

Comprehensive Study of the Sullivan County Emergency Medical Services System

The Benjamin Center

September 2020



FOR PUBLIC POLICY INITIATIVES



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Acknowledgements

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EMS Agencies

Bethel Volunteer Ambulance Corps
Catskills Hatzalah
Cochecton Volunteer Ambulance Corps
Grahamsville First Aid Squad
Jeffersonville Volunteer First Aid Corps
Lumberland Fire Department
Mamakating First Aid Squad
MobileMedic
Neversink Fire Department
Roscoe & Rockland Volunteer Ambulance Corps
Rock Hill Volunteer Ambulance Corps
Sylvan Liebla American Legion Post #1363
Tusten Volunteer Ambulance Service
Upper Delaware Ambulance Corps
Volunteer Ambulance Corps of Livingston Manor
Woodbourne Fire Company

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EXECUTIVE SUMMARY

The persistent challenges of delivering Emergency Medical Services (EMS) services in rural areas in New York State and nationally have been the subject of significant previous study. This reports responds to a request by the Sullivan County government for a study of “all aspects of the EMS system currently in place in the County including, but not limited to response times, call volume, Advanced Life Support (ALS) availability by time of day/day of week, availability of volunteers, and geography to determine if improvements can be made, and if so what improvements would increase the efficiency and effectiveness of the system to meet the expectations of the residents of the County.” Much of it is based upon loosely structured in-depth interviews with leaders of Sullivan County’s ambulance corps.

Agencies and Resources

There are 17 EMS agencies active in Sullivan County. Twelve (71%) are staffed solely by volunteers; four (24%) use a combination of volunteers and paid personnel. MobileMedic is a commercial for-profit agency staffed by paid employees. The number of volunteers contributing to each all- or part-volunteer company ranges from ten to thirty. All but one company reports that significant numbers of their members are not regularly available to respond. The total number of available ambulances in Sullivan County’s sixteen non-Hatzalah corps, including those of MobileMedic, is 35. Additionally, Hatzalah deploys 13 ambulances in Sullivan County during the summer and two in the winter.

Creation of a System

In Sullivan County, as across the United States, rural ambulance services did not develop as part of a larger system. They were created — sometimes independently, sometimes as adjuncts of existing organizations — in an ad hoc, highly decentralized, community-based fashion to meet a local need. From the 1960’s until today, the common goal in NYS and elsewhere has been to create a state regulated, county-centered, integrated, professional service delivery system out of a highly decentralized aggregation of volunteer community-oriented and -based organizations.

Response Performance

The data utilized for this study is from 2017 and 2018. There were a total of 16,120 calls dispatched for Emergency Medical Response in Sullivan County in 2017 and 2018; the combined squads responded to 97% of these. Four fifths of the calls dispatched by the county were covered by three of the sixteen providers. Five providers each responded to fewer than 200 calls.¹ Demand was greatest between 11 AM and 5 PM on Mondays and Thursdays and in the summer months. Agencies differed widely in their ability to respond. Less than two-thirds of

¹ Data does not include Hatzalah.

the time, six volunteer agencies were able to get full crews to the scene less than two-thirds of the time. Protocol is that if there is no initial response, the primary designated mutual aid company is called out. For companies that routinely proved unable to respond at certain times of the day or generally, an automatic mutual aid (AMA) practice was established by county dispatch. Three companies have established the practice of simultaneous dispatch.

For rural areas, a 2017 national study of over 1.7 million cases showed average emergency medical response time to be 14.5 minutes, about twice the time as for suburbs and more than twice that for urban areas.² At 11 minutes and 28 seconds, the Sullivan County average response time during the two-year long study period was shorter the national average by about three minutes. Average time in the county from dispatch to arrival at a hospital or other medical facility was 36 minutes and 44 seconds: 11:28 to the scene, 13:16 at the scene and 12 minutes from the scene to the destination. Response times were about equal for Basic Life Support (BLS) and ALS calls but were far lower for priority ALS calls. Calls with the longest response times were concentrated along the periphery of the county. Response time has been routinely measured as the time between dispatch and arrival of an ambulance on the scene. However, interviewees argue that the length of time to response is best calculated to the arrival of the "first responder," an EMT providing pre-hospital care in advance of the ambulance arrival. Sullivan County began collecting response data in this way in 2019.

Reporting

Each response requires the filing of a Patient Care Report (PCR) to inform the receiving hospital of the patient's condition, required medication and other salient medical information. In 2020 squads were asked to transition to electronic filing; seven in Sullivan County have done so to date. The NYS Bureau of EMS announced in July of 2020 that it will provide an electronic PCR solution without cost at the beginning of 2021 to all EMS agencies that wish to use it.

Demand Side Issues

Pre-COVID-19, EMS volunteer responders expressed concern about the added burden placed upon them by "frequent flyers"; that is, persons who routinely call for medical assistance when emergency intervention is not needed. This creates a disincentive to volunteer, places an unnecessary burden on hospital emergency rooms and drives up costs of medical care. Though an imperfect method, we attempted to measure the demand placed upon the system by such callers by counting the percentage of repeat calls during the study period made from a single address. There are eight agencies in Sullivan County for which "frequent flyer" calls defined in this way comprise more than half of all calls. Finding alternative ways to respond to unnecessary calls, like coordinated care and the use of community paramedicine (when implemented statewide) would diminish the burden on Sullivan County EMS responders and likely, too, reduce the cost of health care in the county.

² <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5831456/>

Decline in Volunteerism

The county is currently served by a quarter fewer ambulance corps than it was a generation ago. Leaders of every ambulance company interviewed for this study identified the decline of the availability of volunteers as a critical problem. Among several causes, they indicated that the time it takes to complete training requirements to become a certified EMT or paramedic, and to retain certification once it is obtained, has been a significant barrier to attracting and retaining volunteers. The county EMS coordinator suggested in an interview that several of Sullivan's volunteer ambulance corps were entirely reliant on "two to four workhorses" and would likely fail if they moved away or ceased to serve. The sole exception is Hatzalah. It has a 60-person waiting list for potential volunteers.

A suggested approach for Sullivan County is to offer free tuition at the community college for a two-year degree in exchange for a specified number of hours of volunteer EMT service. Also, within individual Sullivan County squads, some have suggested replacing points for ridership with an acknowledgement of hours on standby. Coordinating and delivering needed training on a regular basis is a role for which the county coordinator's office is well situated and well-suited.

Recognition

Many ambulance corps volunteers believe that their efforts are insufficiently understood, supported and acknowledged in the communities that they serve, especially in contrast to fire departments.

Cost, Revenues and Financial Issues

The provision of ambulance services by NYS counties, cities, towns and villages is discretionary, not mandatory. The Sullivan County government has not made a significant financial commitment to the provision of EMS services. Excluding MobileMedic, which is privately held, and Mountindale, which did not provide data, but including Hatzalah, Sullivan County emergency medical response agencies reported spending totaling \$2.273 million in 2019.

There are three major sources of funding covering Emergency Medical Service costs in Sullivan County: tax revenues, insurance payments, and charitable contributions. There is no standard EMS budgeting template or fiscal model: the pattern varies from organization to organization. Towns may call upon the general tax levy or create a special improvement district to pay for this service. Agencies associated with volunteer fire companies may not bill for service under state law. EMS corps (if not attached to fire companies) may bill for service. Amounts government and private insurers actually pay usually do not cover costs. Since ambulance corps may not bill unless the patient is transferred to a hospital, this provides little incentive to resolve problems on scene. Insurance companies require providers to accept their fee schedules to get direct payment. Their practice of paying insureds rather than providers when

the provider is not specified as preferred often results in funds being retained by patients and, despite collection efforts, never reaching the providing agency.

Toward A County-based EMS System for Sullivan County

Sullivan County does not face the choice of whether or not to change its EMS delivery system. That choice has already been made by default. Regionalization within the county, and re-centering at the county level, has already been in process for decades. And this analysis shows that further change in these directions is inevitable. A planned county-based system, not necessarily directly operated by the county government but with county responsibility and coordination for assuring that quality service is delivered, is more likely than the status quo or available alternatives to achieve economies of scale and recruit and retain providers for a longer period of time for career, salary, and pension reasons.

ACTION PLAN AND OPTIONS

PHASE ONE
<ul style="list-style-type: none"> • THE SULLIVAN COUNTY LEGISLATURE PASSES A RESOLUTION <ul style="list-style-type: none"> ○ Declaring EMS an “essential function” of county government ○ Committing to a county-wide system, and ○ Making the position of EMS coordinator full time and placing them at the system’s head <ul style="list-style-type: none"> ▪ ESTIMATED COST: Provides an initial appropriation of \$150,000 for the coordinator’s salary and benefits and to launch this system
<ul style="list-style-type: none"> • ALS <ul style="list-style-type: none"> ○ Advanced Life Support (ALS) continues to be delivered countywide (except in Jeffersonville) by MobileMedic. ○ Backup (as needed) continues to be provided by Hatzalah. <ul style="list-style-type: none"> ▪ ESTIMATED COST: \$0
<ul style="list-style-type: none"> • RECOGNITION AND PUBLIC EDUCATION <ul style="list-style-type: none"> ○ Legislature adopts and implements a “life-saver” initiative to <ul style="list-style-type: none"> ▪ Recognize EMS volunteers ▪ Educate the public on the nature of this service ▪ Diminish ambulance abuse ▪ ESTIMATED COST: \$0

PHASE TWO

- **BLS**

- **CON:** The County government obtains a Certificate of Need (CON) to deliver Basic Life Support (BLS) countywide
- Seven BLS response zones would be defined within the county (Map 10 above)
- The county contracts with the volunteer/hybrid squads to provide BLS response within their zones
- Dispatch is simultaneous of all units within each zone
 - **ESTIMATED COST:** \$0

- **TRAINING**

- In collaboration with SUNY Sullivan, Sullivan BOCES and Catskill Regional Hospital, develop and deliver programs to meet state requirements for EMT and Paramedic certification and recertification
 - **ESTIMATED COST:** Minimal, net positive if open to paid outside county as participants

- **FINANCES**

- Countywide budgeting instituted
- County bills for service
- **BLS PRIMARY RESPONSE/ALS INTERCEPT**
 - County enters a reimbursement contract with MobileMedic (and Hatzalah as back-up) for ALS services on county ambulances
- **ALS**
 - MobileMedic and Hatzalah continue to bill independently for direct aid
- County shares billing revenues from private and government sources under contractual terms with corps (including fire district-based corps)
 - **ESTIMATED ANNUAL REVENUE:** \$1.05M

PHASE THREE

- **OPTION 1**

- Contract with one or both ALS agencies in the county to provide dedicated back-up in under-served, poor-response zones. Status manage based on existing data.
 - **ESTIMATED COST:** To be determined (Putnam County Contract; see Appendix II: Putnam County RFP)

<ul style="list-style-type: none"> • OPTION 2 <ul style="list-style-type: none"> ○ County deploys up to three county-staffed ambulances for 40 hours a week using existing ambulances under contract with volunteer corps <ul style="list-style-type: none"> ▪ ESTIMATED COST: Personnel at \$79,000 per ambulance if county supplies both EMT and driver
<ul style="list-style-type: none"> • OPTION 3 <ul style="list-style-type: none"> ○ County purchases 2 to 3 ambulances to be staffed by county personnel <ul style="list-style-type: none"> ▪ ESTIMATED COST: Personnel at \$79,000 per ambulance if county supplies both EMT and driver; ambulances at \$150K to \$200K each
PHASE FOUR
<ul style="list-style-type: none"> • SPECIAL TAXING DISTRICT: Seek creation of a countywide special taxing district for ambulance services by special state legislation (see, Essex County model) <ul style="list-style-type: none"> ○ Town taxing districts dissolved ○ \$1.35M estimated difference between revenue from fees and operating costs prorated by taxing district on properties in service zones, based upon demand for service. (Note: Does not include additional cost for part-time county backup staffing of ambulances above. Add \$79K for each, if county supplies full crew) ³ ○ All purchasing of administrative and communication hardware and software standardized; proceeds through county government ○ Volunteer corps option retained for direct purchase of ambulances, medical supplies and equipment ○ Volunteer Corps retained as First Responders <ul style="list-style-type: none"> ▪ ESTIMATED COST: \$1,350,000 (excluding county personnel) ▪ ESTIMATED COST: \$1,587,000 (including county personnel)
PHASE FIVE
<ul style="list-style-type: none"> • INNOVATION <ul style="list-style-type: none"> ○ Seek inclusion as a rural test site in national and statewide programs to increase efficiency and reduce costs in EMS service delivery <ul style="list-style-type: none"> ▪ Referral for review of frequent callers to a newly established countywide team for consideration for alternative services ▪ Greater reliance on experience for recertification for qualified county EMTs and paramedics ○ Seek accreditation for the county system when state initiative is introduced

³ See CGR. Essex County EMS Strategic Plan (2017) p. 12.

