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Medical Report Writing Quality Improvement:

Developing a Documentation Peer Review Program for the Seminole County Fire Department

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CERTIFICATION STATEMENT

I hereby certify that this paper constitutes my own product, that where the language of others is

set forth, quotation marks so indicate, and that appropriate credit is given where I have used the

language, ideas, expressions, or writings of another.

Signed _____

Abstract

Seminole County Fire Department utilizes a continuous quality improvement team (CQI) to review emergency medical services incident documentation. The CQI team has identified deficiencies in the accuracy and consistency in which medical reports are documented. The problem facing Seminole County Fire Department is that its personnel generate poor medical report documentation narratives. The purpose of this research was to establish a peer review process to ensure medical documentation narratives consistently meet department established minimum documentation standards of a legally defensible report. To accomplish this purpose, this project evaluated the following: What are the minimum acceptable benchmarks that must be included in every medical report narrative? How could a structured narrative format be developed to assist the report writer in meeting the required minimum documentation standards? What type of peer review process can be developed to improve current medical report narratives to the minimum acceptable standards using existing personnel and resources? What are the benefits of developing a peer review process in which the author and reviewer remain anonymous?

Utilizing action research method, this report reviewed current report documentation practices in place under SCFD policies compared against industry-accepted standards and identified deficiencies. Next, developed a narrative guideline format checklist used to assist the report writers and the peer reviewers in writing and evaluating narratives for accuracy and consistency. An anonymous peer review process was established via the development of a policy, without incurring into expenditures or addition of administrative staff to manage the program and recommend periodic evaluation of the program to maximize its benefit.

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Introduction

Delivery of emergency medical care is very complex. On every incident the crew, armed with subjective data from the patient's statements and responses, objective data such as vital signs, physical assessment findings and the knowledge of medicine that emergency medical services (EMS) providers have acquired through education and experience must formulate a short list of tentative possible causes for the patient's problems. From this short list, often referred to as the differential diagnosis, the EMS provider must then, within their scope of practice, treat the patient in the best way possible usually in a relatively short period of time. To complicate matters further, once the patient is delivered to the hospital, the provider must then complete an accurate documentation report, usually from memory, that depicts all aspects of the incident for future reference and to maintain the continuity of care in the hospital.

The field of medicine although based on science, does have a great deal of guesswork therefore it cannot be considered an exact science. For this reason, errors do take place which opens the provider or agency for potential legal liability found in civil law under the United States Constitution. Fire and emergency services engaged in the delivery of emergency medical care must have clear and concise documentation that accurately reflects the actions and care rendered to the patient during each incident. It serves two purposes: It provides a clear picture of the events for debriefing or training and it serves as the official record of the findings and actions taken by the provider and the agency in the event questions are raised about the care in a legal forum.

The State of Florida is no stranger to malpractice (tort) law. In fact Florida ranks third in the nation as one of the most litigious states following New Jersey and New York (McQuillan & Abramyan, 2010). According to the Bureau of Justice Statistics report (2007) between the years

2000 and 2004 Florida led the number of malpractice cases filed with 8,519 cases. Legal suits against EMS agencies continue to rise. A clear and accurate report is the only defense that an individual or agency has when questions arise regarding the appropriateness and competency of the services provided.

Medical report writing is an art. Many providers have exceptional hands-on skills and are knowledgeable diagnosticians but have a difficult time committing their actions concisely into an incident report narrative. Graham (1999) reports that EMS providers have been dismantled in court as their reports were successfully manipulated to discredit their heroic measures. Ludwig (2008) explains is not a matter of documenting events as the report writer recalls them. In a litigious society the report is an account of all the facts. Ludwig further states that "if it isn't written down, it wasn't done". As an art, documentation must be constantly refined and improved to make sure it has all the facts and interventions clearly stated. For this reason, continuous quality improvement (CQI) processes focus significant efforts in reviewing medical documentation reports.

The CQI process in place by Seminole County Fire Department (SCFD) has identified deficiencies in the accuracy and consistency in which medical reports are documented. The problem facing Seminole County Fire Department is that its personnel generate poor medical report documentation narratives. The purpose of this research is to establish a peer review process to ensure medical documentation narratives consistently meet department established minimum documentation standards of a legally defensible report. To accomplish this purpose, this writer will explore the following:

1. What are the minimum acceptable benchmarks that must be included in every medical report narrative?

2. How could a structured narrative format be developed to assist the report writer in meeting the required minimum documentation standards?

3. What type of peer review process can be developed to improve current medical

report narratives to the minimum acceptable standards using existing personnel and

resources?

4. What are the benefits of developing a peer review process in which the author and

reviewer remain anonymous?

Utilizing action research method, this author will begin by reviewing current report

documentation practices in place under SCFD policies compared against industry-accepted

standards to identify possible deficiencies. Next, using this information, develop a narrative

guideline format that will assist the report writer and the peer reviewer in writing and evaluating

narratives for accuracy and consistency. In addition, using information obtained through the

literature review, develop a peer review process that considers an anonymous method of review

and how to implement it into the department's policies without incurring in additional expenditures

or administrative staff.

<div align="center">Background and Significance</div>

The Seminole County Fire Department is a full-time career department employing 406

personnel that staff 18 stations in a three-platoon shift system. SCFD provides an all-encompassing

approach to emergency responses including emergency medical and advanced life support

services, fire prevention and suppression, technical rescue and all-hazards mitigation responses for

all unincorporated areas of Seminole County. Emergency medical responses comprise

approximately 68% of all calls for service operating 17 full-time transport units and one peak-load

transport (Forrest, 2011). In addition to all rescue units, other primary fire response and specialty

apparatus (engines, towers, and one heavy rescue squad) have an assigned paramedic on the unit

capable of providing advanced life support care before the patient is transported (Seminole County

Government, 2009). In fiscal year 2009-2010, SCFD responded to 19,990 calls for emergency

medical services generating 13,932 transports to medical facilities (Forrest, 2011).

Located north of Orlando, Florida and covering an area of 344 square miles, Seminole

County is composed of a mix between residential, commercial, light industrial properties, and

farming/agricultural areas with a current population of 415,786 (U.S. Census Bureau, 2008).

Before drilling down to the intricacies of medical documentation content, it is imperative to

understand the concept of EMS documentation. Snyder (2010) defines EMS documentation as "the

record of unique professional activities transforming clinical judgments and interventions into a

professional, legal, and financial document." Essentially, EMS documentation commits to the

record the unique activities involved in emergency medical care and its contribution in the

continuity of patient care from illness onset until recovery or disposition.

When the question of what is EMS documentation is posed to a group of providers, their

answers are as unique as the individuals who respond. All providers affirm they understand the

need for documentation, the importance it has in recordkeeping, patient care and potential

protection from litigation but do not seem to understand how much of an impact it really has.

Kelly, when explaining why it is important to have appropriate documentation states that

"documentation is certainly not the most exciting of tasks in the EMS industry, but it may be the

most important" (2007, p. 30). Further discussion with providers reveals that although some

training and education has been provided in this subject, they resent this portion of their work as

the most difficult, often dreaded task that must be completed. In fact, Graham (1999) reports that

vulnerable reports are commonplace across all EMS jurisdictions and services. What most

providers sometimes fail to acknowledge is that EMS documentation is indeed part of the

permanent medical record, one that can be discovered and used in litigation when questionable

care or unclear documentation opens the door for an attorney to plant the seed of doubt that can

then be construed as an impropriety (Perkins, 2007). EMS run reports are indeed an essential legal

document. In the legal sense, clear, accurate and concise documentation becomes the protection

element for the provider and the agency should an incident is questioned (Streger, 2003).

To illustrate the essential role that EMS documentation plays in the continuum of

healthcare, let's review a landmark case where a critical piece of information omitted by the crew

in the report became the cornerstone of the case in <u>DeTarquino v. Jersey City</u>. The plaintiff's estate

contended that the decedent had a fatal outcome from allegedly suffering injuries as a result of an

assault by a Jersey City police officer and the subsequent care he received on May 7, 1995.

Following the alleged assault, an EMS unit was summoned to the police station to evaluate the

individual and subsequently was transported to the hospital for evaluation. During the transport the

patient apparently had an episode of vomiting. This information was not relayed to the hospital or

included in the hospital report. During discovery, the report even showed that the check box

related to nausea and vomiting (a significant symptom for traumatic brain injury) was checked as

negative.

