

City of Key West, Florida

DETERMINING THE FUTURE
OF EMS IN KEY WEST

March 7, 2014

FINAL REPORT



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Craig Cates	Mayor
Jimmy Weekly	Commissioner, District I
Mark Rossi	Commissioner, District II
Billy Wardlow	Commissioner, District III
Tony (Fat) Yaniz	Commissioner, District IV
Terri Johnston	Commissioner District V
Clayton Lopez	Commissioner District VI
Bogdan Vitas	City Manager
Mark Finigan	Assistant City Manager
David Fraga	Fire Chief, Key West Fire Department
Michael Davila	Division Chief, Key West Fire Department
Alan Averette	Division Chief, Key West Fire Department
Jason Bogeoff	President, IAFF Local 1424
David Irwin	EMS Supervisor, American Ambulance
Thomas D. Mack, Sr.	Citizen Representative

TriData Staff

The following TriData team members participated in the KWFD EMS study.

Philip Schaanman	President, SPC/TriData
Dr. Harold C. Cohen	Project Manager
Maria Argabright	Executive Administrative Assistant

Background

TriData was asked by the City of Key West to provide a follow-up to our initial evaluation of Emergency Medical Services (EMS) in Key West that was provided in 2010. Key West and TriData believed that the best solution for providing quality EMS was reached. A vendor was selected to provide service without incurring a subsidy that previously cost the citizens over \$700,000 annually.

Whenever a municipality entrusts a critical service to a private vendor, it takes a risk that these services may be affected by business practices, mergers, acquisition, and even bankruptcy. Simultaneously with signing a contract with Care Ambulance (Care), Care was acquired by Falck Ambulance, an international firm. Initially, the relationship was working well and good service was being provided. In 2012, Falck Ambulance made a corporate decision to change the management structure of Care in the Key West market. American Ambulance, another local service acquired by Falck Ambulance, took over management of the Care contract.

The new management team involved previous American Ambulance personnel who immediately began to reduce services that were deemed essential by Key West officials. American Ambulance management refused to comply with the recordkeeping requirements of the contract, and were required to pay the City over \$10,000 in penalties.¹ TriData's review indicates that Care/American Ambulance are in default of the current agreement.

In November, 2013, American Ambulance notified the City that they wished to terminate their contract as of April 1, 2014. An interim agreement was reached to extend the contract on a monthly basis for a large fee.

While the above was occurring, the City asked TriData to help determine what steps it should take concerning the immediate future of EMS in Key West. Until recently, Key West Fire Department (KWFD) was reluctant to consider providing EMS transportation (patients in ambulances to hospitals). Tradition and other priorities influenced this decision. Key West Fire Department became part of a minority of fire service departments that do not provide full EMS service, and the only one in South Florida.²

Below is an assessment of the current situation and more precise recommendations, including proposed action steps. Before reporting the details, we unequivocally state that the time has come for the City to abandon reliance on commercial entities in favor of providing fire-based EMS for emergency ambulance services.

Recommendation 1: The City of Key West should, as quickly as possible, take control of EMS, including emergency ambulance transportation.

¹ Davila, M. (2012). *Ambulance Preparation Report-December 9, 2013*. Key West Fire Department.

² Personal Communications, December, 2013, Kevin O'Connor, Special Assistant to the General President of the International Association of Fire Fighters.

During our return visit to Key West, we examined some data necessary for the City to make an informed decision concerning the future of EMS. The current offer from American Ambulance (Falck Ambulance) to extend service for one year in exchange for a \$600,000 subsidy is detrimental to the financial well-being of the City and should be avoided. This sum is even higher than the 2011 American Ambulance bid of \$413,275.

We understand that system costs are an important factor in determining how EMS should be provided. There is also something to be said about the value of avoiding political turmoil that often accompanies RFP processes. It is easy to remember the amount of time, political capital, legal costs, and similar situations that occurred with the last process. While the initial agreement was successful, corporate changes led to disappointment, leaving the City with little control.

Situational Analysis

Upon signing the original contract with Care Ambulance, the city manager appointed the KWFD fire chief as the overseer of the ambulance service contract. The fire chief was charged with assuring that Care complied with all aspects of the contract including on-time performance, clinical competency, human resources requirement, financial performance reporting, EMS quality management, and similar contractual obligations. The fire chief was also granted the ability to determine violations and to take corrective action. During 2011 and part of 2012, Care achieved excellent compliance with time performance, clinical reporting, and contractual compliance. At the end of 2011, Care submitted a detailed annual report of its performance. Table 1 contains a summary report of 2011 responses.

