Maine EMS Quality Improvement Program

January 2012

Introduction

The provision of emergency medical services is at the crossroads of the community's healthcare system, its public health system, and its public safety system. In this unique role, EMS providers routinely work side by side with other medical professionals from the hospital, medical, and clinic environments, as well as with their counterparts from the fire, rescue and law enforcement disciplines. Regardless of the type of organization that provides prehospital emergency medical response, the prevailing factor we must always acknowledge is that EMS is a patient care entity. As such, providers and agencies must be willing and able to engage in quality improvement activities, as do all other healthcare professionals, to ensure that patients receive timely medical care from well-trained and competent individuals.

The mission of EMS is to provide timely and appropriate emergency medical care and transportation of the ill and injured, which requires consistent on-going evaluation of both organizational efficiency and operational quality. To achieve this end, EMS agencies should embrace the following fundamental principles:

1. EMS agencies can and must be improved
2. It is the responsibility of every provider to participate in the effort to improve EMS
3. The foundation of EMS Quality Improvement begins at the agency level
4. There must be a commitment to quality care by the governing body of each EMS agency.

The goals we have established for our State EMS QI program are based on nationally recognized standards and are as follows:

1. The public should be able to easily access EMS through an enhanced 911 system that uses medically approved dispatch protocols and functions under medical supervision.
2. Emergency responders should possess adequate training and emergency response vehicles should be appropriately equipped and staffed.
3. Patients should be transported to a medical facility that can provide appropriate care and a system of medical oversight must be in place to ensure optimal levels of care consistent with accepted standards of medical practice and available resources.
4. Finally, all components of the EMS system should be linked together by a functioning EMS communications system and a quality improvement mechanism.

EMS provider agencies, dispatch agencies, hospitals, regional councils and the state EMS office, all play an important role in the implementation of an integrated Quality Improvement program. Health care is a constantly evolving and dynamic field. To ensure that patients receive the best care, it is imperative to routinely re-evaluate standards of care, develop strategies for implementation of new policies and procedures, and identify our strengths and weaknesses in meeting those standards. From a medical-legal perspective, such a program reduces risk by reinforcing the delivery of appropriate patient care.

The Clinical Quality Management Program for Maine EMS (MEMS) is designed according to these philosophies:

1. That quality Improvement and improvement (QI/QI) activity originates, and is focused, at the service level.

2. That the focus of quality improvement activities is determined according to customer needs; these customers being patients, physicians, facilities, other healthcare providers, regulatory agencies, and others.
3. That a quality management system utilizes performance measures that monitor process performance and prioritize correction of root causes in the process and system design that provide the opportunities for errors and problems to occur. Correction of problems at an individual level may be warranted, although many such cases may ultimately have root causes in the recruitment, orientation, training processes, or the organizational culture. Correction of such issues should be an early priority.
4. That every provider has unlimited potential and a desire to succeed if placed in an environment that adequately supports, educates, and nurtures a sense of pride and responsibility.
5. That a provider's effectiveness is determined by their environment and only minimally by their individual skills.
6. That it is the responsibility of management to create the appropriate environment, supply the correct resources, communicate complete and accurate expectations, and educate personnel in the proper techniques of delivering consistently high quality services.

A successful program utilizes the EMS service QI/QI committee, in conjunction with the local hospital QI/QI process, to track trends, identify educational opportunities, reward good patient care, and highlight areas that need improvement through improved system design, communication of expectations, education and training. The primary participants in the State Quality Assurance and Improvement program include the EMS service QI/QI committee, local QI/QI Coordinators and sub-regional Medical Directors based out of the local hospitals, Regional EMS Offices, and the Regional Medical Director.

When developing a service quality Improvement program, the following reference materials may be helpful:

1. A Leadership Guide to Quality Improvement for Emergency Medical Services (EMS) Systems, U.S Department of Transportation, National Highway Traffic Safety Administration, July 1997
2. The Baldridge National Quality Program, Health Care Criteria for Performance Excellence, National Institute of Standards and Technology, Technology Administration, Department of Commerce, 2001
3. *Quality Management in Prehospital Care, 2nd Edition*. Robert Swor (Ed). National Association of EMS Physicians, 2005.

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Chapter 1; Establishing an EMS Quality Improvement Program

Section 1: Legal Considerations

Remember that completion of an electronic run report and participation in a quality improvement program by every service and every licensed provider is required by Maine Law. Quite simply, licensed EMS services and providers in Maine must participate in the quality improvement process.

Section 2: Organizational Commitment

In order for any quality improvement program to be successful, the highest level of the organization must fully and publically support it. Without that support, the program will fail from inadequate resources and a failure to be taken seriously by field personnel. A fully functioning service QI program, in addition to limiting organizational liability, can reduce costs, increase customer satisfaction, and improve employee morale. All of these factors combine to make a more efficient operation that has greater public support, critical factors for the survival and growth of your service.

Section 3: Quality Improvement Coordinator

The Quality Improvement Coordinator sets the direction for, and the character of, the Committee's activity.

The QI Coordinator should be knowledgeable in prehospital policies, protocols and procedures and the general QI process. Agencies should consider enlisting the expertise of their Service Medical Director, the local hospital's QI Coordinator, an emergency department physician, or a senior prehospital provider from the agency. Hospital involvement in a quality improvement program, by physicians or other health care professionals, is critical. These quality improvement programs must strive to comprehensively evaluate the entire spectrum of patient care. Successes and failures may occur at one level of the patient's care but also may occur in transitions between providers within different levels of care. Only by pairing EMS quality improvement programs with hospital quality improvement efforts, can these elements become discovered.

Historically, QI programs have focused on the clinical aspects of the EMS providers, typically by retrospective review of patient care reports. This method is important and has its place; however, it is narrow in its scope. QI Coordinators should be "big-picture" thinkers and consider all aspects or the organization having either direct or indirect affect on patient outcome and customer satisfaction. See Appendix "B" for topics/areas that can be included in the QI program.

The duties of QI Coordinator center around interfacing with local hospitals, agency members, educators and field supervisors; reviewing PCRs; reviewing existing protocols; and establishing a public outreach program.

Section 4: Quality Improvement Committee

A Quality Improvement committee is critical to the success of the service quality improvement program. Because of the number of small services in Maine, we recognize that a QI committee may be made of a number of EMS services coming together in order to better utilize available resources.

We strongly recommend that services in Maine EMS form QI Committees made up of the transporting service, their first responder services, and the local hospital. Transporting services without first responder services should work with other surrounding services and their local hospital. This format will serve to increase communication between all the organizations that provide patient care and enable a system approach to Quality improvement.

Organizations should consider including the following personnel on their committee:

QI Coordinator -	Each service should have a QI coordinator. If the QI committee is made up of multiple EMS organizations, then the QI coordinator from each service should serve on the joint committee.
Medical Director-	Every service should establish a relationship with a Medical Director. Ideally, this would be an Emergency Physician from the local hospital, but it can also be a mid-level provider. Other potential candidates could be local family practice physicians/mid-level providers or local retired physicians/mid-level providers. See Appendix "C" for a sample medical director job description.
Hospital ED Rep-	Involving a representative of the local hospital is critical to ensuring 2-way communication and the development of an effective QI program. This person should be a Physician, NP/PA, Nurse, or Paramedic.
Field Providers-	It is important to make sure representatives of the field providers delivering care are members of the committee, including field providers from both the transporting and first responder services.
Customer Reps-	It is important to consider the other customer groups served by your EMS agencies for inclusion on your committee (nursing homes, businesses, etc)

Section 5: Written Plan

The Committee should document its authority and process in the form of a written QI Plan that is approved the Maine EMS Board. Once the plan is approved by the EMS Board, the committee and all of their activities are protected from discovery by Maine State Law. Each service can have their own plan or the joint committee can develop a plan that covers all participating services.

Typically, the written plan provides a pathway for the QI process in the following sections:

1. Introduction;
2. Mission statement;
3. Justification;
4. Goals and objectives;
5. Methods;
6. Identification of benchmarks and monitors;
7. Flow of information; and
8. Feedback loop

A sample written QI plan is attached in appendix "D" of this document.

There are many resources available to the QI Committee, including, but not limited to: existing protocols and standards; agency specific data from PCRs; input from field supervisors and other experienced providers; educational curricula; and customer satisfaction surveys.

Section 6: Two-way Communication

The essence of the quality improvement process is to identify areas of excellence as well as identify areas in need of improvement. Quality Improvement is a way of looking at improving care, not finding problems for punitive action. As such, it is imperative that QI Committees establish a pathway for two-way communication.

Communicating information to the QI Committee is generally the first step in the process. This can be accomplished in a number of ways, following these easy steps:

1. Selecting a subject for study, which includes an operational definition of the condition or procedure under study and a definition of patients to be included;
2. Developing criteria and standards, defining acceptable levels of quality;
3. Collecting data;
4. Comparing data to criteria and standards in order to identify areas of excellence and deficiencies;
5. Determining causes of deficiencies and taking corrective action, including:
6. Determining whether this is a system or individual problem;
7. Determining who or what is expected to change;
8. Determining who is responsible for implementing action to bring about change;
9. Determining what action is appropriate to bring about change;
10. Setting a timetable for the change to occur.
11. Evaluating the change to ensure desired outcome; and
12. Re-evaluating to ensure consistent performance.

We included a reference section on evaluating your performance in Appendix "E" and several examples of QI studies in Appendix "F".

It is an essential component of the program to make sure that findings are communicated back to the individuals involved on the calls, the entire membership of the agency (when the problem is identified as a system issue), the region, or to the Maine EMS office as needed.

Guiding change is a principal activity of a QI program, and positive feedback is an essential part of the process. The following represent critical components of an effective QI process:

1. Identify areas of excellence and reinforce positive behavior in an attempt to encourage continued excellence; and
2. Develop a strong link between your service QI and education program as a way to bring about long-lasting change.
3. Schedule regular skills labs that will allow for supervised reinforcement little used skills, new procedures/equipment, or critical patient management skills;

4. Develop a mentoring program utilizing previously identified preceptors within each agency; and
5. Host a series of lectures designed to reinforce changes brought about by the QI process.

