2015

CMFD Ambulance Service Feasibility Study

Feasibility Study

AP Triton LLC©

11/30/2015

November 30, 2015

Daniel Stefano
Fire Chief
City of Costa Mesa Fire Department

Dear Chief Stefano,

On behalf of A.P. Triton LLC© please accept this review of options for delivery of Emergency Medical Transport Services for the City of Costa Mesa. The future of healthcare in California, as well as the entire country, is on the verge of change. While many have chosen to look the other way the City of Costa Mesa has taken on the task of exploring options for the future. For this we commend you and your city's leadership. While there is no single pathway to the best method for the delivery of ambulance services within the City, there are options that provide better benefits than others. We believe the document presented provides a fair and unbiased assessment of the available solutions to the reorganization plan adopted by the City. We encourage both you and the City Council to not only look at the bottom line, but strongly consider the options that best serve patient care, system stability, flexibility for change and most importantly, local control.

We will remain available to address questions comments or concerns brought on by this study and are prepared to assist in future presentations to your elected officials as needed.

Sincerely,

Kurt P. Henke
Managing Partner
A.P. Triton LLC©

Section 1: Executive Summary

The Costa Mesa Fire Department has undergone an extensive reorganization of their operational deployment model in order to maximize the efficiency of their organization. On May 7, 2013 the Costa Mesa Fire Department presented to the City Council a recommendation for reorganization. The City Council approved the "Alternative Model" of the restructuring. (See attachment 1- City Council Agenda Report). The current practice is the response of an engine company, a fire based ambulance and a private ambulance provider to all EMS incidents. This type of response to medical emergencies is atypical when compared to best practices throughout the United States. Simply stated, this deployment model is not the most efficient for an urban city, operationally or financially. The reorganization plan included the purchase of ambulances and the redeployment of personnel from engine companies to ambulances. As a result, there is no new personnel cost to the implementation of this new ambulance delivery model. The City of Costa Mesa is an H&S Code 1797.201 provider and therefore retains the obligation to provide ambulance services unless it is transferred to Orange County. Along with the obligation to provide the services, the City also retains administrative control of these services.

The purpose of this study is to evaluate the various options available for the efficient delivery of ambulance services for Costa Mesa. The objective is to determine the key factors fire department staff feels are important in selecting a delivery model and recommend the model which most closely meets these goals. Those goals encompass: enhancing the delivery of patient care, improving cost recovery, promoting efficiency in the system, and the ability to be flexible and proactive in making changes in the EMS delivery model as both health care and EMS evolve into the future.

The Fire Department has already begun the transition to providing a more efficient system, with implementation of fire based ambulances. What has been lagging is a City policy on how those units should be utilized, and to what level cost recovery for those services will be implemented. It is the

opinion of this consultant that the response of multiple ambulances to the same incident is not in the best interest of the community, nor is it the most efficient use of resources. A well-coordinated plan for the community's resources starts at the commencement of the call for service and is complete not when the patient is delivered to the emergency department, but when patient outcome is relayed back to the providers, so that training and system modifications can be implemented to achieve better patient outcomes. The more streamlined this process is, the more likely positive patient outcomes will improve.

In order to facilitate changes that may create increased positive patient outcomes, there must be the ability to push money into the delivery model to cover equipment and personnel improvements. EMS systems, particularly the transport component of the system, allow for cost recovery through billing and collection. A sound, well thought out cost recovery program must not only be considered but also implemented. The City of Costa Mesa has the ability and obligation to create a billing and collection policy for the utilization of their ambulances that will generate a cost recovery program which includes no out of pocket costs to the residents they serve.

As the City moves forward in considering the possible deployment models that best suit their needs, they must also consider what they feel is the primary objective for providing not only ambulance but EMS services in general. Is the objective simply to transport the sick and injured to the hospital, or is it to provide an EMS system that increases the quality of life for those who live, work and visit the City of Costa Mesa? The city needs to determine not what the EMS system will look like in the short term, but how the City will address and embrace changes in the health care system in the next decade and beyond.

This report will present four deployment models for consideration by the City of Costa Mesa

1. Continuation of the existing deployment strategy of sending a fire department engine and rescue ambulance along with a private ambulance to all EMS calls
2. Fire department assumes 100% of all emergency ambulance services in the City
3. Fire department engages in a partnership with a private contractor to provide Advance Life Support (ALS) transport while the private contractor provides Basic Life Support (BLS) transport
4. Fire department assumes 100% of all emergency ambulance services using a new class of employees to staff Rescue Ambulances.

Model #	**Model #1**	**Model #2**	**Model #3**	**Model #4**
Deployment Type Service Description	Current Model	CMFD Assumes All Ambulance Service	CMFD Handles ALS/Private Handles BLS	24 New Employees to Provide Ambulance Service
Net Cost Recovery	$645,372	$4,297,848	$2,623,395	$4,297,848
Billing Cost	None	$202,392	$118,670	$202,392
New Employee Cost	None	None	None	$1,633,620
Total Realized Cost Recovery	$645,372	$4,095,456	2,504,725	$2,461,836

Section 2: City of Costa Mesa Fire Department Formal Feasibility Study

The City of Costa Mesa Fire Department (CMFD, also referred to as the Department or Costa Mesa Fire) contracted with A.P. Triton LLC© to deliver a feasibility study to provide an objective assessment of emergency ambulance transportation options as identified in the Fire Department's reorganization plan. The scope of work was to: determine the most viable emergency ambulance deployment options specific to the City of Costa Mesa, recommend the best options for the City in providing emergency ambulance service, evaluate the City's plan to provide ambulance services and provide the cost benefits, and pros and cons of each option. This also included submitting additional reimbursement options for the Fire Department to present to the City Council for a policy decision on emergency ambulance transportation.

To provide ambulance service, the City has numerous options, and within each option there are many sub-options that can be developed. This study we will focus on four (4) basic options. The first model is the currently operating deployment model. The second relies on CMFD providing all Advanced and Basic Life Support care and transport. The third model explores CMFD providing all ALS care and transport while a private ambulance contractor provides BLS transport. And, lastly the creation of a CMFD Rescue Ambulance Transport Program utilizing EMT employees

With each scenario, this study will provide a financial breakdown which will include: cost of development, cost of infrastructure, startup costs, overhead costs, revenue potential and cost recovery to be realized. With the information provided in this report, CMFD, with the Chief Executive Officer, can then make a sound and objective recommendation to the City Council for

consideration and final policy decision based on the best interests of the citizens of the City of Costa Mesa as well as the operational effectiveness of the CMFD.