Introduction

In October of 2019 Sullivan County, New York sought a study of “all aspects of the EMS system currently in place in the County including, but not limited to response times, call volume, ALS availability by time of day/day of week, availability of volunteers, and geography to determine if improvements can be made, and if so what improvements would increase the efficiency and effectiveness of the system to meet the expectations of the residents of the County.” The Benjamin Center was retained to provide this report in June of 2019.

The persistent challenges of delivering EMS services in rural areas in New York State and nationally have been the subject of significant previous study. We reviewed the record of these here for context, and for ideas to inform the goals set out by Sullivan County for this project. The Benjamin Center’s commitment in undertaking this assignment, however, was not to once again document problems. Nor was it to once again argue that these could only be solved if needed actions were taken by the state government (though we do take up the critically important role of the state in shaping and overseeing the delivery of rural EMS services). Rather, we focus upon helping Sullivan County find locally achievable, sustainable, affordable solutions that will maximally support efforts to assure the well-being of its citizens and the seasonal visitors so essential to its economic vitality.

We are in debt to the Sullivan County Bureau of Emergency Medical Services, and especially its director Alex Rau, for the provision of essential information and the quantitative data essential to this study. The Director’s coordinating responsibility, with his deputies, for all EMS delivery in the county gives him a rare synoptic perspective on the achievements of and challenges faced by those working on the line. Additional information was sought from persons in state and county government with extensive EMS responsibilities and expertise.

We decided early in our research process that a solution-oriented analysis was best conducted through reliance on gathering information from the people, mostly volunteers, working daily and saving lives through service delivery. Much of this study is therefore based upon loosely structured several-hour-long interviews with leaders of fourteen of Sullivan’s fifteen volunteer ambulance corps, MobileMedic EMS (its for profit ambulance service), and Catskill Hatzalah, the Chasidic community’s highly regarded ambulance service. We also examined the public record for information about these organizations, especially their costs and revenues. Unfortunately, complete comparative information proved unavailable. Financial impacts of the recommendations made here are therefore our best estimates from a robust but incomplete record.

Allocated County funds for the study were unanimously agreed upon by the EMS Advisory Board. Though some respondents embraced the opportunity this study offered, agreeing to

assist us required many of these interviewees to overcome considerable skepticism about the value of “still another study.” Several told us frankly that one of the county’s biggest problems was the vastly insufficient financial support it provided to its emergency medical response organizations. The county government’s funding commitment, though a long time coming, was an encouraging sign of a developing understanding that EMS in the county was approaching a critical crossroad. However, the money provided to fund this study, some said, would have been much better spent to meet their recruitment, equipment, and training needs.

We have enormous respect for the services provided by volunteer emergency responders, some of whom have done this work for decades and are from families that have committed time and energy to saving their neighbors lives, and the lives of strangers, literally for generations. They do this often with little acknowledgement, despite the fact that the well-being of communities depends so significantly on their contributions. We hope that, in retrospect, that the EMS workers and volunteers who helped us with their time and ideas will find value in this analysis and summary of how to move forward.

Sullivan County

Sullivan County is located in the Catskill Mountain region of southeast New York State, on the periphery of the greater New York Metropolitan area. It is bounded by Delaware County to the north, Ulster County to the northeast, Orange County to southeast, Pike County, Pennsylvania to the southwest and Wayne County, Pennsylvania to the west.

The County’s total population, down 2.6% from 2010, was 75,498 in 2018. This ranked it thirty-sixth among New York’s sixty-two counties. Sullivan is a well-known vacation area for people from the New York City Greater Metropolitan area. County officials estimate that the population more than doubles during the summer months.

Sullivan’s population profile is older compared with NYS as a whole; it thus presents a higher demand for medical services. The aging Baby Boomer cohort along with continued limited economic opportunity will likely result in the county’s share of older residents to continue on an upward trajectory.

The County’s population is highly dispersed. There are fifteen towns and 6 villages but no cities. Just under 30% of the population live in four of the fifteen towns: Thompson (containing the Village of Monticello, the county seat); Liberty (containing the Village of Liberty); Fallsburg (which includes six distinct hamlets); and Mamakating (which includes the Villages of Bloomingburg and Wurtsboro).

The county covers an area of 997 square miles and has 1,987 linear miles of roads over which ambulances must travel, many of them in mountainous terrain. About 10% of these are state

and 20% county-maintained roads; all others are maintained by towns and villages. Route 17 (the future I86), a major interstate arterial, transverses the county from south to north.⁴

The demand for emergency medical response is defined in part by the general health of the community. Sullivan was ranked 60th of 62 counties on health outcomes and health factors in the most recent study by The Robert Wood Johnson Foundation (RWJF) done in collaboration with the University of Wisconsin Population Health Institute (UWPHI).⁵ It is one of New York's counties with the greatest "opioid burden" as measured by the State Health Department.⁶ During the current pandemic (as of June 8, 2020) the infection rate (1/53) was higher than for Ulster (1/104) and Delaware (1/535) but lower than for Orange (1/36) among bordering New York counties.⁷

Because of the county's size, dispersed population, and the location or specialty expertise of available physicians, Sullivan's EMS responders carry patients to a number of institutions dispersed over a broad expanse of territory. The Catskill Regional Medical Center in Harris (now the Garnet Health Medical Center—Catskills) is Sullivan County's principle healthcare facility. The Grover M. Hermann Hospital is a division of Catskill Regional in Callicoon. Based upon proximity and available expertise, determined under medical guidance, patients may also be transported to facilities in Orange, Ulster, Westchester, Delaware, or Broome County in New York, or Lackawanna or Pike County in Pennsylvania.

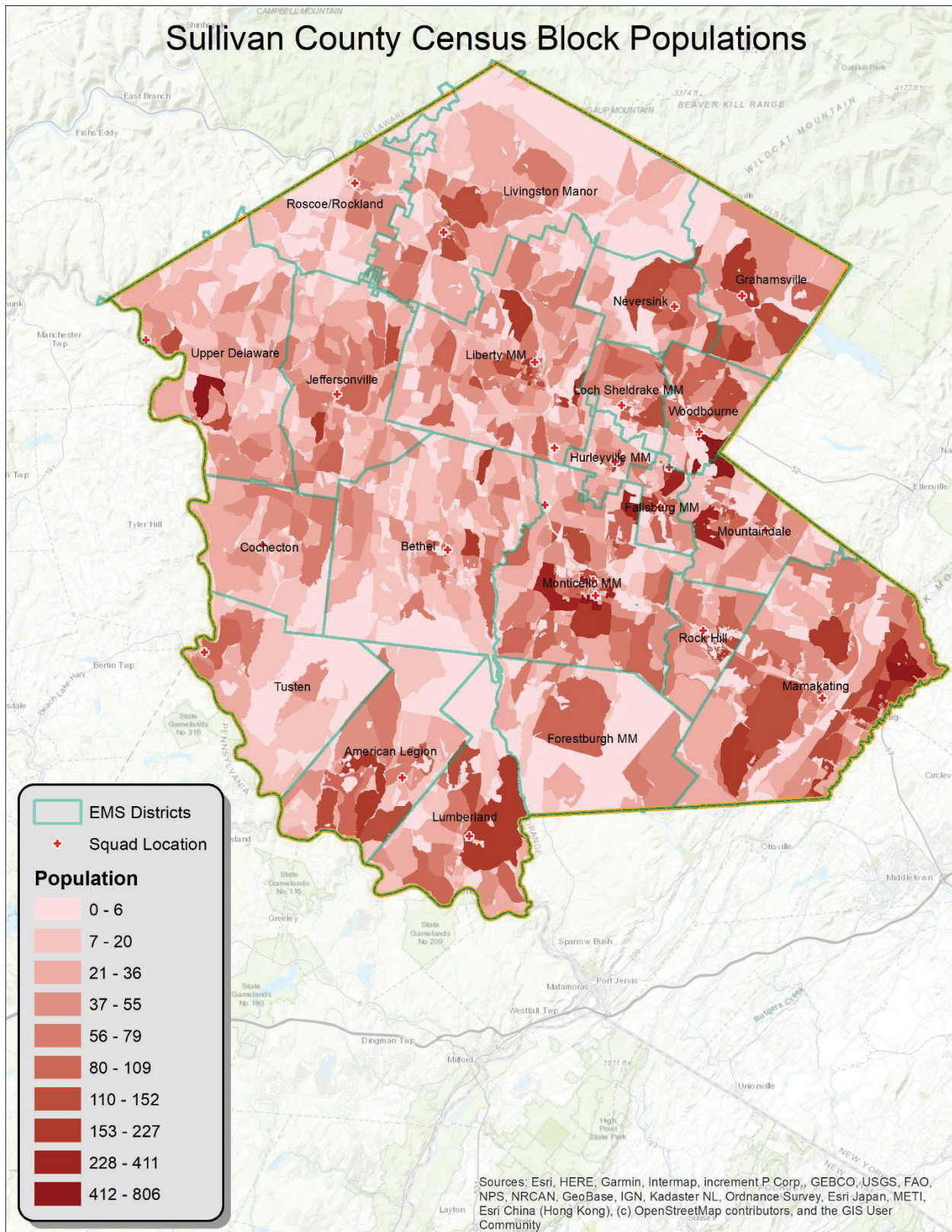
⁴ <https://www.dot.ny.gov/divisions/engineering/technical-services/hds-respository/Tab/HMR%202011.pdf>

⁵ https://www.countyhealthrankings.org/sites/default/files/media/document/CHR2020_NY_0.pdf.