Based on the presentation and report received from the EMS crew, the hospital concluded

that the decedent was not seriously injured. The decedent was discharged from the hospital and

taken by police to jail. A few hours later, the decedent became unconscious, had a grand mal

seizure and was transported back to the hospital where he was pronounced brain dead on May 11,

1995. The autopsy revealed an epidural hematoma (bleeding in the skull above the brain). The

estate of DeTarquino sued all involved agencies, doctors and EMS service for negligence. In the

initial trial, charges against the EMT's were dismissed on the basis that the New Jersey (NJ)

immunity statute protected the technicians from liability (More Law, 2010).

This case went through a series of appeals until it reached the NJ Supreme Court. On June

28, 2002, the Supreme Court ruled that the NJ immunity statute does not include immunity for

negligence in the preparation of the report. The immunity status only protects the providers from

"damages as the result of an act or the omission of an act committed while in training for or in the

rendering of intermediate life support services in good faith…" (Smith, 1999, p. 6-32). The initial

decision was reversed and sent to the lower court for re-trial. The decedent's estate also filed a

cross-motion to amend the complaint and add an additional claim for "spoliation of evidence and

bad faith". During the discovery, a second copy of the report had the vomiting box checked off.

The plaintiff's attorney asserted that the EMT defendants had altered this copy to cover their

failure to note this information on the report and to advise the staff at the hospital of this important

finding. The EMT defendants were found guilty of negligent documentation and assessed

damages.

        This case clearly shifted the paradigm of EMS providers being considered immune under

Good Samaritan type legislations in a number of states. In NJ, the Good Samaritan provisions have

been revised since this case but still do not clearly cover immunity from inappropriate, incomplete

or negligent report or documentation completion.

        The legal aspect of documentation is not the only reason why accuracy and thoroughness

are important. Perhaps the most important is patient care. In the continuum of care, the patient's

entry into the medical system for management of an illness or injury must be clearly documented

as it will form the foundation in which the remainder of the medical treatment or care will be based

from. The EMS report also provides the physician medical director a snapshot of the care provided

to insure such care was rendered according to protocols and accepted guidelines as the patient

entered the medical system (Kelly, 2007).

        A complaint and potential case brought against SCFD in 2008 highlights how a well-

written, clear and concise document served as a barrier of defense against a malpractice claim.

SCFD received a complaint with a notice of intent to sue from a patient that was transported by

one of our units. The claim involved a complication the patient suffered from an intravenous line (IV) allegedly started by our personnel. The IV insertion site had become infected and the patient had to undergo a longer admission to the hospital, additional treatment for the infection, additional medical costs, and loss of work, pain and suffering. During the initial discovery, the report completed by the paramedic was very clear in the fact that this was a joint response with another agency and that the other agency had made contact with the patient first and indeed had initiated the IV line prior to our unit's arrival. The report further clearly described this IV insertion site as clean, with no signs of redness or infection, no evidence of infiltration - defined as when an IV fluid or medication accidentally enters the surrounding tissue rather than the vein ("Intravenous Therapy", 2011) and no problems infusing fluids during the actual transport. Based on that information, the patient now turned plaintiff directed their attention to the other agency. No further complaints were filed and SCFD was not named in any type of action from this incident (SCFD complaint database, 2008).

Another important aspect related to patient care documentation deals with compensation for services. Fire and EMS agencies rely heavily on the reimbursement from Medicare, Medicaid and private insurance companies for the care rendered to individuals. A poorly written or incomplete report potentially translates to a reduced or denied payment for services rendered (Kelly, 2007). The Center for Medicare and Medicaid Services (CMS) conducts routine reviews of incidents submitted for payment and audits these reports to insure compliance and to identify any instances of fraud. A poorly documented run report can easily translate to penalties or fines levied against the agency if CMS auditors determine the report does not meet the level of service that was actually billed on behalf of the patient.

Documentation or better yet, clear, concise EMS documentation shapes the credibility of the report writer and agency. For this reason, SCFD conducts routine CQI reviews of a sample of

monthly reports to identify errors, trends and inconsistencies in patient care, protocol adherence and documentation. Certain incident types are inherently associated with higher morbidity and mortality therefore prone to scrutiny. For this reason, the CQI team reviews 100% of critical incidents defined on the provider impression of the report as acute coronary syndromes, cerebrovascular accidents or strokes, trauma alerts (term defined as the most injured type of accident victim), respiratory and/or cardiopulmonary arrests and recently added sepsis cases which are defined as a severe systemic bloodstream or tissue infection that is life threatening ("Sepsis", 2010). In addition, the CQI team periodically samples of a number of other types of incidents for review.

SCFD has also identified the ability to provide feedback to the report writer is also inconsistent and at times, lacking. The CQI team provides feedback to the report writer whenever a report is deemed incomplete, prompting the writer to generate a supplement report to correct errors, expand explanations and/or provide further information for the incident. This process although non-punitive, does have a negative perception among the personnel. For those authors who do an exceptional job at documenting their incidents, little feedback is provided. Time and personnel limitations simply restrict providing widespread feedback and must aim the efforts at correcting deficiencies first to increase accuracy and to reduce legal exposure. In the case mentioned earlier where the report writer's clear documentation kept SCFD from being held liable, I personally visited the individual and thanked him for his efforts as well as making the Fire Chief aware of his actions.

Through the current CQI report review process, the following deficiencies have been identified: there is no clear standard in existence for what is deemed necessary or constitutes an acceptable report narrative; the report writer essentially assumes in his or her mind what is considered an acceptable narrative; multiple definitions exist on what format is acceptable for

report writing; and a general lack of consistency in the information deemed necessary for proper

report completion. These deficiencies represent a significant problem for SCFD one that must be

addressed. In the past, documentation training sessions and remedial training have focused on

assisting individuals who have had the most difficult time completing report narratives. These

sessions have had limited success. Widespread training sessions seemed to help for a period of

time but the improvement is short lived with a slow decay in the quality of the reports. By

exploring the utilization of a peer review process, this author expects to bring consistency to the

review process; define what parameters are necessary on every legally defensible report; using

these parameters, create a template to assist the writer and the reviewer in report completion and

evaluation; and identify a method where the peer review is kept anonymous and unbiased.

Healthcare professionals in medicine and nursing are no strangers to peer evaluation

processes. In fact many regulatory agencies such as the Joint Commission on Accreditation of

Healthcare Organizations (JCAHO), Medicare and Medicaid, National Commission on Quality

Assessment and the American Academy of Nurse Practitioners (AANP) do require some type of

peer review program to maintain healthcare quality (Sheahan, Simpson, & Rayens, 2001). Peer

review is, in fact, considered an essential portion of CQI to help maintain clinical competence,

encourage professional development and it is used as a tool to maintain a proactive risk prevention

program by the majority of professional medical groups, physicians and nursing professionals.

Peer review also helps to provide positive feedback and information database on the writing and

documentation performance of the EMS providers (Sheahan, Simpson, & Rayens).

EMS providers are no different than our medicine and nursing colleagues. They should not

be considered a separate profession from those healthcare providers working in the hospital

setting. EMS is an extension of hospital services into the community and as such, must maintain

the same standards of clinical competence, risk prevention and self-regulation as our colleagues in

medicine and nursing pursue (Kenny, Baker, Lanzon, Stevens, & Yancy, 2008). Based on this correlation, it is essential for EMS professionals to embrace the peer review process and to strive for clinical as well as documentation excellence on each patient encounter.

The exploration of this subject and research of this problem supports the concepts specifically addressed in the Executive Leadership program of the National Fire Academy that encourages emergency response leaders to develop policies that will promote the professional development of its personnel through a competency based approach. The importance of generating legally defensible medical documentation is critical to the professional service status SCFD wishes to maintain. As such, the peer review process supports the USFA operational objective goal number four to "Improve the fire and emergency services' professional status" (USFA Strategic Plan 2010-2014, 2009, p. 21) by incorporating a system that stresses self-policing, and a proactive risk reduction culture into the daily operations.