Criteria

When determining whether or not to provide ambulance services, perhaps the most difficult aspect is determining what criteria to use. For the private sector, the decision is relatively simple; the goal is to provide the best patient care possible at the lowest cost in order to extract the maximum amount of profit. Or, at the very least, maintain a profit margin that sustains the operation. This formula is not necessarily concurrent with the goals of the public sector provider. In order to determine the best model for the provision of emergency ambulance services, the Department, as well as the City, must first determine their objectives or reasons why they are looking to provide the service. Reasons for moving into the ambulance transport service can include: expanding the types of services already being provided, generating revenue for the purpose of cost recovery that is not currently being tapped, enhancing the level of patient care that is currently being provided, or creating stability in a system that is near a breaking point. While each of these goals is not mutually exclusive, and several of them may even be combined, each example requires a very different deployment strategy and thus very different infrastructure, startup and operational costs. Determination of success may not be decided by the revenue received but by whether or not the objective is met. If the objective is to deliver a better level of patient care, shorter response times, and optimal unit hour utilization than what is currently being delivered, and it is discovered that the selected deployment model meets or exceeds all of these objectives, the program would be considered a success regardless of cost. Although the fiscal impact is not the sole reflection of success in today's fire service, the rising cost of providing service is a reality, and revenue must be considered. Service related industries rely on providing

a needed service at a cost the public is willing or able to pay and must include maintaining a profit margin in order to be successful. The level of success is evaluated by how close the end result is to meeting the needs and goals which are determined prior to the outcome, with fiscal impact a major consideration.

Table of Contents

Section 1: Executive Summary 2
Section 2: City of Costa Mesa Fire Department Formal Feasibility Study 5
Criteria 6
Section 3: Minimum Requirements 10
Section 4: Determination of Objectives 11
Items identified as "Key Elements" by CMFD for Consideration of Assumption of Ambulance Services 12
Optimizing Patient Care 12
Efficient/ Effective Deployment Model 13
Cost Recovery for the Services Provided 14
Applying Revenue to the Current Infrastructure 16
Flexibility to Adapt to a Changing EMS Landscape through Control of Emergency Operations 17
Stability within the Service Area and Operational Control 18
Section 5: Determining the Value of the System 20
Billing Policy 20
Collection Policy 21
Transport Rates 21
Documentation 22
Billing Contractor's execution of the City policy 22
Understanding Payer Mix 23
Population/Demographics for Orange County 23
Population/Demographics for Costa Mesa 24
Costa Mesa Payer Mix 25
Alternate Rate Adjustment 28
GEMT/IGT 30
Section 6: Deployment Models 31
Deployment Model I – Current Model 31
Deployment Model I – Fiscal Summary 33
Deployment Model II – Fire Department provides both ALS and BLS Transport 34
Deployment Model II – Fiscal Summary 36

Deployment Model III - Fire Department provides ALS, Private Contractor provides BLS Transport 37
Ability to Provide Services under Deployment Model III 39
Deployment Model III – Fiscal Summary 40
Deployment Model IV-Staffing four 24 hour units with non-suppression Single Role EMT [SRE]..... 42
Deployment Model IV - Fiscal Summary 44
Section 7: Federal Supplemental Reimbursement Programs 46
Section 8: First Responder and ALS fees 48
Deployment Models / Cost/ Cost Recovery Table 49
Conclusions 50

Section 3: Minimum Requirements

CMFD currently provides ambulance services to this jurisdiction. In doing so the Department meets the minimum requirements to provide ambulance service which includes both equipment standards as well as adherence to Medical Control as described in H&S Code 1797.

Section 4: Determination of Objectives

Note: *As with all feasibility studies conducted by A.P. Triton LLC© a primary goal is to reach a consensus by the agency team members as to the reasons they wish to explore engaging in this venture. It is based upon these objectives that we develop "Key Elements" by which each of the deployment models is measured.*

In initial meetings with the Fire Chief and members of the Fire Departments staff, it was made clear that the intent of the study was to provide an objective analysis of the various transport options for CMFD and the City of Costa Mesa in accordance with the approved "Alternative Model". The primary objective was then used to develop the program key elements. It was established that unless there was consensus among all the parties on at least the majority of these key elements, there was little sense in moving forward with a new program. The key elements which were identified as having consensus with all parties were as follows:

- Optimize patient care
- Efficient/effective deployment model
- Cost Recovery
- Flexibility to adapt to a changing EMS landscape

Determining how each one of these key elements will be or can be achieved, will aid in the selection of the best model for the Department to use in moving forward. Because there were four key elements identified, each has its own operational, financial and administrative requisites that must be shared with all of the system needs.

Items identified as "Key Elements" by CMFD for Consideration of Assumption of Ambulance Services

At the initial meeting with Department staff, there were four "Key Elements" that they identified as priorities in providing ambulance services. These Key Elements will be the foundation for determining whether the ambulance system, as well as the delivery model(s) will meet the needs of the Department, citizens and the City's plan for reorganization.

Optimizing Patient Care

The team assembled by the Department identified four key elements that they felt were important to the undertaking of ambulance transport. Each by themselves provides advantages to the system. Combined, they actually deliver, at the very least, the opportunity to maintain the standard of care but would likely result in an overall enhancement of the current system. As the participants in the system become more streamlined in numbers and philosophy, the synergy lends itself to higher levels of care and customer service.

The licensing of paramedics and certification of EMT's is uniform across the state. All EMTs and Paramedics (EMTP) must meet the same requirements and have the same basic scope of practice within their fields. While the training and scope of practice remain the same for all EMS providers, what may not be the same is the institutional knowledge and longevity that is possessed by providers that may have a greater vested organizational commitment and stake in the community they serve. Paramedics and EMT's in the private sector tend to be more transient often moving from company to company. A career life span in the private sector is often measured in years, while in comparison, the careers of fire department employees are measured in decades. The cohesiveness of team members with long standing working

relationships and the impact on the delivery of both patient care and outcome cannot be underestimated.

In order to distinguish a higher or improved level of care and service, there must be a quality measure that can be evaluated for comparison. This measure can be anything from: documentation, surveys, time on scene, Return of Spontaneous Circulation (ROSC), interval from dispatch to intubation, patient outcome for certain conditions, to any combination of factors. Integrating streamlined ALS transport into the existing system would likely provide for better patient outcomes and optimize patient care. When patient care and transport in the most critical of conditions is facilitated in the most expeditious manner, better patient outcomes are a measurable result.

Efficient/ Effective Deployment Model

As discussed, there are numerous deployment models that can be utilized and integrated into the CMFD operation. Each has its own positives and negatives which must be balanced against the "key elements." The terms "efficient" and "effective" in the context of this report mean that they must meet all of the operational needs to support the EMS functions and take into consideration that CMFD must also be able manage the non-EMS needs that fall under their mission. In addition to meeting those requirements, the model chosen must be operated in a fiscally sound manner, not just in the short term but the long term as well. The deployment model selected must also take into account the reorganization plan that the City Council has already approved. The City is currently responding an engine and ambulance to each call for medical services within the City along with the current private ambulance provider. Developing a system that better utilizes the available resources currently in the system will allow for a more

cost effective and safer system. Streamlining of services is the most cost effective and efficient means to increased delivery. When the 9-1-1 system is activated, pre-arrival instructions are provided to the caller while units are being dispatched. Once on scene, a coordinated effort can be initiated to address the patient's needs. Having the ability to transport critically ill or injured patients at the most optimum time in the call can yield the most benefit to that patient. This key element may be the single most important consideration.