From time to time, actions or omissions identified in the QI process are of a caliber that may require involvement by the Regional Office or administrative action by the Maine EMS Board. Agencies are encouraged to follow due process as well as local and state policies for such actions. Services can contact their Regional EMS Office or the Maine EMS Office for guidance with these issues.

Section 7: Confidentiality and Protected Health Information

The use of protected health information (PHI) is an essential component of a Quality Improvement Program ***and is acceptable under the law when used in health care operations.*** Agencies and providers are responsible, however, for ensuring that health information and a patient's identity are limited to bona fide QI activities required by statute, regulation, and policy. In essence, agency policy determines who has access to PHI, and how that information is shared.

A more detailed discussion on confidentiality and HIPAA regulations is contained in Appendix "G".

Chapter 2: Beginning the Process

Section 1: Getting Started

Here are some initial steps towards implementing a Quality Improvement Program in your organization:

1. Appoint a Quality Improvement Coordinator.
2. See the previous chapter for roles and responsibilities of the QI Coordinator
3. Appoint a Quality Improvement Committee.
4. The makeup of the committee will depend a lot on the size of the organization. Given the varying sizes of organizations in Maine EMS and the limited resources of the local hospitals, we strongly recommend that QI committees be formed around the transporting service. In this case, the Committee would be made up of representatives of a transporting service (or services), each first responder service affiliated with the transporting service, and representatives from the local hospital that form the core of the committee.
5. If your organization is a small, transporting service with no affiliated first responder, then consider combining with other small services in your area and representatives of the local hospital to form your core committee.
6. Write your QI Plan.

Each committee should have a written plan that is approved by the Maine EMS Board so that the committee and the member organizations are protected by Maine Law. More information about the written plan is contained in the "written plan" section in the previous chapter and a sample plan in contained in Appendix "D".

Select Topics to study- Knowing where to start is always difficult. However, experience has shown that a great place to begin is basic documentation. Attached are study templates in Appendix "E", but since the studies will only be as good as the information that is put into them, it is important to implement a process that reinforces complete and accurate documentation. A good start is to use the "procedure competency report" (or similar report from non-MEMSRR software) to highlight documentation deficiencies in the organization.

Other potential topics of study include procedures or practices that are high risk, low frequency or both. In the field of medicine, there are practices and procedures that occur very frequently. The frequency of these interactions allows providers to become very familiar with those entities. Alternately, there are other, much less common events that occur with less frequency and this infrequency or unfamiliarity may lead to potential for error. As well, certain procedures or disease process carry high risk while others have lower risk profile. An example of a low frequency event in EMS is the sick infant while an example of a high-risk interaction is airway management. High risk and low frequency interactions are other natural targets for quality management study.

Develop an Education Program - Start by educating your staff on the use of your electronic run report system and good documentation. Then, spend several months providing feedback to your staff on the documentation issues that you have picked up during the reviews. After that, regular

education goals and objectives can be developed using the information gathered from your QI reviews.

Section 2: Converting Information to Positive Actions

Once a problem has been identified by the QI process, it is important to approach improvement from a systems perspective. Although in some cases a provider may be the root cause of an event, the vast majority of cases involve several contributing factors. Since it is impossible to eliminate human error, and we can thus expect errors to be repeated (usually by other providers), correcting the contributing factors is an effective means to reduce the likelihood of repeating the event in the future. Because of this, it is important that the QI process looks beyond the human error, and seek to determine what system factors might have facilitated the error. For example, if a paramedic gave the wrong drug to a patient, did the two medications come in similarly labeled vials, and were they stored next to each other? What changes can be made to prevent similar events from occurring in the future?

Donald Berwick of the Institute for Healthcare Improvement has said, "Most serious medical errors are committed by competent, caring people doing what other competent, caring people would do." The "old" attitude towards adverse events in medicine is that only bad and incompetent providers commit errors, and they should be fired, demoted, or retrained. It is clear that this method (sometimes referred to as the "name, blame, and train" approach) does not improve patient safety over time. This is because even when the "bad" provider is replaced, it is inevitable that someone else will eventually commit the same error. If no systems improvements have been instituted as a result of the first error, another patient will be harmed. In addition, this approach creates a "culture of secrecy and blame," which causes providers to hide their mistakes. This makes it impossible to respond appropriately with system improvements which might otherwise prevent future repeated or similar adverse events.

The most effective approach to patient safety, which has been adapted from other complex and high-risk environments such as aviation, is to design a system which anticipates and expects human error but has built-in safeguards which protect the patient from incurring any harm as a result of these errors. Dr. Charles Vincent, a leading patient safety expert, wrote that "Eliminating harm is the objective, not eliminating error." (Clinical Risk Management: Enhancing Patient Safety). Thus the most effective QI systems are those that focus on improving the system, not just remediating the provider.[1]

[1] O'Connor RE, Fairbanks RJ, Reducing Adverse Events in EMS. In *Quality Management in Prehospital Care, 2nd Edition.* R. Swor (Ed). National Association of EMS Physicians, 2005).

Chapter 3: Next Steps in Quality Improvement

Once you have established the basic QI structure within your organization and have addressed any documentation issues that were identified as part of your initial QI review, you should consider expanding the scope of your program to integrate the QI process into every aspect of your agency. In this chapter we will cover some of the topic areas that you may want to consider. Remember; don't overwhelm your organization (or yourself) by taking on too many areas at once.

Section 1: Agency Self-Assessment: The Starting Point

Every business – yes, EMS is indeed a business – can only benefit from conducting quality improvement reviews of all aspects of its operation. Predominant among the reasons to apply this strategy include: focusing your membership on organizational goals; jumpstarting change initiatives; energizing improvement initiatives. Today's healthcare environment is complex and rapidly changing and EMS agencies must rise and meet many challenges, including increasing call volume, dwindling volunteer pool, and stagnant budgets. Despite those obstacles, the public has an expectation that EMS will respond in a timely and competent manner when called. Therefore, it is up to each and every one of us to examine our inner strengths and weaknesses and make the modifications necessary to continue to meet public demand.

An understanding of the Strategic Planning Process is essential for today's EMS manager. No longer is EMS just about answering calls. Rather, today's EMS manager must deal with the complexities of developing short-term and long-term organizational goals and measuring the success of the organization, essentially creating a seamless integration of QI initiatives into all aspects of EMS operations. We have included more detailed information about Strategic Planning in Appendix "H".

Benchmarking is a common process used to perform a self-evaluation and begin the Strategy Change Cycle. This type of activity can be viewed as the on-going and systematic process for measuring and comparing the work process of one organization to those of another, by bringing an external focus to internal activities functions or operations. The goal of benchmarking is to provide policy makers with a standard for measuring the quality and cost of internal activities and to help identify where opportunities for improvement may reside. Asking the following questions, and reacting positively to the answers to those questions, provides decision makers with the opportunity to strive for improvement and promote healthy competition. This approach perpetuates constant improvement as agencies continually try to "one-up" each other, and over time, an entire region or state can be operating at peak efficiency. As part of your agency self-assessment, ask:

- How well are we doing compared to others?
- How good do we want to be?
- Who is doing it the best?
- How do they do it?
- How can we adapt what they do in our organization?
- How can we be better than the best?

Essential to the process of benchmarking are that the agencies involved are using the same **quality targets** (i.e.: are reviewing the same topics, for example 12-Lead ECG's) and within each quality target are looking at similar **quality markers** (i.e.: within the quality target of 12 Lead ECG's, measuring a paramedics ability to interpret the 12 lead for STEMI).

According to the National Highway Traffic Safety Administration, the following developmental stages provide the framework for the modern day EMS manager:

1. Building potential for success by developing an awareness throughout the organization that QI is a worthwhile endeavor,
2. Expanding agency-wide knowledge of, and capability in, QI practices and techniques, and
3. Fully integrating the strategic quality planning process and related actions into daily EMS operations.

Strategic issues often center around how the organization (what's inside) relates to the larger environment it resides in (what's outside). Effective strategic planning will take advantage of the strengths and weaknesses found within the organization to minimize or overcome the opportunities and threats (found in the external environment). These forces, strengths and weakness from within the organization, and opportunities and threats from outside the organization are constantly stressing the agency!

The best way to handle the stress is to capitalize on your strengths and minimize your weaknesses, while taking advantage of every opportunity to succeed and reducing or eliminating threats to your organization's performance.

W. Edwards Deming, a noted consultant in behavioral and managerial improvement, has taught us that quality is maintained and improved when leaders, managers and the entire workforce understand and commit to constant customer satisfaction through continuous quality improvement. To illustrate the process, let's take a look at his PDCA Cycle. **P**lan, **D**o, **C**heck, **A**ct – you can apply this process to virtually every aspect of operating an EMS agency, and the process of improvement is never ending. Here's one small example applicable to the meaning behind this manual: *PLAN* to implement a policy to improve response times; *DO* it by putting the plan (which is your new policy) into action; *CHECK* to see if the desired effect was achieved; and *ACT* to either maintain the improvement or determine what went wrong with the plan.

Section 2: Adverse Event and Near-Miss Reporting Systems

Significant knowledge has been developed in other high-risk industries, such as aviation and nuclear power generation, which allow problems to be reported and system safety interventions and solutions to be implemented and studied. These initiatives have focused on *system* problems as opposed to the failings of any one individual as the root cause of adverse events. This method is applicable to EMS for the characterization and analysis of hazards and errors as well as the ultimate improvement of EMS patient safety.

Without knowledge of what types of errors and hazards exist, a system cannot be designed to protect the patient from adverse outcome as a result of these hazards. There are several ways to investigate the nature of error, but event reporting systems have been shown to identify problems and trends that can otherwise go unnoticed.

It is important to note that there are two main types of event reporting systems, mandatory and voluntary. Mandatory reporting systems have two major downfalls: They are often punitive in nature (a barrier to self-reporting), and their reporting criteria select for accidents and errors which cause harm. Thus, "near-miss" data, which are known to be highly valuable for predicting future problems, are absent from the database. The importance of near-miss reporting and analysis has been emphasized by the Institute of Medicine. In medicine, near misses are thought to occur 300-400 times more often than adverse events, and the higher rate allows for more powerful analysis. Non-punitive voluntary reporting systems avoid both of these vulnerabilities: they have a high degree of acceptance among system participants and therefore capture a much larger proportion of actual errors. They also permit participants to report "near-miss" events, increasing the total amount of analyzable information that is captured.

