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# Essex County EMS Strategic Plan

## Initial Proposed Solutions

September, 2017

**Prepared for:**

Essex County and NYS MRF

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This project was prepared with funds provided by the New York State Department of State under the Municipal Restructuring Fund Program



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version9.9.17

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## Summary

As outlined in the Baseline Report, Emergency Medical Services (EMS) in Essex County (NY) is facing numerous challenges. The objective data identifies EMS agencies that struggle to meet the minimum needs of their communities through a combination of volunteer and paid staff. In general, each agency has sought to solve their challenges independently, but there is a common realization that working together may provide a more effective and efficient solution to the problem of providing excellent EMS care.

As part of the planning process, a committee of EMS providers adopted mission and vision statements. The mission of Essex County EMS is to ***“provide timely, high quality, professional, out of hospital emergency medical care and transport to residents and visitors throughout Essex County.”*** The vision statement for the agencies, providers and officials should work toward is to ***“establish a sustainable cohesive evolvable system for emergency medical care in Essex County.”***

The range of solutions for EMS operational needs goes from watchful waiting of the status quo to instituting a county-wide, comprehensive EMS system. While both extremes seem unlikely in the current environment, establishing an action plan to effect operational change is fraught with competing desires to provide the best care to those in need and the cost associated with providing that service. Below are outlined several potential solutions that local agencies and officials can consider. Several of the options can be combined or completed in phases as funding or other support becomes available. Each of the options is further described in the accompanying report including potential fiscal impacts.

1. Adopt Countywide EMS Response Targets  
Establish goals for response times and service. Minimal fiscal impact related to purchasing some additional EMS equipment.
2. Revise Dispatch Protocols to Ensure Help is Responding Quickly  
Revise dispatching policies for serious calls to ensure help is responding quickly. The purchase of a software program would improve adoption of these changes.
3. Expand EMS Educational Offerings  
Offer more EMS certification and continuing education courses. Potential expenses related to training of new instructors and to support the teaching.
4. Expand Support for Existing EMS Agencies  
Appoint a part time assistant EMS coordinator and compensate regional deputy coordinators to improve effectiveness of office and support expanded program. Estimated cost of \$25,500.
5. Establish an Ambulance Operating Certificate

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Obtain a NYS DOH ambulance operating certificate with no costs outside of staff time for initial application.

6. Deploy a county operated ambulance to areas of need in southeast portion of the county

Estimated operational budget of \$542,000 plus potential startup costs of \$185,000. The operation could be funded at least one third by patient billings, with the rest primarily coming from communities that receive the service.

7. ALS First Response and Staff Leasing

For areas that do not need a full ambulance, but aren't able to meet their service obligations, options of either ALS First Response or staff leasing may be appropriate. Cost implications vary based on level of service.

8. Facilitate Cooperation or Consolidation Among Agencies

By helping consolidating smaller agencies into larger ones, the county may be able to facilitate the improvement of EMS operations.

9. Long Term Models might include a single county wide operation, but this will take several years to plan and implement.

The EMS Strategic Planning Committee recommends that the Board of Supervisors and appropriate staff begin work to implement the first six options (underlined above) as soon as practical. The other solutions involving deploying other EMS resources to respond to calls either by the county or through a contract would need additional research and planning. The long term solutions of facilitating cooperation or developing a single operating agency should be consider as part of an ongoing planning process in the county.

Essex County also needs to consider how it will address the funding of ambulance or ALS first response programs, the potential of performing inter-facility transports, the role of public –private partnerships, the future of the AEMT-CC certification level and the potential negative impact of these changes.

EMS Solutions Summary Grid				
	Action	Implementation and first year	Ongoing	Funding Source
1	Adopt Countywide EMS Response Targets	\$ -	\$ -	n/a
	Option to purchase first response kits 50 @ \$250 each	\$ 12,500	\$ 2,000	Use grant money to purchase first response kits
2	Revise Dispatch Protocols to Ensure Help is Responding Quickly	\$ -	\$ -	n/a
	Option to implement appropriate software	\$ 4,000	\$ 2,000	Grant money for implementation and county funds for ongoing costs.
3	Expand EMS Educational Offerings	\$ -	\$ -	Funding from non-county sources such as regional EMS council and NYS DOH
4	Expand Support for Existing EMS Agencies	\$ 25,500	\$ 25,500	Potential grant support for implementation. Long term costs by county.
5	Establish Ambulance Operating Certificate	\$ -	\$ -	Existing staff time
6	Deploy a county operated ambulance to areas of need in southeast portion of the county (Cost shown for 1 ambulance, 24/7)	\$ 727,000	\$ 542,000	Probable grant money to support start up and first year to 18 months of operation. After, a mix of patient billing, subscriber town and whole county funding. Anticipated tax support of \$361,000 a year.

EMS Solutions Summary Grid				
7	ALS First Response and Staff Leasing (Cost shown for one unit, operating 12 hours per day.)	\$ 202,000	\$ 117,000	Probable grant money to support start up and first year to 18 months of operation. After, a mix of patient billing, subscriber town and whole county funding. Anticipated annual tax support of \$35,000
8	Facilitate Cooperation or Consolidation Among Agencies	\$ -	\$ -	No cost anticipated beyond staff time.
9	Long Term Model	\$ -	\$ -	No cost anticipated beyond staff time.

