

DEVELOPING NON-EMERGENT RESPONSE CRITERIA

Executive Development

Developing Non-emergent Response Criteria for the Casper 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 the appropriate credit is given where I have used the language, ideas, expressions, or writings of another.

Signed: _____

ABSTRACT

The problem was the Casper Fire – EMS Department was putting its citizens and firefighters at risk by not having non-emergent response criteria. The purpose of the research was to develop criteria that would indicate a non-emergent response. Action research was conducted to answer the questions concerning laws governing appropriate response, criteria that other departments use, issues concerning non-emergent response, and what “best practices” are used by other departments. A literature review, personal interviews and a time study were done to answer these questions. The results indicated that the Casper Fire – EMS Department needs to classify calls. The recommendation was to classify calls with the Priority Dispatch program that was already in place but not utilized at that time.

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INTRODUCTION

A picture of a vehicle crash with significant mechanism of injury followed by this caption, “Double fatal emergency medical vehicle crash involving a daycare van full of children, Chesterfield, Virginia – responding HOT to an earache” (Clawson & Dernocoeur, 2004). There are many of these types of headlines in our country on a daily basis. The first responders of the United States are putting the citizens and themselves at unneeded risk while responding to calls. Emergency response agencies and the fire service need to have criteria in place to indicate that a non-emergent response would be a sufficient response considering the type of emergency. Some industry experts have estimated that there are 12,000 ambulance related crashes annually in the United States, causing nearly 120 deaths (Bledsoe, 2003). In another study, it was found that an ambulance involved in a fatal crash was twice more likely to be running in emergency mode than not (Wolfberg, 1996). Another showed that nearly 70% of fatal ambulance crashes occurred during emergent response (Brown, Whitney, Hunt, Addario, and Hogue, 2000). It would appear that the fire-EMS service has a difficult issue to deal with. On one hand, a fast response is good customer service and on the other, our main goal is to protect life and property.

Because the fire-EMS community has not addressed the potential for lives saved with the utilization of non-emergent response, people that are supposed to be protected are instead being killed by the same agencies that are sworn to protect them. During the years of 1991-2001, the most recent year that data was available, 300 fatal crashes

involved occupied ambulances; this resulted in the deaths of 82 ambulance occupants and 275 occupants of other vehicles and pedestrians. The 300 crashes involved a total of 816 ambulance occupants (Centers for Disease Control, 2003). In order to reduce the amount of risk to first responders and the general public, it is a must that first responders and administrators understand that risk analysis is an absolute must in this area.

On the initial dispatch side, the most common way this analysis is completed is through an emergency medical dispatch system. On the transport side, the EMS crews need to exercise good judgment on whether an emergent response is necessary based on their experience and local protocols. These measures should be taken to ensure that we are providing for life safety first.

The research problem is that the Casper Fire – EMS Department (CF-EMS) has no protocol for dispatching units for a non-emergent EMS call. Both the CF-EMS and the Wyoming Medical Center (WMC) respond code three to all medical calls. On occasion the company officer of the CF-EMS engine will go non-emergent due to additional dispatch information that makes it a non-life threatening situation.

The purpose of this research is to determine criteria that would indicate a non-emergent response to the citizens of Casper. Action research will be conducted to answer the following questions: What do laws state that make it difficult to respond non-emergent? What criteria do other departments use for non-emergent response? What are the issues with non-emergent response? What are the “best practices” used by other departments?

BACKGROUND & SIGNIFICANCE

The Casper Fire – EMS Department is an all career department comprised of 73 people. It is an all risk department that provides fire, EMS, technical rescue, and hazardous material response to the city of Casper, Wyoming and surrounding areas. Through federal contracts with neighboring counties we also provide hazardous material response to three counties. Furthermore, the CF-EMS provides wildland fire and natural disaster support across the nation.

Casper is an urban area with a population of 51,240 and is located in the center of the state (Casper Area Chamber of Commerce, 2005). The CF-EMS operates out of five stations spaced throughout the community. CF-EMS responds to all medical calls in the city but does not transport. This is done by an ambulance service that is operated by the Wyoming Medical Center. All fire personnel are an EMT basic at the minimum and go up to the paramedic qualification. All ambulances that respond to emergency medical calls are considered ALS ambulances. Hence, there are no BLS ambulances on emergency scenes of any kind.

The Public Safety Communication Center (PSCC) is located in Casper's City Hall and dispatches for all public safety entities including the City of Casper fire and police departments, Wyoming Highway Patrol, and Natrona County Sheriff Department. The dispatch center is state-of-the-art in technology. The primary radio system is an 800 MHz digital backed up by a conventional 154 MHz system.