The Institute of Medicine, Agency for Healthcare Research and Quality, American College of Emergency Physicians, and other prominent medical organizations all support standardized systems of event reporting as a method for improving patient safety. Some states (such as Pennsylvania) and some local EMS systems (such as Houston) have developed their own confidential, non-punitive event reporting systems for EMS. At press, only two national EMS reporting systems are known to exist, and both are fairly new. EMSclosecalls.com focuses on the sharing of stories which are individually submitted or found in the media. MEPARS (EMSsafePatient.com) conducts a more formal analysis and plans to publish results to be shared among agencies. In addition, the fire service has developed a reporting system (firefighternearmiss.com). Maine EMS agencies are encouraged to consider participation in event reporting systems in order to contribute to data collection as well as to learn from the past experiences of others.

Section 3: Customer Service

Improving customer service awareness can go a long way in the development of an EMS organization. After all, it is for the customer that we exist. What do you think of when you hear the term *customer service* and do you view yourself as a provider of *services*? Before we understand the basic practices of customer service, we need to appreciate the intricacies of customer service, and how that relates to the letter "S" in "EMS". We also need to appreciate the fact that a patient that is ill or injured is not your typical "customer" in the common sense of the word. A patient does not have a choice when calling for emergency medical services. A patient does not have the opportunity to shop around when calling for emergency medical services. A patient is in their most vulnerable state when calling for emergency medical services. EMS providers need to be mindful of this, and while we recognize that patients are indeed customers and consumers of our service, they are also in a fragile state of mind or body, and require an up-close, empathetic, and personal approach, not an aggressive sales pitch. In this section, we put it all together by concentrating on a concept that has its roots in private industry and is well established in the business community. Companies known for their excellent products and services rely on their ability to capture and hold a market share. This concept has been slow to make its way into the public sector, because very often, the local EMS agency views itself as "the only game in town" and there is generally little competition among providers of emergency services. Market share in our world is limited to individuals who have the misfortune to become acutely ill or injured in unplanned events that require emergency response, and thus, we are not in a position to aggressively seek out our customers by slick advertising and catchy phrases or jingles. Customers seek us out, based on emergent necessity, and do not have the choice to shop

around for the best bargain. Because of the realities of what EMS providers do, we tend to become complacent when it comes to marketing ourselves and striving to provide the best product we can on a consistent basis.

This manual is designed to provide modern-day leaders, managers, and providers of emergency medical services with the information and tools necessary to monitor their service, with an eye towards transitioning from data collection and analysis to action points of change. In order to successfully use quality improvement findings to promote positive behavior within services or regions, we need to fully understand the implications of what makes some businesses more successful than others, and apply those principles to every day operations.

Often seen in the first pages of any basic prehospital training textbook is a picture of a uniformed EMT or paramedic in perfect attire, stethoscope around his/her neck, holding a blood pressure cuff with a caption beneath saying “a professional appearance inspires confidence.” Instructors offer that appearance is synonymous to quality of patient care. With the advent of customer care surveys, professional appearance does rank high. However, customer service practice goes deeper into the caring and compassion provided to a customer.

So, what is customer service? Customer service is any contact, whether active or passive, between a customer and a company that causes a negative or positive perception by a customer. Most enterprising companies today are using customer service to separate themselves from the rest of their market. There has been a renewed interest in how the consumer wants to be treated. The perception is changing. We have seen large marketing campaigns urge for faster, friendly and reliable service. With the advent of strong and fast computer infrastructure and dynamic production lines, most companies are equal in their ability to improve service.

Today, the market is looking at the end-user, the customer, for help in separating one company from another. We in emergency medical services can learn from their successes. Not only is it important to listen to what the customer wants, it is equally important to “stay the course” and re-evaluate our effort to see if it has modernized and allows for change to keep up with the times. Customers’ ideas, needs and wants change and companies need to change with them. So, how do you know what the customer wants? First, you need to define the customer.

In the prehospital setting, our customers include, but are not limited to:

- The patient;
- The patient’s family;
- Your supervisor;
- Your fellow employees;
- Your partner;
- Nurses;
- Doctors; and
- Hospital registrars

As EMS providers, we must remember that in public and private service, anyone in our field of view must be considered our customer. Our conduct is being judged every day. We have come to realize that the public perception of what we do has long been identified with the media’s portrayal of our profession. From the old television show *Emergency*, through outcome based re-

enactments of successful responses in *Rescue 911*, to its modern day counterpart *Third Watch*, television actors and actresses have defined our profession – in the public's eye.

What Does The Customer Want?

It is important to recognize that *information* is what most customers are seeking.

Instructors are taught that if you do not know the answer to a question, then you must tell the student that you do not know and get back to them and to make sure that you follow through with that promise. When you follow this mantra, you are not faulted for lacking the answer; you are seen as a true communicator. It takes great maturity to admit what you do not know.

The Customer Is Always Right!

Everyone has experienced customers that are wrong. However, it is the *attitude* towards the customer that matters most. The customer is not always right, but they're always the customer and need to be treated with respect and dignity.

Is Everything Okay?

In a restaurant setting, for example, almost universally, the waiter/waitress will always ask "Is everything okay?" shortly after you are served your meal. This gives you an opportunity to identify excellence or promote change, increasing your chances for a satisfactory experience. All EMS providers are also consumers of many types of service. The key is to treat your customers the way you expect you and your family to be treated. In EMS, we should develop a standard of questions that go to the heart of the matter. Certainly open-ended questions may lead to verbose responses and the appropriate close ended responses may be useful. Asking the patient/customer questions about the care and attention they received will tell the patient/customer that you are concerned about their well-being. Examples are:

1. Has the service met your expectations?
2. Did you receive and understand the information given to you?
3. Are there any questions that you may have about the care you have or will receive?

Mannerisms and Non-Verbal Communications

If you go into a retail store and the cashier overcharged you, you must believe that this was not intentional. You bring it to the attention of the cashier and the cashier, in an apathetic tone, tells you to see the manager. Frustrated, you either leave overpaying on the product or you see the manager, enraged that this mistake occurred and could not be rectified by the cashier. What kind of messages do we send with our actions, and not our words? Does your body language exude confidence and a general interest in what you are doing, or does your body tell the patient that their emergency is an imposition on your day?

Customer Service Strategies

Programs that involve active listening are a great start. It is important not just to ask your patient/customer how they are feeling or about their needs, it is detrimental to the overall success of the care that you listen, be attentive and care.

EMS is a young person's profession. Most of us have not lived long enough to struggle with death and disability to understand the pain someone is going through. However,

It is important to know that one should not have to live a traumatic event in their lives to appreciate or empathize with their suffering. Cold and callous behavior will not help in the care of patient and their family. Keyword: EMPATHY. All EMS providers should know what the word means and how to demonstrate it!

Most patients are likely to ask very difficult questions. Getting the most truthful answer is important. Be sure to respond to the patient's needs. Delivering what is asked for is key. If the patient is uncomfortable, then fix the problem. If they are cold, cover them with a blanket. It's not a bad idea during your mentoring program to have your trainee ride on the stretcher and other carrying devices to see how they feel. Having them live through it will have some effect on how they deliver the same care.

As for how the provider should act, great interpersonal skill will always win out. The ability to communicate will place the provider well in front of others. The provider should be proud of the choice they made in choosing this health field, knowing that many before laid the ground work to make this an honest profession. Since most Americans are living longer and life expectancy is expected to increase, the elder patient judges their caretaker by their presentation. Looking the part is important. Walking into someone's home with sunglasses on at midnight or wearing an ear bud for your Bluetooth® cell phone does not ensure patient confidence. Not only does the provider need to maintain a strong customer service connection, so too does the supervisor. Supervisors can greatly affect the outcome a patient care. Several tools in their toolbox will help maintain a strong connection with their clients. Supervisors have a great deal of responsibility in the customer service area. They are usually in the front lines with the provider and will likely have to interact with the customer during an unfavorable circumstance. How they deal with this opportunity, may alter the outcome or return of the customer to your service.

A supervisor welcoming complaints, or opportunities to intercede before a situation results in a formal complaint, may turn a negative situation into a satisfied and loyal customer.

The supervisor needs to connect with the customer in the same manner as the provider.

When faced with the unhappy customer, the supervisor should correct the situation at hand and then work with the complainant to identify the root cause of the circumstance.

It is important to determine if the problem was personal (individual-based), or procedural (agency-based). Having the complainant involved empowers them and they are likely to have an enhanced opinion of the service controls. Remember, as an agency or regional leader or manager, the EMS provider is one of your "customers." In this relationship, the following is necessary for successful customer service and tools available to the supervisor:

Feedback - Feedback to the provider is always necessary. Negative feedback should be given during appropriate times and never in front of the patient/customer. Telling the patient/customer that the employee is wrong without investigation will damage the relationship between the provider and supervisor.

Consistency - Providers look for consistency in their supervisor. Showing favoritism to some employees causes abhorrence and animosity from the workforce. It is difficult to have a functional workforce driven to provide excellent patient care and customer service when the provider themselves do not feel that they themselves are treated well.

Employee Development- All providers need to have development in their responsibilities. Not all want to develop, but every effort should be made to have development sessions available. Most

CME is structured around patient care, not people care. Emphasis should be placed on whole, not just the part.

Have Fun- The responsibility of the patient care and those giving direction in patient care environments comes with enormous pressures. The supervisor should remain cognizant of this and attempt to organize social opportunities to have fun from time to time. However, you must not ever do this in patient care scenarios or at the employee or employer expense. Laughter is good and healthy.

Recognition- It is equally important to establish a recognition process in order to highlight outstanding customer service activity. This recognition is important to tell everyone that it not just okay to have a customer service initiative but it is in your mission to meet that objective.

In conclusion, there are many benefits to having a customer service program in an EMS agency. From a public service perspective, patients hold the providing agency or region accountable under the guise of a public trust issue. The public can seek to demand change through the legislator or community council. Mergers or disbanding agencies can affect the provider's livelihood. For-profit companies can simply choose a competitor for alternative service. In summary, there are simple examples of Customer Service Standards.