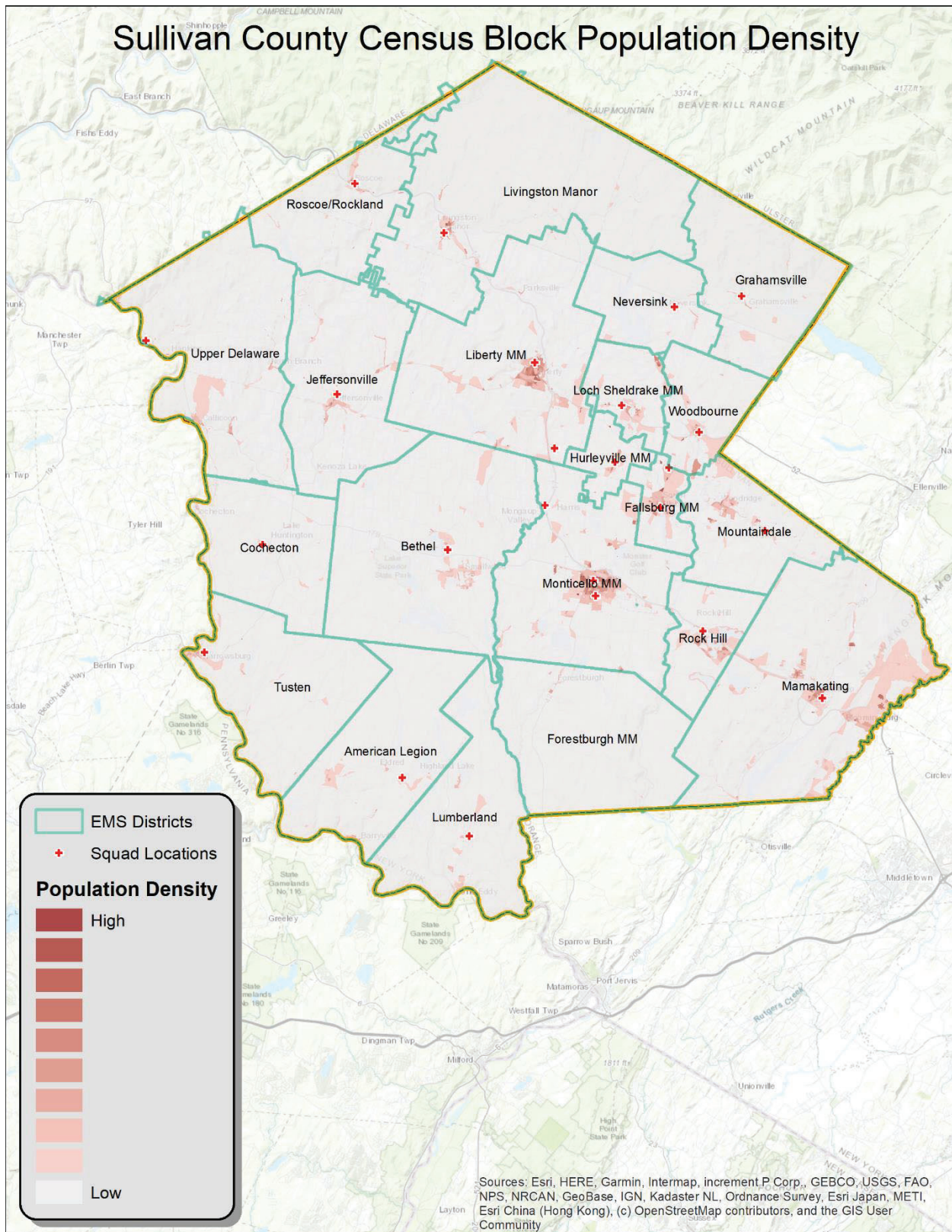
⁶ See also the Rockefeller Institute of Government series <https://rockinst.org/blog/stories-sullivan-pathways-addiction/>

