certification or recertification have completed all pertinent requirements. Once completed, the individual's name is forwarded to the MPD, who recommends certification of the individual to DOH, in accordance with WAC 246-976-920(1)(k).

Co-Chair of CQI Committee - [WAC 246-50-020 \(1\) \(b\) \(iii\)](#)

As Co-Chair, the MPD serves as the liaison between EMS agencies and the rest of the medical community, as well as between the CQI Committee and the WCEMSTCC. The MPD will translate CQI Committee findings into protocol as appropriate.

Individual Call Review

The MPD reviews all cases of serious issues related to scope of practice or compliance that are submitted by the EMS agencies, tracks and trends the issues that are reported, and presents the trended information related to systemic issues to the CQI Committee for discussion and identification of potential solutions. Issues related to regulatory compliance will be reported to the Washington State Department of Health.

Monitoring Initiatives

Additional aspects of clinical care are monitored routinely. Data obtained through this monitoring will be shared with the individual provider agencies. As necessary,

any issues found through these clinical reviews will be communicated to the involved provider agency for investigation and resolution. Trends related to systemic issues will be addressed by the CQI Committee to identify potential solutions.

Risk Management - WAC 246-50-020(1)(d, e & g)

Risk management will be addressed through the use of the EMS/ED Event Report. These reports will be submitted by anyone with a concern regarding patient care, patient management, crew interaction, safety, public perception, or any other issue that is in question. The EMS/ED Event Report form, with instructions for its completion, is available on the WCEMSTCC website. The completed form is submitted by the reporter to the department/agency for initial internal review. Typically, the form is supported by the medical incident report (MIR), computer-aided dispatch (CAD) record, audio recordings from dispatch, and when available, patient outcomes at the hospital. The CQI Committee compiles a data base of reported issues and is able to broadly trend the types of issues reported, agencies involved, and resolution of the issues. All of the reported information is maintained in a confidential manner and reports are available to the CQI representative of the involved agency.

Resolution of Patient/Public Complaints

Any complaint submitted to the MPD or EMS agency from the public is investigated by the appropriate EMS agency (and the MPD if it involves the care of the patient.) The call is reviewed by the district/department members for variances from policy or medical procedure outlined by that particular agency. Each district/department resolves their own complaints from the patient/public, and then may forward the issue to CQI for educational or peer review, in one or more of the following circumstances:

- an EMS responder involved in the call requests a review by the CQI Committee through the chain of command in that responder's district/department,
- the supervisor of the EMS responder involved in the call requests a review by the CQI Committee, if cleared through that supervisor's proper chain of command,
- the MPD may request a review by the CQI Committee

Reports from hospital personnel regarding patient care related to EMS activities will be similarly addressed, beginning with an internal investigation within the EMS agency, and involving the MPD as appropriate.

If a public complaint is accompanied by a UE report from pre-hospital personnel, both the MPD and EMS agency will collaborate on the investigation, as well as on the feedback to the members of the public directly involved.

Professional Liability

Insurance, including malpractice insurance, is the responsibility of the agency with the exposure. In Whatcom County, this responsibility lies with each individual responder agency. Similarly, safety activities are the responsibility of the individual provider agencies.

The malpractice exposure of the WCEMSTCC, as an advisory body appointed by the Board of County Commissioners, is covered by the umbrella policy under the self-insurance program of the county, which is administered by the Washington Counties Risk Pool.

Appendix A

EMS/ED Event Report Form

Instructions: Anyone with a comment or concern regarding patient care, patient management, crew interaction, safety, hospital staff interaction, public perception, or any other issue (positive or negative) related to one specific EMS activity may submit this form. Please complete as much information as possible on this form so that appropriate supporting documents may be accessed as needed.

This Report Initiated by: [] EMS personnel [] SJH staff (select one)

Date of Incident: _____ Date of Report: _____

Incident #: _____ MR#: _____

EMS Agency: _____ ED Triage Level: _____

Description:

Referred to: _____ (department/agency CQI representative)

Name: _____ Signature: _____



Reviewed by: _____ Date: _____

Finding(s):

Action(s) Taken:

Follow-up with personnel involved:

Signature: _____ Date of Resolution: _____