EMS providers should:

- Make everyone feel at home;
- Smile and introduce themselves;
- Be courteous and try to go the extra mile; and
- Be professional and dress the part.

Always remember to handle patients with care and put yourself in the shoes of your patient and family. Respecting privacy is not only mandated but also needed in maintaining the confidence of the patient. Customer service means doing what you say you will do and anticipating a customer's needs.

Chapter 4; Additional Resources for Service or Sub-Regional QI Committees

Section 1: Regional EMS Offices

Regional level quality improvement activities typically involve measuring the efficiency of the regional EMS system and serving as a resource for the EMS services in their Region. Regional QI activity is generally performed by a committee of representatives of the Regional EMS Council, the Regional Coordinator and the Regional Medical Director. The Regional QI program is a remediation process, designed to identify areas that need attention and working with the providers and/or services to improve the delivery of patient care. Parameters for review at the regional level include, but are not limited to:

- Adherence to regional or state medical protocol;
- Adherence to regional or state standard operating procedure or policy;
- Comparison of prehospital impression to hospital diagnosis;
- Comparison of prehospital presentation to outcome;
- Statistical analysis of critical skills;
- Appropriateness of selection of destination hospital;
- Supply and demand of educational opportunities;
- Cardiac arrest survivability;
- Public access to EMS.

Ultimately, the efforts and findings of a service, or sub-regional QI committee have import at the regional or state level. Individual organizations or sub-regions may occasionally witness system-based issues that merit remediation. If these occasional events are systematically filtered to the Region by all services or sub-regions, the Regional vantage may afford identification of larger trends. Equally important then is regional reporting to the state's QI committee, which further allows for a larger vantage as well as benchmarking against other regions/services and ultimately identification of resources or system changes that may result in positive outcome for the service.

Section 2: State EMS Office

The Maine EMS QI committee is tasked with ensuring compliance with Statewide QI initiatives and working closely with the Medical Direction and Practice Board on protocol compliance. The Maine EMS Board also convenes an investigation committee that is tasked with investigation of reported violations of Maine EMS rules and law.

Appendices

Appendix A - Glossary of Key Terms

Adverse Event: An event in which injury to the patient results from the medical career intervention.

Benchmark: A scientifically-validated, regionally-accepted, or nationally-recognized endpoint.

Concurrent Review: Real-time review of processes through on-line medical control, ED observation, field observation, etc.

Continuous Quality Improvement: The sum of activities undertaken by the service to provide confidence to its patients and maintain a standard of excellence. It is a dynamic process based on multiple activities to maintain the ultimate goal of the Emergency Medical Service System: the provision of timely, efficient and effective prehospital care to all those who need it.

HIPAA: Health Insurance Portability and Accountability Act, promulgated in 1996. Designed to simplify the administration of the health insurance industry by setting national standards for transfer of protected health information, confidentiality of protected health information, and the management of health care financing.

Indicators: Any of a group of predetermined values that are of high risk to the provider or service that should be periodically reviewed to reduce risk. They can be either high or low volume.

Near Miss: Occurrence of an error or hazard that could have resulted in an adverse event but did not because of intervention or chance (also called a potential adverse event).

Outcome Evaluation: Deals with the results of care provided. This deals with stabilization and survival through to recovery and hospital discharge.

Outlier: Case that falls out of acceptable standards, accompanied by documented reason for the anomaly.

Patient Outcome Monitors: Types of measurable outcome to gauge effectiveness of prehospital interventions, such as: difficulty breathing rating pre/post treatment; correlation of return of spontaneous circulation (ROSC) to time of defibrillation/presenting arrhythmia; hospital disposition for patients receiving ALS care; and correlation between survivability and cumulative prehospital care options

Process Evaluation: Deals with the use of resources and appropriateness of such utilization. This deals with patient processing, triage, utilization of available resources, etc.

Program Outcome Monitors: Types of measurable outcome to gauge effectiveness of the organization, such as: performance consistent with medically accepted standards; adequacy of resource allocation; resource management; vehicle maintenance/ preventive maintenance; and training program.

Prospective Review: Measuring future events against predetermined standards. This is accomplished through standardized protocols, establishment of time standards, etc.

Protected Health Information: Individually identifiable information linking a person’s health information to their identity.

Red-Flag Monitor: Types of measurable episodes of actual or potential harm to patients or EMS providers: Serious misapplication of procedure or protocol.

Red-Flag Monitors: Types of measurable outcomes to monitor in response to problem cases, such as: deviations from protocol/procedure/untoward events; citizen or response agency complaints; technical malfunction of equipment; time of call received to time of dispatch >2 minutes (or locally acceptable benchmark); and time of call received to time of arrival >9 minutes (or locally acceptable benchmark).

Remediation Process: The scope of resolution to identified results includes efforts to foster a partnership between prehospital EMS providers, provider agencies, and those individuals and agencies responsible for medical oversight in the region. Guiding change is a principal activity of the QI program, and positive feedback is an essential part of the process.

Retrospective Review: Review of system processes after they occur. This is accomplished through PCR review, critique sessions, patient complaints, etc.

Statistical Monitor: Types of measurable outcome to ensure compliance with pre-established benchmarks, such as: cardiac arrest outcome; time of dispatch to arrival of ambulance; technician skills report; and treatment appropriate to patient condition and technician availability.

Structural Evaluation: Deals with the presence of mandated resources and includes standard setting for non-personnel issues. This includes evaluating physical facilities, equipment stocking and control procedures, etc.

Appendix B - QI Committee Topics

It is at the agency, or ambulance/first response service level, where the nuts and bolts of the QI process are placed together. Each agency is responsible for establishing service level QI committees, and performing organizational reviews, as discussed in Chapter 1. Remember that if the agency is a small agency and there are but a few available members, the committee can and should consider linking with several other small agencies or, if you are a first responder service, joining with your transporting service. Service level activities are typically limited to monitoring and evaluating organizational efficiency. Parameters for review at the agency level typically include, but are not limited to:

- Accuracy and completeness of the Patient Care Report (PCR);
- Time of call for help to patient contact;
- Accuracy of patient assessment;
- Adherence to patient care protocols;
- Patient outcome;
- Appropriateness of care and skills proficiency;
- Appropriateness of time spent on scene;
- Appropriateness of destination hospital;
- Patient sign offs, and
- Requests for diversion.

Agencies should be encouraged to expand on the above items as the QI process evolves to measure other areas or organizational efficiency, including, but not limited to:

- Customer satisfaction;
- Vehicle performance/reliability;
- Availability of provider educational opportunities;
- Emergency department turn-around times;
- Recruitment and retention of members;
- Job satisfaction;
- Employee absenteeism;
- Workforce relationships;
- Compliance with OSHA/PESH standards;
- Compliance with workers' compensation regulations;
- Billing and collection processes; and
- Safe communities' initiatives/injury prevention strategies.

Appendix C - Medical Director Job Description

Tri-County Emergency Medical Services
Regional Medical Director Job Description

I. Training

1. Board-Certified in a specialty and a practicing Emergency Physician.
2. Either completed, or planning to complete within one year, standardized training (such as through NAEMSP) course for EMS Medical Directors.
3. Complete the Maine EMS On Line Base Station Medical Control Program within one year of it becoming available.

II. Experience

1. Familiarity with the design and operation of EMS systems.
2. Passion for prehospital emergency care. Experience in prehospital emergency care of the acutely ill or injured patient desired.
3. Routine participation in base-station radio control of prehospital emergency units.
4. Routine active participation in emergency department management of the acutely ill or injured patient.
5. Active involvement in the education and training of prehospital personnel
6. Active involvement in the medical audit, review, and critique of prehospital personnel.
7. Participation in the administrative and legislative processes affecting the regional and state EMS systems.

III. Expectations, Roles, and Responsibilities

1. Ability to interact with others in a tactful and respectful fashion.
2. If in decision-making there is a potential conflict of interest because of the regional medical director's hospital affiliation, the regional medical director will withdraw from the decision-making, which will be the responsibility of the other local medical directors.
3. Meet regularly with Regional Coordinator.
4. Attend MDPB meetings.
5. Attend Quality Council meetings.
6. Act as liaison with the local medical directors regarding protocol development and implementation, as well as other regional medical control issues.
7. Review, approve, and sign EMS service licenses both new and renewal, for compliance with regional QI program.
8. Review personnel licenses and personnel issues such as QI or those requiring discipline upon request by regional coordinator or regional QI Coordinator.
    a. Participate in disaster, WMD planning.
    b. Participate in development and implementation of education and training courses.

c. Chair the regional medical control committee
d. Attend Tri-County EMS Board meetings
e. Attend regional chiefs meetings as requested.
f. Must have the support, both financial and resources, of local hospital or employer to effectively carry out these duties

IV. Term of Service

1. Appointed by the Tri-County EMS Board, but must be formally accepted by the Maine Board of EMS. This position is accountable to the Tri-County EMS Board.
2. The term of service will be three-years and the incumbent can reapply for reappointment at the end of the term.
3. The regional medical director or the Tri-County EMS Board can end the term of service before the three year term expires by giving a 60 day written notice.

V. Recruitment and Appointment Process

1. Interested candidates submit a letter of interest and Curricula Vitae to the search committee.
2. The search committee reviews the applications and interviews the candidates.
3. The search committee will make a recommendation to the Tri-County EMS Board
4. The Tri-County EMS Board will review the recommendation and, if in agreement, will make the formal appointment.
5. Tri-County EMS will notify Maine EMS of the appointment of the medical director and request formal approval by the Board of Maine EMS.

VI. Compensation:

The region will contribute a monthly sum to the hospital where the medical director is employed to help support this position. Liability coverage for this position will extend from the employing hospital's coverage. This position will require approximately eight (8) hours each week or 416 hours per year.

Appendix D - Sample QI Service Plan

Standard for the Establishment and Utilization of Sub-Regional QI Committees

Overview

As part of the Maine EMS Statewide Quality Improvement (QI) program, we are going to establish sub-regional QI committees for the purpose of facilitating communication between hospitals and EMS service, disseminating QI program related education and training, and coordinating QI audits and studies.