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## Background

As outlined in the Baseline Report, Emergency Medical Services (EMS) in Essex County (NY) is facing numerous challenges. The objective data identifies EMS agencies that struggle to meet the minimum needs of their communities through a combination of volunteer and paid staff. The agencies continue to shift more toward paid positions as volunteerism declines. To cope, agencies have begun to charge for services that they used provide for free and have asked communities to contribute more through taxes and fund drives. In general, each agency has sought to solve their challenges independently, but there is a common realization that working together may provide a more effective and efficient solution to the problem of providing excellent EMS care.

An overarching goal is to ensure that qualified EMS providers arrive promptly to all medical emergencies in Essex County. While that occurs in most instances under the current system, there have been gaps that have been identified that should be addressed immediately and other longer term concerns that can also be responded to by changes to the current EMS system.

The county is also facing a paradigm shift in the way EMS is provided. Twenty years ago, volunteer EMTs and drivers were able to meet the emergency medical needs of the county with minimal financial support. However, the combination of increased public expectation, the increasing cost of providing the service, and the struggles of some local agency levels are leading to a gap between the capacities of the current system and the standard of care. This situation is compounded by the rural nature of the community and a call volume that won't generate enough revenue to support a paid agency. The result is a scenario where public funds will be necessary to support this essential service in the very near future.

## Mission and Vision Statement

A committee of EMS providers and county staff have dedicated many hours to the process of developing a strategic plan and have developed the following mission and vision statements to guide the actions of EMS and other involved organizations.

The mission of Essex County EMS is to ***“provide timely, high quality, professional, out of hospital emergency medical care and transport to residents and visitors throughout Essex County.”***

The vision statement for the agencies, providers and officials should work toward is to ***“establish a sustainable cohesive evolvable system for emergency medical care in Essex County.”***



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The solutions proposed in this document are to support the mission and vision of Essex EMS and to address to the existing identified operational needs.

## Identified Operational Needs

In general, the EMS system in the county is able to respond to most emergencies in an appropriate manner. However, there are reportedly more frequent challenges to meet the needs of the community. A part of these challenges comes from an absence of locally adopted rigorous standards for EMS response for agencies to design their operations to meet for the benefit of the patients that need assistance in an emergency.

While the entire county has some problems with availability of volunteers, the southeastern portion of Essex County appears to have the most pronounced need for additional EMS as demonstrated by the collapse of an ambulance service in Crown Point, a busy agency that relies on the actions of single volunteer for the majority of its calls as well as volunteer firefighters from other agencies and another agency that is unable to answer one in 12 calls. Other agencies and political leaders have expressed concerns about the availability of staff in other areas of the county, particularly the northwest section. There is also a concern about how the existing system will be able to operate in the next five years and beyond with the number of volunteers declining, limited availability of EMT classes, and increasing administrative burdens. Additionally, objective analysis of EMS performance across the county could be improved to help target specific needs.

## Solutions

The range of solutions for EMS operational needs goes from watchful waiting of the status quo to instituting a county-wide, comprehensive EMS system. While both extremes seem unlikely in the current environment, establishing an action plan to effect operational change is fraught with competing desires to provide the best care to those in need and the cost associated with providing that service. Below are outlined several potential solutions that local agencies and officials can consider. Several of the options can be combined or completed in phases as funding or other support becomes available.

### 1. Adopt Countywide EMS Response Targets

A prompt, effective EMS response is essential to positively impact the health of the residents and visitors of Essex County. The agencies in Essex County all currently

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operate based on their own independent best efforts. A set of countywide response effort targets will aid in the enhancement of the EMS system in the county. An example of response targets is outlined below:

- First responder with appropriate equipment and training on scene of critical EMS calls<sup>1</sup> in 8 minutes, 90 percent of time in hamlets and villages;
- Ambulance on scene of serious EMS calls<sup>2</sup> in 12 minutes, 90 percent of time in hamlets and villages and on scene of all other EMS calls in 25 minutes, 90 percent of time;
- ALS trained and equipped providers dispatched to serious EMS calls at the time of call; and
- Develop appropriate tracking tools for county EMS to monitor agency performance and to assist with improvements as appropriate.

These are performance goals that in some cases represent a substantial improvement from the current environment and will necessitate a change in operations to meet them. These goals will need to be achieved over time as there will be modifications to the system to get there including potentially using nontraditional responders.

### **Fiscal Impact**

No additional costs to change standards, but existing personnel would need to allocate time to complete this objective to develop and monitor the tracking tools. In addition, there would be costs if there is the need to purchase first response kits to be used by EMS providers and other responders in advance of the ambulances.

## **2. Revise Dispatch Protocols to Ensure Help is Responding Quickly**

The majority of ambulance agencies in the county operate by mustering a crew only when a call occurs. For these agencies, when the dispatch center alerts them that a call has occurred, there is usually not an immediate response and there can be a delay of four or more minutes before the dispatch center determines that a crew is not available for that call and requests mutual aid from another agency. There is the

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<sup>11</sup> Critical EMS calls defined as Echo calls by EMD standards such as suspected cardiac arrest.