Table 1. Care Ambulance End of Year Data Summary, April-December, 2011³

	Number	Percentage
Total Treated, Transported by CARE	2,685	71.0%
Total Patient Refused Treatment Transport	654	17.3%
Total Cancelled - Enroute/on Scene(No PT contact	186	4.9%
Total Patient Treated but REFUSED Transport	155	4.1%
Total Dead at Scene	27	0.7%
Total No Treatment Required	26	0.7%
Total No Patients Found	23	0.6%
Total Stand By/No Treatment	12	0.3%
Total Treated, Tx by Helicopter	9	0.2%
Total Treated, Transferred to Other	3	0.1%
Total Body Haul/Dead	2	0.1%
Total Treated, Tx by Law Enforcement	2	0.1%
Total Number of Responses	3,783	100.0%

³ Care Ambulance. (2012). *End of Year 2011 Emergency Medical Services Operations Summary For The City of Key West*. p. 4. Data only represents April thru December of 2011.

Care provided services in a safe manner, experiencing only one employee injury (back strain) on the job, and one minor vehicle crash. The employee quickly returned to work, and the vehicle was fixed with little out of service time. These data are examples of the transparency the City leaders expected from a contracted public safety service.

After American Ambulance took control of the contract, there was some reporting, but far less detailed than Care Ambulance. Table 2 includes the 2012 total responses.

Table 2: American Ambulance End of Year Data Summary, 2012

Response Outcomes	Count	Percent
Total Cancelled – Enroute /on Scene	93	1.7%
Total Dead at Scene	21	0.4%
Total No Patients Found	5	0.1%
Total No Treatment Required	15	0.3%
Total Patient Refused Treatment &Transport	793	14.7%
Total Patient Treated but REFUSED Transport	412	7.6%
Total Stand By/No Treatment	12	0.2%
Total Treated, Transferred to Other	4	0.1%
Total Treated, Transported by CARE	4,029	74.8%
Total Treated, Tx by Helicopter	4	0.1%
Total CARE Ambulance	5,388	100.0

No report has been received for 2013.

Key West Fire Department – Currently, Key West Fire Department (KWFD) provides EMT level first response from engine and truck companies. During the last two years, KWFD exhibited the growth necessary to be able to take on further EMS responsibilities. Some examples:

- The fire chief completed the National Fire Academy EMS Quality Management course. A deputy fire chief completed the National Fire Academy Management of Emergency Medical Services program.
- Key West Fire Department gained two years of experience in providing contract oversight for two ambulance services. This included operations, quality management, and contract compliance. They saw what was needed to manage EMS.
- Between the first TriData project (2010) and now, we noticed a change in attitude by fire department staff that aligns more with providing EMS, and is needed to oversee quality EMS service.
- Key West Fire Department continues to provide quality EMS first responder care.
- There have been no complaints concerning dispatch being able to handle the system.

System Finances

Adding EMS to a municipal operation cannot be done without understanding the possible financial implications that can occur. Before examining the income and expenses data, the following should be considered.

1. Municipalities are usually legally or morally obligated to provide EMS, or assure that it is provided.
2. Very few 911 EMS systems are profitable. The goal is to provide fast, effective, and efficient EMS service. EMS transportation profit comes from non-emergency transportation. Non-emergency transportation is scheduled, safer (no red light and siren use), usually requires lower levels of care, and payment is pre-arranged. In 911 systems, up to 30 percent of incidents generate no patient transport. If no patient is transported, Medicare, Medicaid, and other insurance providers will not provide reimbursement.
3. When fire departments enter into the non-emergency business, revenue is not accessible to local businesses.
4. In the case of Key West, the accuracy of economic data may be questionable due to different levels of reporting.

Collectables – Should the KWFD provide EMS emergency transportation, the following collectables may be realized. Table 3 shows a breakdown of what could be expected, based on the level of service required; Advanced Life Support (ALS) or Basic Life Support (BLS).