Each sub-regional QI committee will be comprised of, but not limited to, the following:

- The hospital ED medical director or their designee.
- The Hospital ED Nurse Manager or their designee (Must be a RN).
- A representative of the QI committee of each ambulance services whose primary transport of emergency patients is to that hospital.
- A representative of the QI committee of each First Responder Service that lists an ambulance service from #3 above as their transporting agency.

Role of the Sub-Regional QI Committee

The committee will meet at least quarterly. EMS Services will be required to send at least one member of their service QI committee to 75% of the scheduled quarterly meetings. The agenda for the meetings will be left to the Sub-Regional Committee, but every effort should be made to include the following content:

- Review of local, regional, or statewide QI Audits.
- Presentation of education programming that is developed as part of QI efforts.
- Updates on local, regional, and state QI committee activity.
- Communication between EMS services and the hospital about communication and operational issues.
- Local case reviews

Continuing Education credits will be available for these meetings.

The sub-regional QI committee will also designate a representative to the regional QI committee.

Mandatory Participation

Services will be required to send a representative from their service QI committee to at least 75% of the scheduled quarterly meetings. Attendance will be taken at each meeting, and service that are not in compliance will receive a letter from the Regional and State Medical Director reminding them that participation in the sub-regional QI committee is a condition of licensure and that further non-compliance will result in referral the Maine EMS investigation Committee.

Appendix E - Evaluating Performance in Your Organization

Once your Committee has been established, and a plan has been developed, it's time to start the evaluation process. For each study, the first order of business is to establish the *OBJECTIVE***,** which is your comparison of actual performance against predetermined established standards.

Next, decide on the *MECHANISM*, which is how you identify and monitor the pre-selected key indicators. Begin your *AUDIT*, which consists of the actual review process.

There are several types of audits to choose from:

- Structural Evaluation refers to the structure of your organization and deals with the presence of mandated resources, and centers around non-personnel issues. Selected criteria may be used to evaluate things such as: physical facilities; equipment/inventory control; staffing patterns; mutual aid; and qualifications and credentialing.
- Process Evaluation refers to the appropriateness of the use of available resources. Selected criteria may be used to evaluate things such as: history taking, focused physical exam and vital signs; and appropriateness of treatment procedures.
- Outcome Evaluation refers to the results of the care provided to the patient. There are several methods of evaluation commonly used in the healthcare industry.
- Prospective method measures future performance against predetermined standards. Typically, prospective review consists of picking a time frame going forward and reviewing PCRs for your chosen objective(s) against accepted standard(s).
- Retrospective method measures past performance against accept standards. This type of review is often the most convenient, in that the committee need only pull PCRs from the file and screened for your topic-oriented and relevant information. Although convenient, this type of review is the least beneficial in that time may be spent on issues or trends that may have already been identified and resolved.
- Concurrent method is a strategy that capitalizes on direct or on-site activities, such as on-line medical control/on-scene medical control, or field observations made during actual patient care activities.

Now that the type of review and evaluation has been chosen, it's time to conduct the actual audit. Prepare a data tool, which is nothing more than a way to record the data elements you have chosen to study. The data tool should be developed with the endpoints in mind. Oftentimes, when data points are identified and data are pulled, the end of the review period is upon us and we find that we did not pull enough data points to answer the questions we want answered. Therefore, the more efficient way to proceed is to identify the questions you want answered first, and then choose the data points that best provide those answers.

Choose a time period that the review will encompass. For example, in a retrospective review, "we are going to pull PCRs for all calls that occurred this past January to evaluate our response times for the month." As an alternative, in a prospective review, "we are going to pull all PCRs with a chief complaint of chest pains that occur between January 1 and March 31 to check compliance with protocol." Finally, in a concurrent review, "from January 1–March 31, all ALS providers must send EKG biotelemetry to medical control and we will measure concordance between technician and physician EKG interpretation."

Results are recorded on the data collection tool, which facilitates entry into a database, where multiple queries can be then be run to answer your pre-determined questions.

Reports with results are generated and analysis of the findings is made.

The process continues with individual or agency feedback, the acknowledgement of a job well done or the development of a corrective plan of action as indicated, and concludes with a re-audit at some point in the future to assure that desired outcome is either maintained or achieved.

Appendix F - QI Audit Examples - XYZ EMS

Documentation Compliance Report

Audit Report For: January 2010 **Report(s) Selected:** Procedure Competency Report
Ambulance Run Data Report

Instructions for Generating Report:

Sign on to the MEMSRR system (www.memsrr.org) and log in using you username and password assigned to you by Maine EMS. IF you do not have a username and password, contact Jon Powers at Maine EMS, 626-3860.

On the right side of the home opening page you will see a box titled "Reports" that has links to 3 separate report templates.

For the first report, click on "procedure competency report"

"Date Incident Reported Range" – 1/1/2010 – 1/31/2010

"Service" – Should have only your service listed

"Procedure" – performed should be showing in the box. Then, from the list immediately underneath the word performed, select the following procedures by holding down the "ctrl" key on your keyboard and clicking on the following selections:

- 12-Lead ECG
- Assessment-Adult
- Blood Glucose Analysis
- Cardiac Monitor
- Pain Measurement
- Venous Access-Extremity
- "Crew Member Role" – *All* should be selected
- "Crew Member level" – *All* should be selected
- "Patient Disposition" – *All* should be selected

Then click on the "continue" box at the bottom of the page, and your report will be generated.

For the second report, return to the MEMSRR home page and click on the "Ambulance Run Data Report" in the reports box on the right side of the page.

"Date Incident Reported Range" – 1/1/2010 – 1/31/2010

"Service" – Should have only your service listed

"Staff" – *All* should be showing in the box and *Active* should have a dot beside it.

"Unit" – *All* should be selected

"Incident Zone" – *All* should be selected

"Type of Service Requested" – *All* should be selected

"Patient Disposition" – All should be selected

Uncheck the “select all” box at the top left of the next section, then put a check mark in the following boxes:

- Provider Primary Impression
- Primary Symptom
- Cause of Injury
- Runs by City
- Then click on the “continue” box at the bottom of the page, and your report will be generated.

Issues of concern:

Procedure Competency Report:

- “Unsuccessful” results for procedures that shouldn’t be successful/unsuccessful (Patient assessment, cardiac monitor, etc.). This would indicate that personnel are not checking “successful” for every procedure documented that requests a successful/unsuccessful designation. Selecting “not applicable” in the successful/unsuccessful box will automatically generate a “not successful designation”.
- High “unsuccessful” rates for certain procedures (IV Starts). This either indicates a problem with performance of that skill by the provider or incomplete documentation as detailed in “a” above.

Ambulance Run Data Report:

- Runs in the “unknown” category – Indicates incomplete documentation
- Provider impression and Primary symptom results with “not applicable”, “not available” or “Unknown” calls listed- *Indicates incomplete documentation*

The purpose of this first round of Audit reports is to get services and their personnel used to using the reports and increase awareness of the value of complete documentation. Remember, these reports contain public information and can be viewed by anyone, including members of the public, municipal officials, or the press, and it is in everyone’s best interest to have complete and accurate information.

XYZ EMS - Airway QI Audit

1.0 Standard

1.1 All patients with airway compromise will have their airway appropriately managed based upon need, level of licensed personnel on the call, and available equipment.

1.2 This audit applies to all personnel.

1.3 For the purposes of this audit, "airway management" will mean any time a provider has to manually clear the airway, use BLS or ALS adjuncts to secure the airway, or assist with ventilations.

2.0 Indicators

2.1 When appropriate, provider documents an airway assessment.

2.2 When indicated, the airway is appropriately managed based upon patient need, provider license level, and available equipment.

2.3 Provider documents results of airway management procedures, effect on the patient, and patient re-assessment.

3.0 Defining Compliance

3.1 Successful compliance with the study will be defined as 100% of the indicators listed in 2.0 above are present on the run report when appropriate. Any standard that is not applicable will be marked as such and will be considered compliant.

4.0 Frequency of Measurement

4.1 Reports will be audited weekly (monthly).

4.2 Feedback will be provided to providers within 1 week of review.

5.0 Format for Reporting

5.1 Personnel will be notified by the QI Committee which audits will be reviewed and for what period of time.

5.2 The QI coordinator will maintain a spreadsheet documenting reports reviewed and compliance statistics.

5.3 Individual providers will receive notification requesting clarification when appropriate.

5.4 Service-specific compliance data will be posted for all personnel to review.

XYZ EMS - Patient Refusal Audit

1. Define the process to be measured:

   1.1 Accurate identification of patients capable of exercising their right to refuse treatment or transport, to include…

      1.1.1 Adult patients that are fully oriented to person, place, and time;

      1.1.2 Emancipated minor patients that are fully oriented to person, place, and time;

      1.1.3 Patients that have not expressed suicidal ideation;

      1.1.4 Individuals that are identified by their obvious condition;

      1.1.5 Individuals that identify themselves as a patient or are identified by another individual at the scene as being ill, injured, or requiring evaluation.

   1.2 Appropriate documentation of patient refusals, to include…

      1.2.1 Documentation of the treatment offered;

      1.2.2 Documentation of the patient's statement of refusal;

      1.2.3 Documentation that the patient was informed of the risks of refusal and benefits of treatment.

      1.2.4 Documentation of the patient's reason for refusal.

      1.2.5 Documentation of the patient's signature or a statement that the patient refused to sign.

2. Measurement parameters:

   2.1 All XYZ service responses where a patient is identified and the patient refuses treatment or transport.

3. Data Verification:

   3.1 Data will be verified through the retrospective review of Maine EMS run reports by the QI Committee.

4. Defining Success/Failure

   4.1 Successful compliance with the study parameters will be defined as the documentation of…

      4.1.1 Accurate identification of patients capable of making informed decisions about their own care.

      4.1.2 Complete documentation of the patient's refusal including the elements outlined in 1.2.1 - 1.2.6.

5. Frequency of Measurement

   5.1 All responses that meet the inclusion criteria of the study will be evaluated.

   5.2 Data will be accumulated on an ongoing basis.

5.3 Company Compliance Data will be posted monthly.

6. Standard of Care/Compliance Threshold

6.1 The minimum standard for compliance will be 80%.

Appendix G -HIPAA

Since its enactment in 2003, the federal Health Insurance Portability and Accountability Act (HIPAA) has provided strict guidance on how protected health information (PHI) can be utilized with the health care industry, including emergency medical services.