⁷ <https://www.nytimes.com/interactive/2020/us/new-york-coronavirus-cases.html>

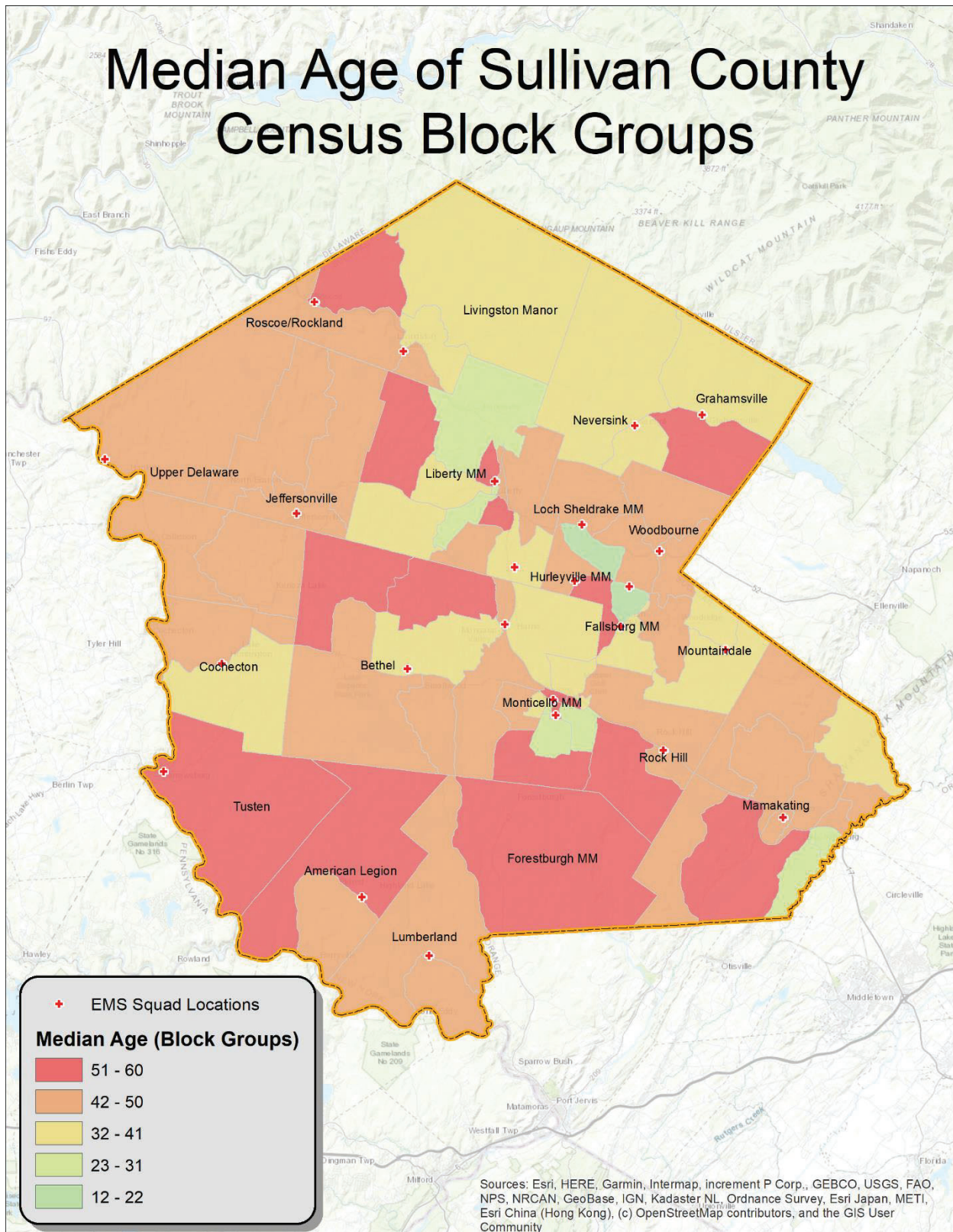
MAP 1: CENSUS BLOCK POPULATIONS



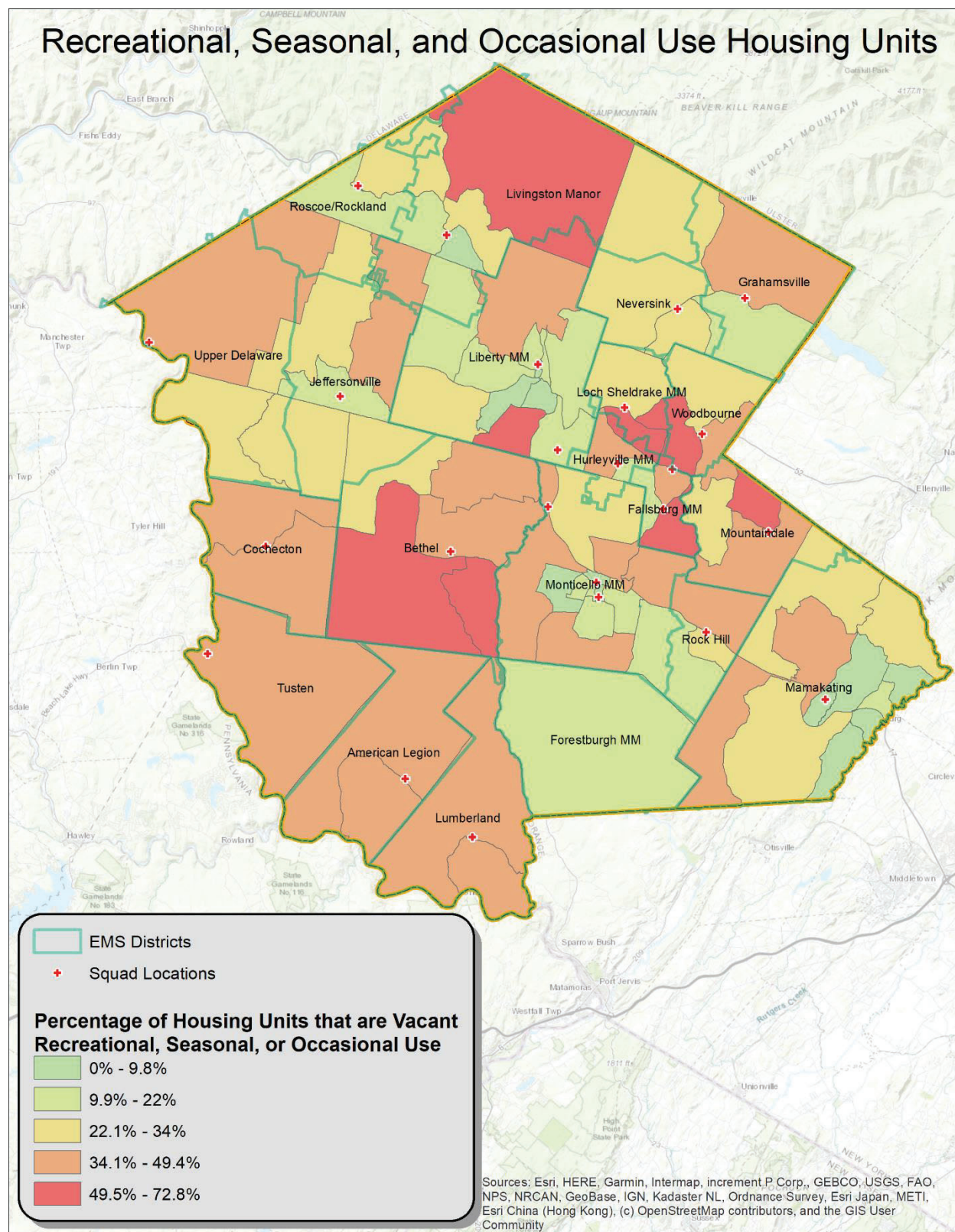
MAP 2: POPULATION DENSITY



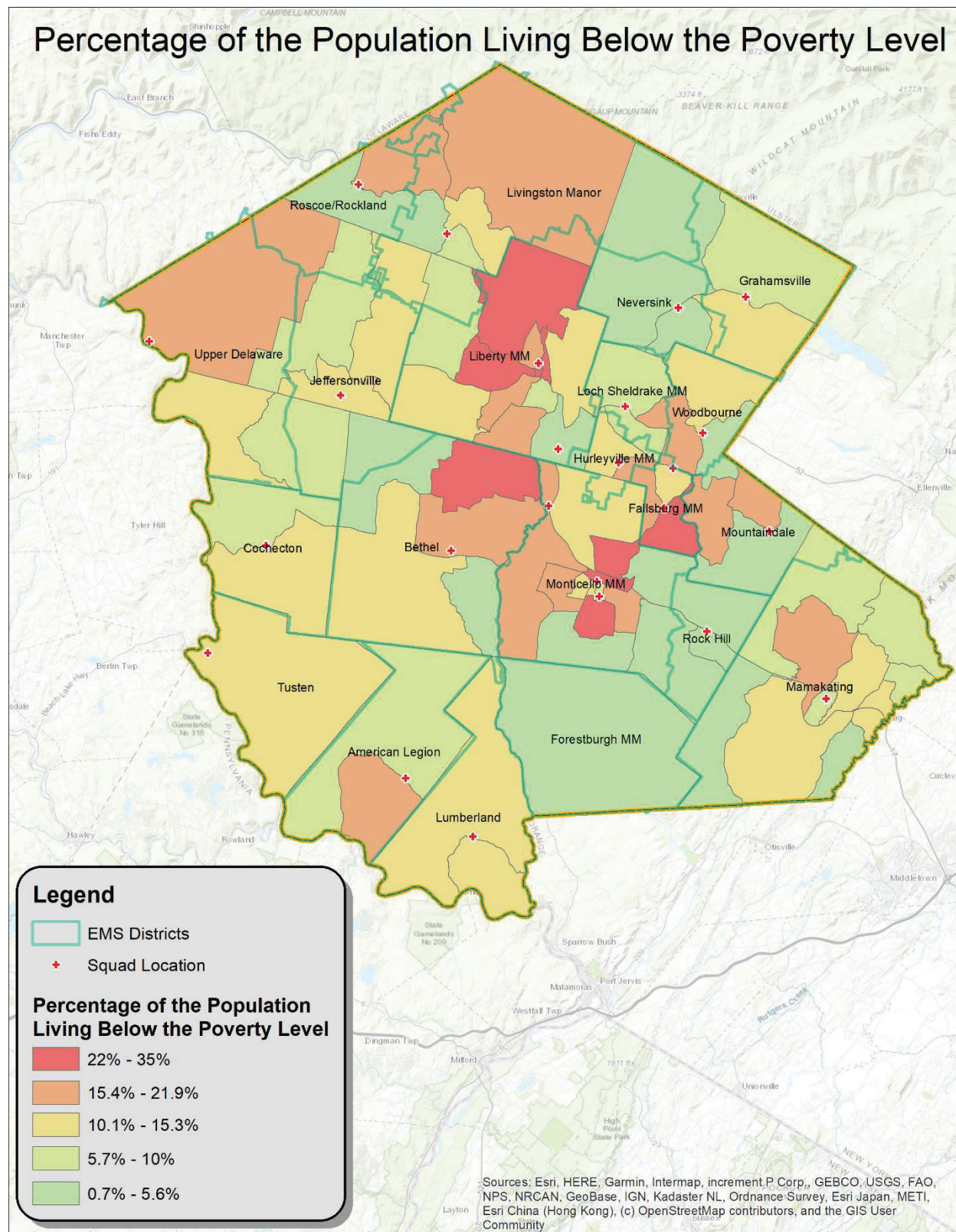
MAP 3: MEDIAN AGE



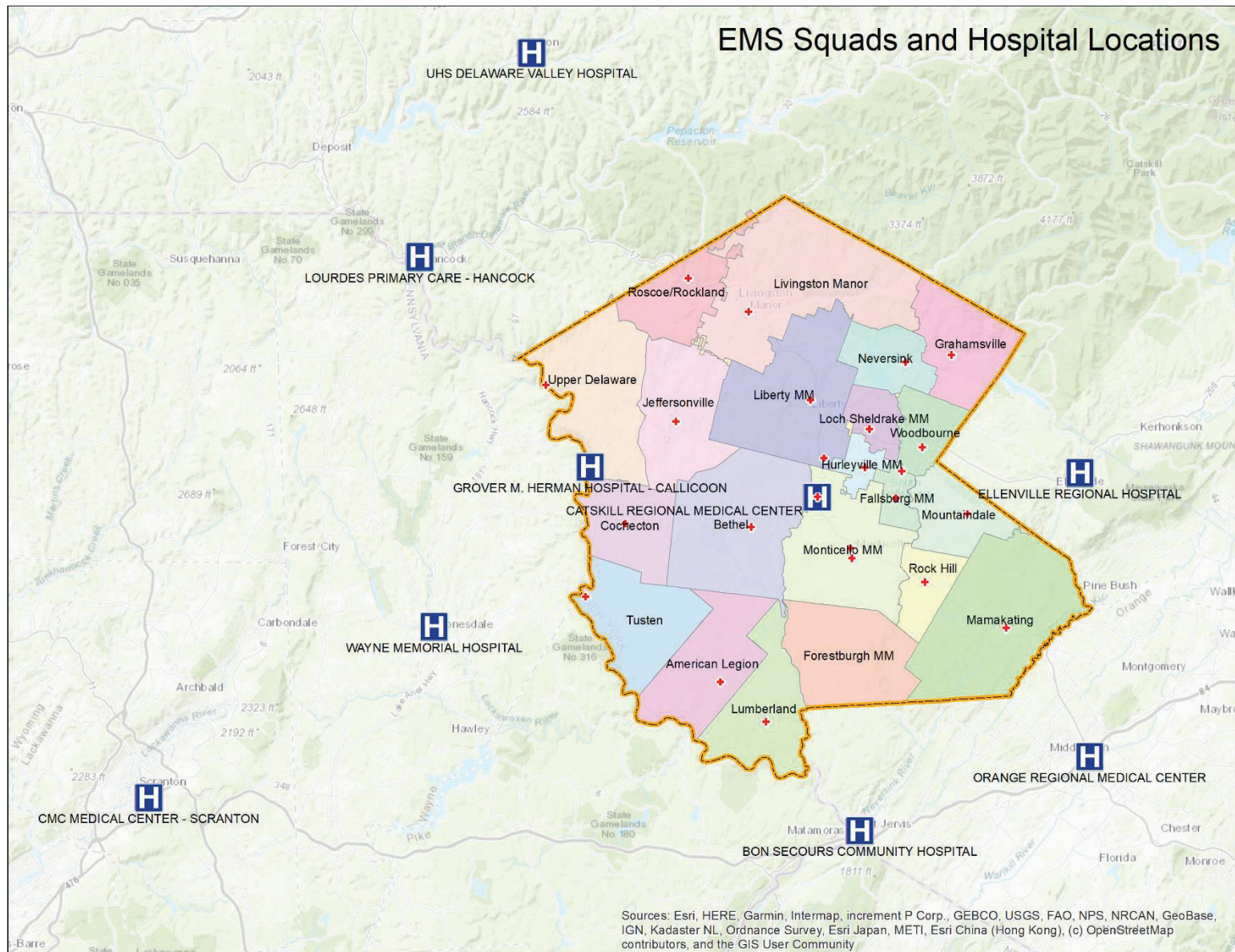
MAP 4: RECREATIONAL, SEASONAL, AND OCCASIONAL USE HOUSING UNITS



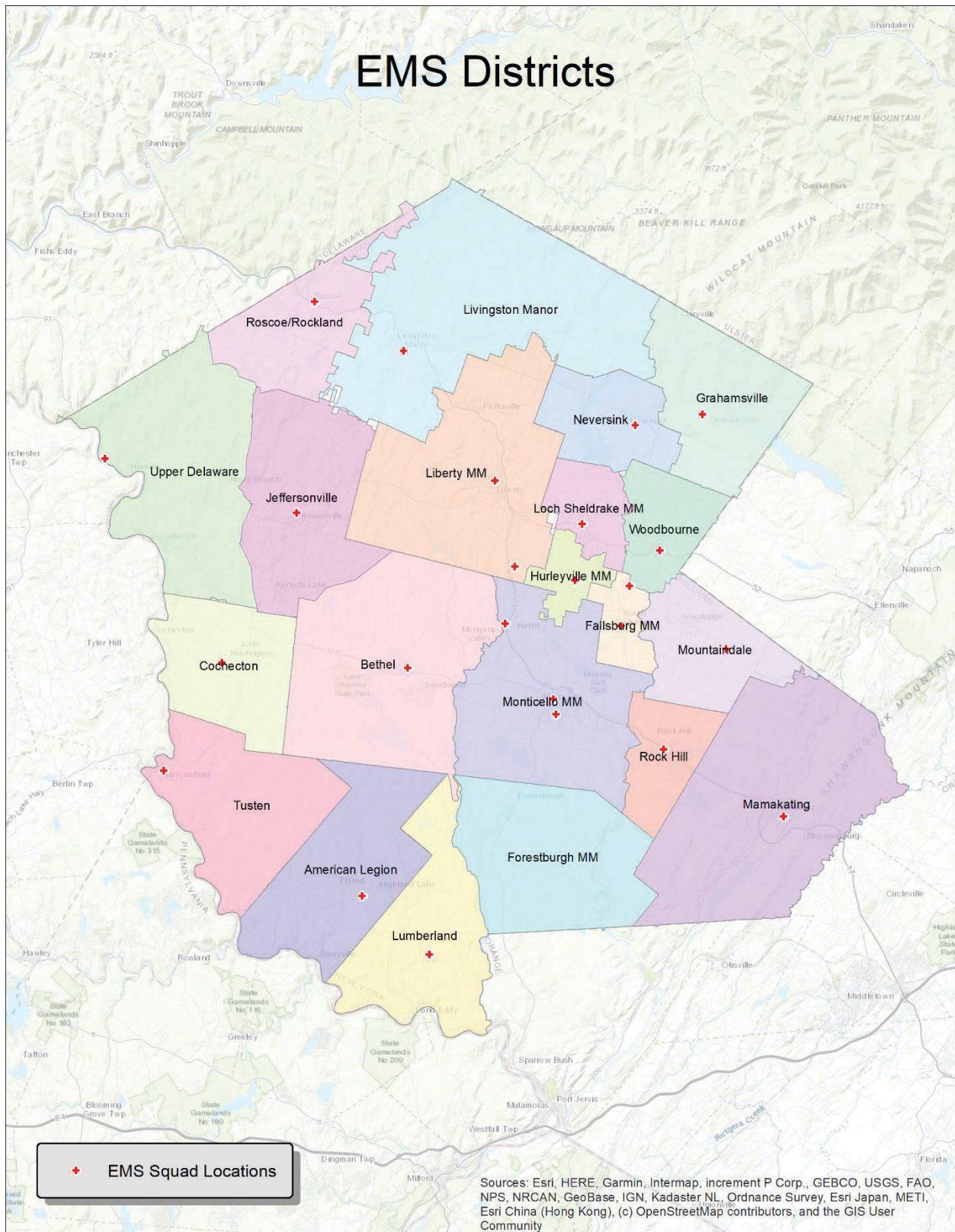
MAP 5: PERCENTAGE OF POPULATION LIVING BELOW THE POVERTY LEVEL



MAP 6: EMS SQUADS AND HOSPITAL LOCATIONS



MAP 7: EMS DISTRICTS



EMS Providers

There are seventeen EMS agencies active in Sullivan County: twelve (including Hatzalah) are staffed solely by volunteers; four (Jeffersonville, Mamakating, Roscoe-Rockland, and Tusten) use a combination of volunteers and paid personnel. MobileMedic is a commercial for-profit agency staffed by paid employees.

The number of volunteers associated with each all- or part-volunteer company ranges from 30 (Lumberland) to 10 (Cochecton, Woodbourne). The average, excluding Hatzalah which is uniquely heavily staffed, is 17. In all cases but Lumberland, companies report that significant numbers of their members are not regularly available to respond. Lumberland's staffing is augmented because it requires its volunteer firefighters to drive EMS rigs as part of their departmental obligation. Roscoe also uses available volunteer firefighters as drivers. The fire department responds to all Upper Delaware calls.

The total number of available ambulances in Sullivan County's sixteen year-round corps, including those of MobileMedic, is 35. Additionally, Hatzalah deploys 13 ambulances in the county during the summer and two in the winter. Most volunteer companies have two ambulances. Cochecton, Neversink and Woodbourne have one. Hatzalah and 10 other corps employ a first response system.

MobileMedic is a commercial service that is authorized to provide Basic Life Support (BLS) and Advanced Life Support (ALS) countywide. The company is the principle ALS responder in the county. It is funded through payments by insurers and those served. Though it maintains contracts to provide ambulance services in a number of towns in Sullivan County, MobileMedic receives no direct financial support from local government appropriations.