The typical response for all medical calls is a BLS engine followed by an ALS ambulance. CF-EMS also dispatches a medium rescue unit to all motor vehicle accidents

with injury and any other instance that is considered life-threatening. Currently, the PSCC uses emergency medical dispatch (EMD) protocol on all medical calls for the purpose of getting the appropriate information for responders and to provide reporting parties with life saving instructions prior to responder arrival. They do not use the EMD codes for classifying calls. This means that the company officer on the BLS engine has to respond emergent to all medical calls unless there is sufficient information given to determine it is not a life threatening situation. The ALS ambulance also responds emergent and rarely responds non-emergent or downgrades no matter what the additional information is. This creates numerous calls where lights and sirens are used for non-life-threatening situations. Hence, there is a risk that is being imposed on the citizens and responders that has no commensurate benefit.

The dispatchers in the center have the training, experience, and equipment for emergency medical dispatching but are not using the system for its intention. The classifying of calls does not happen at the dispatch level, which makes it very difficult for the responders. This is because the responders cannot speak to the reporting party in order to get the pertinent information. Furthermore, for a number of reasons, responders are reluctant to downgrade to code 2 after non-life threatening information is passed on. Regardless of the reasons, we are increasing the chances of creating a life threatening situation through a needless emergent response. The National Fire Protection Association states that fifteen to twenty percent of all firefighter injuries and deaths are attributed to responding and returning from emergency incidents (Smith, 2000). In addition, a study done in 2002 that looked at 339 fatal ambulance crashes found that

60 percent of them occurred during emergency use (Taylor, 2003). These facts reinforce the idea of non-emergent response.

The current driving policy on the Casper Fire-EMS Department has no reference to when emergent response is required nor does it make any reference to going non-emergent to any type of call. As a result, the current way of doing business is to respond emergent to virtually everything.

The CF-EMS department has recently looked at the idea of driving non-emergent to calls. All administrators are looking to do the right thing and minimize the risk of our responses. The action research that is completed in this paper will help the department to make decisions concerning non-emergent response in the future.

LITERATURE REVIEW

The purpose of this literature review is to gather information on the subject of emergent and non-emergent responses. The information that was gathered was directed to answer the research questions.

The first area of research dealt with the laws that make it difficult or impossible to respond in a non-emergent manner. No laws were found that explicitly prevent non-emergent response to an incident. There were however, ambiguous areas of case law that make it difficult to respond in a non-emergent mode. The grey areas that would make a responder think twice before going non-emergent to a call are negligence and duty to act. What dictates negligence in the emergency medical field is constantly being challenged in court cases. One case that occurred in Ohio in 1990 brought up some interesting issues that could be tied to the issue of non-emergent response. In the case of Ohio vs.

Montecalvo, a pregnant female was killed in an intersection accident involving an ambulance. The word “emergency” became very important in defining for the court. The court stated, “An emergency is a serious and urgent situation which demands immediate use of a public safety vehicle.” The court further stated, “if a driver proceeds with no reasonable grounds for believing that an emergency exists, even though he is using a siren and flashing, rotating lights when he approaches the intersection he forfeits or gives up his right of an emergency vehicle” (Nicholson, 2003). This particular passage could be debated as to what constitutes an emergency, and if a judge or jury believed that a vehicle driver was not responding to an actual emergency, then the person would forfeit the privileges that are granted to an emergency vehicle. Consequently, they could be found guilty of violating a traffic law or laws. Responders have been civilly and criminally punished for the injury or death of another person.

There were no laws or cases that were found in regards to mode of response. It should be noted that the two most common lawsuits that are filed against EMT’s are patient refusals and ambulance collisions (Limmer & O’Keefe, 2005). The vast majority of information in regards to proper response to emergencies does not deal with high response times but instead with collisions while responding to emergencies.

A report done by the National Fire Protection Association in 2005 showed that, of the 103 firefighter deaths in 2004, the largest proportion occurred while responding to and returning from alarms. That was a total of 35 deaths out of the 103 for 2004. This fact becomes more pertinent to the issue of non-emergent response after considering that statistics show that chances of having an accident are three times greater and a chance of

associated injuries are ten times greater responding with lights and sirens than responding in the non-emergency mode (Wilbur, 1994). Facts like this bring the idea of non-emergent response to the forefront and it's utilization on a day to day basis.

Many other fire and EMS providers across the nation have implemented non-emergent response criteria or found methods to classify emergencies as non-emergent versus emergent. What criteria do other departments use for non-emergent response?

Numerous articles were found that made reference to Salt Lake City, Utah and there use of non-emergent response. "In 1983 the number of emergency medical vehicle accidents in Salt Lake City dropped 78 percent after the city started to classify calls with a dispatch system. Salt Lake now goes to all routine traffic accidents "cold," or without lights and sirens (Taylor, 2003). The dispatch system that is referred to is an emergency medical dispatch program or priority dispatch.