<div align="center">Literature Review</div>

To understand the magnitude of the problem and exploring what information is available in the literature, this writer conducted a comprehensive literature review both at the National Emergency Training Center Learning Resource Center and at the Florida Hospital Medical Center medical library for the most current information on this subject. A simple Google® search with the keywords "EMS documentation narratives" yielded approximately 93,200 results. The research also included keywords related to medical peer review. The search captured over nine million results. At a glance, these sites cover a wide variety of aspects related to documentation narratives. They also reveal a lack of consistency in defining what an acceptable report is. There are generally accepted concepts and items deemed necessary to make a report complete but there is no specific standard in existence.

EMS documentation narratives as currently defined are the cornerstone of an agency's accountability for the services they provide to individuals and the community. The general perception in the literature regarding EMS documentation defines this type of document as the highest level of professional accountability; a legally recognized medical record that provides credible and pertinent patient care information; and sets the stage to identify adherence or deviation from the standard of care (Graham, 1999). Another important point voiced by Kelly (2007) supporting the documentation of the responders' actions relates to medical justification. The report writer needs to clearly frame the need for medical interventions based on factual assessment data that provides compelling information to support such interventions.

Although the EMS medical report is considered the highest level of professional accountability, Porter, et. al. (2008) published a study that supports the need for concise and accurate documentation but found considerable ambiguity among providers as to the importance of generating a legally defensible report. In their study they randomly sampled 25 paramedics from the United Kingdom's ambulance service brought into focus groups to discuss the value of clinical documentation and whether these reports accurately reflect the clinical care provided to the patient. They concluded that members of the service appeared to be aware of the importance of clear and concise medical documentation and the risks associated with improper or missed reports but they seem reluctant to take action to minimize the problem. The reluctance seemed to be linked with the perception that the incident report documentation was not considered important or critical in the care of the patient.

Another study that supports the critical need for concise documentation was published by Laudermilch, Schiff, Nathens & Rosengart (2010). They completed a medical records review of 4,744 trauma patients medical records evaluating whether requests by the on-scene basic life support (BLS) providers for advanced life support (ALS) assistance or failure by EMS personnel

to accurately report the initial patient condition was associated with increased in-hospital mortality. They concluded that nearly 28% of EMS trauma reports were missing critical on-scene patient information. Through a multivariate analysis they identified that patients missing one or more physical measures from the on-scene assessment were associate with an increased risk of death. There were no significant differences in outcomes whether patients were treated by BLS unit vs. an ALS unit in this study.

Another important topic of discussion when addressing the need to improve narrative documentation deals with the effectiveness of ongoing training. Even when agencies provide frequent retraining on pertinent documentation points, the improvement seen following the training is usually short lived. A prospective observational study conducted by Riley, Burgess, & Schwartz (2004) supports this statement. The report sought to compare if the documentation of the decision-making capacity of providers in an emergency medical services system would improve following an educational intervention teaching how to properly obtain and document patient refusals. A baseline assessment was performed from reports completed by the study subjects, the educational intervention provided and a follow up in their documentation reviewed. They concluded that an educational intervention resulted in no change in the decision-making capacity documentation or improvement in the personnel's ability to adequately document patient refusal of care.

The first research subtopic addressed in this project to help obtain answers to the research questions sought to identify the minimum current benchmarks that must be included on every report. A credible and legally defensible report must have the essential facts and actions that took place during the patient care encounter as the most concise interpretation of the event. It has to be based on complete, objective, accurate and factual information (Graham, 1999). This information has to be crafted in a logical, well-organized and generally accepted format using proper grammar and punctuation committed in a legible format to paper or electronic file (Martinsek, 2009).

All EMS reports must contain a specific set of variables that include: incident number; response times; patient demographic data; chief complaint and patient condition; medical history and physical exam; interventions and treatments provided; response to medical treatments; finally disposition and patient's condition at the time of transfer or release (Maltz, 2002). This data creates a framework where all other factual call information must be addressed. Because of the infinite number of variables and possible scenarios that can be presented to the EMS responders, it is impossible to have one specific template for each type of incident; instead each report must address the general information required and then expand on items that are specific to the incident. For instance, a patient complaining of chest pain it is important to obtain and document his/her cardiac history including previous procedures related to the disease. Streger (2003) contended that the most important aspect is to complete the report using a basic format, one that works for the specific individual every time. Streger also emphasized that the report writer should never "wing it". By always following the same format, the report writer would be able to identify omissions or errors before the report is submitted.

A consistent way to assure that all pertinent information is included on a report is by using mnemonics. Perkins (2007) reports that these mnemonics, some of them already being taught in EMT and paramedic school help the report writer with a consistent way to capture the patient's medical history or to better explain the characteristics of the patient's pain. Common mnemonics such as S-A-M-P-L-E help identify the Signs and symptoms, Allergies, Medications, Pertinent past medical history, Last meal, Last menses and Events leading to the incident can help present an organized format for information collection and recording (Pollack, 2011).

Another common mnemonic used by EMS is O-P-Q-R-S-T. This mnemonic is used to evaluate and document the specifics of the patient's pain. It stands for the Onset – of pain, Provocation/alleviation – as to what makes the pain better or worse; Quality – asking the patient to

describe their pain in their own words; <u>R</u>adiation – does the pain go anywhere else; <u>S</u>everity – how significant is the pain, usually assessed in a 1-10 scale; and <u>T</u>ime – how long have the patient been experiencing this pain. Using this tool helps the provider quickly identify all the important information that helps define the patient's possible diagnosis (Pollack, 2011).

The second subtopic explored information aimed to address the second research question, which deals with the general format of narrative composition. Every report writer tends to develop a format that works for him or her but the majority of formats identified in the literature review generally follow one of four generally accepted ones. The first is the S-O-A-P format. This format addresses the <u>S</u>ubjective findings, <u>O</u>bjective findings, <u>A</u>ssessment and <u>P</u>lan of care. (Munger, 2001) In this format, the report writer can explain in the subjective area all information provided for the patient in reference to the chief complaint, history of present illness, past medical history, review of systems, social and work history, surgical history and family history. In essence, the subjective area captures information provided by the patient that is not readily observable by the provider. In the objective area, the provider presents all information that is observed or quantified. Observable data including the condition of the patient or position on arrival; general observed impression of the scene; actions taken by the patient; etc. Next comes the assessment piece. In this section the report writer can document the physical findings such as vital signs, cardiac monitoring, oxygenation status, lung sounds, and findings from a head to toe exam. Finally in the plan, the report writer documents what was done for the patient. Medical interventions, medications given, transport destination, etc. would be included in this area. After the initial interventions are performed, the report writer must also review these interventions and document the response to the therapy or treatments provided. At the conclusion of the report, it is important to specifically address the patient's condition at the time of transfer to the medical facility or release from medical care (Doak, 2008).

A variant from the S-O-A-P format also frequently used by EMS providers is known as S-O-A-P-I-E-R. This format uses the first four common information pieces (subjective, objective, assessment and plan) and adds the "E" for evaluation and "R" for revision. In the evaluation piece, the report writer can describe the reassessment of the patient's condition, responses to any treatments provided or any other changes from the original presentation. Using this information the provider then revises the current treatments or medications given as well as any other adjustments that are needed to the plan of care. S-O-A-P-I-E-R formatting puts much needed emphasis on reassessments and revisions to the plan that are inherently absent from the standard S-O-A-P format. (Snyder, 2009).

Another widely accepted format for EMS narrative documentation is known as the C-H-A-R-T-E method. This format breaks the information into logical sections that coincide with the providers' structured or systemic approach to managing a patient care encounter (Doak, 2008). When completing the report, the report writer describes the Chief complaint; History – present illness, past medical, social, surgical and work history; Assessment includes the physical data and head to toe exam; R or Rx for treatment, interventions or medications provided; Transport information including disposition; and Exceptions noted that must also be addressed in the narrative. Munger (2001) explains that this format seems better suited for EMS documentation.

A variant from the C-H-A-R-T-E method currently being taught is D-C-H-A-R-T-E where the "D" provides documentation on the dispatch information received by the crew while enroute to the incident. This may include current patient status, whether bystander resuscitation is taking place, safety of the scene and other similar information captured by the call taker when the initial emergency call was placed. (Froman, 2009).

Perhaps the ultimate quality test in which to measure the effectiveness of any EMS narrative rests solely on its ability to summarize all the key essential elements of an incident.