Fifteen squads provide BLS within limited, geographically defined zones. Twelve are staffed entirely by volunteers; four employ paid personnel (Jeffersonville, Mamakating, Tusten, and Roscoe-Rockland). Of these agencies, only Jeffersonville is credentialed to provide ALS. The four companies that are associated with volunteer fire departments (Woodbourne, Neversink, Lumberland, and Mountaintale) are prohibited by law from billing for service; these rely on charitable contributions, community fund raising, and fire department local government appropriations. Others "soft bill" to recover some costs from insurance companies, have created their own taxing district and/or receive varying degrees of local government support.

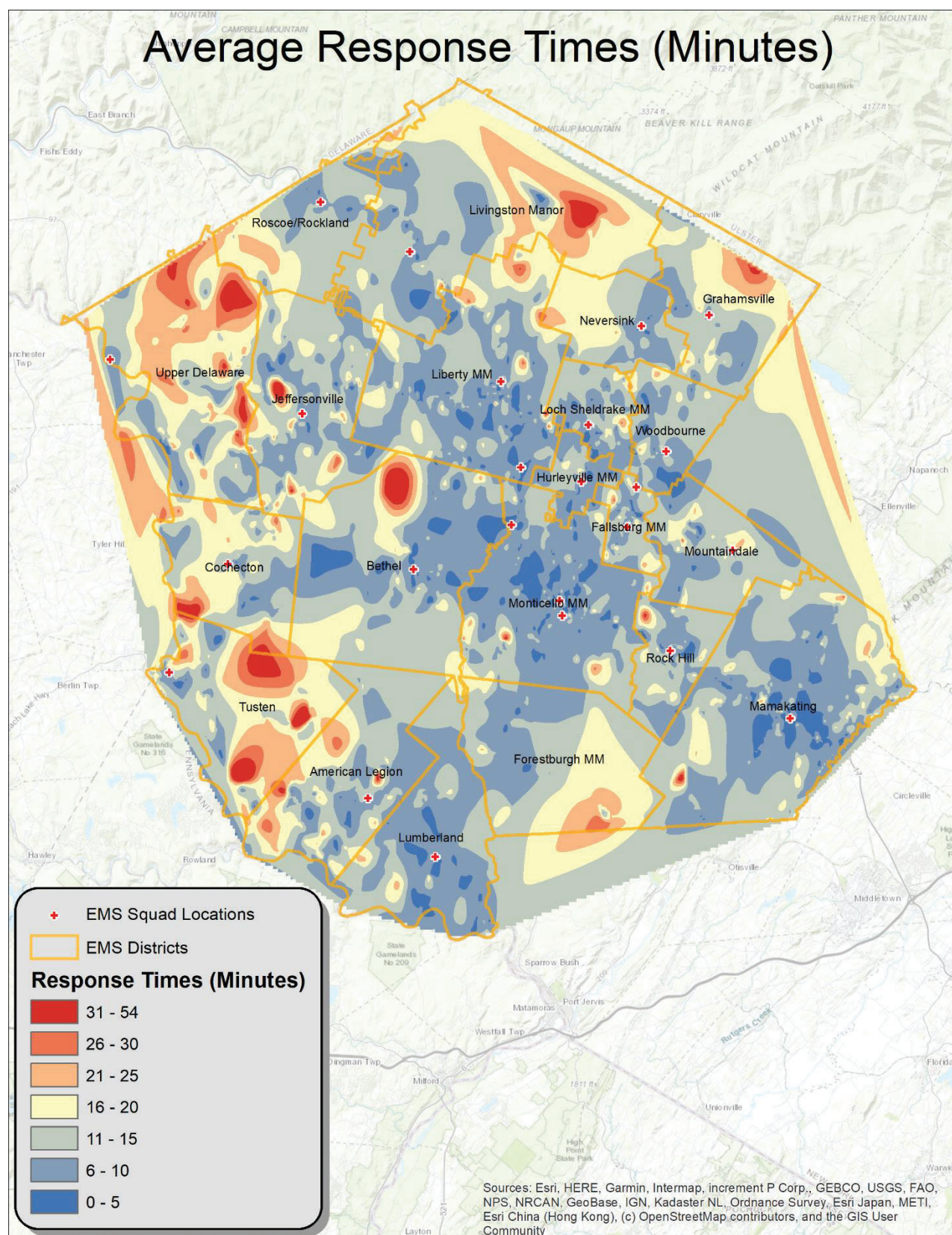
Catskill Hatzalah is an all-volunteer company that dispatches its own ambulances and provides both BLS and ALS service to year-round and seasonal Chassidic residents of Sullivan County, and mutual aid for other providers. It describes itself as "a full-time organization ensuring the safety of over 300 vacation colonies and summer camps spread across the Catskills region." Though the agency was organized to respond to needs in the Chassidic community, Hatzalah leadership

indicated in an interview that it “responds to emergencies in a non-sectarian manner, without regard to race, ethnicity or religion.” The county EMS coordinator confirmed that Hatzalah is called upon for mutual aid when the need arises. After long operating on the basis of charitable contributions, Catskill Hatzalah has recently begun to bill for service.

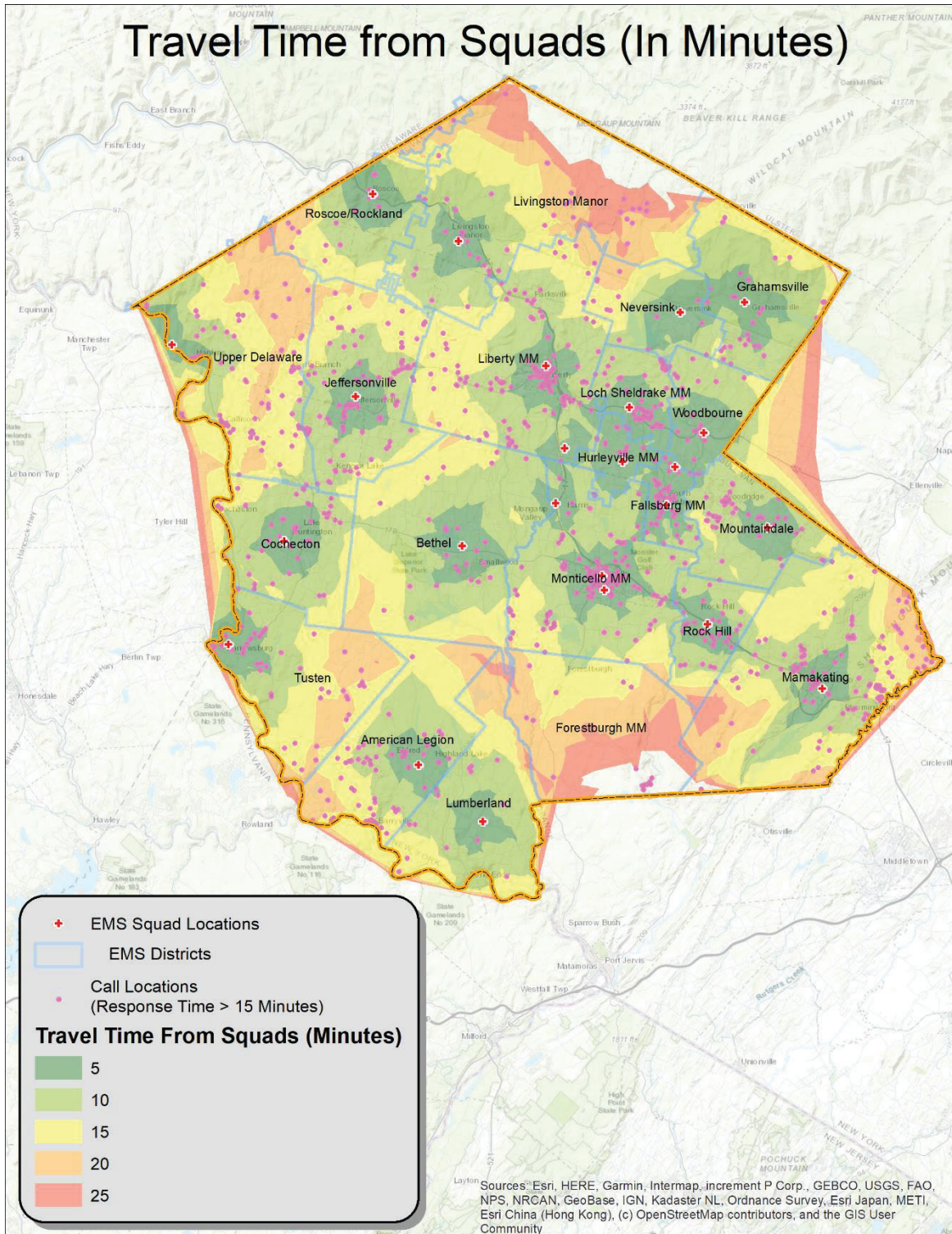
Table I: Selected Characteristics of EMS Service Delivery Agencies in Sullivan County											
Corps	Service Area	Type	Funding (Excludes Charitable Contributions)	Annual Costs (Approximate)	% Municipal Funding (Approximate; NY only)	Paid Staff	Volunteers	~Active	Ambulances	Mutual Aid	First Responders
American Legion	Town of Highland	Private non-profit	Town Contract Billing	\$100k	30%	0	30	2 to 5	2	Lumberland	Yes
Bethel	Town of Bethel	Private non-profit	EMS Tax District	\$62K	83%	0	25	6	2	As directed by dispatch	Yes
Cochecton	Town of Cochecton	Private non-profit	Billing	\$20K	0%	0	10	6	1	Upper Delaware Tusten	Yes
Grahamsville	Town of Grahamsville Neversink (Sundown)	Private non-profit	Billing	\$38K	0%	0	18	10	2	Neversink Woodbourne	No
Hatzalah	County	Private non-profit	Billing	\$475K	0%	0	350		13	As needed	Yes
Jeffersonville	Former Jeffersonville Youngsville School District Villa Roma	Private non-profit Hybrid paid/volunteer	EMS Tax District Billing	\$550k+	52%	12	20	10	2	None Mobile Medic for large ALS scenes	Yes
Livingston Manor	Livingston Manor School District	Private non-profit	Billing	\$95K	0%	0	21	8	2	Livingston Manor	Rarely
Lumberland	Town of Lumberland	Fire-based	Fire District	\$259K	100%	0	22	22	2	American Legion Port Jervis	Yes
Mamakating	Town of Mamkating	Private non-profit Hybrid paid/volunteer	EMS Tax District Billing	\$260k+	65%	4	15 to 20	9 to 12	2	Wallkill Rock Hill Forestburgh Ellenville Woodridge	No

Table I: Selected Characteristics of EMS Service Delivery Agencies in Sullivan County											
Mobile Medic	Sullivan County	Commercial	Billing	UNKNOWN	0%	50 to 60	0	NA	12	All squads	NA
Mountaindale		Fire-based	Fire District	UNKNOWN	100%	0			2		
Neversink	Neversink Fire District	Fire-based	Fire Tax District	\$16k+	100%	0	20	10	1	Grahamsville Woodbourne Mobile Medic	Yes
Rock Hill	Rock Hill Fire District	Private non-profit	EMS Tax District	\$56K	100%	0	26	10	2	Woodrigde Mamakating Monticello	Yes
Roscoe-Rockland	Roscoe Central School District	Private non-profit	Town Contract Billing	\$120K	2%	2	13	10	2	Livingston Manor	No
Tusten	Town of Tusten Berlin-Damascus Townships, PA	Private non-profit. Hybrid paid/volunteer	Town Contract Damascus PA Tax District Billing	\$150K	10%	2	18	14	2	Cochecton	Yes
Upper Delaware	Former Delaware Valley School District	Private non-profit	5 Town Contracts Billing	\$69K	33%	0	24	8 to 9	2	Roscoe Hancock Tusten Cochecton	Yes
Woodbourne	Woodbourne Fire District	Fire-based	Fire tax district	\$3K	100%	0	10	6	1	Grahamsville Neversink	Yes