It is believed that only about 5 to 10 percent of all medical calls is life threatening, but no one knows for sure (Clawson & Dernocoeur, 2004). With such a low number of life threatening calls, screening calls for importance is vital. Priority dispatch allows for evaluation and verification that the system is being used appropriately and effectively (Clawson & Dernocoeur, 2004). Furthermore, by using priority dispatch, the situation is matched to a responder's training and manpower available. This goes against the traditional "more is better" philosophy. Hence, advanced life support units are saved for life-threatening situations.

These classifying programs are designed to respond to the customer's needs at the dispatch level. This means that as soon as the call from the reporting party is received, the emergency is being mitigated. According to Santa Cruz Consolidated Emergency Communications Center (SCCECC), their agency is getting a zero response time for all medical calls due to the fact that they have a emergency medical dispatch system that puts the dispatcher "on scene" with the patient (SCCECC, 2004). These programs use time tested methods of ranking emergency calls. This not only allows an agency to respond non-emergent or emergent but also allows them to queue calls that are less time sensitive. According to C. Funch (personal communication, April 25, 2006), a lead dispatcher at PSCC, most programs use flip cards that direct a dispatcher how to rank a call in a certain way based on answers to a series of questions asked of the reporting party. Newer versions of these programs are computer based in which a dispatcher fills in fields based on the answers given.

In addition, these programs allow the dispatcher to help treat the emergency. This can be done by giving life saving instructions over the phone. For example, many callers reporting a cardiac arrest are asked if they will perform CPR. If they agree but do not know what to do, the dispatcher will give instructions over the phone.

More importantly, the dispatcher can get valuable information to the responders in order to start the assessment and treatment process. The questions are very clear and concise. Although the emergency medical dispatch programs are very effective in creating criteria for non-emergent response, it can cost a lot of money to buy the

materials to get started and even more to train dispatchers on how to effectively use the system.

For this reason, many departments utilized standard operating guidelines or SOG's to dictate the criterion that needs to be met for a non-emergent response. These SOG's might be a lengthy list of specific criteria for certain calls, or as simple as stating that the officer-in-charge utilizes his or her best judgment based on the information given. Regardless, the purpose is not to put the public at needless risk from responding emergency vehicles.

There are many other issues that surround the issue of non-emergent response. Most of these deal with public perception of non-emergent response and also the responder's level of comfort with non-emergent response.

In many areas, the public pays taxes to fund public safety entities. For agencies like a fire department, these taxes are not considered well spent until the taxpayer requires the services of that entity. Fire-EMS departments are like insurance policies, you're unhappy about paying for them until you really need them. Consequently, many people expect the fire truck and ambulance to show up rapidly with lights rotating. After all, it is an emergency to them.

In a telephone survey done by A. Williams of the Anne Arundel Fire Department, it was found that 85% of people surveyed stated that it was not expected for lights and siren to be used when dispatchers are trained to screen calls for safety (Williams, 2005). Many studies that have been in the area of public customer service show that getting to the perceived emergency rapidly is the number one priority. Studies on how much time

can be saved with lights and sirens range from an average of 43 seconds per run (Hunt et al., 1995) to 3.63 minutes (Taylor, 2003). One study by the Tualatin Fire Protection District showed only an average of 27 seconds in increased response time by going non-emergent (Clawson & Dernocoeur, 2004). In another similar study, but in a more urban area, an average of 3.02 minutes was saved by running emergent (Ho and Casey, 1998). But a study that found a 3.5 minute savings said that the quicker arrival didn't translate into clinically significant improvements to the patient (Taylor, 2003). A study in Prehospital Emergency Care showed that there was an average of 1 minute and 46 seconds of time saved by running emergent. The authors went on to say that "Although this difference is statistically significant, the clinical importance of a less than two minute time saving is questionable." With the obvious exceptions of patients requiring defibrillation or clearing of an obstructive airway, there are few EMS cases in which such small time differences are likely to affect patient outcome (Brown et al., 2000).

Another issue is that the public uses 911 as a number to call when there is no emergency but they do not know who else to call. In a personal interview with Laurie Jackson at Casper's dispatch center, she stated that approximately 1 call out of 10 to 911 falls into this category (personal communication, July 11, 2006). These calls are likely to be classified as emergencies only because of the number that was dialed. With the increased use of 911 due to impatience or ignorance, there will be more calls dispatched as emergencies when there is no significant reason other than someone pushed 911 on their phone.

Another issue is the responder's attitude towards the procedure of responding non-emergent. A responder may not want to respond for a couple reasons.

First, they may not have trust in the dispatcher's information or classifying of the call. The information that is given may have vague symptoms that could be from a life threatening situation. A good example of this comes from an example in Principles of Emergency Medical Dispatching where a call was coded as a "sick person without priority symptoms" and it turned out to be a person about to go into cardiac arrest and subsequently died (Clawson & Dernocoeur, 2004). This was a result of a dispatcher who was using a dispatch system but was ad-libbing questions instead of reading them verbatim as trained.