<sup>2</sup> Serious EMS calls defined as Echo, Delta and some Charlie calls by EMD standards

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potential further delay from the sheer geographic separation between some agencies and frequently the need for the other agency to also muster a crew.

Empower the dispatch center to begin requesting mutual aid through simultaneous dispatch at the four minute mark for serious EMS calls if crews have not indicating that they are responding to a call. The mutual aid agency can be canceled if the home agency musters a crew, but if they do not assistance will be coming to help the person who called 911.

Additionally, the dispatch protocols should be revised so that trained and equipped care providers quickly respond to the critical calls. These care providers could be drawn from the existing ranks of first responders such as firefighters and law enforcement. They could also be drawn from other healthcare providers or citizens that receive the required training and can be alerted through the use of a smartphone.

The recommendation is to develop or acquire a countywide provider notification and tracking system for use by all EMS agencies to aid in the implementation of the revised dispatch protocols.

### **Fiscal Impact**

No anticipated additional costs to the county, but existing personnel would need to allocate time to complete this objective. However, purchasing an appropriate software program may aid in the implementation of this objective. Responding agencies or a countywide purchase of software would have the additional costs related to a small increase in responses. The establishment of an emergency CPR response network would have both a personnel and technology cost that is not determined at this time.

## **3. Expand EMS Educational Offerings**

Essex County has a limited number of courses and qualified instructors available to the community. This impacts the ability to educate potential new EMS providers and also to retain existing providers. For example, no new basic EMT class is being offered in Fall 2017 in the county. An effort needs to be made by both Essex County EMS and Mountain Lakes REMSCO to recruit, train and retain qualified instructors at all levels. Essex County EMS and county agencies will need to work with the REMSCO to develop appropriate training offerings.

As a stop gap, the County in coordination with the REMSCO could seek instructors from other areas of the state to teach courses as visiting instructors. For example, an EMT refresher course could be taught through a mix of on-line lessons and in person

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skills over two weekends or a core content course could be offered during several condensed sessions.

Additionally, it is possible that the Franklin-Essex-Hamilton BOCES may be able to offer educational support either to the high school population or to adult education. The county also does not have enough CPR and first aid instructors to meet the demands of the community. These courses are often taught by the Essex County EMS Coordinator.

## **Fiscal Impact**

Essex County EMS could accelerate the training process by assisting with the expenses for one or more candidates to complete the required certification training and by providing courses for them to intern in. At the end of the process, the instructor would be a Mountain Lakes REMSCO employee while teaching.

The visiting instructor model would need some additional staff time from county personnel to complete and a financial investment to support the expenses of traveling instructors. Essex County should also identify appropriate staff to expand their offerings of CPR and First Aid training. These new instructors could be drawn from new employees hired as part of other solutions.

## **4. Expand Support for Existing EMS Agencies**

The ambulance services in Essex County currently receive a variety of support from the county government. The largest support is through the 911 center where calls are received, dispatched and units are supported through out the calls. Agencies can also seek to receive data information about their calls from the communications center. The EMS Coordinator provides a variety of support to the EMS community including:

- Direct educational offerings on a frequent basis
- Mutual aid planning
- Technical support for the volunteer agencies
- Coordination between agencies
- Disaster response

However, despite the current activities by the county offices, there is still a demand for additional support from the EMS agencies in the county that were identified during the strategic planning process. It is suggested that expanding these services through the

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county, primarily in the EMS office, although some of the support will be provided by other departments as noted:

- Expanded educational offerings – the EMS Office will offer additional EMT classes to ensure that there are offerings for at least one day time and one evening EMT classes. This objective will be met in coordination with Mountain Lakes REMSCO;
- Field support and EMS supervision for complex or expanding incidents through field supervision;
- Consolidated purchasing of ambulances, medical equipment, medical supplies, uniforms, household supplies and technology through the county purchasing department;
- Planning for large scale events such as Lake Placid Ironman, county fair, and other public gatherings; and
- Routine public education about the EMS system.

## **Fiscal Impact**

To provide these expanded services to all the agencies, and therefore residents and visitors to Essex County, it suggested that the Essex County EMS Budget by \$25,500 to support the above initiatives. The expenditures projected as follows:

- Part Time Deputy EMS Coordinator to assist with EMS planning, contracting for services, public education (including first aid and CPR) and expanded agency support. This position would support the goal of succession planning for the county as the current coordinator is approaching retirement age. (\$18,000 total cost per year for 800 hour per year position)
- Stipend for Assistant EMS Coordinators to support scene responses and interactions with local agencies - \$4,500 (\$1,500 each)
- Funds for interdepartmental chargebacks for purchasing (Estimated at \$3,000)

## **5. Establish an Ambulance Operating Certificate**

Municipalities, including counties, are empowered by Article 30 of Public Health law to establish an ambulance service by declaring a public need and receiving permission

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from the DOH to operate an ambulance service. This step would allow the county to act on their own to provide EMS to citizens in need. The county could then choose to operate the ambulance service itself or contract with a third party to provide the service. An ambulance operating certificate would also empower the county to operate an ALS first response service.