Cost Recovery for the Services Provided

In order to achieve a well-orchestrated EMS delivery system, it may be necessary to develop a cost recovery plan for those services provided. If the City chooses to implement an emergency ambulance service, they may also choose to adopt a cost recovery plan for the provision of those services. In doing so, the City may also adopt a liberal and compassionate billing and collection policy that would result in achieving an enhanced level of service as well as a more efficient deployment model without increasing cost to the local taxpayer.

The function of local Government is to provide for essential services. Government code §54980

> *(a) "Legislative body" means the board of supervisors in the case of a county or a city and county, the city council or board of trustees in the case of a city, and the board of directors or other governing body in the case of a district.*
>
> *(b) "Local agency" means any county, city, city and county, or public district which provides or has authority to provide or perform municipal services or functions.*
>
> *(c) "Municipal services or functions" includes, but is not limited to,* ***firefighting, police, ambulance****, utility services, and the improvement, maintenance, repair, and operation of streets and highways.*

Being the ambulance provider of record, the City assumes full responsibility both financially and operationally for emergency ambulance services. Insuring that the system is supported by a fee structure that creates stability for the long term, along with reducing cost to that city taxpayer, is in the best interest of all parties.

Applying Revenue to the Current Infrastructure

As identified previously, additional revenue is available from other sources, as well as the ability to create additional new revenue strategies that can be utilized to enhance the current EMS infrastructure.

If there is a private ambulance provider doing business within an urban area, there is profit to be made. If there was not profit to be derived in the system, there would be no competition among private providers. Thus, there would be no reason to create an RFP for ambulance services. Ambulance companies are in the business of providing a service that makes money like any business. The EMS industry in California has created a competitive system that encourages the submission of low, ***unsustainable*** bids to secure ambulance Exclusive Operating Areas (EOA's). Historical examples suggest that both the State Emergency medical Services Authority "EMSA" and the Local Emergency Medical Services Authority "LEMSA" play a significant role in creating and approving unrealistic RFP's in which local government has had to step in with subsidies in order to continue to provide citizens with ambulance services. With this being stated, it should be understood that an EOA, or in this case the City, has a fixed financial capacity or cap regardless of who is providing the ambulance service. If every provider operated in the same way and had the same revenue generating options available to them, then every agency would generate the same amount of profit and pay the same amount of operational costs.

However, since each agency operates uniquely, the amount of profit that can be realized is determined by a host of items that impact collections for service. The largest item is the cost of personnel and the number of unit hours provided. Also note that depending upon the billing and collection policies of the provider, the amount of revenue pulled from a system can

vary greatly. Through multiple delivery models, the Department can collect revenue over and above the cost of the transport component of the system and return the additional revenue back into the EMS system as a whole. There are multiple fire agencies in California successfully doing just that. In addition to collecting revenue from the transport of patients, there is substantial revenue that is available through Ground Emergency Medical Transport (GEMT) and Inter-Governmental Transfers (IGT's) for transport of Medi-Cal fee for service and managed care patients. These supplementary revenue generating programs will be discussed later in this document.

Flexibility to Adapt to a Changing EMS Landscape through Control of Emergency Operations

As a participant in the system, a provider can have input into making the system better, but unless the participant is also the ambulance transport provider they have little ability to make changes in the system. Health care and EMS in particular are on the edge of seeing potentially significant changes in the delivery of EMS. The future of what EMS delivery looks like is changing every day, and the ability to meet the new demands must be proactive, not reactive. Engagement through direct control of the system allows the City the best possibility to be proactive as the system changes. Only as the primary provider or as an active participant of the transport component can CMFD have the ability to ensure vital changes take place in a proactive manner. As the transport provider, the Department will retain local control both administratively and operationally of all aspects of patient care. This includes the initial call for service, patient contact with the EMS system, transport, transfer of the patient to hospital staff and follow-up as part of the CQI process. As needs change, CMFD will be able to establish trigger points in system delivery that will alert staff that modification in the system need to be considered or evaluated. An example may be changes in reimbursement for transport of low

acuity patients within an HMO to clinics. CMFD may be in alignment with those HMO's and be able to provide a lower cost transport unit to get those patients to the right facility at the right time in the right vehicle. This is a benefit to the City and the patient and is in alignment with the triple aim of healthcare. This component should be a focus for consideration.

Stability within the Service Area and Operational Control

The establishment of an Exclusive Operating Area (EOA) is conducted by the Local Emergency Medical Service Authority or LEMSA. The primary reason for establishing an EOA is to create a stable financial market in a specific geographical, socioeconomic area so that emergency ambulance services can be provided to all citizens on an equitable basis, and the area can be financially self-sustaining. In the case of cities, in lieu of an EOA, their area is confined to the city limits, as is the case with Costa Mesa. Theoretically, the EOA also provides the LEMSA a certain level of administrative oversight of the ambulance provider, but in reality once an agreement has been reached between the winning party of an ambulance EOA and the LEMSA, the agreement becomes more of a shared partnership between the county and the provider. CA Health and Safety Codes 1797.201 and 1797.224 provide the LEMSA administrative and operational oversight, and the contract then provides the ambulance provider control to work within the provided regulations. Because the EOA becomes a contractual obligation that was entered into between the LEMSA and the provider, only the **exclusive provider** has any control over the daily operations of the ambulance services. Therefore, in order to meet this key objective of operational control, the Department must exercise their 1797.201 rights and obligations. Then CMFD will be able to operate the system in a manner that is not only fiscally stable for the City but operationally stable for the other providers within the County and citizens they serve. Stability can be gained through control of the entire EMS

delivery process. The crucial point to remember is that the City of Costa Mesa is a 1797.201 provider and thus is solely responsible for the provision of ambulance services to its jurisdiction without interruption.

Section 5: Determining the Value of the System

There are numerous factors that impact the value of an EMS system and the provider's ability to exercise cost recovery.

Billing Policy

Establishing a billing policy is one of the primary steps a provider needs to accomplish in order to get the best and reasonable cost recovery from the system. There are several factors that will determine what is included in the patient billing policy. However, there are areas that do have a fixed rate attached to the service, and this alone will create a fixed cap on the maximum potential collections that are available within the system. Other factors that can impact billing are:

- Types of calls for which the City will charge
- Rates the City will charge for services
- Cost to provide the services
- Level of cost recovery to be obtained

All systems experience fluctuations in the call volume, however, significant or seasonal changes in call volume are fairly predictable. Based upon previous transport data and census data, an expectation of approximately a 3% increase in calls for service annually is reasonable. Therefore, the reimbursement for some services based upon the number of calls is relatively established. The areas of the billing policy which will determine revenue are: collection policy, transport policy, documentation accuracy, billing contractor level of effort and understanding the Orange County payer mix.