Second, they may not like the idea of change in regards to response policy. It is well known fact that emergency responders don't like change period. There is also an adrenaline rush or at least a heightened sense of awareness when responding with lights and sirens. By changing how responders get to the scene they may feel threatened that the rush will disappear or that the change is just too extreme.

Despite the issues that are evident when implementing procedures for response methods, there are many departments around the country that have put together such programs.

Salt Lake City Fire Department was one of the first agencies in the world to use a priority dispatch program and they have seen good results to prove its effectiveness. The department responds code three to only the highest of ranked calls and no others. The

overriding factor is if the officer in charge of the apparatus gets information that may warrant a code three response (Clawson & Dernocoeur, 2004).

PROCEDURES

Definitions of Terms

Negligence – the act of deviating from the accepted standard of care through carelessness, inattention, disregard, inadvertence, or oversight, which results in further injury to the patient.

Duty to Act – the obligation to care for a patient who requires it.

Research Question Procedures

The procedures for this ARP were started at this author's Executive Development course at the National Fire Academy. Information was gathered from fellow classmates and instructors. A literature search was done at the Learning Resource Center. This was done using the on-line card catalog. This catalog was used to find relevant articles pertaining to the use of non-emergent response. Many articles were reviewed at the fire academy and some books were checked out and read during this time. The staff at the LRC was helpful in obtaining instructions on how to check out articles and books after leaving the academy.

During the author's time at the academy, numerous classmates were asked about the types of responses that they use and the methods that they use to implement them. There were no formal interviews but many ideas and questions were formulated for later use.

The library of fire service books were also utilized at the Casper Fire/EMS Department. Internet searches were also used to get more articles and web sites that pertained to the non-emergent response method.

The Casper Fire/EMS Department's response policy was reviewed in regards to non-emergent response. This review served as a baseline as to what the Casper Fire-EMS Department uses for response criteria at the present time.

A meeting was also set-up with one of the lead dispatchers at the CF-EMS dispatch. This meeting was with Chris Funch, who is a registered emergency medical dispatcher. This meeting was used to determine the present dispatch methods. The lead dispatcher is responsible for ensuring that all dispatchers in the center are following policy and procedure. The lead dispatcher is also responsible for making response decisions in areas that are not routine emergencies or covered by current policies or procedures. The interview was on April 25, 2006 at the dispatch center and lasted approximately 90 minutes, and the following questions were asked:

1. What is the current method of dispatching calls; from 911 line ringing to paging appropriate units?
2. What are the training requirements for a dispatcher at the present time?
3. What other methods of dispatching do you know of?
4. Are we (CF-EMS) dispatching calls in an appropriate manner? If not, what can we do different?

After this meeting there were numerous issues that were brought to the author's attention and could not be answered by the lead dispatcher. In an effort to get a

comprehensive set of answers to these questions, the author had “non-emergent response” added to the bi-monthly staff meeting. This venue was selected to get numerous perspectives on the subject and to possibly get the process started for future change. The meeting was attended by the author on April 27, 2006 at the police department meeting room. The meeting was also attended by:

Mark Young, Chief of Casper Fire/EMS

Mark Harshman, Division Chief of Operations

Kenneth King, Division Chief of Training

Donald Crow, Shift Commander

Egbert VonSeggern, Shift Commander

Mike Moore, Public Safety Communication Center Supervisor

Chris Funch, Lead Dispatcher

The non-emergent aspect of the meeting lasted for approximately 45 minutes.

The material that was covered was mainly about why procedures are the way they are and the pros and cons of changing those procedures. Also discussed were the criteria presently used by CF-EMS for non-emergent response and the frequency that the criteria are appropriately used on each call. The lack of trust between the dispatch center and CF-EMS was also discussed and addressed.

A telephone interview was conducted with Laurie Jackson, a lead dispatcher, on July 11, 2006. She was interviewed to determine the amount of calls that come in on a 911 line but are not perceived as an emergency, even by the reporting party. These

would be 911 calls in which the reporting party simply did not know who else to call.

The interview lasted approximately five minutes.

Survey instruments were also researched in order to get an idea for how much time is saved in Casper, Wyoming when going emergent to calls versus non-emergent. Based on the information that was needed to answer questions in this ARP, a data request form was developed for distribution on the Casper Fire/EMS Department. This request was for emergent response EMS calls only. A copy of this survey is in Appendix A. The survey was taken to CF-EMS Chief Mark Young for approval of use job wide. The chief approved its use and requested the results for possible use in the future.

In an effort to get buy-in from the department as a whole, the author went to each station on the different shifts to present the survey and its intent. The instructions and the importance of them were explained. The data was collected for emergent EMS calls only. All people contacted consented to using the request until a reasonable amount of data were collected. The surveys were picked up periodically from June to August 2006. This data was then compiled and organized to determine an average time saved by running emergent. Thirty seven different EMS calls were evaluated. Furthermore, the importance of a rapid response was determined by experienced first responders that were EMT-basic at the minimum qualification.