Table 3: Expected Revenue

	Number of Calls/dollar cost	Comments
Income		
EMS Responses in Key West	5603	5388 x 1.04
Patients Transported	4420	Actual 2013 numbers
Medicare ALS 1	2652	4420 x .6
Medicare ALS 2	440	4420 x .1
Medicare BLS Emergency	1326	4420 x .3
Medicare ALS 1 Base Rate	\$410.76	
Medicare ALS 2	\$594.52	
Medicare BLS Emergency	\$345.90	
Loaded Mileage Rate	\$28.32	\$7.08 x 4 miles
Oxygen and Supplies	\$28.00	
Medicare ALS 1 Base Rate	\$467.08	Rate + Loaded Miles + Supplies
Medicare ALS 2	\$650.84	
Medicare BLS Emergency	\$402.70	

Expected Gross for ALS 1	\$1,238,696.19	2652 x \$467.08
Expected Gross for ALS 2	\$286,369.60	440 x \$650.84
Expected Gross for BLS Emergency	\$533,982.20	1326 x \$402.70
60% Collection Rate		
Expected/Adjusted Gross	\$1,235,428.79	\$2,059,047.99 x .6
Expected Net	\$1,136,594.49	\$1,235,428.79 x .92
70% Collection		
Expected/Adjusted Gross	\$1,441,333.59	\$2,059,047.99 x .7
Expected Net	\$1,328,786.90	\$1,444,333.59 x .92
80% Collection		
Expected/Adjusted Gross	\$1,566,932.94	\$2,059,047.99 x .8
Expected Net	\$1,515,459.32	\$1,647,238.39x .92

The above does not take into account any changes that Federal Center for Medicare Services (CMS) makes. Also, a 2 percent federal bonus currently being paid may expire at any time with little notice. The Medicare base rate was used because many insurance companies are moving toward using that guideline. Medicaid reimbursement rates are considerably lower.

Expenses – EMS expenses should be looked at as first-year expenditures and following year expenditures. Obviously, first year outlay will be significantly higher due to investment.

Human Resources: In order to staff three EMS transport units, the KWFD will have to hire one EMS manager and up to 18 additional firefighter/paramedics or firefighter/EMTs. The level of hiring will depend on current staffing.

Table 4: Cost for Additional Staffing

	Current Fire Budget 2013-2014	Added for Ambulance	Budget Need for a Full-Service Organization
Budget			
Payroll	\$7,040,000	Plus \$1,414,954	\$8,454,954
Operational	\$310,000	Plus \$160,057	\$470,057
Total	\$7,350,000		\$8,925,011
Personnel			
Administration	4	Plus 1	5
Administrative Assistant	2		2
Fire Prevention	4		4
Operational	62	Plus 18	80
Total	72		87

	Current Fire Budget 2013-2014	Added for Ambulance	Budget Need for a Full-Service Organization
Payroll			
Average First Year Cost Per New Hire		18	\$73,053
Estimated First Year Cost for 1 EMS Manager		1	\$100,000

Training: Training expenses are difficult to determine due to different subject matter and different number of hours needed. Table 5 indicates the training costs for the new hires. This expense can be mitigated by how the training is done, i.e., traditional classroom, distributive education (on-line and traditional mixed). This includes costs for EMTs and paramedics. Most of the paramedic training is part of the formal refresher program required by the State of Florida.

Table 5: EMS Training Costs

Training Expense	Number	Price	Total
EMT RE-CERT KAPLAN (EMS Jane)	65	\$55	\$3,575
New Hires	18	\$55	\$990
CPR RE-CERT	65	\$15	\$975
New Hires	18	\$15	\$270
ACLS RE-CERT (Paramedics)	20	\$15	\$300
New Hires	18	\$15	\$270
PALS RE-CERT (Paramedics)	20	\$15	\$300
New Hires	18	\$15	\$270
Emergency Vehicle Operator Training (EVOC) cost for on-site trainer	1	\$2,000	\$2,000
New Hires - additional day on-site trainer	1	\$2,000	\$2,000
		\$7,150	\$3,500
Total	--	--	\$10,950

The total cost is actually a biennial cost because EMS licenses/certifications are valid for a two year cycle.

Initial Vehicle Purchase: The quickest and most cost effective way to begin ambulance service is to purchase four used ambulances and order a new ambulance. Also included in the cost for units is the cost for initial EMS hardware including stretchers, cardiac monitors, lifting devices, and firefighting gear (most are already provided to individuals).