Snyder (2009) contends that although S-O-A-P, C-H-A-R-T-E or other variations of these formats may serve the limited needs of EMS and some physicians, yet it fails to summarize the event adequately therefore not well suited for EMS documentation. He poses the use of a focused EMS event summary designed to capture all the critical elements of an incident, patient care evaluation, treatment and response to treatment in a concise package that is easily followed with information that can be retrieved quickly when needed.

The focused EMS event summary consists of the following components: An EMS diagnosis; medical necessity statement; scene summary; EMS review of systems; intervention summary; changes in patient status; safety summary; and disposition summary. Utilizing this format, Snyder emphasizes the need to group all the critical elements of the emergency incident in a format suitable for use by the hospital and to aid in the handing of pertinent and sensitive communications at the time of transfer.

Armed with an understanding of where the EMS profession stands with respect to the nursing and medicine profession as related to clinical competencies, the delivery of safe, quality healthcare is essential before exploring methods of peer evaluation and review. Medical Peer review is defined by the American Medical Association (AMA) (2011) as:

> The process by which a professional review body considers whether a practitioner's clinical privileges or membership in a professional society will be adversely affected by a physician's competence or professional conduct. The foremost objective of the medical peer review process is the promotion of the highest quality of medical care as well as patient safety. (p. 1)

This definition illustrates the importance placed on peer review by the AMA. This association stands firmly in support of the peer review process as an essential component of the quality

improvement process and professional self-regulation (American Medical Association [AMA],

2011).

       The nursing profession also supports peer review as the hallmark for the demonstration of

professionalism and clinical competency. Briggs, Heath & Kelley (2005) believes that peer review

at its most basic level, regulates the actions of health professionals to insure the safety of patients

by reviewing the appropriateness of services ordered or performed by nursing professionals against

acceptable norms and standard of care. Davis, Capozzoli & Parks (2009) state that peer review is

also an excellent way to provide feedback of a person against established standards that is not

punitive. They also affirm that utilizing a peer review process is an excellent way to engage a

multigenerational workforce to create positive relationships and create a better work environment.

       Peer review is clearly identified as an excellent and accepted evaluation method to maintain

clinical competency and professional standards. The next step was to identify what the nursing and

medicine colleagues defined as goals of a peer review process. Most nursing literature named very

similar goals when utilizing a peer review model; these included: to assess the overall quality of

care rendered to patients; to assist both the peer reviewer and the person being reviewed and

opportunity for improvement and professional development; examine the appropriateness in how

the documentation was completed making sure all benchmarks are met based on a predetermined

checklist or criteria template. Help maximize a colleague oriented evaluation process that does not

include an outside force or entity to conduct the review (Sheahan, Simpson, & Rayens, 2001).

       Moorer-Whitehead (2010) developed a peer review process that focused on individual

accountability, the provision of timely and correct documentation and a reduction in omissions or

errors in documentation. This process was not blinded; each nurse evaluated received a score

report that was posted in the nurses' lounge. Moorer-Whitehead was also very clear to the staff that

"peer review" was not a "pal review" as it was intended to provide an accurate appraisal of the

nurses' performance. During the development of this process, she explained that information gathered from the review would be used to determine the need for additional training and as concrete evidence of the nurses' performance for the annual performance appraisals. At the end of the first year of this process showed a 27% improvement in the documentation completed by the staff.

Sheehan, Simpson, & Rayens (2001) created a peer review process using a developed instrument to aid nurse practitioners (NP) conduct peer review evaluations. The instrument followed a problem-oriented approach that mirrors the traditional S-O-A-P format used by physicians. In the instrument, a reevaluation plan revision component was also included to specifically address the adjustment of therapies to improve outcomes. Every three months, each NP reviewed four randomly selected charts from a specific date where the NP being reviewed had appointments. Computerized random selection was not available. The NP's were assigned a number. The number, chart reviewed and instrument findings were documented on the peer review record. Once the review was completed, the writer was given either verbal or written feedback on their documentation.

This program encountered some difficulties and obstacles. The greatest obstacle was the inability to randomly select record using a computerized system. This limitation created additional work to the peer review process administrators to select the charts for review. Also, the administrators identified that although a generic evaluation instrument was used, some specialty NP's were not comfortable in commenting on the performance of other NPs involved in other specialties. Finally, verbal feedback was minimized. Performing verbal reviews was not consistent so the program was revised to use written feedback as the primary source of communication (Sheehan, Simpson, & Rayens, 2001).

Another method of peer review utilizes a peer review committee. By creating a committee the process is formalized and a structured mechanism placed so consistent and timely feedback is provided to the advanced practice nurse. Kenny, Baker, Lanzon, Stevens & Yancy (2008) presented an overview of the establishment and function of a peer review committee and how it focused the review process on critical incidents. Their goal was to maximize self-regulation by providing peer feedback to the advanced practice nurses regarding the appropriateness of their care and management of patients. One important item discovered through the development of their peer review committee dealt with confidentiality. It is important to hold all peer review discussions under the umbrella of continuous quality improvement so any reviews or recommendations are protected from discovery in the legal sense.

Another example of peer review process was presented by Pedersen, Crabtree & Ortiz-Tomei (2204). They implemented a peer review council in two medical surgical units at a large tertiary care hospital to help alleviate the cumbersome process of annual evaluations. In this council a group of peers reviewed the nurse's performance along with other members of the staff including unit secretaries and patient care technicians. These individuals had valuable information to share about a nurse's performance on other components other than nursing practice such as organizational skills, prioritizing and customer service. The council used instruments developed to review the nurses' performance designed to identify deficiencies and also to provide feedback consistently. After one year, the council reported a significant improvement in the overall performance of the nurses within the two units. An unexpected positive finding resulting from the council's feedback to the staff was identified. Nurses began to identify and correct problems prior to their performance reviews. The program has evolved into a fair, consistent and confidential process.

All sources citing peer review clearly support its benefit in the quality improvement process and the important role it plays in maintaining clinical competence and improve performance feedback. Another important aspect is the ability to customize it. Davis, Capozzoli & Parks (2009) stated that the peer review process could be easily customized to fit any size organization, professional activity or work culture. The process must have maximum employee involvement and participation in the process. Other important components include the definition of clear goals and expectations; prompt feedback; and a mechanism to help providers in their professional development if deficiencies are identified.

The final portion of the literature review sought to discover if a peer review process where both the author and the reviewer remain anonymous would be beneficial. The majority of articles did not address a blinded peer review process. In fact, the work from Moorer-Whitehead (2010) clearly stated that "peer review" was not a "pal review". The results from the reviews were actually published in the bulletin board for everyone's information. In her work, there was no mention whether the publication of the information helped or hindered the project. Other peer review teams did identify that an open method suffered from reviewer bias. Their assessments stand to reason that interpersonal relationships, perceptions or preconceived notions from the person being reviewed can affect the objectivity of the evaluator (Kenny, Baker, Lanzon, Stevens & Yancy, 2008). In the remaining pertinent articles discovered the subject of blinded review was not addressed or whether an open review format (where the author and reviewer know each other's identity) played a significant role either positive or negative in their respective peer review programs.

In conclusion, all the literature reviewed support the need to have a structured EMS narrative writing style. They differ however, in which format is the best suited for the EMS environment. The literature also supports the use of mnemonics to aid the report writer in

capturing essential data elements required on every incident. In the topic of mnemonics, all

resources and textbooks agree in using the S-A-M-P-L-E format for gathering the patient's

pertinent history and the O-P-Q-R-S-T format for the evaluation of pain. In regards to peer review

all sources strongly support the use of a peer review process as a component of quality

improvement programs with a focus on professional self-regulation, adherence to an established

set of standards and to measure the appropriateness and quality of the care provided. Development

of a peer review program can be customized to any size organization, type of service or work

culture. Peer review is a widely accepted practice in the healthcare industry and used extensively

by medicine and nursing counterparts. This concept is not yet in widespread use in pre-hospital

EMS. Based on this research, it is only logical to parallel the efforts of our medicine and nursing

colleagues by introducing the peer review process to the EMS arena.