While operating the service itself would give the county the greatest ability to tailor the resources to the community need, a lower cost solution would likely be to contract through a competitive proposal for a non-governmental organization to provide the service. The countywide operating certificate could also be utilized to reallocate existing resources to other communities as part of a dynamic system management plan.<sup>3</sup>

## **Fiscal Impact**

The initial creation of an ambulance operating certificate has no application cost. There would be staff time to complete the required application for the operations certificate. However, in accordance with state law, after two years, the county would need to reapply to the REMSCO to demonstrate that the service meeting a need in the community. The CON application process can cost several thousand dollars and does require a public hearing.

If the model for redeployment were identified as being helpful to solve problems in the community, a system in would need to be developed that would include staff time to design the operations and administrative support for any memorandums of understanding.

## **6. Deploy an Ambulance to Communities with Demonstrated Need**

As outlined above the communities in the southeastern portion of the county appear to have the greatest need for additional resources. During the first six months of 2017, the communities of Crown Point, Moriah, and Ticonderoga had nearly 700 responses –roughly a third of the county’s overall call volume. Ticonderoga was unable to muster a crew for 1 in 12 calls and Moriah needed to use a mutual aid crew member

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<sup>3</sup> Columbia County (NY) uses this model to help redeploy resources across the county. When one agency responds to a call and has no other resources, a neighboring agency could be moved to a location near or into that community, if they have adequate resources of their own.

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on a substantial proportion of their calls. Crown Point was usually covered by a EMS crew from LaMoille<sup>4</sup> that responds from Ticonderoga.

Staffing an ALS ambulance in this area would help provide the necessary EMS service when the existing volunteers are not available. If the ambulance were assured to get the primary calls for Crown Point and mutual aid calls for Moriah and Ticonderoga, there would be an estimated 1 call per day. All efforts to provide these services should be done in conjunction with the existing EMS agencies in the area.

In the northwestern portion of the county, Wilmington has been struggling to secure a complete crew to handle their emergency calls at various times of the day. There might be a need to locate an ambulance in this area if it cannot be solved through other options discussed below.

## **Option A – County Operated Ambulance – Committee Recommendation**

After the establishment of a countywide operating certificate and approval of the REMAC, Essex County could begin to operate an ALS ambulance in the community. The service would have startup costs related to purchasing equipment such as an ambulance, cardiac monitor, stretcher and other supplies. A working estimate for purchasing all those materials new would be about \$185,000<sup>5</sup>.

A common staffing pattern in EMS is to have employees work 12 hour shifts on a 4 day on, 4 day off rotation. Based on that model, the county would need to employ 4 full time ALS technicians, and 4 full time EMTs. In addition, to the full time staff, there would need to be several part time employees hired to help cover for vacations, illnesses and training.

The anticipated costs for providing this service are outlined below:

- ALS Tech average pay rate \$18.00
- EMT average pay rate \$ 14.50
- Benefit Premium = 75%
- Annual Vehicle Operating costs = \$24,875 plus \$0.45 per mile
- Medical Supplies \$30 per day on average

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<sup>4</sup> LaMoille has a contract with the town of Crown Point to provide this service. Their crew does not remain at their station between calls, but needs to be mustered for each call. They also may be tied up on other calls when a request comes in for them to respond.

<sup>5</sup> It would be possible for the county to lease or purchase a used ambulance/equipment at substantially lower cost.



- Estimated daily cost \$1,485.
- Annual cost estimated at \$542,000.

The anticipated revenue for 1 transports per day is \$181,000.<sup>6</sup>

Based on the anticipated revenue, the net cost to operate the system is \$ 361,000. However, the ambulance completed 2 transports per day, the subsidy would drop in half to \$180,000.

This option is recommended by the committee to ensure that the county will have direct control over the ambulance and to ensure its long term viability.

### **Fiscal Impact**

The net cost to operate the system is estimated to be \$361,000. While the primary beneficiaries of the service will be residents and visitors to the towns of Crown Point, Moriah and Ticonderoga, all communities will benefit as the ambulance will be able to respond to other communities as needed to provide back up. Therefore, the cost should be shared based on the share of call utilization among the three primary communities and also other communities.

### **Option B- Private Sector Ambulance**

Essex County could choose to solicit proposals from private organizations to provide the ambulance and crew to serve three towns identified. The request for proposals (RFP) and eventual contract should specify the type of service desired, the minimum standards. For example, the RFP could request that an ambulance service provide an ALS ambulance and crew for 24 hours per day to serve the area as the primary dispatch for calls in Crown Point and to serve as a backup for other agencies in the area. The RFP could specify that a certain subsidy will be available to support the service and that the agency will be empowered to collect revenue for transports and other appropriate EMS responses in the area.

Using identical pay rates, the private sector ambulance should be able to provide the service at a lower cost because of lower benefit costs. As a model, potential costs are outlined below.

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<sup>6</sup> The supporting explanation for the estimated revenue for ambulance transports is in the appendix. It is based on actual data for several EMS agencies in Essex County for 2016-17. A variety of factors can impact this revenue projection, this conservative figure can provide information planning purposes



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- ALS Tech average pay rate \$18.00
  - EMT average pay rate \$ 14.50
  - Benefit Premium = 40%
  - Annual Vehicle Operating costs = \$24,875 plus \$0.45 per mile
  - Medical Supplies \$30 per day on average
  - Estimated daily cost \$1,215.
  - Annual cost estimated at \$443,000.