The goal of this action research was to develop criteria that would work for CF-EMS. By finding a commercial product that satisfied the requirements of this organization, the implementation process was begun. A letter was sent to Chief Mark Young that stated the recommendations of this research. A copy of this letter is in

Appendix B. Chief Young read the recommendation and decided to begin the implementation process. A copy of this response letter is in Appendix C. The outcome of this research was very constructive and will have a positive effect on the CF-EMS for years to come.

The limitation of this research was that there are very few sources that said what amount of time is detrimental to a particular type of patient illness or injury. The people that were contacted regarding the subject of non-emergent response would not consider themselves experts in the field for this reason.

Another limitation was that there are not many sources that have done applied research in the area of non-emergent response. The author could only locate a few published studies that looked at time saved by running emergent. This limitation was further compounded by the fact that the clinical implications of this response time, saved or lost, were not known. Time was also an issue in the fact that this topic could use extensive amounts of it to gather more information for a more complete research paper. Additional experiments could be used as well as doing a long term study of response times.

The most significant limitation encountered was the fact that the amount of lives saved by running to calls non-emergent will never be known. It is a preventative method that does not lend itself to measurement. Data was found that showed a decrease in accidents but the accident data fluctuated from year to year and could not be extrapolated based on any one cause. The abstract components of non-emergent response can be compiled with sound theory to produce concrete results.

RESULTS

The results of this study indicate that there is a need for all first responder agencies to have criteria that dictate a non-emergent response. These criteria will vary from agency to agency but all will have a common goal, which is to save lives. In the past, criteria were developed for the CF-EMS department. However, these criteria have been altered over the years to the point that it can be rationalized for most cases that the criteria do not apply and an emergent response is used. There are agencies in the United States that do not use emergent response except for a few instances. There are also agencies that do not have any criteria that point to a non-emergent response. The administration of the CF-EMS realized this and was interested in the results of this ARP to help determine what criteria would be suitable for the Casper Fire/EMS Department. The answers to the following research questions will help accomplish this.

Research Question 1 Results

Most states have laws that tell a responder what privileges they are granted when responding to an emergency with lights and sirens. These privileges are sometimes written in a vague style or in some instances they are dictated in a very specific manner. However, the author could not find any laws that state when emergency vehicles should travel emergent or non-emergent. Individual agencies may set up policies and procedures that indicate when the two different modes of travel are used. The agency may base the policies on what is considered an emergency and what is time sensitive. For those agencies that have no criteria for non-emergent response it needs to be known that in the legal world one of the most common reasons for litigation is a result of an accident with

responding or returning units. All studies the author looked at indicated that the majority of collisions occurred in the emergent mode. Furthermore, case law is holding responders liable for injuries and deaths that are a result of a collision. Many responders may not realize that Good Samaritan laws do not protect them while they are driving an emergency vehicle (Lucia, 1993). Responder's have been found guilty of negligence crimes in the past. The amounts of these types of cases will continue to grow more rapidly as more case laws are created.

Research Question 2 Results

There are many departments across the United States that have realized the need for non-emergent response. These departments have created policies and procedures that are custom made to accommodate their community. These policies and procedures are based on everything from past experiences to how the infrastructure of the area accommodates travel from one area to another.

There are also emergency dispatch programs that help develop the criteria for non-emergent response. Some of these programs only recognize a few instances as an emergency that may require an emergent response. According to Principles of Emergency Medical Dispatch:

Most systems identify the most time critical calls are cardiac or respiratory arrest, airway problems (including choking), unconsciousness, severe trauma or hypovolemia, and true obstetrical emergencies. The early identification of these emergencies means a maximum response is sent. For the majority of other

problems planners need to carefully consider a less than all-out response

(Clawson & Dernocoeur, 2004).

In addition, these programs allow the dispatcher to be the first responder on scene because they provide life saving instructions to the reporting party.

Regardless of which method of choosing the criteria for non-emergent response is based on, the agency must define what a true emergency is. This must be then refined to fit the risk-benefit philosophy of that agency.

Research Question 3 Results

There are other issues that surround the area of non-emergent response. One such issue is the public's perception of emergency services. There are numerous articles about public service that show the public's number one priority is a rapid response by emergency services. The question then becomes: Does 45 seconds of slower response not qualify as rapid? What about 4 minutes? These questions are difficult to answer for many reasons. From a clinical perspective there are only a couple sources that feel, in most cases, that a response time that is four to five minutes slower is significant. The result of this author's response time study was an average difference of 2 minutes and 9 seconds. This study was done by CF-EMS in Casper, WY and based on 37 different EMS calls that were responded to emergent. A copy of the data request is in Appendix A.

On another level, there are calls that are dispatched as emergencies just because the reporting party dialed 911. This is because they did not know another number or who

else to call. These calls are common and it is hard for the dispatcher to make a decision on how to classify the call with no criteria to guide them.