Collection Policy

The collection policy is the most significant and political aspect of the collection process affecting the revenue stream. Federal regulations which control billing require that **every patient** receive a bill for services rendered in order to prevent what is known as "cherry picking" where only specific groups of patients are billed. How aggressive a company is with the collection of bills is a matter of business philosophy. Most private ambulance companies, and hospitals for that matter, have very aggressive collection policies, while many public ambulance providers have much less aggressive collection policies. The reason for this disparity is simple; private ambulance companies are in the business of generating profit. For these companies, sending a patient to collections or placing them on a rigorous payment plan is standard operating procedure and best business practice. Conversely, in the public sector there are political considerations and public relations concerns which must be balanced, as the vast majority of patients will also be taxpayers. Local governments that provide ambulance transport are in a superior position to take several different approaches to their collection policies:

- Softer collection policies reduce costs to the local taxpayer as profit is not a primary consideration
- Cost recovery lends itself to focus on better delivery
- When revenue generation is achieved, it is returned back into the system
- Revenue returned to the system provides "added value" to the taxpayer

Transport Rates

It has already been discussed that there is a fixed number of transports that will occur in a given period of time, but there is a subsection of patients whose medical condition will not require immediate transport. There will always be a percentage of calls that will not result in a transport due to circumstances. This is to be expected and can be projected as a percentage of the

overall call volume. It should be noted that within this category of patients the ability to bill for what is called "treatment and non-transport" is allowed by the State for Medi-Cal patients and is accepted by most commercial insurance providers. With this in mind, additional revenue is available for certain patients that are not transported.

Documentation

Documentation provided by a paramedic on the Patient Care Report "PCR" also plays a significant role in the collection rate achieved by the provider. CMFD currently uses state of the art electronic Patient Care Reporting approved by the Local EMS agency and is already in compliance.

Billing Contractor's execution of the City policy

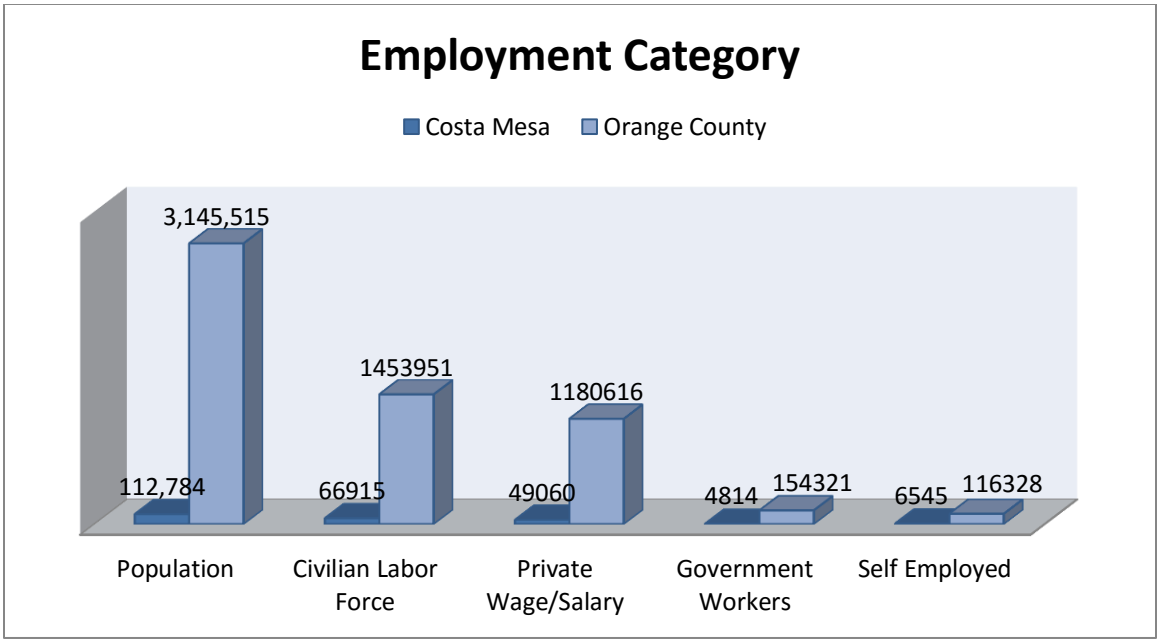
The billing contractor or billing office plays a major role in the collection for services. With the City's ability to control the billing and collection policy, they will be in a position to have the most significant impact on how emergency ambulance services affect the citizens of the City of Costa Mesa. As previously stated, the private sector bills for services rendered and establish a collection policy that provides for a profit margin. Aggressive billing and collections is the norm in this scenario. Collection of co-pays and payment plans for non-insured individuals is a common practice. While a municipal provider has the ability to use cost recovery for the services provided, the ability of the billing contractor to identify non-insured and those with co-pays and either eliminate them from the process or accept the coverage available reduces cost for the patient, contractor, and the city.

Understanding Payer Mix

When billing for services in the healthcare arena, there are four categories of payers; this is often referred to as the payer mix or payable cost centers. These cost centers consist of Medicare, Medi-Cal (both Fee for Service and managed care), private pay (uninsured), and commercial insurance. Sub categories of these groups consist of patients covered under workers compensation and medical coverage under an auto policy. An agency's percentage of each of these categories varies widely depending on the demographics of that agency. An agency with a very high percentage of working age adults and higher percentage of larger businesses will have a higher percentage of commercial insurance, while an area consisting of a large population of seniors will have a higher rate of Medicare coverage.