Based on the change in benefit rate from 75% of wages to 40% of wages, the service could be provided for about 18 percent less on an annual basis.

It is estimated that the revenue from such a service would be \$ 181,300 for one transport per day. The net cost for the provider would be \$262,000, which could be subsidized by the county as noted below. Also, if the number of transports doubled to 2, the subsidy would drop to about \$80,000.

### **Fiscal Impact**

The net cost to operate the system is estimated to be \$206,200. As above, while the primary beneficiaries of the service will be residents and visitors to the towns of Crown Point, Moriah and Ticonderoga, all communities will benefit as the ambulance will be able to respond to other communities as needed to provide back up. Therefore, the cost should be shared based on the share of call utilization among the three primary communities and also other communities.

## **7. ALS First Response and Staff Leasing**

Advanced life support response vehicles and qualified staff have also been identified as potential needs in the county. The ALS response units could become a greater need if ALS units are dispatched on a more regular basis as a result of revised dispatch protocols. There are particular agencies that have more needs than others, especially in daytime hours. The county could provide that service on a regular basis, as needed for potentially high demand times, or as temporary relief because of injury or time away.

Similarly, as agencies have trouble maintaining a full roster of volunteers to meet the increasing demands there has developed a need for supplemental staffing. About a third of the agencies in the county hire their own staff and one currently staff leases from a private, for profit company. There are options available for staff to be provided

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on regional model. Among the following, the committee does not have a recommended option at this time, but believes that one or more of these options may be needed in the next year or two to solve anticipated staffing and response concerns.

## Option A – County ALS Response Vehicles

Essex County could develop an ALS Response vehicle (ALS-RV) model to support agencies that have difficulties providing their own ALS providers. The county could deploy one or more ALS-RV to strategic areas in the county. These units could be used to first respond to some or all calls in a designated area. The units would work in conjunction with the existing BLS units and could be used to complete a crew when only one volunteer is available.

The anticipated costs for this model are:

- ALS Provider wage is \$18.00 per hour.
- The benefit rate for a county employee is 75 percent of wages.
- The daily cost of operating an ALS response vehicle is \$23.00, plus \$0.35 per mile at 50 miles per day.

For an ALS unit operating 12 hours a day, 7 days a week, the operating costs are estimated at \$117,000 per unit. The county would need to enter into a contractual arrangement with the agencies that it would provide this support to so they would be able to bill for the patient care and then pay the county for the service.<sup>7</sup> Depending on the area where the units are deployed, they may participate in up to 2 transports per day. A reasonable rate for ALS intercept, based on the current environment, is \$ 250 per call. In order to cover the costs of \$117,000 for the service, it would need to be involved in about 470 transports per year.

## Fiscal Impact

It is unlikely that any deployment models will generate the necessary revenue to cover all the costs. If we forecast one transport per day and 90% collection rate, there would be a gap of \$35,000 annually. This gap would need to be covered by some public funding. There would also be startup costs of about \$85,000 per ALS RV for the vehicle, outfitting, and ALS supplies.

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<sup>7</sup> Most insurance companies consider EMS to be a transport service and do not consider the ALS technicians service as appropriate for separate billing. Therefore, transport agencies bill at either an ALS or BLS rate, depending on the care provided. If the ALS care is provided by someone outside the agency, the transporting agency can pay the ALS agency at an agreed upon rate.

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## Potential Variation

This model could be performed by either a new or existing organization for a cost point of about 15% lower because of lower benefit costs, reducing the need for public funding.

## Option B – County Operated Staffing Program

Under this model, the county would enter into agreements to provide staff to agencies on a regular basis, such as 60 hours per week or on as needed basis for special events or temporary relief. The county would then screen and hire the appropriate number of providers to meet the needs of the contract. While the cash cost might be marginally higher than if the agency hired directly, there are avoided costs in the area of human resources, benefit management, training and uniforms that would benefit the contracting agencies.

The anticipated costs for providing this service are outlined below:

- ALS Tech average pay rate \$18.00 per hour
- Benefit Premium = 75%
- Effective rate to agency \$31.50 per hour.
- The estimated annual cost for ALS tech coverage for a 40 hours per week work is \$66,000. For 60 hours per week, the cost would be about \$99,000. The cost to cover a 24/7 schedule with a combination of full and part time staff is estimated to be \$278,000.

## Fiscal Impact

The cost of this option would be best managed through a contract between the county and the agency that was seeking the service. Most staffing arrangements provide for billing on a monthly or quarterly basis based on the actual number of hours worked. If the hourly rate is calculated properly, then there should be enough revenue to cover all expenses. However, there would be “legacy” costs to the county for post-retirement benefits.

## Option C - Private Sector Staffing Model

The private sector, either a non-profit or for profit company, would also be able to provide this service. One potential option would be for one existing ambulance company to contract with another for this service. An advantage the private sector has over the county would be a lower benefit ratio and potentially more flexible human resource management rules.

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The anticipated costs for providing this service are outlined below:

- ALS Tech average pay rate \$18.00 per hour
- Benefit Premium = 45%
- Effective rate to agency \$26.00 per hour.
- The estimated annual cost for ALS tech coverage for a 40 hours per week work is \$54,000. For 60 hours per week, the cost would be about \$81,000. The cost to cover a 24/7 schedule with a combination of full and part time staff is estimated to be \$229,000.