MAP 8: AVERAGE RESPONSE TIMES IN MINUTES



MAP 9: DISTANCE IN TIME FROM EMS SQUADS (IN MINUTES)



Organizational Structure

In Sullivan County, as all across the United States, rural ambulance services did not develop as part of a larger system. They were created — sometimes independently, sometimes as adjuncts of existing organizations — in an ad hoc, highly decentralized, community-based fashion to meet local needs. For example, according to its current president Louis Pine, Sylvan Liebla American Legion Post #1363 in Eldred, the oldest corps in the county, “...was started by a group of veterans coming back from the war that wanted to do something for the citizens of the town. They kind of debated what they were going to do...[and]... decided to start an ambulance corps.” Needed equipment, facilities and resources were generally acquired from individual contributions and community-based fund raising. Service, focused more on transportation than emergency care, was provided by volunteers without charge. Like American Legion, most of Sullivan County’s earliest squads found their origins in a post WWII sense of sacrifice and service. At the time, there were no operating standards, and no overall system other than a perceived need and strong sense of community

Thus “[i]n 1960,” According to Manish J. Shah, writing in the *American Journal of Public Health* “only 6 states had standard courses for rescuers, only 4 states regulated ambulance design specifications, and fewer than half of all EMS personnel had received even minimal training.”⁸ Decentralized community-based efforts were re-contextualized by national and state level developments starting in the 1960’s, all of which cannot be detailed here. But most importantly, responses to reports of the Presidents’ Commission on Highway Safety and the National Academy of Sciences National Research Council documented the absence of quality emergency care at accidents and its consequences. The initial focus was primarily on the quick transportation of patients to medical facilities and only secondarily on enhancing immediate health care at the site of trauma. But initiatives were triggered nationally and in the states to professionalize EMS services and integrate them into a system, with specified standards for personnel training and equipment and professional medical oversight. These continued over following decades with advocacy and leadership by physicians interested in emergency medicine and governmental and foundation funding. In sum, the goal was to create a state regulated, county-centered, integrated, professional service delivery system out of a highly decentralized aggregation of volunteer community-oriented and -based organizations.

This evolved structure and operation of EMS services in NYS is specified in Article 30 of the Public Health Law and Part 800 of the Code of NYS Regulations. Chart I graphically displays the resulting complex, four layered design for delivering EMS services in New York State. Local agencies (in yellow) are dispatched and coordinated at the county level and represented in a

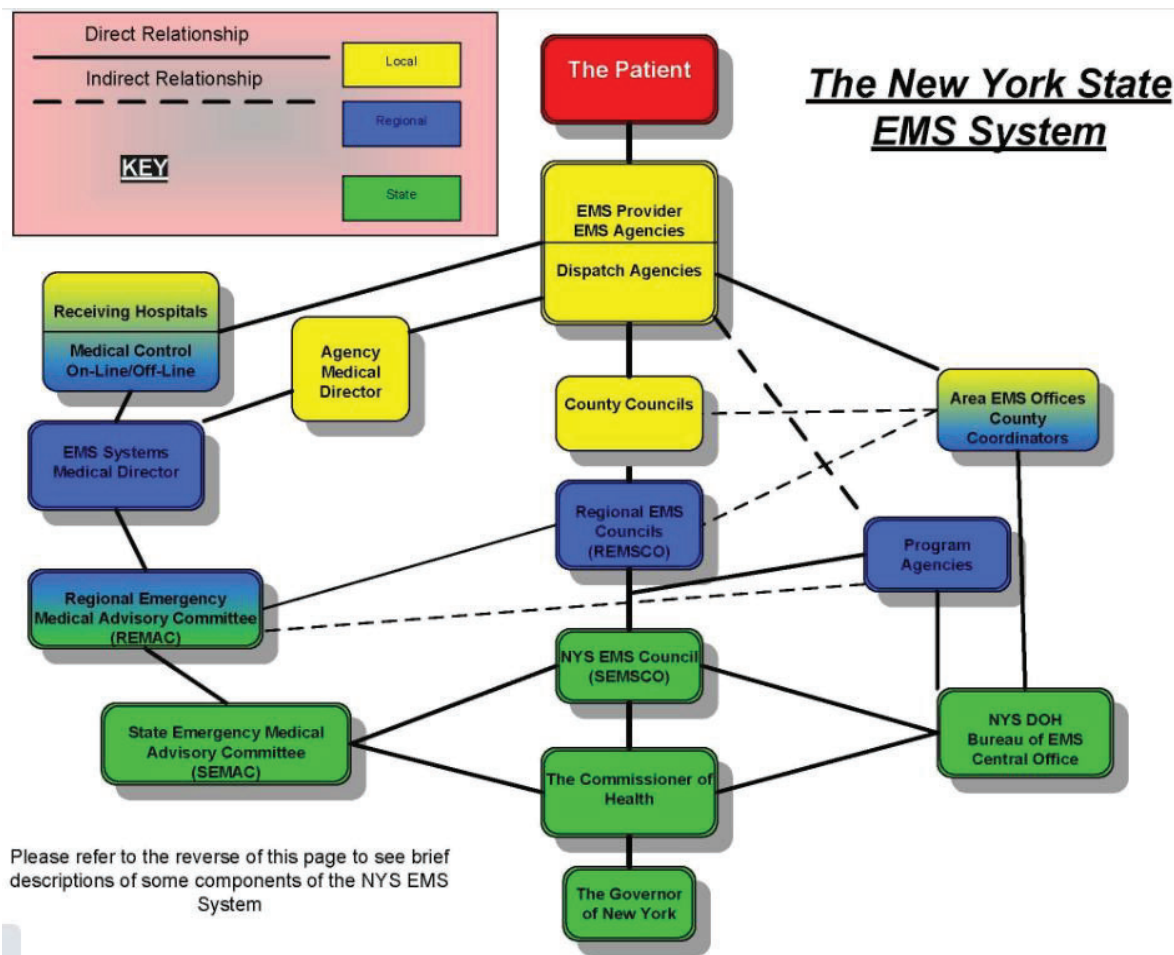
⁸ Manish J. Shah. “The Formation of the Emergency Medical Services System” [Am J Public Health](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1470509/). 2006 March; 96(3): 414–423. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1470509/>

county council. Each is subject to medical control by receiving hospitals and must have a medical director.

At the regional level (in blue) there are eighteen professionally staffed regional EMS Councils; in the Hudson Valley the REMSCO, with offices located in New Windsor, includes six counties: Dutchess, Orange, Putnam, Rockland, Sullivan and Ulster. Representatives of member counties, selected by county elected officials on recommendation of emergency service providers, serve on these councils, which oversee operations of local service delivery agencies and are empowered to adapt statewide policies to local conditions. Sullivan County has three members: EMS Coordinator Alex Rau, MobileMedic company head Albee Bockman and Rock Hill Corps Captain, Neal Meddaugh. In addition, each region has a Medical Director and an Emergency Medical Advisory Committee (REMAC) appointed by the REMSCO comprised of emergency physician representatives of regional hospitals. There is some sentiment in the volunteer companies that the regional councils are unduly influenced in their decision making by for-profit providers who seek membership on them. One interviewee said: “ The regional councils are primarily comprised of the owners or bosses of most of the commercial services. They're all going to stick together and have each other's backs.” Others acknowledge that the already time-consuming work of volunteer EMTs prevents them from participating.

Statewide responsibility (in green) is with the Department of Health, operating through the central and regional offices of its Bureau of EMS. The Bureau's regional office responsible for Sullivan County is in New York City. State level EMS policy is developed through an Emergency Medical Services Council and Emergency Medical Advisory Committee.

Chart I: The New York State EMS System



Operations

A 2019 HVEMSCO summit identified the key challenges affecting performance by volunteer and hybrid emergency medical agencies in the region (Appendix I). Many of these extend, as well, to for-profit providers. They include status in state law and state oversight, staffing and retention, training, agency finance, interagency relations, and communication with and recognition by the public.

Dispatch

The dispatch system seeks to identify the nature of the medical problem and get emergency assistance to the person or persons in need of aid so as to assure trained intervention to the degree authorized and possible to stabilize the patient, and then to transport them to an appropriate medical facility, all as quickly as possible. Informed by experience and training, dispatching processes have been adjusted in Sullivan County to achieve these ends. Pre-arrival

instructions are provided by the 911 dispatcher to the caller in order to provide immediate aid in response to life threatening conditions.

Equipment

Sullivan County modernized its radio system in 2017, providing all volunteer companies with new radio equipment for their ambulances. This was generally well received. However, one criticism was that individual responders were not provided “hand-helds.” (Historically, agencies have provided their own radio equipment.) If they proceed by personal vehicle or fly car and are first on the scene in locations where cell service is poor or not available, they report that they often cannot communicate with the dispatch, ambulance or medical facility.

One interviewee commented: “The way that Sullivan County worked prior to the new radio system was EMS and law enforcement was on a VHF high band frequency.... Fire departments were operating on a low band frequency.... The FCC, who controls radio frequencies nationwide, mandated that by a certain date the low band needed to be phased out completely.... Sullivan County jumped on that bandwagon and switched everybody over to a VHF high band frequency, which has its advantages because we can now talk to fire if we're coming into a scene and fire is going in.”

They added: “We have gotten better reception than we had in the past, but there are still a lot of dead spots where we may not be able to talk to the 911 center. And that's one of the problems that they're still trying to work out and fix. Ten minutes up the road and we're into the Delaware County side of our district. We may not have communication with Sullivan County. And in some areas, that's a real health concern for me and my members. You go into some of these houses that are operated by the guy who's lived there for a hundred years and sits there with the shotgun on his lap because he doesn't trust his neighbors. Yet we're going in ...”

Call Volume

There were a total of 16,120 calls dispatched for emergency medical response in Sullivan County in 2017 and 2018; squads responded to 97% of these. Four fifths of the calls dispatched by the county were covered by three of the sixteen providers. One provider, MobileMedic, responded to almost two-thirds of the calls (10,180, 64.9%). An additional 14.4% were covered by those with the next two greatest workloads (Mamakating: 1390, 8.9%; Jeffersonville: 860, 5.5%). Each of the others responded to 405 calls or fewer in the two-year period; five to less than 200.⁹

Demand was greatest between 11 AM and 5 PM on Mondays and Thursdays and in the summer months (Charts II, III, IV).

⁹ Data does not include Hatzalah.