Another group of issues are encountered when talking about the responder's level of comfort when implementing a non-emergent response. A responder may respond emergent because they feel it is a safe response for the patient. If the responder gets to the incident as quick as possible, the responder does not have to make a decision in regards to the severity of the situation. The responder feels this is a better safe than sorry approach. Unfortunately, it is difficult to show the lives that are saved because of non-emergent response. This is even more so in a community in which there is only 1 or 2 emergency vehicle collisions per decade. This is the case in Casper.

Another responder issue is that of cultural change. It is a well documented fact that people in general do not like change. This fact is more pronounced in the emergency service occupations due to long standing traditions. Responders continue to respond emergent to calls because that is what they have always done in the past.

Research Question 4 Results

There are emergency response agencies around the world that have realized the importance of non-emergent response. These departments have put together their own criteria for non-emergent response and policies to implement such programs. Other departments have gone to the private sector and purchased products that have been proven over years of use.

The department that is most mentioned in the area of non-emergent response is the Salt Lake City Fire Department. This agency utilizes an emergency medical dispatch

system developed by Jeffrey Clawson of Priority Dispatch. This system classifies calls based on a series of questions asked of the reporting party or in some cases the patient. In 1983, Salt Lake City Fire Department had a 78% drop in emergency vehicle collisions after implementing the Priority Dispatch system (Taylor, 2003).

The overall decision for what type of response is left to the company officer on each apparatus. Priority dispatch has never had a lawsuit filed against them for an inappropriate response. The company says that if the system is used properly the company will pay for the litigation if any is filed against an agency that is using their product.

Action Research Results

The purpose of this research is to develop criteria that would indicate a non-emergent response is a proper response given the emergency. The criteria of choice would be what are outlined by Priority Dispatch's EMD system. The three reasons for this selection is that the company has had a long standing reputation in the field of classifying calls, the Public Safety Communication Center already has the product, and the people that work in the center are already trained to use it. Once again, Casper has the system but has chosen not to use it for a couple of reasons. The implementation of this system was brought up in the CF-EMS staff meeting and the two dominant reasons for not implementing the system is the lack of trust in dispatch and the fact that the benefits of non-emergent response have not been brought to the department's attention until now. As far as the trust issue, Lieutenant Mike Moore, head of the PSCC, said that

he would do everything in his power to resolve this trust issue. Currently, he has a number of items in the works to resolve this.

Other than finding criteria for the CF-EMS to use, a letter was drafted to alert the chief of CF-EMS, Mark Young, to the recommendations of this research. A copy of this letter is in Appendix B. This letter was evaluated by the chief and the decision was made to start the implementation process. The process for implementing an idea such as non-emergent response is a long one due to the number of other stakeholders. A summary of the steps that will need to be taken are outlined in the response letter from Chief Young. A copy of this letter is in Appendix C. The process of change is further slowed down due to the fact that there are other agencies that may not want to implement such a large cultural change. This creates an environment where this author will continue to educate other people in the benefits of non-emergent response.

DISCUSSION

Relationship Between Study Results and Literature

Based upon the information gathered in this research project, this author does not feel the CF-EMS and surrounding agencies are doing enough to protect its citizens while responding to calls. A study in 2002, by Prehospital Emergency Care, looked at 339 fatal ambulance crashes and found that 60 percent of them occurred during emergency use (Taylor 2003). This is similar to the findings of Brown et al. (2000) who stated that another study showed that nearly 70% of fatal ambulance crashes occur during emergent response. Furthermore, there is a phenomenon called the “wake effect” that can also

adversely affect the community. This effect occurs when the public panics in the presence of lights and sirens. Rear-end type collisions are a common consequence of emergent response because the public has a tendency to hit the brakes hard when they see the lights and hear the sirens. A study conducted in Salt Lake City found that there are five wake effect vehicle collisions for every emergency vehicle collision. These panic reactions can also cause motorists to abruptly pull over or swerve into another lane, increasing the risk of these types of secondary collisions (Lucia, 1993). It is negligent on the part of the CF-EMS, and the fire service as a whole, to wait for another injury or fatality for response criteria to change. It's time for this department as well as others to stand up and say, "We will not unjustly risk the lives of citizens to save unneeded time."

After looking at the number of injuries and deaths associated with responding and returning emergency vehicles, it does not take long for one to realize that there is a problem with how emergency services are doing business. It appears that the concept of risk/benefit analysis is not being applied in the area of medical emergencies. This is certainly the case for the Casper Fire/EMS Department and the Wyoming Medical Center.

Interpretation of Results

An interpretation of the results of this study leads this author to conclude that CF-EMS, like most agencies, has not taken a serious look at the benefits of non-emergent response. This author feels that this has been mostly in part due to the traditional values of the fire service. If you call, the cavalry will show up and everyone will know it. Maybe it is a visibility issue and by running calls emergent it has become a public

relations gimmick to increase support for the fire/EMS departments. Whatever the reason, it needs to be weighed against the large amount of risk that the fire service is introducing to its community.