In summary, the major thrusts of HIPAA are to:

- Establish a universal language for healthcare providers and payers of healthcare services;
- Modify pre-existing privacy standards;
- Give patients new rights to access their own health care records and to know who else has access to them;
- Restrict disclosure of health information to the minimum number of people needed to fulfill the intended purpose;
- Establish new criminal and civil sanctions for improper use and disclosure; and to
- Establish new requirements for access to records by researchers and others.

Our discussion of HIPAA requirements within the scope of this document is limited to the use of PHI in the quality improvement process. As stated in 45CFR 164.512:

> *A covered entity may disclose PHI to a health oversight agency for said oversight activity authorized by law including audits; civil administrative or criminal investigations; inspections; licensure or disciplinary actions; civil, administrative or criminal proceedings or actions; or other activities necessary for appropriate oversight in the health care system"*

Notwithstanding any other provision of law, none of the records or documentation or QI committee actions or records required pursuant to Maine EMS Law and Rules, except as provided in any other provision of law, and no person in attendance on a Quality Improvement Committee shall be required to testify as to what transpired at a quality improvement review.

Any person in good faith and without malice provides information to further the purpose of this section or who, in good faith and without malice participates on an agency-level or regional-level Quality Improvement Committee, shall not be subject to any action, civil damages or other relief as a result of such activity.

Therefore, according to HIPAA and other applicable standard practices, PHI can be shared among and between covered entities including, but not limited to: service level QI committees; regional level QI committees; Hospital QI Committees; and the State of Maine QI Committee.

Appendix H - Strategic Planning

Strategic Planning is effectively the development of strategies to cope with changing circumstances, and to set a pathway from where the organization is, to where leaders think the organization needs to be. This pathway is typically broken down into time frames and milestones, based on realistic expectations. The data collected and analyzed in the QI process provides decision makers with the information necessary to make factual decisions, and the process results in a disciplined effort to produce decisions and actions that guide what an organization is, what it does, and how it does it, by:

- Setting the organization's direction;
- Formulating broad policies;
- Making internal/external assessments;
- Paying attention to needs of key stakeholders;
- Identifying key issues;
- Developing strategies to deal with each issue;
- Implementing procedures; and
- Continually monitoring and assessing results.[2]

We can translate that from the philosophical approach to the operational approach by identifying five (5) easy steps:

1. What are practical alternatives, dreams and visions you might pursue?
2. What are the barriers to realizing those alternatives, dreams and visions?
3. What proposals might you pursue to overcome those barriers?
4. What steps are needed to implement those proposals?
5. Who is responsible to implement these proposals?

[2] Bryson, John M. Strategic Planning for Public and Non-Profit Organizations/a Guide to Strengthening and Sustaining Organizational Achievement. Jossey-Bass: San Francisco, CA, 1995.

Appendix I - 12 Lead Model QI Programs, Quality Markers/Targets and Resources

Model for Review:

1. Southern Maine Sub-Regional 12 Lead Quality Management Program:
    a. Utilized in the following communities, services or hospitals – Southern Maine Medical Center, Mercy Hospital, Maine Medical Center, and Mid Coast Medical Center as well as service transporting to these facilities. This program was created by members of Portland Fire Department/MECDU.
    b. Contacts for the program:
        i. Lt. John Kooistra, EMT-P – Quality Management Program, Portland Fire Department/MEDCU - JLK@portlandmaine.gov
        ii. Chris Paré, EMT-P – EMS Program Manager, Maine Medical Center – parec@mmc.org
    c. Description of the program – EMS providers are asked to print 2 copies of their patient's 12 leads. One accompanies the patient and becomes a piece of the patient's medical record while the other is submitted for review. Prior to submitting this second 12 lead for review, the paramedic is asked to fill out information on a small sticker and place this sticker on the back of the submitted 12 lead. The information requested includes the following:
        i. Demographic Information including date of call, time of call, call number, providers name and license number and the EMS service
        ii. The provider is asked to interpret the patient's rhythm and if there is evidence of STEMI
        iii. If STEMI is present, the provider is asked if they activated the hospital's STEMI pathway
        iv. Finally, the provider is asked if they provided aspirin, if they did not provide aspirin, or if dispatch provided aspirin

        The patient's 12 lead is then submitted for review. Most hospitals have placed drop boxes in the EMS rooms to collect these 12 leads. These 12 leads are then regularly reviewed by a combination of EMS providers and hospital providers (predominantly physicians). Results of these reviews are fed back to either the individual providers or the services.

        Various hospitals have used this information in a variety of ways. Southern Maine Medical Center tracks the 12 leads submitted and compares this information to the Maine EMS electronic medical record looking for discrepancy between 12 leads submitted and 12 leads reported as performed. This compliance information is reported to individual services. Maine Medical Center and Mercy Hospital combine their information and calculate EMS provider sensitivity and specificity for interpretation of 12 leads for presence of STEMI. This information is also reported back to the services.

d. Benefits of the Program – This program has the benefit of creating a single place to deposit 12 leads for review (i.e.: the hospital). This program also partners hospitals and EMS agencies, allowing for high-level communication and dialogue, especially in hospitals or health care systems with EMS STEMI pathways. Because EKG's in this program are typically reviewed by a small number of providers, they are then able to collect large amounts of data and digest this into compliance, sensitivity and specificity.
e. Downsides of the Program – As these programs are managed by a small number of providers, they rely on these providers' availability. Data entry is also cumbersome and laborious.
f. Attachments for the Program –
    i. 12 Lead Stickers
    ii. 12 Lead Data base – contact Chris Paré (contact information above)

2. Goodall Hospital 12 Lead Review Program:
    a. Utilized in the following community, services, or hospitals – Goodall Hospital
    b. Contacts for the program –
    c. Kent Hall, MD – Chief, Emergency Medicine - khall@goodallhospital.org
    d. Description of the program – Paramedics are asked to present 12 leads to Emergency Medicine physicians.
    e. Benefits of the program – Allows point of care review of 12 leads, decreasing number of missed STEMIs on EMS 12 leads. This program also allows immediate feedback to the paramedic and dialogue between the medic and physician. The program also does not burden any one provider, instead asking all Emergency Physicians to engage in the process.
    f. Downsides of the program – As this program relies on the entire group of emergency physicians, tracking of data is more difficult than with other models.
    g. Attachments for the program – None

12 Lead Review Attachments -

1) Southern Maine Sub regional 12 Lead Sticker –

Date:_____ Time_____ Call#:_____

Provider Name:_____Lic. Number_____

EMS Service:_____

Rhythm:_____

STEMI: NO YES Activation NO YES

Was Aspirin issued? NO YES By EMD

Appendix J - Maine EMS Run Reporting System

The Maine EMS Run Reporting (MEMSRR) System is a powerful system for both the collection of EMS incident data and reporting of the information entered for analysis to aid in quality assurance efforts.

The information is available in 2 styles of report. The first, which we will not be spending much time on in this manual, is by using an ad hoc report to query raw information to be exported to a third party software such as Microsoft Excel or other spreadsheet program to analyze for presentation. The second is making use of the "canned" reports which will present a variety of aggregate and non-aggregate information for the services use. With many of these reports the information is preformatted for presentation.

Access to reports is available at the top of the MEMSRR screen by clicking on "Report Writer 2.0". Look through the canned reports available on the left side of the screen, this document will be focusing on 3 reports that are very powerful and can be used to support a number of administrative and QA functions within your service.