Initial start-up costs will include vehicles, equipment, and supplies. We know from the Florida Sherriff’s Association State Purchasing Contract that the cost of a new Type III Ambulance sells for \$85,000 to \$122,000. Used ambulances average approximately \$50,000 depending on mileage, and condition. The City requires five units to operate efficiently. Table 6 shows the calculation for different combinations of new or used units. Depending on the choices made, the total cost for initial start-up vehicles will be between \$250,000 and \$610,000.

Table 6: Cost of Ambulances

Unit Combination	Total Cost
5 New, 0 Used	\$425,000-\$610,000
4 New, 1 Used	\$390,000-\$538,000
3 New, 2 Used	\$355,000-\$466,000
2 New, 3 Used	\$320,000-\$394,000
1 New, 4 Used	\$285,000-\$322,000
0 New, 5 Used	\$250,000

Disposable medical supplies such as bandages, needles, etc. cost approximately \$2,219 per month according to American Ambulance's current usage. A stock up of three months would require \$6,657. Patient care equipment including stretchers, stair chairs, cardiac monitors, etc. would be a substantial investment with little turnover, possibly in the 5-10 year range. Equipment costs include Lifepak Cardiac Monitors at a cost of \$25,495 per unit. The KWFD would need five units, one for each ambulance; total cost for three new and two refurbished monitor units is \$100,000 according to direct consultation with Physio-Control. Various patient care equipment including stretchers, stair chairs, air splints, etc are also needed. Five sets would cost \$35,000 based on American Ambulance pricing contracts, and an Internet search.

Total start-up investment for hardware equipment including cardiac monitors, stretchers, etc. is \$160,057. Table 7 lists additional start-up costs. Access to buying services or state purchasing contracts could lower these costs.

Table 7: Start-Up Costs (Miscellaneous)

Item	Cost
Cardiac Monitors (New and Refurbished)	\$100,000
Stretchers and Stair Chairs, etc	\$35,000
E-PCR (5)	\$14,600
Soft Goods (3 month supply)	\$6,657
Licensing Fees	\$5,000
Total	\$160,057

Annual Operating Costs –After the initial purchases, there will be ongoing annual costs. Operating expenses include all medical devices, disposables, fuel, maintenance and other expenses.

These include the following:

- Personnel Costs – \$1,414,954 for 18 new hires and EMS Manager
- Fuel and Vehicle Maintenance – \$13,452 (\$.63/mile x 4 miles x 5,338 responses [2012 level]).
- Equipment – \$12,000
- Medical Director – \$20,000 (cost for a part-time medical director, 15 hours per week)

- Disposable Medical Supplies – \$27,693 (Care 2011 costs x 1.04)
- Medical Gases (Oxygen) – \$3,600 (Care 2011, medical gas prices are stable)
- E-PCR – \$9,064 (licenses, software upgrade, repairs)
- Total annual operating costs are approximately = \$1,437,809

Cost Benefit Analysis – A conservative estimate of collection minus expenses = Expected cash liability to the City.

Expected Net Collection (60%) = \$1,136,594 minus Expected Expenses (\$1,500,763) = City Liability of (\$364,169). This should be considered a WORST CASE scenario.

Expected Net Collection (70%) = \$1,328,786 minus Expected Expenses (\$1,500,763) = City Liability of (\$171,977).

Expected Net Collection (80%) = \$1,515,459 minus Expected Expenses (\$1,500,763) = City Gain of \$14,696. This should be considered a BEST CASE scenario.

All estimates are below the proposed stipend requested by the current vendor.

Immediate Actions Needed

Earlier this year, we provided a list of “hot button” items that needed immediate attention for transition success. We will restate those items we believe still exist.

EMS Vehicles – American Ambulance’s initial agreement to sell the City its used ambulances would have made the transition easier. Unfortunately, American Ambulance withdrew their offer. This action makes quick vehicle acquisition an urgent matter. This will likely be the most time consuming process of the transition.

There are several avenues the City can choose to accomplish this. Four or five ambulances are needed to initiate service. Purchasing four or five new ambulances would be very expensive and not efficient. It may take six to 10 months for the vehicles to be ready and all would likely need replacement at the same time. Purchase four or five of the least expensive ambulances available and start to replace them. Type II van ambulances are available at a lower investment cost. While Type II ambulances will decrease initial outlay, they are not as reliable, hold less equipment, and are not usually used in fire-based EMS.