Population/Demographics for Orange County

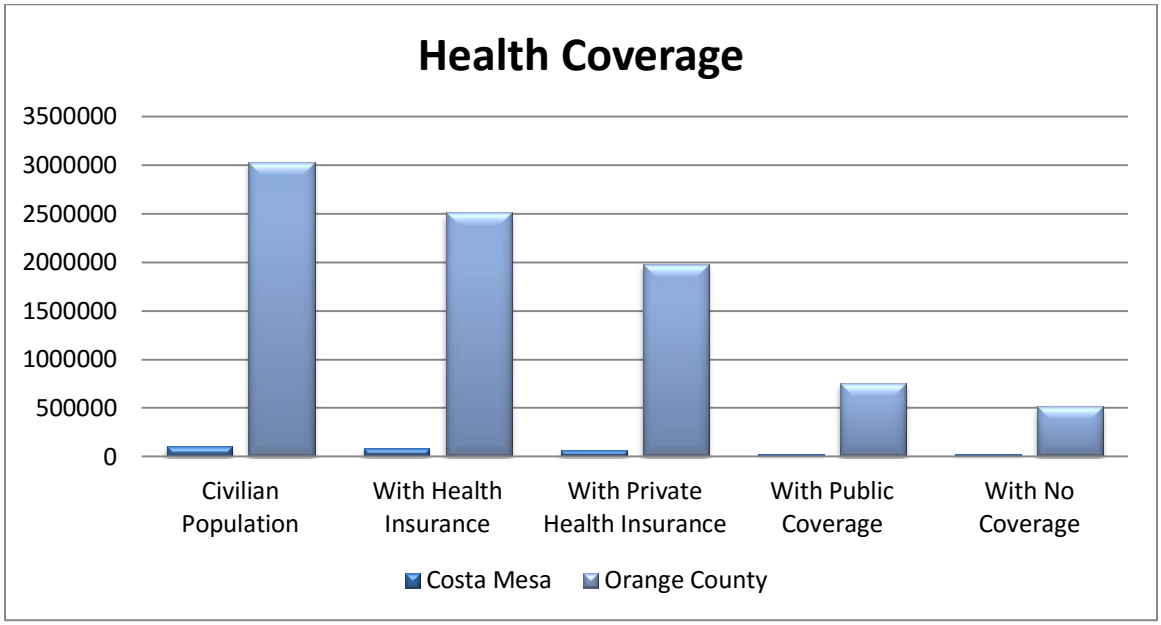
Costa Mesa/ Orange County Work Force



http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml

Population/Demographics for Costa Mesa

Costa Mesa / Orange County Health Care



http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml

It should be noted that the percentage of transports for each payer mix is not directly related to the percentage of that population. For example, even though senior citizens may only represent 20% of the agency's population, their use of medical services increases with age and results in a higher usage of the EMS system than those with commercial insurance who represent a larger percentage of the agency population. "Fifteen percent of the U.S. population, or 44.8 million individuals, are enrolled in Medicare. While California has the largest number of Medicare beneficiaries in the nation at 4.5 million, they make up a comparatively small percentage of the state's total population. Medicare payments for beneficiaries age 85 or older are nearly 80 percent higher than payments for those 65 to 84."[1]

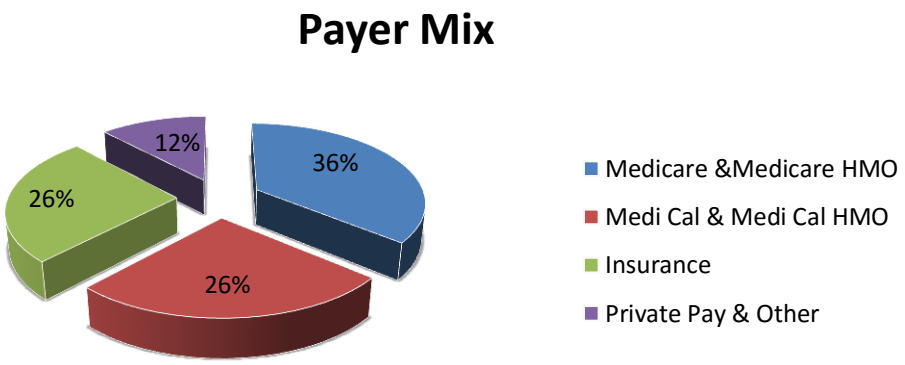
[1] http://www.chcf.org/~/media/MEDIA%20LIBRARY%20Files/PDF/PDF%20M/PDF%20MedicareFactsFigures2010.pdf. October 2015

Costa Mesa Payer Mix

Using data provided in the last Orange County ambulance RFP, AP Triton LLC has developed the following breakdown. Breakdown is based upon an 8,750 incident call volume, assuming an annual call increase. Call volume is derived from 8,450 calls in 2014 with a projected call volume of 9,473 in 2015. Costa Mesa has a historical transport rate in the range of 80% all emergency medical related services.

Costa Mesa Payer Mix

➢ Medicare/Medicare HMO	-	36%	-	2,520
➢ Medi-Cal/Medi-Cal HMO	-	26%	-	1,820
➢ Commercially Insured	-	26%	-	1,820
➢ Private Pay/non-insured/other	-	12%	-	840



Payer Mix Reported Collection Rates

➢ Medicare/Medicare HMO	-	93%	-	2,344
➢ Medi-Cal/Medi-Cal HMO	-	92%	-	1,820
➢ Commercially Insured	-	90%	-	1,820
➢ Private Pay/Non-insured/Other	-	3%	-	25

The following estimation of the system value is based on the data provided above with charges at current Orange County rates. The total number of EMS transports for the EOA was estimated to be 7,000.

Current Orange County Rates

➢ Medicare/Medicare HMO	Cap	$488
➢ Medi-Cal/Medi-Cal HMO	ALS/BLS rate	$145
➢ Commercially Insured	Average of ALS/BLS	$1,025
➢ Private Pay/non-insured/other	Av. ALS/BLS @ 0%	$1,025

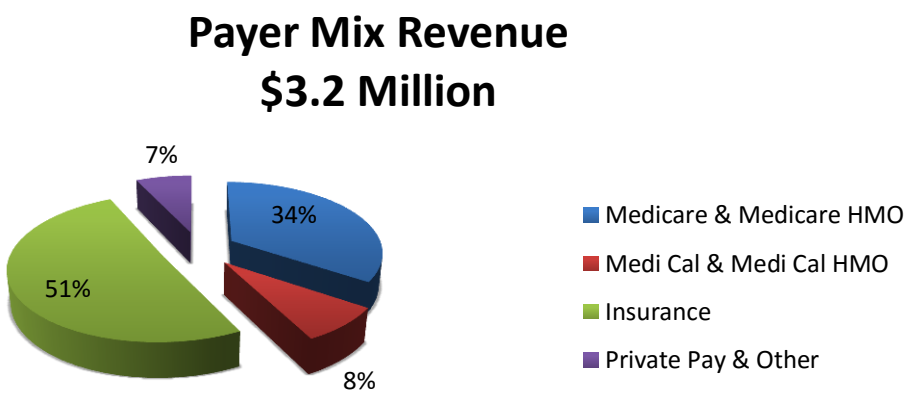
Based upon these rates for service, an estimate of the value of the system can be determined for the city of Costa Mesa

Value of the System

➢ Medicare/Medicare HMO	$488.00 x 2,344	=	$1,143,872
➢ Medi-Cal/Medi-Cal HMO	$145.00 x 1,675	=	$242,875
➢ Commercially Insured	$1,025.00 x 1,638	=	$1,678,950
➢ Private Pay/non-insured/other	$1,025.00 x 25	=	$25,625
Transports subtotal			$3,091,322

In addition to the transport rates and collections estimates above, there are additional funds from treat and no transport (Treat and refused transport was calculated at a flat 10% across each payer mix with the exception of PP @ 5 %.)