Procedures

The continuous quality improvement process already in place by SCFD identified

significant deficiencies in the proper documentation of critical items in the narrative portion of

incident reports. The CQI team reviews 100% of incidents coded in the report as acute coronary

syndromes, cerebrovascular accidents or strokes, trauma alerts, and respiratory and/or

cardiopulmonary arrests (see appendix A). In January 2011, sepsis cases were also added to the list

for review. At the time of this research, there is not enough data collected to support if the sepsis

narratives are being completed correctly. Because of the marginal performance on other critical

type calls it is suspected that sepsis incidents will reveal similar problems or documentation errors

as the data is accumulated.

After recognizing the consistency problem in how narrative documentations are completed

through the CQI review, the next step was to identify research questions that would help

conceptualize and develop a peer review program suitable for SCFD. The first question addresses

the minimum acceptable benchmarks that must be included in every medical report narrative? Next was to identify if a structured narrative format were developed to assist the report writer in meeting the required minimum documentation standards? The central focus of this project deals with what type of peer review process can be developed to improve current medical report narratives to the minimum acceptable standards using existing personnel and resources? And finally, what are the benefits of developing a peer review process in which the author and reviewer remain anonymous?

The process started by identifying the minimum acceptable benchmarks that must be included in every medical report narrative. The literature review provided insight at the currently accepted industry benchmarks of what is generally accepted as essential data points needed in all general narrative documentation. It also helped identify specific data components needed for certain complaints such as chest pain. Current textbooks and medico-legal references were used to further clarify what industry accepted benchmarks are also desirable when writing reports. These mandatory data points (see appendix B) were used to create a checklist form (see appendix D) and submitted to the Seminole County EMS Medical Director, Dr. Todd Husty for review.

The second research question sought to identify how could a structured narrative format be developed to assist the report writer in meeting the required minimum documentation standards? Utilizing information gathered from the literature review, the different types of formats were evaluated for their benefits, disadvantages and applicability to the needs of EMS documentation (see appendix C). The results of the format comparison, coupled with the information obtained from answering question one were used to compose a guideline form that can be used by report writers to help achieve the required documentation parameters (see appendix D). Peer reviewers use this form to evaluate the report content for accuracy. The idea behind this concept is to compare "apples to apples" since both the report writer and the reviewers are using the same guidelines with a goal of maintaining consistency and report accuracy.

Next, it is necessary to select the type of peer review process that can be developed to improve current medical report narratives to the minimum acceptable standards using existing personnel and resources. From the literature review it is clear that having a peer review the performance of others with similar position and responsibilities is indeed the ideal way to affect change and improve performance in a non-threatening and non-punitive way. The question is: how can SCFD use such a tool without incurring additional staff or personnel costs. To answer this question, this author first conducted a review of SCFD's current shift schedule, evaluated the institutional practices and routine activities performed daily outside of emergency responses in order to identify who is best to perform the peer review, when to conduct such reviews and how to incorporate the peer review process.

SCFD operates 24 hours on / 48 hours off schedule utilizing a three platoon system. This system would allow assigning reports from a different shift from the reviewers' shift. For example, A shift would review C shift reports, B shift would review A shift and C shift would review B shift reports. Using this system, reports from the previous month for a specific shift would be sent only to the reviewers already identified in the assigned reviewer shift.

The next step is to determine who would be doing the reviews from each shift. A full roll out of the peer review program where every paramedic from every shift would have a defined number of reports to review each month vs. a gradual phase in where a select group would initially perform the reviews was considered. The gradual phase in program would allow for modifications and refinement while it would also allow time for buy in from all the personnel. As with any new program related to CQI, careful attention must be exercised when marketing the idea, as the goal for this program is to provide feedback and correction in a non-punitive way. The gradual phase in option has a higher degree of control, allowing the CQI team to educate the reviewers before the actual reviews are assigned. To implement the gradual phase in, consideration was given at using

the current group of designated mentors (field training paramedics). These mentors have been selected to provide the initial training and preceptorship of new paramedics when starting with the department. As mentors, these individuals are considered the top performers of the agency and have the skill set necessary to provide feedback in a constructive manner. A positive side benefit of using the mentors as reviewers is also expected. These mentors train all of the new personnel; over time the process of peer review along with the importance of training in proper documentation would become a standard that becomes part of the culture of the agency.

To identify how SCFD would implement a peer review program, this author evaluated processes that would make it easy for peer reviewers to obtain reports, provide them with an assessment tool, complete the review in a time frame that will not adversely interfere with other assigned daily duties. Options for the delivery of reports (electronic vs. paper copies) were evaluated. Time frames for review were discussed; options included daily vs. weekly reviews and turn around of reports within one to two shifts for review. Another important aspect was to involve the station supervisors in the process. Including the supervisors in the peer review as a coordinator would help ensure the reviews are completed in a timely manner without having an adverse effect on the other assigned activities of the crew. Lastly, it is also important to identify a method to protect personal health information in accordance with the Health Information Portability and Accountability Act (HIPAA) when conducting peer review evaluations.

One specific research question posed asked whether a blinded peer review process would be beneficial. Implementation of a blinded process would help in minimizing subjectivity or reviewer bias. A blinded review would also give non-judgmental feedback to the report writer. An added benefit of making this process blind is that it would eliminate any concerns of unauthorized access of protected health information under the HIPAA requirements. The report would have all of the patient's personal identifiable information (name, address, contact information and other

protected information) completely blocked off. The process would also block out the names of the attending crew, incident number, dates, unit numbers and any other information that could provide the reviewer with clues as to who was the responding crew.

The peer review program design for SCFD does have limitations. First, it specifically addresses only the appropriateness of the narrative documentation on EMS incident reports and does not evaluate the providers' hands on skills performance. The review does evaluate whether the assessment and treatment provided are consistent with Seminole County Practice Parameters and the accepted standard of care based only on the information contained within the EMS report and does not necessarily evaluates if the treatment is consistent and in accordance with the actual medical diagnosis formulated by the emergency room physician. The program implementation is also limited due to the absence of a budget for the program. The intent in this initial peer review phase in is to create awareness and generate support from the personnel before any expansion or budget support is considered. As a result, The CQI group (EMS officers) have expanded their roles to coordinate the peer review process. The use of uncompensated mentors to perform the reviews also limits the scope of the program. The CQI group cannot impose large review quotas or strict time sensitive timelines to these volunteers. For the program to expand, budget support would be necessary. This peer review is limited to EMS report narratives and does not include any other types of report narratives for fire, technical rescue, specialty or hazardous materials incidents.

Finally, time and resources limit the sample size of reports being evaluated. For the process to work, a larger complement of reports based on a wide variety of chief complaints must be reviewed. This limitation results in this program only evaluating initially critical reports related to acute coronary syndromes, cardiac arrest, cerebrovascular accidents, trauma alerts and sepsis.

Results

The results of the four research questions presented in this project are as follows; first, what are the minimum acceptable benchmarks that must be included in every medical report narrative? It is important to first mention that all reports must contain essential incident and demographic information usually capture in labeled information fields. These include: date, time, location, chief complaint and run number for each incident; patient specific information such as name, date of birth, age, gender, home address, phone number, social security number, etc. Also captured in required fields the patient's medications, allergies, past medical history, social and surgical history; A section devoted exclusively to capturing vital signs, diagnostic data such as electrocardiogram tracings (ECG), oxygen saturation and blood glucose levels is also required. A treatment section to specifically document any procedures performed with their required information; a medication section listing any medications, their dosage and route given during their incident; A transport section outlining whether the patient was transported or refusal of care obtained, the transport destination and medical reason for the transport; and finally a disposition section listing the status of the patient at the time of release or transfer and the report writer's signature.

All of the information listed above is usually captured in specific fields that can be easily reviewed using automatic CQI errors program. For purposes of this project, the CQI team focused solely on performing peer reviews in the report narratives, as there is so much variability in writing styles, information provided and formats. Based on the information on the literature review and evaluating the different formats, this author defined the items that each report narrative must contain as the minimum acceptable information to be considered as a complete report. The narrative must depict a verbal "picture" of the events that took place during the call, in such a way that another individual can read the document and visualize the scene from the report narrative. The following information is necessary on all reports:

- Dispatch information: Information received from the communication center from the caller, such as nature of call, pertinent patient information and scene or safety information.

- Arrival impression: Scene safety, any obvious hazards or extenuating circumstances that may impede or delay the crews in making patient contact.

