

## **RETROSPECTIVE MEDICAL DIRECTION: QUALITY IMPROVEMENT PROGRAM**

Quality improvement in EMS is the sum of all activities undertaken to provide patients treated in the EMS system with the confidence that the emergency services provided to them maintain standards of excellence established by individuals responsible for the system. A quality improvement program also constantly strives to improve the system.

It is essential that every EMS system develop an effective and coherent quality improvement program within its region. This program must involve service and/or system medical direction.

### **Retrospective Medical Direction**

Retrospective medical direction consists of field assessment form review, base hospital case review, and system and statistical review. In order for this process to be valid, the collection and recording of data and of care provided (including run sheets) must be accurate, complete, and readily available. The review process is designed to identify system or policy errors, individual errors, and areas in which EMS participants (EMTs, Paramedics, nurses, and physicians) might benefit from continuing education or retraining. Incomplete and/or inaccurate charting of prehospital care is a major medico-legal liability and must be corrected.

Field assessment form reviews consist of a specifically designated individual reviewing all prehospital runs and evaluating the care provided and compliance to protocol. A review of EMS dispatcher (where applicable) compliance to protocol is also essential.

Base hospital case review is a forum for all members of the prehospital care team (EMTs, paramedics, nurses, and base hospital physicians) to evaluate and discuss selected cases illustrating controversial or extreme situations, exceptional care, or demonstrating areas of recurring problems in the prehospital care system. After presentation of the case (and review of recorded radio transmissions if available) the review can allow for discussion of care provided in the field and base hospital direction as well as providing follow-up regarding the patient's ultimate diagnosis and outcome.

EMS administrative management and the EMS medical director carry out the system review (including a statistical analysis). It allows for evaluation of the system's performance (i.e., response times and resuscitation rates), statistical evaluation of type and distribution of calls, review of current protocols, and identification of any recurring problem areas. It is important that the information obtained through these reviews be utilized to evaluate the system and to make changes to improve the system's function. For example, if review of an EMS system consistently demonstrates prolonged on-scene times for multi-systems trauma patients, the reason must be found and action taken to resolve the problem.

Medical directors should encourage use of the new computer based data collection system (WARDS), as this will allow for meaningful study of effectiveness regarding prehospital interventions.

## **DEVELOPING AN EMS QUALITY IMPROVEMENT PROGRAM**

While quality itself is difficult to define, some good steps to establishing a quality improvement program are listed below. Attributes of EMS system quality should include: patient outcome and satisfaction, good interpersonal relations, integration into community health system, patient access, and pride among workers, consistency and reliability of performance, timeliness and cost effectiveness.

### **Establish a “Vision” of Excellence**

1. Establish a concrete vision of what it means to operate with excellence.
2. Establish standards based on your system and individual capabilities.
  - System standards: Define the local EMS agency capabilities by evaluating response times and on-scene times, dispatching, training and continuing education, equipment used, medical protocols, procedures and standing orders and existing EMS and Trauma plans for the area.
  - Individual standards: Review personnel and personnel policies by evaluating hiring policies, personnel requirements, and participation in the selection process, individual skill requirements, and skill maintenance requirements.
3. Prior to implementing standards, solicit input from your staff. Ask them about realistic response times, skills needed to benefit patients, and equipment necessary to save lives. Solicit input from medical personnel. Ask the ER staff, the nursing staff, and the nursing homes about areas that need attention.

### **Establish Prospective, Concurrent, and Retrospective Evaluation Procedures**

1. **Prospective Individual Evaluation.** Evaluate your hiring and screening practices
2. **Prospective System Evaluation.** Perform needs assessment for your service area and identify your services capabilities and effectiveness of radio communications, protocols, standing orders, training programs, etc. Establish preceptor programs for newly trained EMTs.
3. **Concurrent Individual Evaluation.** Conduct run reviews at the hospital using physician involvement. Observe individual EMTs in action and encourage EMT participation in the ED patient care.
4. **Concurrent System Evaluation.** Evaluate provider performance based on patient report and care rendered, observation of provider conduct in mass casualty incident drills, information from ad hoc peer-based committees, etc. Consider having ED nurses ride along in ambulances in order to understand differences in pre-hospital field care from in-hospital care.
5. **Retrospective Individual Evaluation.** Perform random audits of run reports and continuing education and skill maintenance records; evaluate performance in patient scenarios and other testing situations.
6. **Retrospective System Evaluation.** Establish run reviews and debriefings including peer review and physician critique.

## **Institute Regular Training and Education Programs**

It is imperative that the medical director oversees and participates in medical training within his/her system. This allows medical oversight as a provider begins a career in EMS, and insures competency with knowledge and motor skills on an ongoing basis. Additionally:

1. Use training and education as a positive response to problems.
2. Determine the types of education needed and which are the most beneficial to your service. (Lectures, skills practice, patient scenarios, clinical time, field observation, one-on-one counseling, courses or modules, basic reading, writing and math skills, etc.)
3. Provide educational opportunities outside the classroom by encouraging further training by conferences, books, seminars, magazines, grand rounds or ED rotation with a physician, establishment of a local EMS library, etc.

## **Reward for Excellence**

Advise EMS providers when they have done a good job by writing quick notes of praise, personal phone calls and/or a formal system of recognition.

## **Sources of Further Information on Quality Assurance**

For additional information on Quality Improvement programs, consult your local library for books such as: *Continuous Quality Improvement in EMS*, published by the American College of Emergency Physicians in 1992 and *Quality Management in Prehospital Care*, published by NAEMSP.