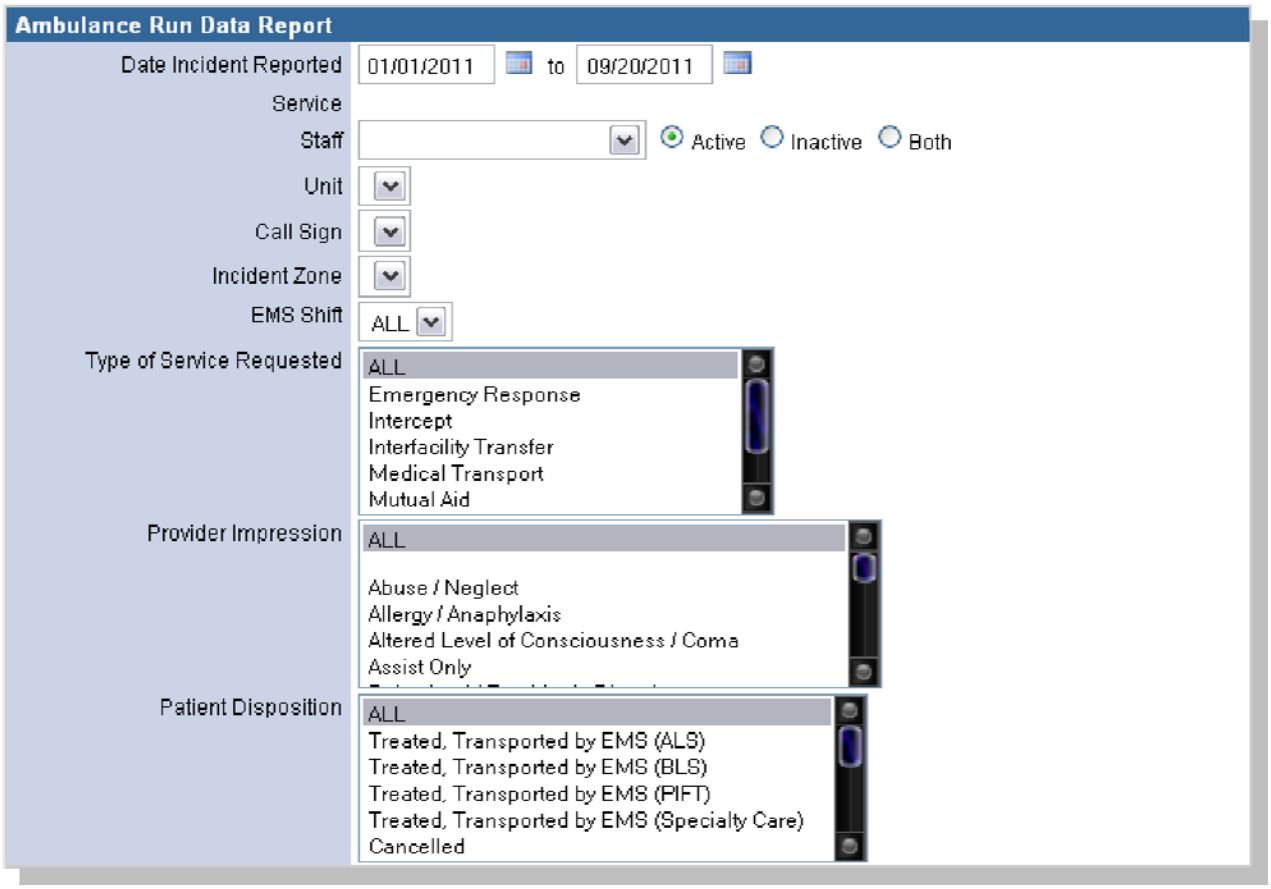
AMBULANCE RUN DATA REPORT

The first report is available in the left side menu by clicking on "Call Information". The report labeled "Ambulance Run Data Report" is a very useful report to quickly and easily present aggregate service level information about the calls the members have been on. This can be useful to take a look at the service as a whole or individuals. The report can provide a number of important statistics for the service about run times, mileages, dispositions, and other response information. This report can be run by any member of the service and is a fantastic resource for all users to use the information in the MEMSRR for a number of purposes such as Grant Applications, the annual Budget Process, Public Information and Outreach, and more.

(Go to next page)

To use, click on the title of the report to open

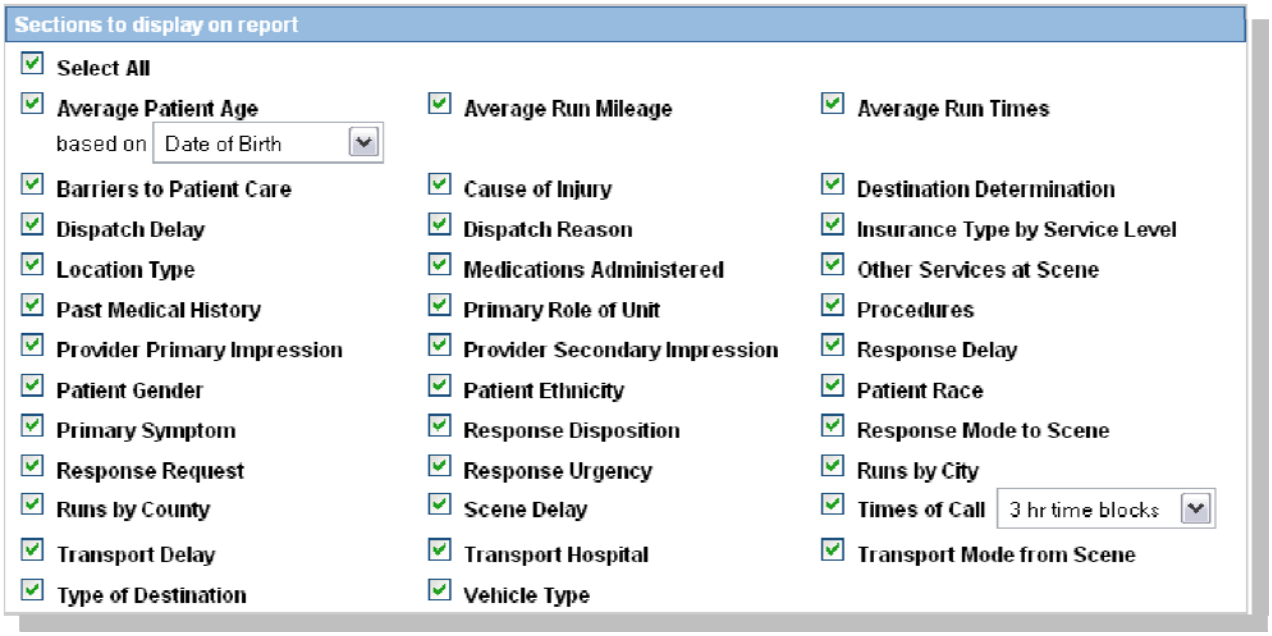
The first section of the report identifies the criteria:



- Date - Enter the date range desired
- Staff – select “All” or a specific staff member
- Unit – select “All” or a specific responding unit
- Call Sign – Select “All” or a specific call sign
- Incident Zone – select “All” or if your service has zones setup, select a zone to report on.
- EMS Shift – select “All” or if your service has shift setup, select a shift to report on.
- Type of Service Requested – select “All” or select the appropriate type of service. This can be useful to differentiate between “Emergency” and “Non-Emergency” transport requests. Multiple options can be selected by selecting the first option, then by holding down the “CTRL” key and clicking with your mouse on the next selections.
    - Provider Impression – select “All” or select the impression desired. As an example, this can be used to report out average times when the Provider Impression is “Cardiac – Chest Pain”. Multiple options can be selected by selecting the first option, then by holding down the “CTRL” key and clicking with your mouse on the next selections.

- Patient Disposition – select “All” or select the appropriate dispositions. This can be used to separate out “Transport” vs. “Non-Transport” calls or separating out just “PIFT” calls.

The next section of options is to demine which sections of this report are important to your needs. The first time you run this report, all check boxes should be checked to allow the chance to review all of the options. After you become familiar with the sections, most users will start by removing the check in the upper left corner labeled “Select All” and select only the parts of the report they are interested in. Selection of the different sections may also depend on how your service is entering information in the system. As an example, for a non-transporting service that is not collecting mileage information the “Average Run Mileage” report option will not be very useful nor will the “Transport Hospital” since that service is non-transporting there should be no information in that section either. For a Transporting service that is not entering insurance information into the billing portion of the report will also not find any use in the “Insurance Type by Service Level”. Also take into consideration how the report will be used. Cluttering too much information may cause confusion for end users.



For Transporting Services the following may be most useful:

- Average Age;
- Average Run Times;
- Dispatch Reason
- Response Disposition
- Response Request
- Runs by City;
- Times of Calls; and,

- Transport Hospital.

For Non-Transporting Services the following may be most useful:

- Average Age;
- Average Run Times;
- Dispatch Reason;
- Response Disposition;
- Runs by City; and,
- Times of Calls.

Once all criteria are selected, click “Continue” at the bottom. With in a few seconds to a minute you will have a report that you can print off and hand out. If a section of the report is missing or a selection is determined not necessary and needs to be changed, click your browsers back button, make the necessary changes and click continue again.

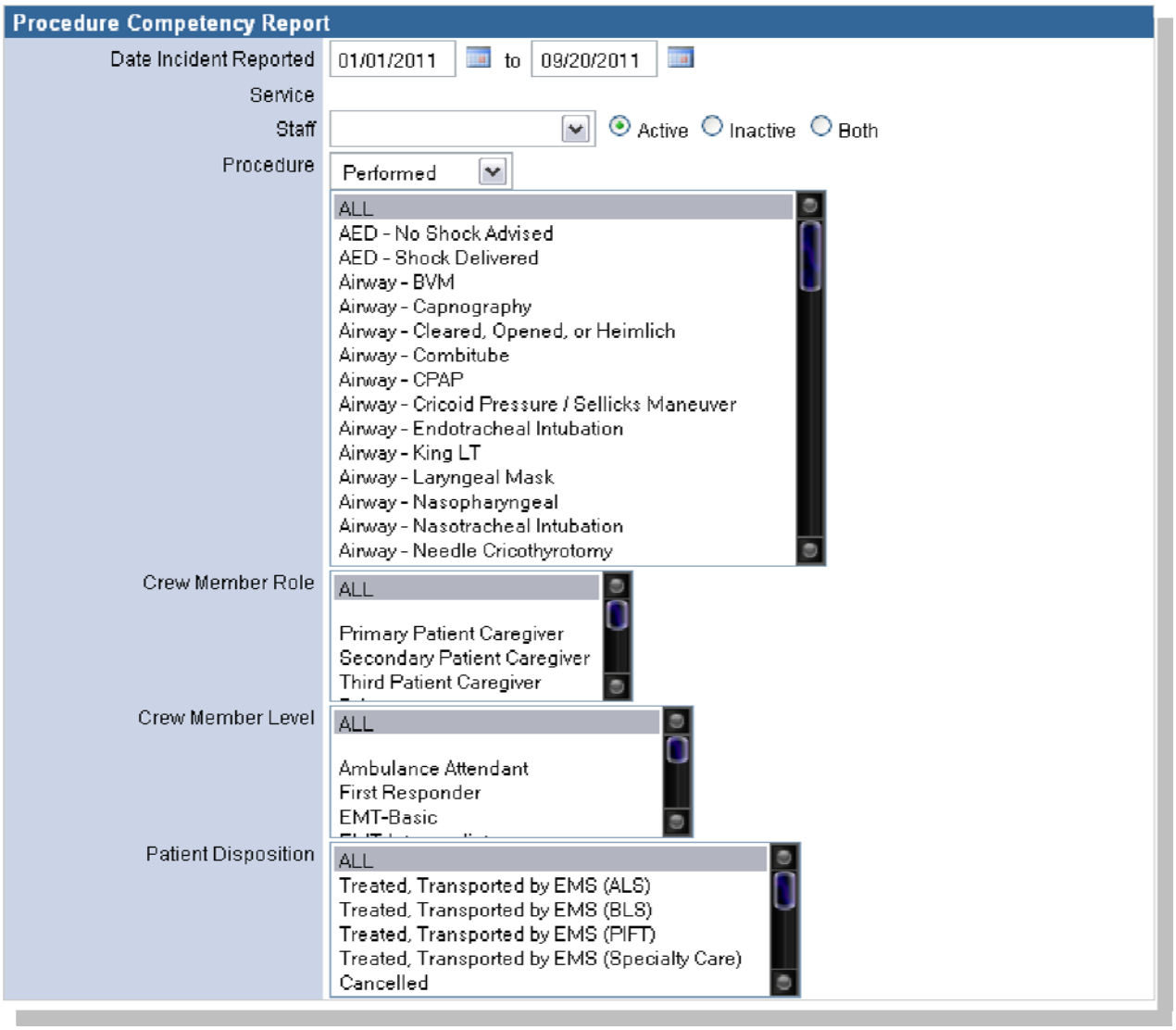
Procedure Competancy Report

The next report is called the “Procedure Competancy Report”. It is available under the “QA/QI” folder on the left side menu. This report provides an aggregate report of all providers or a single provider on the service, the procedures documented that they performed, the number of attempts, how many were successful, and how many were unsuccessfull. This will also provide the percentage of successful attemptes at the procedure and compare that to the services percentage. Success is documented on the procedure screen in the report and is only calculated as a success if the procedure drop down is marked as “yes”, leaving it blank or selecting no would result in an unsuccessful attempt documented.