### **Fiscal Impact**

The cost of this option would be best managed through a contract between the agencies. Most staffing arrangements provide for billing on a monthly or quarterly basis based on the actual number of hours worked. If the hourly rate is calculated properly, then there should be enough revenue to cover all expenses. There would be no fiscal impact on the county.

## **8. Facilitate Cooperation or Consolidation Among Agencies**

As noted earlier, the existing EMS system is being stressed from a number of different factors. One potential response that has been discussed is to provide additional support for the existing EMS agencies to make them more efficient and effective.

### **Regional Agency Mergers**

Willsboro Fire Department and Essex Fire Department merged their ambulance operations into a single standalone EMS organization (the fire departments remain independent operations) to support billing and improve the efficiency of their operations. While a merger like this can create disruptions, the end result is often a stronger, more effective organization. The county has provided some support to mergers when they occur, it could take a more active role in supporting the mergers and could potentially provide technical support for facilitating the change or financial support for outside experts such as accountants and attorneys. The technical support could come either from county funds, or through assisting the agencies in grant applications to support the merger.

A long term goal could be to reduce the number of EMS agencies in the county from 18 to a handful. There would maintain bases of operation in population centers to

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ensure prompt response and encourage volunteer involvement, but administrative and staffing tasks could be handled through a larger organization.

## Sharing of healthcare and retirement benefits

One of the challenges faced by the individual agencies working alone is the provision of benefits to their employees such as healthcare, dental, and retirement. The county could facilitate the development of a cooperative purchasing entity or help the EMS agencies gain access to any existing cooperatives in the area. However, the best solution might be to assist agencies toward mergers, especially if there is grant funding available to support the mergers.

## 9. Long Term Models

It has been demonstrated in multiple communities in the country, including rural areas like Essex County, that a single provider in the county (and beyond, where appropriate) is capable of providing excellent EMS service, including a variety of ancillary services. In some cases it is a county agency and others a private organization (either for profit or non-profit), but the single agency is able to develop efficiencies of scale.

The transition to such a model would require a substantial public investment of political will and financial resources. For example, the new single agency could acquire the existing physical resources from the current agencies and continue to operate one or more ambulances in all of the population centers. The staffing would be a mix of volunteers based in each community and career staff employed by the agency.

While the scale would be substantially different, an example of this model can be found in Fairfax County where over 40 years the county has slowly worked with community volunteer fire and EMS agencies to knit them into symbiotic combination department. The career force provides a core of responders and sets standards for all providers. The county owns nearly all the capital and has established standards for operations. Community based volunteer companies work side by side with the professional core when they are available and to provide additional resources for surge events – planned or unplanned.

## Other Considerations

This section identifies some of the factors that should be considered by Essex County as it identifies solutions to the existing and potential problems with EMS in the county.

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## Funding of Ambulances or ALS FR Vehicles

The current EMS program, like other public safety programs, is funded out of the general fund of the county budget because the entire county benefits from the activity. However, if ambulances or ALS first response vehicles are placed into service that serve primarily just a portion of the county, the county should seek a method to proportionately assess those communities for those services. This could be done through Intermunicipal agreements between the county and impacted towns, through the creation of special ambulance districts or reallocation of sales taxes.

## Revenue from Inter-facility Transport

- Inter-facility transports could provide additional revenue to a county run system. This project has not evaluated the volume or revenue of inter-facility transports except those reported by Lake Placid EMS as part of their emergency call volume. Elizabethtown Community Hospital and LaMoille Ambulance both are frequent providers of inter-facility transport. This could be source of regular revenue for a single provider system.

## Role of Private/ Public Partnership

- There are several examples of successful private/public partnerships in EMS. In New York, Greene County EMS is an independent non-profit that is funded partially by the county and a variety of town based EMS agencies. It provides ALS first response services to the residents in support of the existing BLS agencies. The county has a number of appointed members to the board and has a contract that gives a certain amount of control over the actions of the agency.
- In Mecklenburg County, NC, a collaboration between the county and a large hospital system created a hybrid model where the EMS providers are employed by an independent organization that is managed jointly by the county and the hospital system. The employees work on vehicles that are owned and maintained by the county and stationed at county facilities. However, the employees are a part of the private organization that also manages the billing and purchasing of medical equipment. The agency handles nearly all emergency and non-emergency EMS transports in the county and operates with minimal tax subsidy.

## Non-Traditional EMS Activities

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The volume of EMS calls in Essex County will likely lead to any employees having substantial time between emergency responses. To provide benefit to the community between calls, the employees should be assigned other activities that would aid the community. Examples include well checks of elderly or infirm residents, follow up on discharged patients, home healthcare visits, or administrative tasks either related to EMS or other government services. EMS providers could also provide community education on topics such as CPR, first aid or injury prevention.

## Future of AEMT-Critical Care

New York State is evaluating the role of AEMT-Critical Cares in the future and a clear policy has not yet been established. Essex County relies very heavily on AEMT-CC to provide ALS care. If future protocols reduce their scope of care to a level that is not considered ALS, then there will be substantial gap in the county. The creation of a paramedic program at ECH will help address this need by training more paramedics, but this solution has several year lead time and the change in certification and scope of care may occur more quickly.