➢ Medicare/Medicare HMO	non-covered benefit	=	$0
➢ Medi-Cal/Medi-Cal HMO	$118.00 x 227	=	$26,786
➢ Commercially Insured	$400.00 x 227	=	$90,800
➢ Private Pay/non-insured/other	$400 x 53	=	$21,200
Treat and refused transport subtotal			$138,786



The total value of the Costa Mesa 9-1-1 services is *approximately* $3,230,108

With a clear estimate of the value of the EOA, it is possible to determine if participation in the system is feasible or practical and explore the various options for participation models. It should be noted that the above estimate, although very realistic, is based upon a reasonable billing and collection model that includes collections from those with no insurance as well as collection from those with co-pays, as is likely the current practice from the private contractor. It is feasible that additional revenue for cost recovery could be realized by increasing the rate structure to a level more in line with 'like' agencies across the state. However, for this study the current Orange County rate of $1,025 will be used.

Alternate Rate Adjustment

For illustration purposes only, a calculation is presented using a higher base rate of $1,750.0 to demonstrate the amount of cost recovery that could be seen with a slightly higher rate being used. This report is not recommending that a rate increase take place and is only presenting this calculation for discussion purposes. When developing the rate structure, a "bundled" billing schedule with the inclusion of a mileage charge, oxygen charge, night charge and a treat and no transport charge should be considered.

Rate with Increase

- Base rate increase = $1,750.00
- Mileage charge = $45.00 (use 6 miles per transport)
- Oxygen charge = $150.00
- Night charge = $75.00
- Treat no transport = $400.00

If the above rates were to be adopted, the financial impact would introduce an estimated:

Financial Impact

- Base rate increase = $725.00 = $1,187,550
- Mileage charge = $29.00 (@ 6 mi.) = $285,012
- Oxygen charge = $68.00 = $111,384
- Night charge = $75.00 = $57,330
- Total increase with new rate structure = **$1,641,276**

If the previous rate structure were to be adopted, the estimated revenue for CMFD could be reassessed with an estimated value of nearly **$5 million dollars** annually.

GEMT/IGT

Two factors which have not yet been addressed are the availability of Federal Supplemental Reimbursement programs and the additional money that is available to public providers for offsetting the unreimbursed cost of providing transport and services to the State's Medi-Cal recipients. The GEMT program and the currently operating IGT program have the ability to bring in significant amounts of money for what would normally be one of the lowest paying groups in the payer mix. The GEMT program is entering its fourth year of reimbursements, and contracts with participants have just been completed for the next three years. The IGT program is in its first year of funding and does not contain a sunset clause. The amount of funds that are available depends on the model that has been chosen for the delivery system. In order to address this component cost recovery, each model will be presented with the cost breakdown, and the Federal Supplemental Reimbursement will be shown as an added value to the bottom line.

Section 6: Deployment Models

Deployment Model I – Current Model

Deployment Model 1 is the current delivery method for services that the City of Costa Mesa is providing. In this model CMFD provides first responder services at the Advance Life Support "ALS" level while at the same time the City utilizes a private ambulance contractor who responds to all EMS calls within the City providing transport at the Basic Life Support "BLS" level. In addition to the private ambulance, the City responds a Rescue Ambulance to all EMS incidents. Once CMFD paramedics have assessed the patient and have determined that patient care requires only BLS services the patient is transferred to the ambulance contractor for transport. However, when ALS intervention is required, CMFD paramedics maintain and continue patient care and treatment while being transported to the hospital in the private ambulance. When CMFD paramedics provide ALS care, the county approved ALS fee is charged by the ambulance provider and passed to the Department for those services.

The advantages to this plan are as follows:

- Reduced financial risk to the city
- Possible surge capacity from a larger provider
- Fixed rate of reimbursement for ALS services provided

Disadvantages to this relationship are as follows:

- More limited cost recovery
- Potential increased cost to the taxpayer
- Less control of the system

The City of Costa Mesa has maintained their status and eligibility to provide all aspects of pre-hospital EMS including: dispatch, first response, BLS, ALS and ambulance transport. In order to maintain this status of recognition under Health and Safety Code Div. 2.5 Sec. 1797.201, the City is obligated to provide ambulance services at all times to everyone within the city limits of Costa Mesa. The City has chosen to fulfill this obligation through a contractual agreement with a private provider for ambulance services. However, both the financial and operational obligation to provide those services lies completely on the shoulders of the City, independent of the contract with the provider. In the event that the provider becomes insolvent or is unable to meet the requirements of the contract, the City immediately assumes full responsibility to provide for ambulance services. The term "immediate" implies without interruption of services as written in H&S Code Sec. 1797.201. In executing the contract with a private provider, the City has reduced its risk for incurring cost to the General Fund but has not extinguished it entirely. As has already been seen in at least two other counties, Alameda and Santa Clara, the county shares the same risk as 1797.201 providers for the provision of ambulance services. In both of those situations the county had to financially bailout the private provider who failed to remain solvent and capable of continued ambulance services. In order to maintain the city's 1797.201 standing, continued and uninterrupted services must be maintained at all times.

Deployment Model I – Fiscal Summary

Service Delivery

Deployment Model 1 is the current delivery of services that the City of Costa Mesa is providing. The City utilizes a private contractor that responds to all EMS calls within the City along with an engine and Rescue Ambulance.

Cost of Service

No new costs as services are currently being provided

Cost Recovery

Cost Recovery is limited to the ALS fee's charged to the patient by Contractor as well as First Responder Fee's "FRF" that are charged to non-residents.

- For 2014 the ALS passed through to CMFD was $289,288
- For 2014 the FRF collected for non-resident response was $233,808
- For 2014 the Cost Recovery of Medical Supplies $122,276
- Total fees collected for 2014 $645,372

Pro's	Con's
Requires no changes in deployment	Less Control of the System
Reduced financial risk to the city	Potential increased cost to taxpayer
Possible surge capacity from provider	
Fixed rate of reimbursement for ALS services provided	

Deployment Model II – Fire Department provides both ALS and BLS Transport

Within deployment Model II, CMFD would be expected to deliver 100% of the ambulance services for all 9-1-1 emergency services using current firefighter staffing. This model provides for four (4) 24hour ambulances and eight (8) personnel per shift. This deployment model is consistent with the current redeployment model adopted by the City. This model provides for a 25% increase over and above what is provided by the current ambulance contractor which is three (3) units, with a fourth unit moved into to the City as needed. The Fire Department would provide all transport of both ALS and BLS patients.