- Initial presentation: How was the patient found? Location, dress, demeanor, actions being taken by the patient or bystanders and any care that was rendered prior to the arrival of the EMS unit.

- Chief complaint: in the patient's own words if possible what is the reason for requesting EMS assistance? If the patient is not able to verbalize the complaint, information from bystanders helps the provider formulate a chief complaint.

- History of present illness: What happened? Onset time, provocation, quality, radiation, severity and total time (OPQRST) evaluation.

- Past medical history: Includes significant medical conditions, medications, any surgeries, allergies, etc.

- Assessment information: A detailed explanation of the physical exam, head-to-toe exam, vitals, diagnostic findings (ECG, blood glucose, etc.) and any pertinent negatives from the exam.

- Provider impression: An assessment of all the information gathered to formulate a short list (DDx) of possible reasons or causes for the problem the patient is experiencing.

- Treatments: Any procedures, medications, advanced skills performed to assist the patient.

- Transport decision: Whether the patient is capable of refusing transport. If transport is required, destination choice based on protocols.

- Reevaluations: Once the initial assessment and interventions is completed, it is necessary to reassess those interventions and the patient's response to therapy. Based on the reevaluation, the treatment plan is then continued or modified based on the response.

- Any radical changes in the patient's condition: Patient's may deteriorate quickly no matter what is done. Clear explanation of these changes is instrumental in painting a good picture of the event.

- Arrival at the hospital, and reports: Clearly outline the patient's condition upon arrival at the hospital, the condition of all interventions performed, a verbal and written report given to the staff (include the name of the person to whom the report was provided) and any other actions completed as patient care was relinquished to the hospital staff.

Second research question, how could a structured narrative format be developed to assist the report writer in meeting the required minimum documentation standards? All of the articles and publications on this subject agree that a structured narrative format helps the report writer in completing narratives that capture the essential minimum documentation requirements for a legally defensible report (Graham, 1999). The contention exists as to which of the most popular structured narrative formats is best suited for EMS. This author created a table to evaluate the formats identified through the literature review. S-O-A-P, S-O-A-P-E, C-H-A-R-T-E and D-C-H-A-R-T-E were reviewed. Of these, D-C-H-A-R-T-E was the most comprehensive and suitable for consistent EMS report narrative documentation (see appendix C) therefore selected as the format to use when designing the peer review evaluation form. The other formats had the ability to capture similar content but they were more subjective and open to interpretation on behalf of the report writer. D-

C-H-A-R-T-E specifically addressed in a simple format all the essential components of a report

narrative in an easy to follow format. This format is a variation of the original C-H-A-R-T method

but also addresses dispatch information and cues the report writer to also discuss the reevaluation

of the interventions provided.

Third, what type of peer review process can be developed to improve current medical report

narratives to the minimum acceptable standards using existing personnel and resources? Based on

the review of current operations for SCFD, CQI reports already being generated, limitation of

resources and personnel, and through discussion with the CQI team, the respective shift Division

Chiefs and EMS leadership, the following is the recommended type of peer review process to

specifically evaluate EMS report narratives. The process will be implemented as a "phase in"

utilizing the mentors already designated as field training officers for our new paramedics. Each

mentor will receive an instruction pamphlet with information on the purpose and goals of the

program. The pamphlet will also outline expectations and provide a reference section for common

questions or conditions already identified by the CQI team as problems. Within the pamphlet the

generic peer evaluation form will be presented. All mentors will also have a liaison from the CQI

team for any questions or problems.

Once the mentors are briefed in the process, reports for the previous month will be selected

at random, using the administrative CQI tools from the reporting software. Reports will be filtered

by chief complaint (during this phase in, the peer review team will be evaluating only those reports

that are already selected by the CQI team). The reports will also be filtered by shift and station.

This is done so when assigning reports to review, the reviewer is not assigned a report from his/her

own shift or station.

The selected reports will be blinded (all incident identifiable data, dates, times, incident

number, report writer and responding crew names and units, patient's name and demographic

information) will be blocked out. This serves a two-fold purpose. First, it allows the peer reviewer to perform an objective evaluation of the narrative without bias and; it purposely removes all protected health information according to HIPAA from the document eliminating any possible breach of information according to this federal requirement. For tracking purposes, each report will be assigned a generic CQI number so the report, once reviewed can be returned with the peer review form to the report writer for feedback on their narratives.

The reports will be placed along with the evaluation form in a SharePoint file (within the Seminole County intranet site) and assigned to the peer reviewer. The SharePoint system sends an electronic notification to the peer reviewer that he/she has a number of reports to review. Once the peer reviewer completes the evaluation (form also on SharePoint) the reviewer assigns it as completed. The system then sends a notification that the peer review is complete to the CQI team. The System can also automatically notify the report writer via e-mail that a "peer" reviewed his/her report and the record is ready for them to obtain feedback. The e-mail will also provide a hyperlink to the report. At the end of each month the CQI team can query the SharePoint site for any peer reviews that were not completed and reminder notifications can be distributed to the peer review team. This system allows for total anonymity on both sides of the equation. The peer reviewer and report writer remain anonymous to each other. This information is locked and only visible to the CQI team. In fact all reports and reviews are available for further review from the CQI team at any time based on their unique logon code and access rights.

Finally, what are the benefits of developing a peer review process in which the author and reviewer remain anonymous? Traditionally personnel often deem TQM and CQI review processes as a negative activity. Making this process anonymous for both the report writer and the reviewer, using a checklist evaluation format developed for the peer review process would help alleviate tensions, eliminate bias and make the process as pure as possible in order to yield documentation

improvement without concerns of retaliation. The goal of this program is to provide continued feedback to the report writers on their report narratives when compared against a defined standard in order to reach consistency and improve the overall quality of their product. As report writers receive feedback from a "peer" they are more apt to accept the criticism without becoming defensive or feel admonished. The blinded process helps reassure both parties the educational intent and the desire of the CQI team to see all report writers improve. It is only logical that this blinded process provides a safe forum for objective feedback without any bias or personal subjectivity.

<div align="center">Discussion</div>

The peer review process is widely accepted as an excellent evaluation method to maintain clinical competency and professional standards. Nursing and medicine professions support peer review as the hallmark for the demonstration of professionalism and clinical competency. At its most basic level, peer review regulates the actions of health professionals to insure the safety of patients as it reviews the appropriateness of services ordered or performed by nursing or medical professionals against acceptable norms and standard of care (Briggs, Heath & Kelley, 2005).

SCFD has recognized the value of peer review as an instrument to help correct identified deficiencies in the composition of EMS report narratives. Other methods of writing improvement and narrative corrections have been attempted yielding only limited success. The peer review process formulates an ongoing, non-biased method of providing frequent feedback to the report writers of their narratives as they are evaluated against an accepted format and standard.

To properly customize the process, it is important to identify the desired goals, and then identify a process for review and feedback suitable for the agency that establishes a two-way information pathway so all involved can benefit from this system. The program must also be sustainable without an adverse impact on operations or personnel time. SCFD's plan is attainable

using existing resources, a flexible and automated electronic system (SharePoint) and utilizes the department's most well qualified providers (field training mentors) to begin this process.

The implementation of the peer review process represents a significant change in the current culture of the department. This author in collaboration with the EMS group chose to implement the process as a phase in program. This was selected for two primary reasons: limited personnel and budget funds available and a desire to slowly introduce the field personnel to this type of review. Fears of rebuttal or objection by field personnel or union representatives are quite real. A gradual implementation process provides the CQI team with time to educate mentors and field personnel on the benefits of the peer review process while emphasizing the non-punitive aspect of the program. As the program is defined and further developed for implementation, it is suggested to enlist the assistance of the union representatives so they can experience first hand the intent of the program and how each member is protected from any type of punitive consideration or intent. The support of the union leadership is instrumental in the success and eventual assimilation of a peer review program into the department's culture.

There are some additional benefits to a peer review program. The sheer knowledge that a report writer's narratives are being evaluated may prompt the individual to pay much more attention and conduct a more intense scrutiny of their narratives prior to submission of the report. Knowledge of such peer review may also prompt the report writer to use the evaluation form as the template to follow when completing all of his/her reports. Another potential side effect that may positively improve report narratives lies within the innate competitive nature of firefighters and EMS providers. These individuals can potentially but quietly compete against their peers as to who completed the better report. Although there are no scores in the peer evaluation form, these individuals would challenge each other as to who will complete a narrative that is devoid of any negative peer review comments.