## Potential Negative Impact of Changes

One concern is the movement of providers seeking employment between agencies based on wages and benefits. There is relatively little difference between most providers right now, but the creation of a county agency with improved benefits and wages could draw providers away from existing positions and create a gap in the system preventing agencies from being able to meet their response demands. This could lead to agencies ceasing operations as well if the cost of services begins to exceed their revenue potential.

Another major concern would be the potential acceleration of the loss of volunteer if they felt that they were not valued by the EMS system and are not involved in shaping the future state of the EMS system. It is key to ensure their continued involvement and full participation because they bring substantial value to the community through their community connection, local knowledge and response to calls. A system without volunteers would require substantial support from government revenues to provide adequate services.

## Future Steps

The county government can unilaterally act on several of the above identified solutions with minimal fiscal impact and with the potential to improve the EMS System



in short order. The first six proposed solutions, recommended by the committee, could be implemented before or with the start of the next fiscal year. They are:

1. Adopt Countywide EMS Response Targets
2. Revise Dispatch Protocols to Ensure Help is Responding Quickly
3. Expand EMS Educational Offerings
4. Establish an Ambulance Operating Certificate
5. Expand Support for Existing EMS Agencies
6. Deploy a county operated ambulance to areas of need in southeast portion of the county

The other solutions involving deploying other EMS resources to respond to calls either by the county or through a contract would need additional research and planning. The long term solutions of facilitating cooperation or developing a single operating agency should be consider as part of an ongoing planning process in the county.

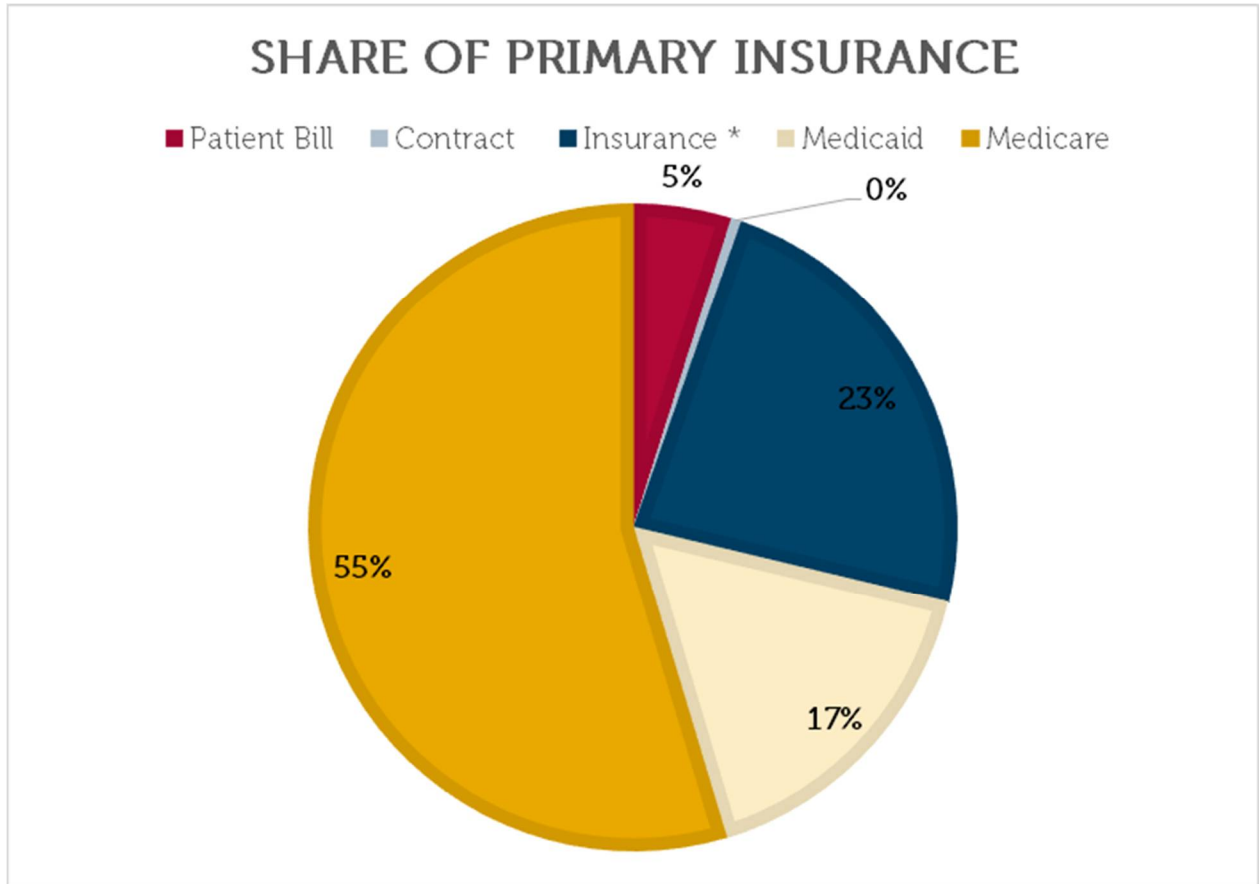
EMS Solutions Summary Grid				
	Action	Implementation and first year	Ongoing	Funding Source
1	Adopt Countywide EMS Response Targets	\$ -	\$ -	n/a
	Option to purchase first response kits 50 @ \$250 each	\$ 12,500	\$ 2,000	Use grant money to purchase first response kits
2	Revise Dispatch Protocols to Ensure Help is Responding Quickly	\$ -	\$ -	n/a
	Option to implement appropriate software	\$ 4,000	\$ 2,000	Grant money for implementation and county funds for ongoing costs.
3	Expand EMS Educational Offerings	\$ -	\$ -	Funding from non-county sources such as regional EMS council and NYS DOH
4	Expand Support for Existing EMS Agencies	\$ 25,500	\$ 25,500	Potential grant support for implementation. Long term costs by county.