Chart II: Calls by Month

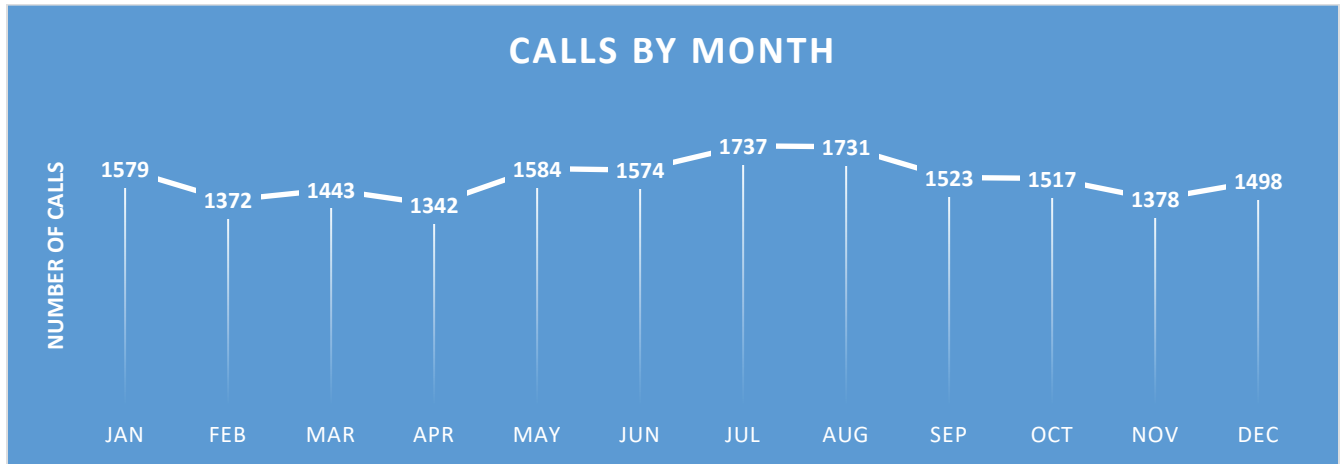


Chart III: Calls by Day

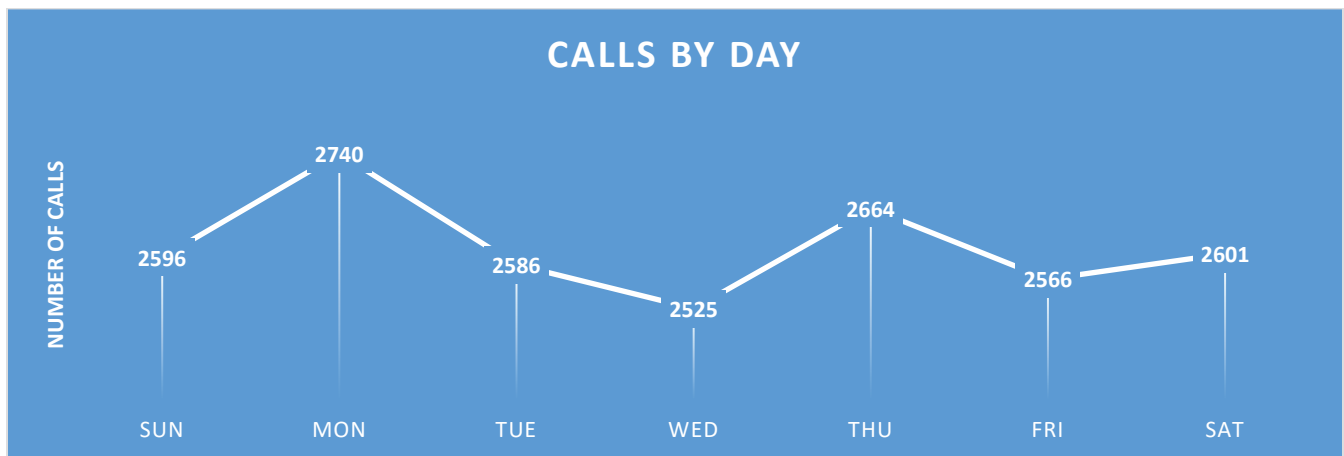
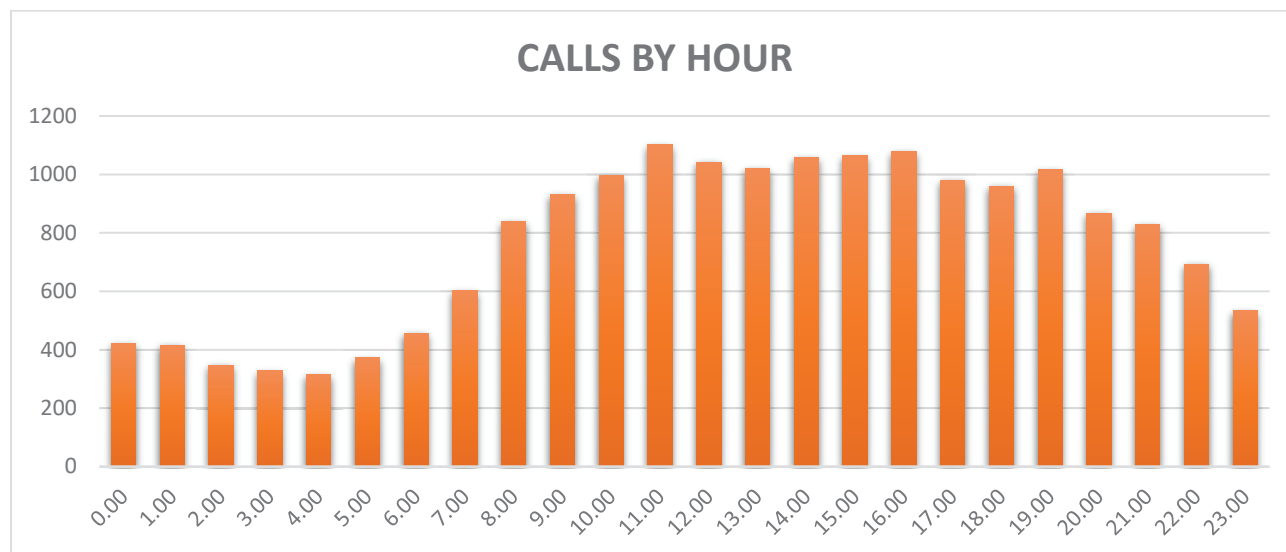


Chart IV: Calls by Hour

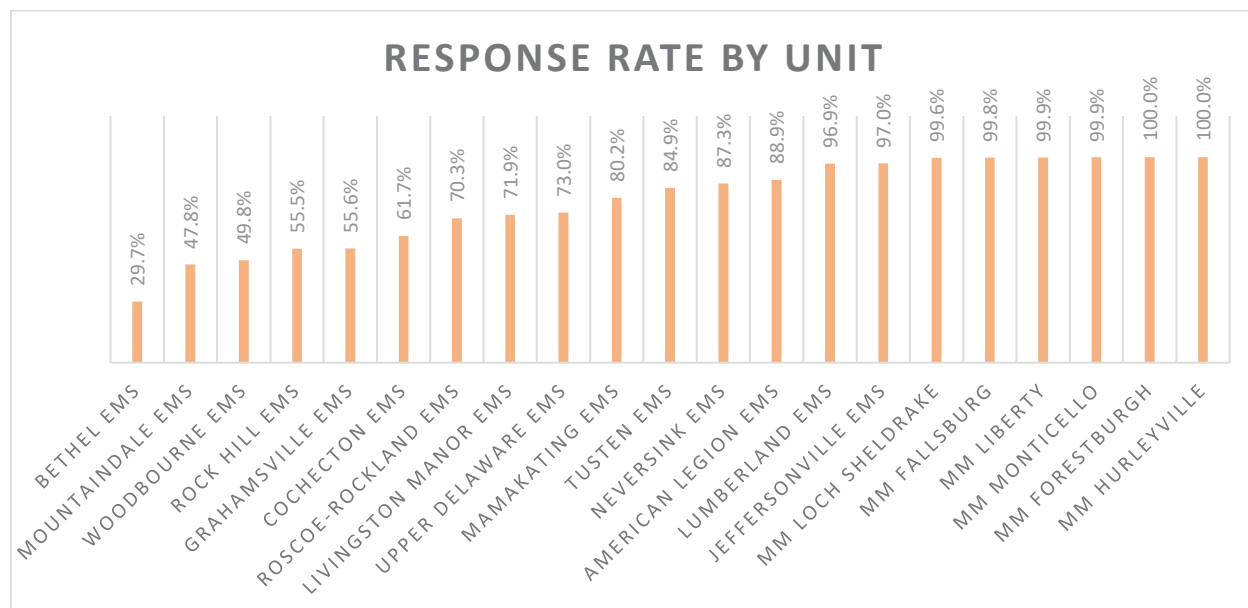


Using an established Association of Public Safety Communication (APCO) paradigm, dispatchers categorize medical calls as requiring basic life support (BLS), advanced life support (ALS) or priority advanced life support. To expedite response, dispatch is initiated by a second dispatcher while a call is still in progress with the dispatcher who first took it.

As shown in Chart V, agencies differed widely in their ability to respond. The home agency for the geographic location of the medical emergency is called out first; there are three pages in a five-minute period. MobileMedic had the best record for initial response, followed by Jeffersonville. Among the volunteer companies with little reliance on paid personnel, Lumberland performed best and Bethel least well when they were the first called. Six volunteer agencies were able to get full crews to the scene less than two-thirds of the time.

One captain was critical of how response was credited: "When they run numbers they show the call types, how many of each type, how many calls you covered, how many you had to get mutual aid to cover because you couldn't cover.... They don't provide that you had an EMT to the patient. That's important. But that's not shown. So if we only got a crew out for five out of 20 calls, it shows that percentage. They don't take into account that may be for 10 of those remaining 15, we had an EMT to the patient and just no driver. So, that's kind of unfair. I may have been doing CPR on a patient for 20 minutes by myself waiting for MobileMedic. But on the paperwork it shows we didn't cover it."

Chart V: Response Rate by Unit



If there is no initial response, the primary designated mutual aid company is called out. If the call requires an ALS response, Mobile Medic, which throughout the county except in Jeffersonville is the authorized countywide ALS provider, is simultaneously called out. If MobileMedic is unavailable for an ALS call, Hatzalah — otherwise not routinely dispatched by the county — is called. In some circumstances, response from an out-of-county ALS provider may be sought.

In recent years, for companies that routinely proved unable to respond at certain times of the day or generally, an automatic mutual aid (AMA) practice was established by county dispatch. Bethel, which has had difficulty crewing during weekdays, established an AMA with MobileMedic for Monday through Friday from 6 am to 6 pm some years ago. More recently, three companies have established the practice of simultaneous dispatch, combining resources to enhance their capacity to respond. This suggests the potential for defining areas of the county for regional response.

Response

The available data utilized for this study is from 2017 and 2018. Dispatch procedures are designed to assure that a response occurs. Once dispatched, response time to the scene is generally used as the primary measure of the emergency medical agency's performance. This has been routinely measured as the time between dispatch and arrival of an ambulance on the scene. But often an EMT first responder proceeds immediately to the scene, with the driver and ambulance following. (In fact, the use of "fly cars" to quicken arrival of trained personnel at the

scene is standard procedure for Hatzalah.) Interviewees argued that the length of time to response is best calculated to the arrival of the person who is trained to provide service. Sullivan County began collecting response data in this way in 2019.

EMS response time expectations among some county residents may be based upon experience elsewhere with urban service delivery systems that are staffed with paid personnel standing by on a 24/7 basis. Rapid response has also been emphasized as a metric because it is crucial for patient survival or the avoidance of irreversible damage in some of the most feared medical emergencies (heart attack, stroke). Volunteer agencies in the county report that they encounter response time expectations in summer and weekend visitors that are unreasonable for rural areas served by volunteer first responders. With regard to rural areas, a national 2017 study of over 1.7 million cases showed average emergency medical response time to be 14.5 minutes, about twice the time as for suburbs and more than twice that for urban areas.¹⁰ (Table VI)

Table VI: National Average EMS Response Times

Table 2.

Response Time Data for Emergency Medical Services Encounters by Zip Code Classification

Category	No.	Median (IQR), min	Arrival Time, min	
			90th Percentile	Mean (SD)
Suburban	1 538 203	6 (4-10)	14	7.7 (5.4)
Urban	146 682	6 (4-9)	12	7.0 (4.4)
Rural	68 283	13 (8-19)	26	14.5 (9.5)
Overall	1 753 168	7 (4-10)	14	7.9 (5.7)

Abbreviation: IQR, interquartile range.