Another benefit is that of consistency. Report writers' narratives will be evaluated based on an objective form that is widely publicized throughout the department. It is certainly in their best interest to follow the format when writing their narratives, so over time, most report narratives would have a very similar, thorough and consistent format that has sufficient defensible power should the care provided by the personnel comes into question.

Finally, an intrinsic benefit of the peer review process is self-education. Report writers stand to gain much more educational value from chronic, consistent feedback from their peers as opposed to infrequent and tedious training sessions on how to properly complete a report. Lectures or programs on report writing aim at delivering a large amount of significant content related to report writing in a condensed amount of time. The examples provided are usually fictitious or perhaps samples of old reports identified as the bad or good examples of report writing. These programs are time and personnel intensive; often require the unit to be placed out of service for the training session; is expensive; and is not conducive to keeping units in their first response areas ready to respond. For all the cost, operational hardships, intensity and hardships of scheduling all personnel for these programs, the net positive yield effect is negligible at best. The bolus of information given to the personnel is quickly forgotten. The report writer soon falls back to his/her routine ways of completing the report.

In comparison, peer review is an ongoing process. Rather that bolusing a person with a ton of information related to proper documentation during a condensed period of time, peer review meters out the information via a steady flow of information. In medical terms we put an intravenous "drip" of information so the person can absorb the information much more effectively. Peer review uses the report writer's own narrative to provide the training. These real live incidents mean much more to the report writer as they can mentally and physically relate to the call and are prone to be more cognizant of significant information that must be recorded in the narrative the

next time a similar incident presents itself. Peer review also allows the person conducting the review to learn from each report. The reviewers, through repetition, memorize the format, learn how others document certain things effectively and can pick up good tips that would also help refine their own report writing skills.

In essence, peer review is a win-win program for everyone. The report writer gets clear, objective feedback on his/her narratives which translates to improved report writing in the future; the peer reviewer learns and refines his/her narratives by exposure to a multitude of reports from different authors and how they apply the report format into their style; the CQI team has a contingency personnel to assist in reviewing critical reports; the EMS group will see an improvement in the personnel's performance measures, quality and consistency in their reports, therefore minimizing the risk of exposure to liability and the department gains professional recognition from other agencies, hospitals and medical providers as the report documentation clearly show the quality, efficacy and professionalism of the personnel in caring for their patients.

Recommendations

The peer review program in its inception now has much room to grow. As with any other new program, it is important to implement it gradually while gaining the buy in from all members of the department. The initial process of how to conduct the actual peer review is certainly a work in progress. No program implementation is successful without its own review. After the initial education provided to the mentors, information disseminated to all personnel regarding this program, implementation would begin. Feedback from the mentors and those initially involved in the peer review process will be used to modify and streamline the process. The goal is to have an effective peer review program that has little or no impact to operations, does not require an exhaustive commitment from the mentors, yet it yields consistent defensible report narratives that meet or exceed the minimum requirements for appropriate documentation. Following the initial

period the process would be reviewed at six months from implementation to first: identify if the process/checklist is working as intended; secondly to review the actual narratives to see if improvement has been achieved and to make corrections and adjustments as necessary to the program.

As the program evolves and gains acceptance, the CQI team could be then tasked with addressing program expansion. The potential positive benefits of using a peer review process stand only to benefit those who participate in the program. The recommendation based on initial success with the mentors would be to expand the program where all paramedics would have the opportunity to review reports from their peers.

Another recommendation is to have the field training officers involve the new paramedics being mentored in the peer review program. There is no better time to educate a person regarding the culture and expectations related to proper narrative documentations than the time when they are being initially trained. An additional benefit of involving these paramedics early is that it helps weave the peer review process into the culture of the organization. In time this process would become the norm for the system.

Future opportunities of expansion of the peer review process could include, proper and accurate fire, technical rescue, hazardous materials report narratives; improved narratives of pre-fire plans and inspection reports. Finally, report writers would stand to benefit from improved writing skills that canvas all of their document writing. These skills can be of substantial benefit in times of disaster, for example. During disasters the skills of concise and accurate writing may help the report writers in command and staff positions prepare incident action plans that are clear, concise and complete for the management of such events.

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Appendix A

Report data sample from the CQI review

Acute Coronary Syndromes Report Narrative Review January-December 2010	Performance Benchmark	SCFD Performance level
Chief Complaint and HPI clearly documented	95%	94%
Documented recognition of STEMI and hospital notification	95%	92%
Documented baseline pain level	95%	89%
Initial 12 Lead ECG documented with interpretation	95%	93%
Documented administration of morphine, oxygen, nitro and aspirin	95%	55%
Documented contraindication to administering aspirin	95%	30%
Documented Post treatment 12-Lead ECG	95%	22%
Reassessment of patient and response to treatment documented	95%	60%
Transfer of patient and report given to receiving nurse	95%	77%

The sample above is representative of the types of CQI reviews performed on selected reports based on chief complaint / provider impression. Each type of provider impression currently evaluated (ACS, stroke, trauma alert, STEMI and Sepsis) has its own specific review form.

Note: This review specifically addresses the documentation of these components in the narrative section. These actions may also be captured in other portions of the report as separate data fields. A low percentage number is reflective of the collective ability of report writers to include such data in their narratives and not necessarily reflective of the efficacy and accuracy of their actual clinical practice.

Appendix B

Required data points on all narrative reports

- Dispatch information
- Arrival impression
- Patient's initial presentation
- Chief complaint
- History of present illness
    - OPQRST
- Past medical history
    - SAMPLE
- Surgical history
- Social history
- Assessment information
- Provider impression or EMS diagnosis
- Treatments
- Transport decision
- Reevaluation
- Changes in the patient's condition
- Condition upon arrival at the hospital, and transfer report

Required data points based on chief complaint
(All of the general data points plus the following)

Acute coronary syndrome points:
- Detailed description of the location of pain
- Any radiation of the pain
- Detailed information of previous cardiac history – Name of Cardiologist
- Specific initial pain level and any changes based on interventions
- Use of aspirin prior to arrival or document contraindications for withholding
- Baseline 12-Lead ECG tracing
- Follow up ECG tracings and any changes based on interventions

Cerebrovascular accidents or Stokes:
- Last seen normal – document when was the person seen in a normal state
- Detailed neurological exam with a Cincinnati Pre-hospital Stroke Scale completed
    - Note deficits by specific area (speech, motor)
- Baseline 12- Lead ECG
- Highlight any current use of anticoagulants (Warfarin, Plavix or Aspirin)
- Close monitoring of blood pressure and changes in pulse pressure
- Transport facility selection based on the patient's condition

Trauma:

- Detailed description of the mechanism of injury
- Cervical spine precautions
- Neurological, motor assessment both pre and post immobilization
- Any changes from baseline assessment documented
- Glasgow Coma Score from initial assessment and on each reevaluation
- Diagram any specific wounds or penetrating trauma
- Estimated blood loss
- Amount of fluid resuscitation administered

Sepsis

- Patient's normal or baseline neurological status prior to the onset of symptoms.
- Document an accurate oral or rectal temperature on baseline vital signs.
- Recent history of surgery, indwelling catheter placement, recent admission to the hospital
- Any recent chemotherapy
- Any blood diseases (leukemia, anemia, etc.)
- Any diseases that renders the person immunocompromised
- Any recent admissions for pneumonia, meningitis, cellulitis, etc.
- Hypotension with warm extremities
- Changes in fluid intake
- Dry mucosa
- Tachycardia and/or hypotension

Appendix C

Evaluation of common structured report formats

Evaluation Questions	S-O-A-P	S-O-A-P-E	C-H-A-R-T-E	D-C-H-A-R-T-E
Addresses dispatch or pre-arrival information				✓
Easy to follow format			✓	✓
Provides an easy area for documenting scene information			✓	✓
Specifically addresses the chief complaint and HPI	✓	✓	✓	✓
Addresses the tentative impression or diagnosis	✓	✓	✓	✓
Provides a specific area for pertinent medical history			✓	✓
Provides a specific area to document physical assessment	✓	✓	✓	✓
Provides a specific area to document treatments	✓	✓	✓	✓
Provides a specific area to document transport actions			✓	✓
Allows the documentation of reevaluations		✓	✓	✓

This evaluation took into account the documentation needs for EMS reports. The SOAP and SOAPE format are traditionally used in the hospital setting whereas the CHARTE and DCHARTE formats are commonly seen in the EMS setting. As a result, these two format types met the benchmarks of this evaluation much more effectively.