(Go to next page)

To use, click on the title of the report to open.

First enter the criteria desired:



- Date Incident Reported - Enter the date range desired
- Staff – select “All” or a specific staff member
- Procedure – select whether the procedure was performed by the provider or not performed.
    - Select “All” or select a specific procedure to report on from the list of procedures. Multiple options can be selected by selecting the first option, then by holding down the “CTRL” key and clicking with your mouse on the next selections.
- Crew Member Role – Select “All” or a specific role the provider played.
- Crew Member Level – Select “All” or a specific license level. i.e. wanting a report for just EMT-Intermediates and the procedures they provided.
- Patient Disposition – Select “All” or a specific disposition i.e. separating out the “Transport” vs. “Non-Transport” calls.

- Finally Click Continue

Some services use this report and post it in a common area for all providers to review or will print it and cut the providers into strips and provide it for that providers review. This report can be valuable to identify documentation problems with procedures or identify where training may be needed to improve procedure competency.

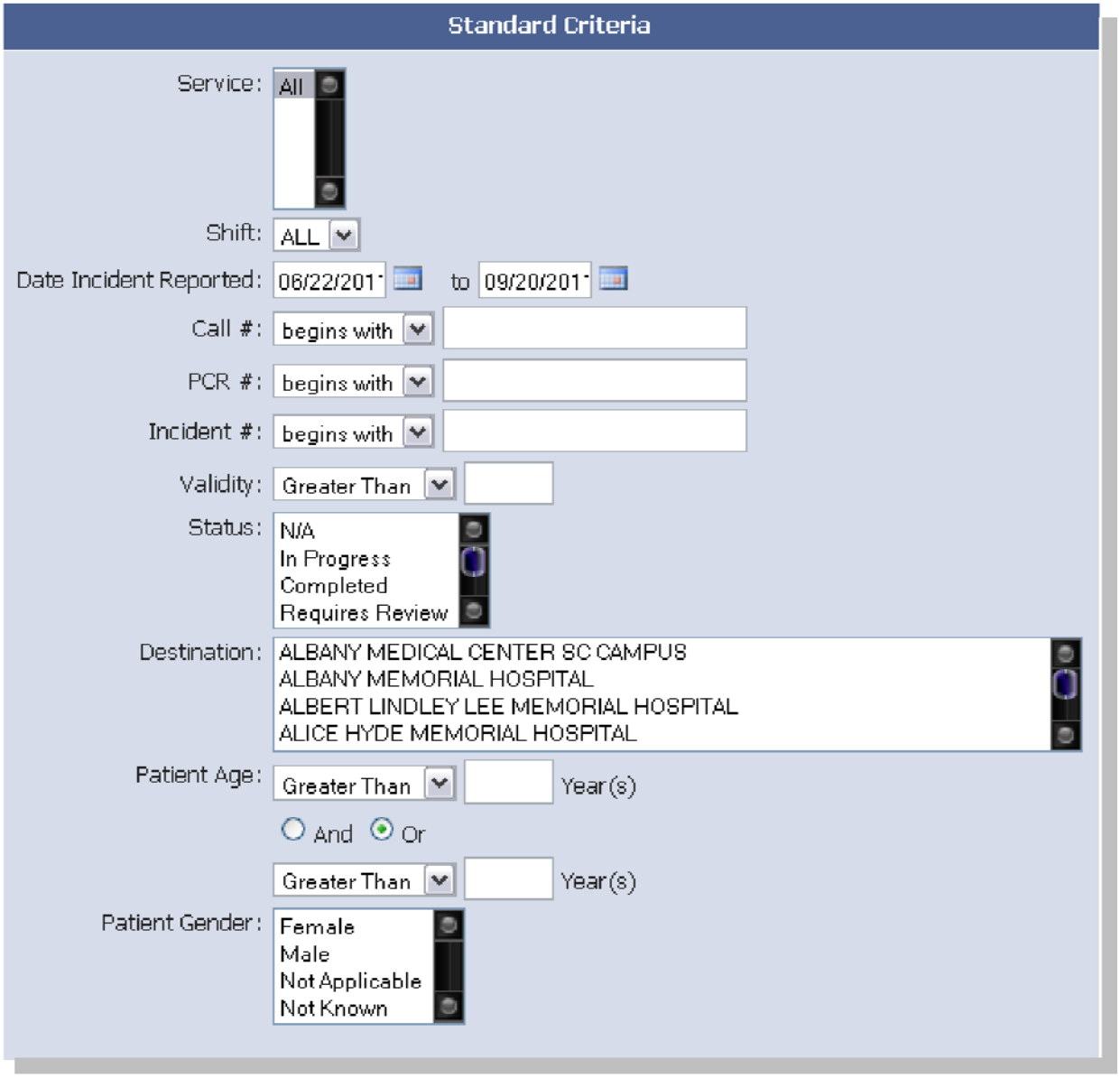
QA/QI Report

The QA/QI Report is available also under the QA/QI folder. This report is a complex and very powerful tool to improve how QA committee's review calls. This report allows the user to select specific criteria and based on that criteria will return a "snap shot" of those calls that meet the settings and list them one after another. It also allows the user quick access to the entry form or the PDF report if further evaluation is needed and access to the QA/QI note system which will be covered in another section.

(Go to next page)

To use click on the title of the report to open

The first section of the report identifies the criteria:



Standard Criteria

- EMS Shift – select “All” or if your service has shift setup, select a shift to report on.
- Date Incident Reported - Enter the date range desired
- Call#, PCR#, Incident# - Leave blank or enter any of these specific identifiers for calls.
- Validity – select either “Greater Than” or “Smaller Than” and enter a validity score. This would allow for review of all calls greater than or less than the validity score entered. i.e. if you wanted to QA all calls less than 80%, select “smaller than” and enter 80.
- Status – If your service makes use of the status option in MEMSRR you are able to select a specific status.

- Patient Age – select the appropriate qualifier and then enter the first age then select the "and" or "or" statement appropriate for your criteria and then the appropriate qualifier and the next age. This allows you to set criteria for a specific age range. i.e. if you wish to return all calls where the patients age is between 1 and 5.
- Gender – Set criteria for a specific Gender.

Show Report Status

Similar to the Ambulance Run Data Report, these check boxes are the sections of the report you will see in the "snap shot" of each call. What you choose will depend on your function in QA. Typically all of the check boxes are selected. If you are presenting to a group you may choose not to select "Patient Info" or if your service does not have service defined questions, you may not need that section visible.

Advanced Criteria

The advanced criteria allow you to select one or multiple criteria to limit the calls for review to specific criteria. All items under advanced are multi select options and allows you to select more than one option by selecting the first option, then holding down the "CTRL" key and clicking with your mouse on the next selections.

- Medications – Selects any call where one or more of the medications listed has been documented as administered. By checking the box next to "Not" negates the selection. i.e. selecting Aspirin and checking the "Not" will return any call that did not contain aspirin.
- Procedures - Selects any call where one or more of the Procedure listed has been documented as performed. By checking the box next to "Not" negates the selection. i.e. selecting Blood Glucose and checking the "Not" will return any call that did not have Blood Glucose performed.
- Response Disposition – Leave unselected to query all or select the appropriate dispositions. This can be used to separate out "Transport" vs. "Non-Transport" calls or separating out just "PIFT" calls.

- Response Requested – Leave unselected to query all or select the appropriate type of service. This can be useful to differentiate between "Emergency" and "Non-Emergency" transport requests.
- Provider Primary/Secondary Impression –If applicable, select the impression desired. As an example if your function is to review all calls where the provider's impression was "Cardiac – Chest Pain". Click once on "Cardiac – Chest Pain"
- Dispatch Reason – Filters calls based on the complaint reported to dispatch.

Once all appropriate criteria has been selected, click search at the bottom.

Example

An example of how to use this report would be to review all "Cardiac – Chest Pain" calls that did not receive Aspirin in the last month.

Start by in the upper left corner of the "Standard Criteria" section. Enter your date range, either by using the calendar or typing in the dates desired. Scroll down and select the sections of the report desired under "Show Report Sections". Place a check mark next to all that you would like, generally all but "Service Defined Questions". Scroll back to the top and start in the upper right corner under "Advanced Criteria".

In the Medications box, click once on "Aspirin (ASA)", because we are looking for calls that do NOT contain aspirin, also check the "Not" box above it. Then scroll down to "Provider Primary Impression" select "Cardiac – Chest Pain" and do the same in "Provider Secondary Impression".

With the current criteria set, the system will look at all calls in the requested date range, that have a primary impression of "Cardiac – Chest Pain" or a secondary impression of "Cardiac – Chest Pain" and does NOT have aspirin documented in medications. Click continue at the bottom.

The report showing will contain "snap shots" of the incident reports on file for your service meeting this criteria allowing you to scroll from one on to the next. For QA we will review these calls for reason aspirin was not administered, this information may be in the narrative which is available as one of the sections. At the top of the call you will see a thick blue bar with 3 icons in it allowing you to easy get to additional features inside the MEMSRR. Once review of the first call is complete, simply scroll down to the next.

If no calls are presented you may need to adjust your criteria.