<p>Recommendation 2: KWFD should exclusively purchase Type III ambulances for service.</p>

A reasonable direction would be to purchase four used ambulances, with mileage below 100,000 (if possible), and begin the purchasing process for one new ambulance. This direction allows for quicker purchasing, equipping, and readying of ambulances for service.

Recommendation 3: KWFD should purchase four used Type III ambulances and begin the purchasing process for a new Type III ambulance. An annual replacement cycle of purchasing one new ambulance and moving one ambulance to reserve status should begin.

Making these purchases and preparing vehicles is a top priority. Key West Fire Department staff, city purchasing agents, and IAFF members should work together to make this a streamlined process.

EMS Manager – A matter of great urgency is the appointment of an EMS manager for KWFD. A seasoned EMS manager will help expedite the transition, will have better familiarity with personnel transitioning from American Ambulance to the KWFD, and will reduce much of the pressure on the EMS transition team.

KWFD has personnel that are qualified, or aspiring to become qualified, to lead EMS. At this point, it is unlikely that anyone will be interested. The EMS manager position will likely be mostly administrative, with field response limited to MCIs or incidents that require additional EMS supervision. This manager will likely work a 40-hour week and have on-call duties. There is little incentive for a firefighter (paramedic) to move from a field schedule to a 40-hour week with little chance for overtime, no guarantee of promotion, no guarantee of additional benefits above those given to field paramedics.

We know that labor is usually concerned about outside managers being hired into a traditional fire department. There is legitimate concern that City of Key West management will seek to fill other positions this way instead of through a traditional civil service process. The City should assure the IAFF local that this position is being created with a specific purpose, and not a subversion of the rank structure. Initially, the EMS manager should be a position outside the rank structure who reports to the deputy chief of Operations and the fire chief. His or her authority would be administrative in nature, with limited field authority except as defined by the fire chief. The EMS manager would not provide line supervision of personnel because the station officers and shift commanders already do that. The department should engage in a three- to five-year evaluation process to determine whether this should become a uniformed position, and at what level.

The basic duties of the KWFD EMS manager should include:

- Manage all aspects of the operations and administration of EMS;
- Administer the EMS Quality Management program;
- Oversee the education and training, certification, licensing, and privileging of all EMS providers⁴;
- Assure that all EMS vehicles are stocked, inspected, and actively licensed as per Florida EMS regulations;

⁴ Obviously, for some areas the EMS manager will have direct authority, while for others he will act as the liaison between the medical director, and licensing agencies.

- Regulate the controlled substance policy as directed by federal law and the EMS medical director;
- Maintain liaison with the KWFD for EMS dispatch and medical priority dispatch;
- Serve as the department infection control officer;
- Oversee all logistical aspects of the EMS service;
- Maintain liaison with the EMS billing contractor;
- Assure that remedial education and training is provided for determined to be deficient in skills;
- Maintain liaison with the Lower Keys Medical Center administration and clinical staff;
- Organize and oversee the EMS Public Education program;
- Maintain liaison with the Electronic-Patient Care Report (E-PCR) contractor;
- Assure that personnel attain and maintain minimum proficiency in E-PCR skills;
- As directed by the fire chief or designee, respond to medical emergencies such as MCIs and others incidents deemed warranted; and
- Any other EMS management duties as directed by the fire chief.⁵

Recommendation 4: Hire a non-sworn EMS manager to perform the above duties. This manager would preferably come from the existing EMS organization, but could be anyone meeting the qualifications determined by the City.

Human Resources – The fire chief has advised that preliminary meetings have occurred with the City’s Human Resources Department. Finalization of positions and hiring authorization will be needed. Additional attention will be needed to the recruiting process. Between the qualified paramedics working for American, and the large number available throughout Florida, the department should be able to easily hire enough paramedics and likely firefighter/paramedics. Just like other professions, an investment must be made in the recruiting process.

Recommendation 5: The Key West Office of Human Resources should work with the KWFD to initiate a targeted recruitment program for firefighter/paramedics.

There is a consensus within the department that EMS providers should be dual role/cross-trained as both paramedics and firefighters. We support this plan with one caveat, initially, non-firefighting paramedics may need to be hired because it will take too long to train or find paramedic firefighters to get the EMS running quickly. Below we offer guidance on classifying personnel during this temporary situation.

⁵ Duties described here are exemplary and not intended to be an exhaustive list.