EMS Solutions Summary Grid				
5	Establish Ambulance Operating Certificate	\$ -	\$ -	Existing staff time
6	Deploy a county operated ambulance to areas of need in southeast portion of the county (Cost shown for 1 ambulance, 24/7)	\$ 727,000	\$ 542,000	Probable grant money to support start up and first year to 18 months of operation. After, a mix of patient billing, subscriber town and whole county funding. Anticipated tax support of \$361,000 a year.
7	ALS First Response and Staff Leasing (Cost shown for one unit, operating 12 hours per day.)	\$ 202,000	\$ 117,000	Probable grant money to support start up and first year to 18 months of operation. After, a mix of patient billing, subscriber town and whole county funding. Anticipated annual tax support of \$35,000
8	Facilitate Cooperation or Consolidation Among Agencies	\$ -	\$ -	No cost anticipated beyond staff time.
9	Long Term Model	\$ -	\$ -	No cost anticipated beyond staff time.

## Appendix 1 – Revenue Recovery Environment

Six of the Essex County EMS Agencies that bill for EMS services use the same company for billing, Emergency Management Resources (EMR) out of Albany, NY. To understand the current revenue recover environment, EMR shared billing data shared billing information from nearly 10,000 calls from the last several years. Medicare is the largest share at 55% of patients with contracts accounting for less than 1%. Private Insurance represents nearly a quarter of patients.



EMS is paid primarily based on the transport of a patient and the level of care provided during the transport. There is also a charge based on the number of miles that a

patient is transported. Medicare rates are set by the Center for Medicare and Medicaid Services at the federal level. Medicaid rates are set by Essex County. Agencies choose how much to bill private insurance companies and patients. Insurance companies do not always pay the full billed amount and agencies can count on receiving about 80 percent of the amount billed. Calls categorized based on the care provided during transport into Advanced Life Support (ALS) – Level 1 (example – patient with chest pains, trouble breathing or a stroke), ALS Level 2 (example – cardiac arrest transported to hospital or major trauma) or Basic Life Support (BLS)(example – abdominal pains or minor orthopedic injury).

Patient Billing Matrix				
	ALS 1	ALS 2	BLS	Mileage
<i>Percent of calls</i>	53%	1%	46%	
Patient Bill	\$ 850.00	\$ 1,100.00	\$ 650.00	\$ 18.00
Contract	\$ 850.00	\$ 1,100.00	\$ 650.00	\$ 18.00
Insurance *	\$ 850.00	\$ 1,100.00	\$ 650.00	\$ 18.00
Medicaid	\$ 200.03	\$ 200.03	\$ 150.02	\$ 2.00
Medicare	\$ 411.32	\$ 595.34	\$ 346.38	\$ 7.24

#### Calculation of Average Call Revenue

Using the billing rates and the share of primary insurance identified, we calculated the average call revenue that could be expected for an EMS transport. For mileage, we used 10 miles per transport. We also used the following assumptions to create a conservative pricing model:

- Only 70 percent of patients receiving a direct bill would pay the bill;
- Private Insurance would only pay 80 percent of the amount billed; and
- 25 percent of Medicare recipients would not pay their share of the bill (Medicare recipients are responsible for 20 percent of their bill).

Based on the above assumptions, we estimate that an ambulance would receive an average of \$490 per transport over the course of a year.

## Appendix 2- 2017 Call Volume

Essex County EMS Responses (1/1/2017 to 8/31/2017)			
Agency	Number of Responses	Missed	Coverage
AuSable Forks EMS	302	2	99%
Crown Point VFD *	186	0	100%
ECH Ambulance	6	0	100%
Elizabethtown-Lewis EMS	188	1	99%
Keene EMS	52	0	100%
Keene Valley EMS	84	8	90%
Keeseville EMS	7	0	100%
Lake Placid EMS	353	0	100%
Lamoille EMS	222	1	100%
Long Lake EMS	81	0	100%
Minerva EMS	45	0	100%
Moriah EMS	337	3	99%
Newcomb EMS	48	1	98%
Saranac Lake EMS	3	0	100%
Schroon Lake EMS	275	20	93%
Ticonderoga EMS	427	49	89%
Westport EMS	112	1	99%
Willsboro-Essex EMS	295	1	100%
Wilmington EMS	140	4	97%
<b>Total</b>	<b>3,163</b>	<b>91</b>	<b>97%</b>
Per Day (243 days)	13	0.4	
<i>* Crown Point VFD provides first response, Lamoille typically provides transport for that town.</i>			
Source: Essex County 911 Center			