The positive aspects of this plan are as follows:

- Requires no change from the approved counsel plan.
- Is consistent with the City objectives.
- Provides for the appropriate number of firefighters on duty every day as adopted in the City redeployment plan.
- Provides for the expected number of units needed in the system to handle typical peak load demands and an overall increase in the daily Unit Hour Utilization "UHU" over the 24 hour operational period.

This model would meet all of the "key elements" determined by the team members and would place CMFD in a position to control all aspects of the transport delivery system.

- Uses existing employees that are already encumbered in the budget and does not require appropriation of new funds to implement.
- Allows for an enhanced level of service (four units vs. three) with the potential of no out of pocket cost to residents.

- Allows for the most flexibility in the billing and collection process that can benefit both the City and its residents. This model also has the highest capacity to maximize cost recovery to the City.

As the City currently has the staffing to implement this model as well as the equipment and rolling stock, there are no significant negative aspects identified to prohibit this deployment model form being implemented.

Deployment Model II – Fiscal Summary

Service Delivery

Costa Mesa Fire assumes provision of 100% of the ambulance transport services and no longer utilizes a private ambulance contractor for ambulance services.

Cost of Service

No new costs as services are currently being provided

Cost Recovery

Current Orange County billing rates EXCLUDING co-pays/out of pocket costs

- Cost Recovery for services = $3,230,108
- First Responder Fee
  - $275.00 x 7,000 tx x .26 = $500,500
- ALS Fee
  - $387.35 x 3,150 x .26 = $317,240
- GEMT/IGT + $250,000
- Net total cost recovery = $4,297,848
- Billing services @ 5% - $202,392

Total net cost recovery for model II = **$**4,095,456

Pro's	**Con's**
Provides maximum local control	May require contract for surge
Requires no changes in deployment	Increase in workload
Consistent with redeployment plan	
Provides flexibility/cost recovery	

Deployment Model III - Fire Department provides ALS, Private Contractor provides BLS Transport

Deployment model III involves developing a public-private partnership between the Department and a private ambulance provider. The relationship of a public-private partnership already exists to some extent. However, this deployment model will provide for a slight modification to the existing system. This deployment model will utilize the current staffing of Department ambulances with Firefighter paramedics as described in plan I and as approved in the City redeployment plan. Units would be dispatched as they are currently. However, upon discovery that the patient requires Advanced Life Support (ALS) measures, Costa Mesa ambulance units would not only maintain patient care but would provide the transport as well as the continuum of care needed during transport. Once transport has been completed, the patient care record will be submitted electronically to the billing company for collection. However, if upon discovery that the patient requires no Advanced Life Support measures, the Costa Mesa Paramedic units would clear and hand off the transport of the Basic Life Support (BLS) patient to the private contractor.

This ambulance deployment model staffing is the same as described in deployment plan A.

<u>The positive aspects of this plan:</u>

- Is an overall increase in the number of ambulances available daily compared to the number of ambulances provided if the current contractor was the sole provider of ambulance service.
- Is in line and consistent with the approved deployment plan.
- Is consistent with the City objectives.

- Provides for the appropriate number of firefighters on duty every day as adopted in the City redeployment plan.
- Provides for the expected number of units needed in the system to handle typical peak load demands and an overall increase in the daily Unit Hour Utilization "UHU" over the 24 hour operational period.
- Would meet all of the "key elements" determined by the team members and would place CMFD in a position to control all aspects including the continuum of care for the most critical patients of the transport delivery system.
- Uses existing employees that are already encumbered in the budget and does not require appropriation of new funds to implement.
- Provides for significant cost recovery to offset city expenditures
- The most important aspect of this deployment model is that it will increase the level of service to those who are critically injured or sick while at the same time creating a cost recovery model that will allow the City to rapidly change their deployment and EMS delivery product as the healthcare industry changes.

<u>The negative aspects of this plan are as follows:</u>

- Provides for lesser cost recovery to offset city expenditures as the number of transports and collections will be based upon a lower percentage of calls, i.e. ALS vs. BLS transports
- Potentially creates a two tier system of billing and collection

- A two tier system of billing and collection means those transports by the ambulance contractor will incur out of pocket expenses while those transported by CMFD ambulance may not incur any out of pocket expenses.
- May create instability in the ambulance delivery system.

Ability to Provide Services under Deployment Model III

This deployment model is nearly the same as what is currently being provided today with the exception that patient transportation (provider) will be determined based upon patient needs. The typical breakdown between Advanced Life Support (ALS) and Basic Life Support (BLS) patients runs roughly 40/60 with a low of 25/75, with the greater being Basic Life Support. Although there are more BLS patient transports than ALS, the reimbursement for BLS is less. The current private contractor's ability to provide three units per day or 504 weekly unit hours is based upon the mix of transporting both the ALS and BLS patients. By reducing the number of patient transports, along with reducing the reimbursement rate, the contractor may not be financially able to continue to provide three units per day, which is the current level of coverage. As there is no time of day or schedule when ALS calls occur as opposed to BLS calls, there lies the potential that CMFD ambulance units will absorb the lost unit hours by the private contractor and transport BLS patients when the contractor's units are unavailable. Even with the introduction of call triaging, the loss of ALS transports by the private contractor may reduce the weekly unit hours that the private contractor could provide. Under this scenario, the long term financial stability of the private provider within Costa Mesa could become a challenge.

Deployment Model III – Fiscal Summary

Service Delivery

Costa Mesa Fire assumes provision of transport for ALS services while the private contractor has primary responsibility for BLS services.

Cost to provide services

No new costs; services are currently being provided.

Cost Recovery

Current Orange County billing rates EXCLUDING co-pays/out of pocket costs

- Cost Recovery for services
  - $3,230, 108 Full Value x .45 = $1,453,549
  - Treat and Refused tx = $102,106

    = $1,555,655
- First Responder Fee
  - $275.00 x 7,000 tx x .26 = $500,500
- ALS Fee
  - $387.35 x 3,150 x .26 Comm. = $317,240
- GEMT/IGT + $250,000
- Net total cost recovery = $2,630,930
- Billing services @ 5% - $118,670

Total net cost recovery for model II = $2,504,725

Pro's	**Con's**
Requires no changes in deployment	Could impact the current contractor
Consistent with redeployment plan	Could create a two tier billing system
Provides for reasonable cost recovery	

Deployment Model IV-Staffing four 24 hour units with non-suppression Single Role EMT [SRE]

This deployment model would utilize a new employee class and salary to be determined by the City. Salary rates for this model are based upon $12/hr. for EMTs, both working a 40hr work week with16hrs FLSA OT/month factored in to fully encumbered cost. The hourly rate is based upon both current private ambulance industry standards for the general service area as well as the general provision for the same type of employee as used by other like public providers.