All attempts must be made to minimize delays caused by antiquated hiring rules or the inability to adjust classifications as needed. There are several ways to consider classification and compensation for paramedics. The advice provided here should be considered general and not interfering with the City of Key West collective bargaining processes.

There are two general ways to classify and determine compensation for paramedics. One way involves paying for paramedic licensure. Personnel who are Florida licensed paramedics have been granted functional privileges by the EMS medical director, and provide EMS care as directed by the fire chief would be eligible for a fixed amount of additional pay. The exact amount would be determined by way of the collective bargaining process. The second way is to create a new uniformed classification.

The pay for licensure method could occur as follows:

- A fixed percentage;
- A partial fixed percentage and an hourly increase when working the medic unit; or
- An hourly increase when working the medic unit.

A New Classification – Another method is to create a new classification. The following classifications should be considered. These standard definitions should be used to guide the next section of the report.

- Firefighter/EMT – Current Key West firefighter who is Florida EMT certified and has been granted local functional privileges.
- Firefighter/Paramedic – Current Key West firefighters who are Florida licensed paramedics and have been granted local functional privileges.
- Paramedic/Firefighter-Apprentice – Paramedics hired by KWFD that have been granted local functional privileges but are in training to become Florida-certified firefighters.

At this time, all Key West firefighters are either firefighters or firefighter/EMTs. There are few firefighters left who do not have EMT-certification. Every member of the department should be able to ride a medic unit as a Paramedic or EMT.

The goal for the department is for all paramedics to be qualified firefighters. Recruiting preference would be given to applicants who are licensed paramedics and Florida-certified firefighters. If enough personnel cannot be recruited, a temporary classification of Paramedic/Apprentice Firefighter could be established. Candidates for Paramedic/Apprentice Firefighter would include:

1. Must be a Florida licensed paramedic;
2. Must be able to achieve paramedic privileges prior to graduation from the Key West Paramedic Orientation program;
3. Must meet the NFPA 1582 physical standards for firefighter prior to hiring;

4. Must meet the KWFD firefighter physical standards prior to hiring;
5. Must attain Florida Firefighter certification within one year of date of hiring.

The Paramedic/Apprentice Firefighter classification would be considered probationary in nature. No one would be permitted to hold the classification for more than one year. Failure to meet all conditions of probation would cause the Paramedic/Apprentice Firefighter to be disqualified by reaching full employment status.

Recommendation 6: Establish the classification of Paramedic/Apprentice Firefighter if an insufficient number of Firefighter/Paramedics would be available. This classification would be probationary in nature, with no employee holding the position for over one year.

A Paramedic/Apprentice Firefighter would perform the following job tasks:

- Drive a KWFD ambulance during emergency and non-emergency incidents;
- Provide paramedic skills while working on a KWFD paramedic ambulance;
- Train with firefighting crew members while in firefighter training;
- If qualified, use rescue and extrication tools as directed by company officers;
- Upon reaching a specific point in their firefighter training, begin to ride as an extra firefighter on KWFD suppression equipment. The specific eligibility point would be determined by the fire chief. No overtime would be paid in order to allow a Paramedic/Apprentice Firefighter to ride as an extra person on a fire engine;
- Upon graduation from firefighter training, the candidate may be required to complete a KWFD orientation program and examination.

The fire chief could make any additional rules or requirements needed to assure the safety of firefighting crews and apprentice personnel.

Medical Direction – Appointment of a medical director is a priority. Key West Fire Department should continue negotiation with Lower Keys Medical Center concerning EMS medical direction. The hospital should be asked if they could help with medical direction. Specifically, the hospital should be asked to work with the emergency medicine community to donate EMS medical direction services.

If this proves unsuccessful, then an EMS medical director must be hired. Due to changes at the national level, our recommended qualifications for EMS medical director have changed to the following:

- Must be a Doctor of Medicine (MD) or Doctor of Osteopathy (DO) and have an unrestricted Florida license to practice as such;
- Must be board-certified in the specialty of emergency medicine by the American Board of Emergency Medicine or the American Board of Osteopathic Emergency Medicine. Alternatively, a physician who is board-certified by any specialty recognized by the American Board of Medical Specialties, AND is board-certified or

board eligible in the subspecialty of Emergency Medical Services by the American Board of Emergency Medicine or the American Board of Osteopathic Emergency Medicine would be eligible;

- Must have documented experience in providing EMS medical direction for areas including: medical priority dispatch, EMS Quality Management, EMS Operations, EMS Education, and MCI and Disaster Medicine;
- Must be willing to serve as the EMS Medical Director for all Key West Public Safety programs including, EMS, Fire, and Law Enforcement;
- Must have some level of medical privilege at the Lower Key West Medical Center;
- Must be willing to complete prescribed training in EMS medical direction, as directed by the fire chief.