No matter what resources an agency possesses, there are steps they can take to reduce the risk to the public. It can be as simple as empowering the responder's to make the decision to respond emergent or non-emergent. It needs to be reinforced that a true emergency is defined as a situation where there is a high probability of death or injury (Federal Emergency Management Agency, 1996). The more training and experience the responder possesses the easier and more reliable the decision will be. The initial step is educating.

Numerous responders around the country have realized the importance of non-emergent response and have developed local protocols as well as commercial products for worldwide distribution.

After looking at the extensive thought that has been put into emergency medical dispatch protocols it is not a surprise that no litigation has been filed regarding the classifying of calls. The calls that are ranked in the top tiers fall right in line with this author's training as an emergency medical technician. The fire service needs to be educated about the criminal and civil liability that may fall upon them personally. Wolfberg (1996) makes it a point to let responders know that the Good Samaritan and governmental immunity defenses in litigation offer no protection criminally or civilly to the emergency vehicle driver if the plaintiff can prove gross negligence on the part of the

emergency vehicle operator. It is time for CF-EMS and the fire service as a whole, to make sure that we are taking care of patients and not creating them.

Organizational Implications

One of the greatest implications of this research is that the administration and line duty firefighters of the CF-EMS are more aware of the consequences of needlessly running emergent to non-life threatening calls. It has brought to light a topic that has been buried for decades. The culture surrounding this topic is also very much alive around the country and will not be easy to change. Cady and Lindberg (2001) reported that 32% of the 200 largest cities in the country still respond emergent to all calls. It is not a popular topic amongst line duty firefighters because it concerns change and the reduction of something that is considered necessary or just plain fun. Wilbur (1995) summarized that first responder departments need to develop, modify, and enforce driving policies before the legal or insurance industry does it for us.

Another implication for the CF-EMS is that Chief Mark Young has “the reduction of response times” as a major part of the department’s strategic plan. This research shows that there is a need for non-emergent response, but can that be incorporated into the current strategic plan? In the case of this research, it is not a question of response times, as much as a question of sending the correct response. Regardless, all studies that this author looked at showed a minimal amount of response time added by going non-emergent. The largest difference was that in the study done by Ho and Lindquist (2000) done in Becker County, Minnesota, where an additional 3.63 minutes of response time were added. However, this amount of time could not be added to CF-EMS response

times and be within the strategic plan goals. On the other hand, if the response time goals applied only to those calls that were deemed an emergent response by the criteria in this research, there would be no conflicts. It should also be noted that the chief of a department that is found negligent in an accident may also be held responsible. Peters (1998) alluded to such a case in which the officer and fire chief were found partially responsible due to not having operating guidelines in place.

Another issue is that the CF-EMS can not see a significant drop in emergency vehicle collisions due to the fact that it is a relatively small department with very few collisions to begin with. Whereas a larger department like Salt Lake City Fire Department which saw a 78% decrease in collisions (Clawson & Dernocoeur, 2004). Another study by Schaper (1997) showed that the St. Louis Fire Department also reduced their collisions by 35 percent. CF-EMS would not have the ability to produce this kind of impressive data to support non-emergent criteria in our community. This is, however, a common problem in any area that deals with preventative measures.

RECOMMENDATIONS

As a result of the data collected for this applied research paper, the best recommendations that this author can find is to take the tried and proven criteria set forth by a professional emergency medical dispatch company, like Priority Dispatch, and implement it into the standard operating procedure for the Casper Fire-EMS Department. This author feels that this would be the best solution for a number of reasons.

First, it is a set program that has been developed by medical professionals that have a clear understanding of what questions need to be asked and the order in which they need to be asked. The answers to these questions prioritize the call. The questions are carefully formulated and are to be asked verbatim to ensure a proper prioritization of the call.

Second, it allows the dispatcher to get valuable information from the actual reporting party, instead of the responding unit trying to read between the lines or fill in the blanks. In the absence of critical information the emergency responder will always go with the worse case scenario and respond appropriately. In most cases this would end up being an emergent response.

Third, the responsibility of ranking call is taken off the shoulders of the responding unit. As stated above, the responding unit usually has no way of getting the information from the reporting party. They are instead, depending on the dispatcher to get critical information and pass it on to the emergency responder. This method is cumbersome and has much more room for error because the information is filtered through a third party, the dispatcher.

These types of programs also have a perfect track record when it comes to litigation. If the system is properly used, the program producer will pay for the litigation if it ever arises. But more importantly, during this research there were no negative remarks regarding the use of these programs.

Lastly, the CF-EMS already has the Emergency Medical Dispatch Program by Priority Dispatch available in the dispatch center. Furthermore, the current dispatcher's

are already trained on how to use the system. It is a matter of implementing an SOP for its use in ranking calls.