This class of employee is non-suppression and thus does not require safety status. They do, however, fall under standard FLSA rules which require overtime pay after 40 hours worked per week. Staffing 24 hour ambulances with this class of employees could utilize a number of staffing scenarios including 8, 10, 12 and 24 hour shifts. For this scenario we will use a three (3) platoon system consistent with the current fire department shift schedule. If this deployment model were to be selected, this would employ four (4) 24 hour ambulances, requiring two (2) personnel to staff each 24 hour ambulance. This would result in total program personnel of twenty-four limited term contract employees. This model does allow for a more creative deployment model based upon peak needs for services through overtime coverage.

<u>The positive aspects of this plan are as follows;</u>

- Fulfills all of the key elements proposed by CMFD.
- Creates potential new pathways for future employment and community outreach as well as creating new opportunities for diversity.
- Based upon the revenue estimate previously provided, this program has the potential to generate significant cost recovery.

- This program also has the potential to reduce costs to the residents of Costa Mesa by not charging out of pocket costs to residents.

The negative aspects of this plan are as follows;

- This model requires the creation of a new class of employee for a new position within the CMFD. As a result, there will be initial and ongoing costs to maintain the workforce. This group of employees is likely to be actively seeking employment within the fire service as Firefighters. Although this does create a class of candidates from which CMFD will also pull from for positions within their ranks, these non-suppression employees will become highly sought after by other organizations.
- Quality control can be an issue with a workforce that is constantly changing. Although it is good that this model creates gateways to future employment both within the City and outside the City, there exists a challenge in maintaining familiarity with the City itself as well as the culture of the agency. However, it should be noted that the private sector can also be a "revolving door" as there exists a high turnover within the private ambulance industry.

Deployment Model IV - Fiscal Summary

Service Delivery

Costa Mesa Fire assumes provision of 100% of the ambulance transport services utilizing a new class of Single Role EMT's (ambulance operators), no longer requiring a private ambulance contractor for everyday ambulance services A private ambulance contractor may be utilized for surge protection and large scale incidents.

Cost to provide services

Twenty-four new employees = $1,533,620

- Annual salary per employee $39,938 x 24 = $958,512
- Roll-ups (PERS, Health, Dental, Vacation, SL) estimated @ .50 $479,256
- Additional 10% coverage cost for SL, Vacation, WC $95,852
- Funds for recruitment, uniforms, program management $100,000

Cost Recovery

Current Orange County billing rates EXCLUDING co-pays/out of pocket costs

- Cost Recovery for services = $3,230,108
- First Responder Fee
  - $275.00 x 7,000 tx x .26 = $500,500
- ALS Fee
  - $387.35 x 3,150 x .26 Comm. = $317,240
- GEMT/IGT + $250,000
- Net total cost recovery = $4,297,848
- Billing services @ 5% - $202,392
- Employee costs -$1,633,620

Total net cost recovery for model IV = **$**2,461,836

Pro's	**Con's**
Provide some degree of flexibility	Inconsistent with redeployment
Creates moderate cost recovery	Potential high turnover
Creates new employment pathways	Requires a new class of Employee
Ability to expand diversity in CMFD	

Section 7: Federal Supplemental Reimbursement Programs

Supplemental reimbursement programs through the Federal Government have been in operation for more than 30 years. Each state that has created a State Medicaid program is entitled to participate in these programs. The State of California created the Medi-Cal program which is part of the Federal Medicaid program. Under the Social Security Act, a unit of government as defined under CFR 433.5 is entitled to share in the cost of providing Medicaid services for the amount that is not covered from the cost of providing the services compared to the amount that is received by the agency. For example, if it cost an agency $1000 to provide a service and that agency only received $100 from Medicaid, the difference, or gap, is $900. That gap is known as the uncompensated cost and can be shared on a 50/50 split with the Federal Medicaid program.

California created the Ground Emergency Medical Transport program (GEMT) and developed a Certified Public Expenditure (CPE) program to offset the cost of providing service for the Medi-Cal Fee for Service (FFS) beneficiaries. Orange County has a lower number of FFS Medi-Cal participants (14%) compared to Medi-Cal Managed Care beneficiaries (86%). Managed Care, also known as HMO participants, are not allowed to participate in the current GEMT Certified Public Expenditure process.

The estimated financial impact of the current GEMT program for CMFD is based upon the Department providing the ambulances including the billing for those services. The estimate below was derived using Costa Mesa Medi-Cal percentage and the average lows and highs from like providers across the state. The actual reimbursement rate cannot be determined until a

deployment model has been selected along with a billing and collection policy has been established.

GEMT Estimates for Costa Mesa based upon statewide averages

Estimated Medi-Cal FFS GEMT dollars = $250,000- $400,000/yr.

Section 8: First Responder and ALS fees

Costa Mesa Fire Department currently receives both First Responder and ALS Fee's. First Responder Fee's "FRF" are charges for the response and services provided to non-residents of Costa Mesa that utilize EMS services while in the city. Advanced Life Support "ALS" fees are charged for the added cost of ALS services. On July 21, 2015 the Board of Supervisors for Orange County approved an emergency ambulance rate adjustment. Within that rate adjustment the ALS rates was increased to $396.55. These fees are charged to the patient when CMFD paramedics treat and transport the patient to the hospital. Once collect by the ambulance contractor they are passed on to CMFD.

For calendar year 2014 CMFD received the following;

First Responder Fee collected…….. $233,808

ALS FEES…….…… $289,288

Cost Recovery of Medical Supplies...$122,276

Total Fee's collected for 2014…….. $645,372

Deployment Models / Cost/ Cost Recovery Table

Model	Model 1	Model 2	Model 3	Model 4
Deployment Type / Description	Current Deployment model	CMFD Providing 100% Delivery	Partnership	CMFD EMT's
Initial Cost Recovery	$0	$3,230,108	$1,555,655	$3,230,108
First Responder Fee (FRF)	$233,808	$500,500	$500,500	$500,500
Advanced Life Support (ALS Fee	$289,288	$317,240	$317,240	$317,240
Cost Recovery Medical Supplies	$122,276	$0	$0	$0
GEMT/IGT	$0	$250,000	$250,000	$250,000
Billing Services @ 5%	$0	$202,392	$118,670	$202,392
Net Cost Recovery	$645,372	$4,095,456	$2,504,725	$4,095,456
New Employee Costs	None	None	None	$1,633,620
Total Cost Recovery	$645,372	$4,095,456	$2,504,725	$2,461,836

Conclusions

The delivery of healthcare throughout the country is changing. Although the extent of those changes is not fully known, what is known is that the status quo is not acceptable for the future. The City of Costa Mesa is positioned to choose between the status quo and changing their EMS delivery models to be as flexible as the environment in which they are operating. Cost effective and efficient delivery of services that fall under direct local control are available now if the City is willing to take advantage of the opportunity presented to them. Presented are four models that offer at the least the status quo; to full local control of a flexible efficient EMS delivery model adaptable to the needs of the future.