Recommendation 7: Appoint an EMS medical director who would report directly to the fire chief.

The EMS medical director must be willing to provide up to 15 hours of service weekly to the program. Salary range would likely be \$20,000 to \$30,000 annually, plus any training, equipment, protective gear, or vehicles deemed by the fire chief to be appropriate. This physician could appoint deputy EMS medical directors to serve in specific areas such as education, quality management, or law enforcement/SWAT programs. The medical director would be an independent contractor to the City of Key West.

Additional Needs

The following are also required, but are not as critical due to ease of availability or circumstances.

EMS Medical Priority Dispatch (MPDS) – The dispatch center should implement an MPDS program, finalize EMS dispatch criteria, and develop a quality management processes. There are three nationally recognized MPDS programs that will provide a protocol-driven, validated response direction for which equipment and what level of EMS response is needed. Each also provides a validated set of pre-arrival instructions that EMDs can use to provide instructions to callers. These programs generate directions that include simple steps such as sitting the patient up or covering with a blanket, to more complex tasks like CPR or delivering a baby.

Investing in MPDS will also be economical since it allows for the logical use of firefighter first responder units. Presently, KWFD provides first responder EMS for almost all EMS calls. Once EMS would be under the fire department, it would be easier to designate which responses require firefighting apparatus to be dispatched.

The quality management program required should be joint responsibility of the police dispatch project manager and the KWFD EMS manager. The EMS medical director would provide medical oversight of patient care issues.

Recommendation 8: Pursue the adoption of a formal MPDS program by the Key West police dispatch. This does not have to be completed prior to adopting ambulance service.

Certificate of Need – The KWFD is required to attain a Certificate of Need from the Monroe County Administration and County Commissioners. The Certificate of Need will require documentation and legal requests that will involve the City of Key West Legal, City Clerk, City Manager’s Office, and KWFD. There does not appear to be anything to likely block the County from awarding the Certificate of Need. The KWFD should immediately contact the needed support agencies to determine what part each must play in obtaining the Certificate. Upon Commission approval, the request should be ready for submission.

Recommendation 9: Immediately begin the process of filing for the Monroe County Certificate of Need.

EMS Billing Agent – The City of Key West should hire a medical billing agency to conduct all billing and collection of fees. The reasons to seek an outside agent include:

- The high risk involved with Medicare billing standards. Agencies can be debarred from CMS participation, fined, and their personal employees held civilly or criminally responsible for violations. By using an outside agent, all of the risk is shifted to the contractor.
- The ability to achieve maximum collection often depends on the billing agent’s ability to properly code events. This takes experience to master, and is complicated by the expected shift from ICD-9 to ICD-10 diagnostic codes. It would take City officials too long to master these skills leading to uncollected revenues.
- The harder the billing agent works, the more revenue that the City and the agent collect. Instead of a fixed fee, billing agents are often compensated based on a collection fee of six to eight percent of the fees they collect.

Recommendation 10: Hire a medical billing agency to manage all EMS medical billing. Under no circumstances should the City of Key West or the KWFD attempt to do this on their own.

A Request for Proposal should be developed to receive bids from the various agencies that provide this service. The service should be reputable and provide monthly and annual reports that are independently audited to GAAP standards. This agency will operate independently from the City, but will work closely with the KWFD as well as the Information and Technology (IT) and Finance Departments. The EMS manager should serve as the primary liaison with the billing firm.

Recommendation 11: The City should develop and issue an RFP for EMS Medical Billing.

Electronic Patient Care Reporting System – Patient care reporting should be done electronically using an Electronic Patient Care Reporting (E-PCR) system. The E-PCR system

will require contracting with a software development agency as well as acquiring hardware to operate on-scene and transfer electronic patient information to a secure server and the billing agent.

The IT department will need to assist with the design, development, and implementation of the E-PCR system because all of the data is entered, stored, and accessed using electronic devices and computers. There will need to be integration of billing information with the vendor providing collections and monthly reporting is required with the State of Florida. The KWFD associates will also require training if new software and devices are acquired that are significantly different from the systems they have been familiar with.