It needs to be reiterated that the prioritization of the call does not dictate to the responding unit how it has to respond, but instead it is a recommendation based on the information that the dispatcher has received. If the responding unit has reason to believe that minutes or seconds matter, it can still respond emergent.

By implementing these recommendations, the CF-EMS will save lives of both citizens and firefighters. There is still a need for additional research in the way of evaluating the non-emergent criteria and response. Quality control needs to be looked at for CF-EMS as well as other departments that use the same types of emergency medical dispatch. Furthermore, this change needs to be introduced to company officers first in order to get input and buy-in from those who will execute the change in response.

Other departments that are looking at reducing the risk to their communities through non-emergent response must understand that there are deep seated issues that must be addressed. The fire service has a unique culture when it comes to change and it certainly makes it difficult to implement non-emergent response. This author, however, feels that through education, the facts present themselves in a manner that makes it hard to disagree that non-emergent response has a very important place in our profession.

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Appendix A

Copy of Data Request

Emergent Call Data Request

Date and time of call:

Station #

Call Dispatched As:

Time elapsed from responding to arrival radio traffic:_____ min._____sec.

Non-emergent response time:_____min._____sec.

(Please use the same route, time of day, road conditions, etc.)

Looking back at the call, what amount of added response time do you feel would have been damaging (mentally or physically) to the patient or citizen?
(Circle One)

30 sec. 1 min. 5 min. 10 min. more than 10 min.

Did you respond emergent because it was a life threatening situation? Y N

If no, was it from lack of complete dispatch information? Y N

Transport options (Circle one):

Refusal Non-emergent transport Emergent transport

Appendix B

Recommendation to Chief of CF-EMS



CITY OF CASPER FIRE DEPARTMENT

200 N. David Street, Casper, WY 82601
PHONE: 307-235-8222 FAX: 307-235-8218
www.casperfire.com

MARK P. YOUNG
Fire Chief

September 20, 2006

Chief Young,

I have finished my ARP and would like to share my findings with you. The Casper Fire-EMS Department needs to stop exposing its firefighters and the citizens of the community to unneeded risk by responding emergent to virtually every call.

My recommendation is to classify incoming EMS calls at the dispatch level. This is for the following reasons:

1. To properly classify calls, various questions must be asked of the reporting party.
2. Our PSCC already possesses an emergency dispatch system by Priority Dispatch. This system is one of the best systems available and has been tried and proven by various agencies around the world.
3. All dispatchers at our PSCC are trained in the proper use of the emergency medical dispatch system.
4. It takes the pressure off the company officer of the responding unit to make a life and death call based on limited information.

All of the pieces are in place for our transition to a higher quality response policy. We simply do not use our dispatch system for what it was designed for. I realize there are issues that need to be resolved before this transition can take place. Please consider my recommendation and let me know what I can do to help implement this important change.

Sincerely,

A handwritten signature in blue ink, appearing to read "Tim Cortez".

Tim Cortez
Captain
Casper Fire-EMS



Appendix C

Response from Chief of CF-EMS



CITY OF CASPER FIRE DEPARTMENT

200 N. David Street, Casper, WY 82601
PHONE: 307-235-8222 FAX: 307-235-8218
www.casperfire.com

MARK P. YOUNG
Fire Chief

September 21, 2006

Mr. Tim Cortez
Fire Captain
Casper Fire-EMS Department
200 N. David St.
Casper, WY 82601

Captain Cortez,

I am in receipt of your letter recommending that the City of Casper Public Communications Center begin classifying its EMS calls as they are received and dispatch them, on a priority status, to our agency and other responding agencies accordingly. It is my understanding that this recommendation is being proposed as a result of your Executive Fire Officer Applied Research Project.

I am in support of your recommendation. At this point in time, due to the fact that the Public Communications Center is a division of the Police Department and that they serve many other emergency agencies in the County, I will need to proceed in a collaborative effort to gain support from all agencies affected by this new policy/procedure. I envision the following process will need to be used to gain support from other response agencies served by our dispatch center:

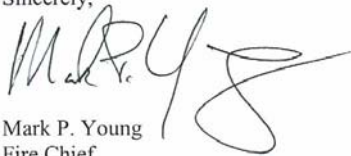
1. Meet with the Police Chief and Communication Center staff to discuss the issue at hand and to elicit their feedback and support for the project.
2. Meet with the Public Safety Communications Center Oversight Committee to present the proposed change to all of the affected user agencies.
3. Assist with the development of the policy change.
4. Educate all agencies and associated responders on the change in procedure/policy.
5. Implement policy/procedure.

I will take you up on your offer to provide assistance to me and others while we work through the proposal.



Thank you for your research efforts and your recommendation. I see it as a valuable recommendation and look forward to working with you and others to gain its acceptance and implementation in our department and all other County response agencies.

Sincerely,

A handwritten signature in black ink, appearing to read 'M. P. Young', with a stylized flourish extending from the end.

Mark P. Young
Fire Chief