Appendix D

Seminole County Fire Department
PEER REVIEW – GENERAL NARRATIVE CHECKLIST FORM

Report Number: _____
Date completed: _____

Section 1: General Narrative Evaluation (Complete for all reports)

General Required Information	Described	Comments
Dispatch information described	☐ Yes ☐ No	
Arrival impression	☐ Yes ☐ No	
Patient's initial presentation (orientation, mood)	☐ Yes ☐ No	
Position in which patient was found	☐ Yes ☐ No	
Initial physiologic exam (ABC's) described	☐ Yes ☐ No	
Chief Complaint described in detail	☐ Yes ☐ No	
History of Present Illness	☐ Yes ☐ No	
OPQRST explained in detail	☐ Yes ☐ No	

Past Medical History	Described	Comments
Complete Medical history documented using SAMPLE	☐ Yes ☐ No	
Surgical history (Surgeries or procedures)	☐ Yes ☐ No	
Social History (Tobacco, alcohol use, employment)	☐ Yes ☐ No	
Specific information regarding medical allergies	☐ Yes ☐ No	

Physical Exam	Described	Comments
Primary survey explained in detail (A-B-C-D-E)	☐ Yes ☐ No	
States patient "STABLE" or "UNSTABLE"	☐ Yes ☐ No	
Describes how the patient was exposed/covered for exam	☐ Yes ☐ No	
Head-to-toe exam described in detail	☐ Yes ☐ No	
Documents diagnostic testing (12-lead, glucose, etc.)	☐ Yes ☐ No	
Provider Impression / EMS Diagnosis stated	☐ Yes ☐ No	
Document all interventions appropriately (IV, airway, medications given, etc.)	☐ Yes ☐ No	
Describes the rationale for transport decision and destination	☐ Yes ☐ No	
Documents patient reevaluations according to parameters	☐ Yes ☐ No	
Describes changes in patient's condition and interventions provided to stabilize negative changes	☐ Yes ☐ No	
Describes clearly the patient's condition upon arrival at the hospital or at the time a refusal is obtained	☐ Yes ☐ No	
Describes the transfer report to the hospital/agency including name of to whom report was given to	☐ Yes ☐ No	

General Narrative and Style Review	Described	Comments
D-C-H-A-R-T-E format used	☐ Yes ☐ No	
Uses pertinent negatives on narrative as appropriate	☐ Yes ☐ No	
Proper English and grammar	☐ Yes ☐ No	
Used only approved abbreviations	☐ Yes ☐ No	

Section 2:   Narrative Evaluation based on Chief Complaint / Provider Impression
(Use the most applicable one)

Acute coronary syndrome points	Described	Comments
Detailed description of the location of pain	☐ Yes ☐ No	
Any radiation of the pain	☐ Yes ☐ No	
Detailed information of previous cardiac history – Name of Cardiologist	☐ Yes ☐ No	
Specific initial pain level and any changes based on interventions	☐ Yes ☐ No	
Use of aspirin prior to arrival or document contraindications for withholding	☐ Yes ☐ No	
Baseline 12-Lead ECG tracing	☐ Yes ☐ No	
Follow up ECG tracings and any changes based on interventions	☐ Yes ☐ No	

Cerebrovascular accidents or Stokes	Described	Comments
Last seen normal – document when was the person seen in a normal state	☐ Yes ☐ No	
Detailed neurological exam with a Cincinnati Pre-hospital Stroke Scale completed	☐ Yes ☐ No	
Note deficits by specific area (speech, motor)	☐ Yes ☐ No	
Baseline 12- Lead ECG	☐ Yes ☐ No	
Highlight any current use of anticoagulants (Warfarin, Plavix or Aspirin)	☐ Yes ☐ No	
Close monitoring of blood pressure and changes in pulse pressure	☐ Yes ☐ No	
Transport facility selection based on the patient's condition	☐ Yes ☐ No	

Trauma	Described	Comments
Detailed description of the mechanism of injury	☐ Yes ☐ No	
Cervical spine precautions	☐ Yes ☐ No	
Neurological, motor assessment both pre and post immobilization	☐ Yes ☐ No	
Any changes from baseline assessment documented	☐ Yes ☐ No	
Glasgow Coma Score from initial assessment and on each reevaluation	☐ Yes ☐ No	
Diagram any specific wounds or penetrating trauma	☐ Yes ☐ No	
Estimated blood loss	☐ Yes ☐ No	
Amount of fluid resuscitation administered	☐ Yes ☐ No	

Sepsis	Described	Comments
Patient's normal or baseline neurological status prior to the onset of symptoms	☐ Yes ☐ No	
Document an accurate oral or rectal temperature on baseline vital signs	☐ Yes ☐ No	
Recent history of surgery, indwelling catheter placement, recent admission to the hospital	☐ Yes ☐ No	
Any recent chemotherapy	☐ Yes ☐ No	
Any blood diseases (leukemia, anemia, etc.)	☐ Yes ☐ No	
Any diseases that renders the person immunocompromised	☐ Yes ☐ No	
Any recent admissions for pneumonia, meningitis, cellulitis, etc.	☐ Yes ☐ No	
Hypotension with warm extremities	☐ Yes ☐ No	
Changes in fluid intake	☐ Yes ☐ No	
Dry mucosa	☐ Yes ☐ No	
Tachycardia and/or hypotension	☐ Yes ☐ No	

Section 3: Parameter Adherence (Complete for all reports)

Practice Parameter Adherence	Compliance	Comments
Was the treatment provided based on the chief complaint consistent with Seminole County Practice Parameters	☐ Yes ☐ No	

☐ **REQUEST EMS CHIEF REVIEW**
☐ **REQUEST MEDICAL DIRECTOR REVIEW**

Describe Reason / Concerns for requesting review:

Appendix E
Section 1 - ADMINISTRATIVE POLICIES
1.18
EMS QUALITY IMPROVEMENT PROGRAM

Peer Review Program:

The Medical Director recommends development of an internal peer review team for the confidential review of run reports and evaluating the reports and medical care based on established thresholds for evaluation.

Process guidelines:

✱ Selection of peer reviewers: Peer reviewers can be selected from qualified candidates authorized to practice in Seminole County by the Medical Director in accordance with Parameter 1.17 "EMT and Paramedic County Certification".
  • Selected peer reviewers will be issued a guidelines book, evaluation checklist and grading criteria instructions.
  • All peer reviewers will have a CQI team liaison contact in the event that questions or problems arise.
✱ Reports are to be selected at random utilizing available sorting software.
✱ Reports submitted for peer review will be selected from the previous month incidents.
✱ Patient confidential information, incident date, time, location, units and personnel responding must be properly blocked for patient privacy in accordance with HIPAA and to maintain the objectivity of the peer review.
✱ Once all identifiable information is blocked out, a unique peer review identifier number will be assigned to the report. This will assist tin routing the report back to the report author for feedback.
✱ Agencies shall select a method of distribution suitable for the operations of the agency. If available, distribution via SharePoint software is recommended.
✱ Peer reviewers will be allowed a minimum of two shifts for review and response. Reviews should be completed no later than three shifts from being assigned.
  • In the event the peer reviewer is on leave, the reports for review will be reassigned to another person.
✱ Completed reviews will be processed by the CQI team and feedback submitted to the report author. The identity of the peer reviewer will not be disclosed.
  • In the event the author has questions regarding the peer review, he/she must submit inquiries directly to the CQI team for a response.
✱ Reports that have significant errors or gross deviations in parameters or treatments will be referred back immediately to the CQI team for evaluation.
  • Depending on the report, the CQI Team will submit for Medical Director review, Process as a sentinel event or medication error as outlined in this parameter.
✱ Any problems not specifically covered under these guidelines will be resolved at the discretion of the Medical Director.

> The EMS Quality Improvement Program Policy is a nine page document – For brevity, the page addressing peer review is the only portion attached to this document.