The EMS manager will be responsible for all medical records including billing, medical procedures, and inquiries. The EMS manager will regularly review the records to monitor trends and assess quality for the purposes of improving patient care. The EMS manager will develop the reports required for the State of Florida as well as any information that is required by the billing agency to ensure proper billing is being done and all funds deserved are received. The E-PCR system will be integral to the effectiveness and efficiency of the KWFD providing emergency medical response as well as transportation to the hospital, and other routine transport services they may be called upon to deliver. Also, any E-PCR hardware or software must be able to integrate into the dispatch CAD system for data storage, and the ability to populate E-PCRs.

Another issue to consider is the type of E-PCR hardware to purchase. There are two main styles, laptop computer or tablet. For the following reasons, we recommend that the tablet style be chosen.

- A laptop requires installation of intrusive hardware and software into a vehicle. These items are costly to install and may create safety hazards in the units;
- Ruggedized laptop computers cost over \$3,000, while tablets cost \$700;
- Both types of units can accomplish the same work; and,
- Tablets offer greater portability. As access to medical databases grow, portability becomes more important for daily operations. For example, if a paramedic has to look up a medical record, or guidelines for treatment of a particular poisoning, the information is right at the patient's side. While a laptop can do the same thing, its size and shape, handling a laptop computer usually will require another set of hands.
- Some states are now or will soon require first responder units to produce E-PCRs. The exact liability for Key West remains unknown. Should KWFD first responders be required to complete E-PCRs, tablets will be much more economical.

Recommendation 12: Choose a tablet type of E-PCR device for use by paramedics and EMTs.

Mutual Aid – Three ambulances will likely be able to handle almost all of the EMS responses within the City. The KWFD already participates in the Monroe County mutual aid agreement. To better protect the citizens of Key West, the KWFD should develop a mutual aid plan with American Ambulance (or other local commercial ambulances).

There are many options for compensation for mutual aid. One option is to allow American to directly bill the patient and keep all monies collected. Another is to provide American a guaranteed discount fee of \$300 per transport and for KWFD to bill for services. Legal consultation will be necessary for the particulars of such an agreement.

Recommendation 13: Develop a mutual aid plan with American Ambulance, to include a compensation mode.

Summary

In summary, we believe that the City of Key West, FL has reached a point where the timing is right for the KWFD to takeover responsibility for 911 emergency ambulance service. It does not appear that there will be a great cost deficit. Also, not having to experience a contentious RFP process every few years will allow City political and administrative leadership to better invest their time into the continued betterment of the City.

List of Recommendations – Following is a list of the 13 recommendations for the transition of EMS into the KWFD.

Recommendation 1: The City of Key West should, as quickly as possible, take control of EMS, including emergency ambulance transportation.

Recommendation 2: KWFD should exclusively purchase Type III ambulances for service.

Recommendation 3: KWFD should purchase four used Type III ambulances and begin the purchasing process for a new Type III ambulance. An annual replacement cycle of purchasing one new ambulance and moving one ambulance to reserve status should begin.

Recommendation 4: Hire a non-sworn EMS manager to perform the above duties. This manager would preferably come from the existing EMS organization, but could be anyone meeting the qualifications determined by the City.

Recommendation 5: The Key West Office of Human Resources should work with the KWFD to initiate a targeted recruitment program for firefighter/paramedics.

Recommendation 6: Establish the classification of Paramedic/Apprentice Firefighter. The classification would only be used if an insufficient number of Firefighter/Paramedics would be available. This classification would be probationary in nature, with no employee holding the position for over one year.

Recommendation 7: Appoint an EMS medical director who would report directly to the fire chief.

Recommendation 8: Pursue the adoption of a formal MPDS program by the Key West police dispatch. This does not have to be completed prior to adopting ambulance service.

Recommendation 9: Immediately begin the process of filing for the Monroe County Certificate of Need.

Recommendation 10: Hire a medical billing agency to manage all EMS medical billing. Under no circumstances should the City of Key West or the KWFD attempt to do this.

Recommendation 11: The City should develop and issue an RFP for EMS Medical Billing.

Recommendation 12: Choose a tablet type of E-PCR device for use by paramedics and EMTs.

Recommendation 13: Develop a mutual aid plan with American Ambulance, to include a compensation mode.