If national averages are used as the basis of comparison, Sullivan County's EMS providers prove to be doing well. Average response time for the county during the two-year long study period was 11 minutes and 28 seconds, 21% lower than the mean for rural areas in the United States. Mean time from dispatch to the scene was longest during the winter months. On average, MobileMedic was quickest to the scene (8 minutes and 51 seconds) and Cohecton slowest (14 minutes and 35 seconds). Average time from dispatch to arrival at a hospital or other medical

¹⁰ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5831456/>

facility was 36 minutes and 44 seconds: 11:28 to the scene, 13:16 at the scene and 12 from the scene to the destination. Response times were about equal for BLS and ALS calls but far lower for priority ALS calls. Sullivan’s emergency medical responders reached the scene of priority ALS calls in an average of seven minutes and thirty-five seconds, about 27% faster than for BLS or other ALS calls. (Chart VII) MobileMedic in Monticello had by far the most priority ALS calls (as noted, it is Sullivan’s principle ALS responder) and was fastest to the scene for this type of call (5 minutes). At the other extreme, Grahamsville EMS took more than twice the time (12:51) to reach the scene for such calls. (Chart VII)

Chart VII: Response Time by Triage Type

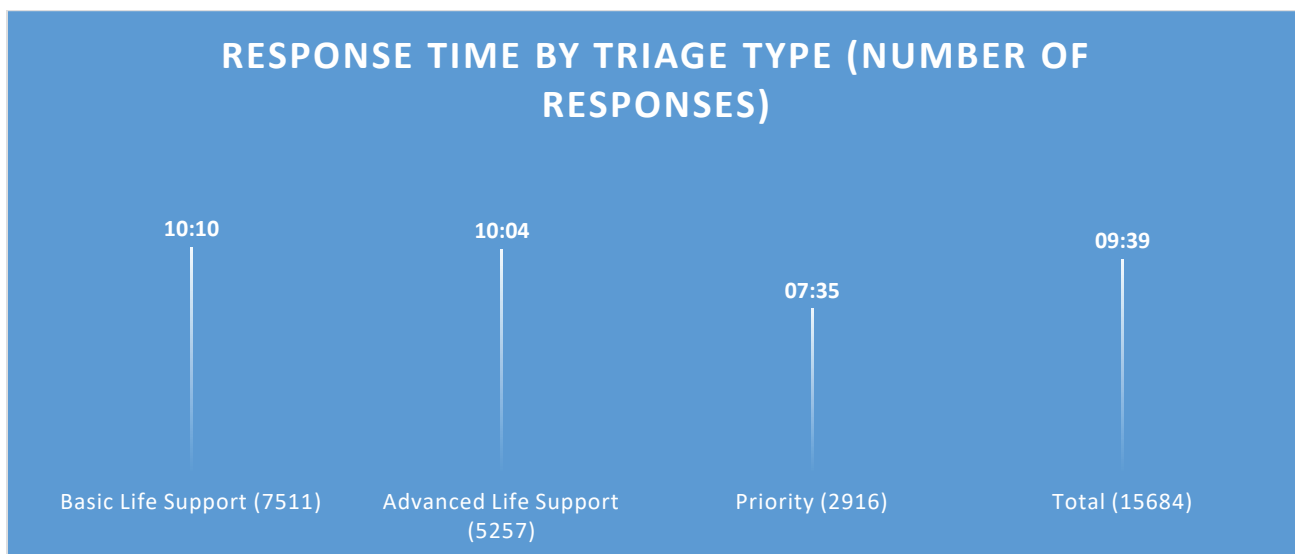
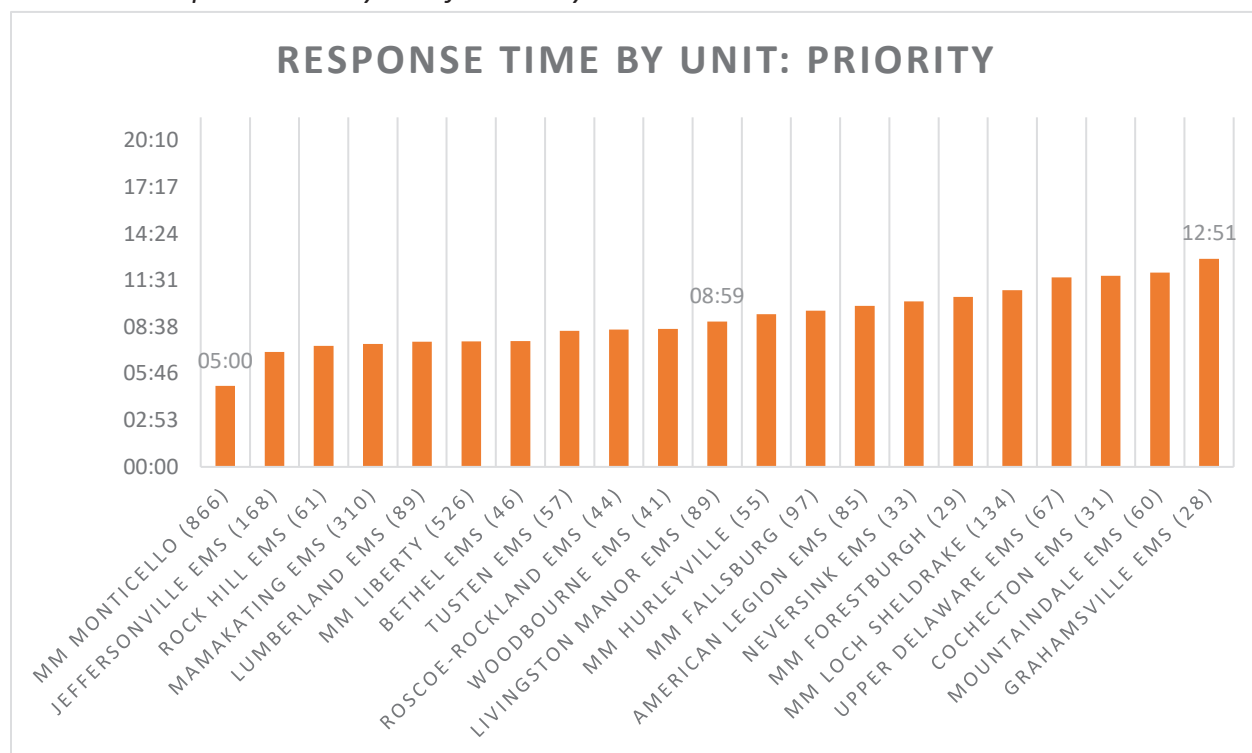


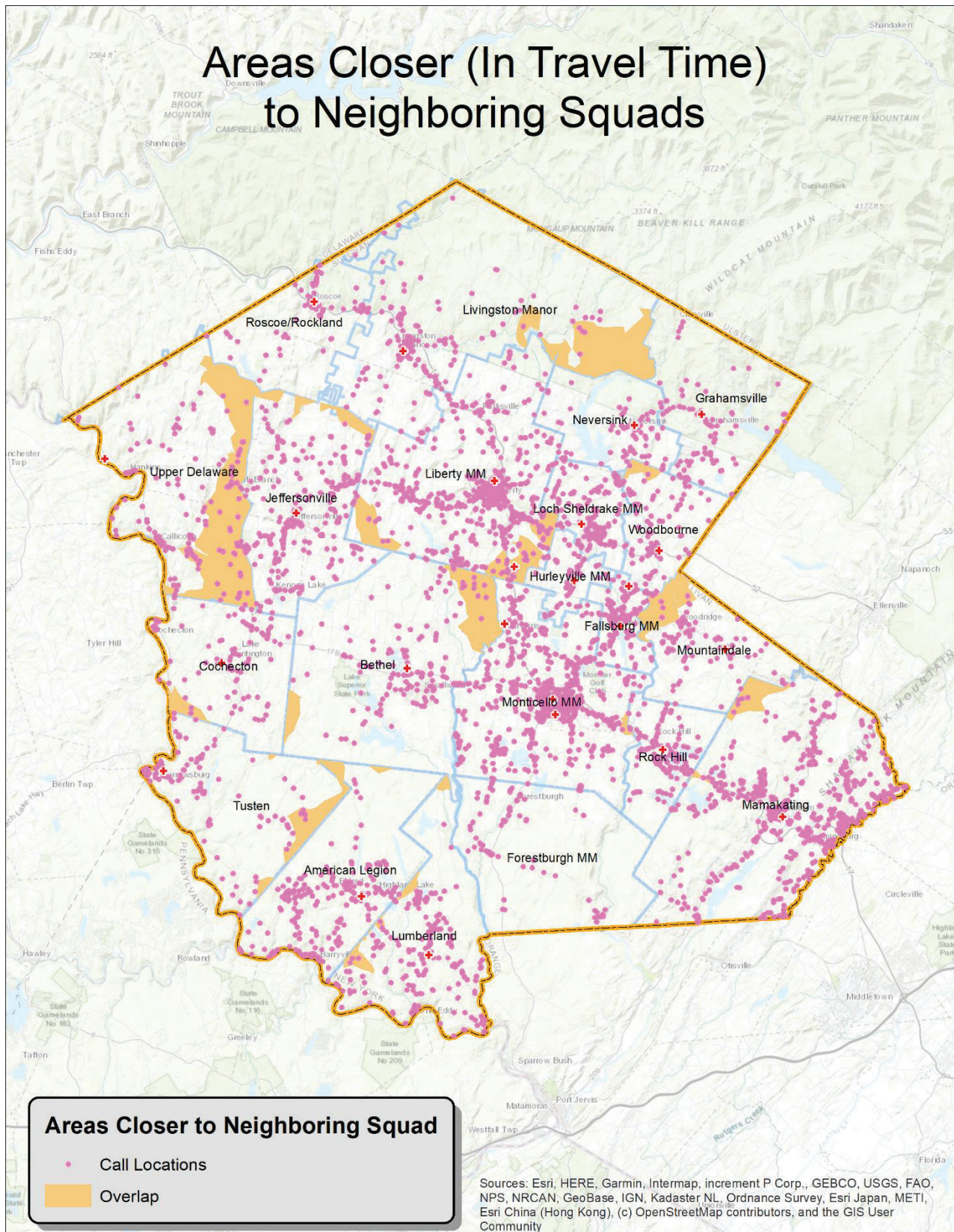
Chart VIII: Response Time by Unit for Priority ALS Calls



While acceptable or even exceptional overall or provider-specific average response times may be achieved, response in certain parts of the county might still be systematically slower, or ambulances might be entirely unavailable. Map 8 illustrates that calls with the longest response times (in orange and red) were concentrated along the periphery of the county in the Towns of Tusten, Upper Delaware, Livingston Manor and Grahamsville, and in Bethel. An interviewee at the hospital in Callicoon reported MobileMedic is often unavailable to meet patient transfer needs because an emergency may take priority. “They are often running EMT calls making our wait times very long to ship a patient out.” (Conversely, hospital transport contracts can compete with EMS response availability.) They added: “Patients won’t call. They just get into their car and come. I had a woman in borderline cardiac arrest who just drove herself in. She knew the ambulance wouldn’t come on time.”

Ambulance company jurisdictions are defined by town and/or other local government boundaries established well over a century ago (See Table I). Map 9 illustrates call locations closer to an alternative provider than the one actually now responsible for service.

MAP 8: AREAS CLOSER TO NEIGHBORING SQUADS THAN TO RESPONDING SQUAD



PCRs

Each response requires the filing of a Patient Care Report (PCR) to inform the receiving hospital of the patient's condition, required medication and other salient medical information. This was traditionally done by using a paper form; in 2020 squads were asked to transition to electronic filing. In Sullivan County, at least seven squads have done so. This changeover is high priority for the state. Data is entered directly into an overall data base, lowering costs, enhancing efficiency and facilitating focused analysis in real time, for example of patterns of response to heart attacks or strokes.

Though a deadline for providers switch to electronic filing is still not mandated, the NYS Bureau of EMS announced in July of 2020 that it will provide an electronic PCR solution without cost at the beginning of 2021 to all EMS agencies that wish to use it. Some corps leaders acknowledged the value of this change to assure that reports are complete and have greater utility. Others were critical of the added time they say that electronic reporting takes, and additional costs for equipment and software, especially when upgrades are needed.

One captain remarked: "This year I went over to an electronic PCR. If you don't use it, you lose your ability to use it. It does make your call last longer. There's so many intricate parts of it that they want knowledge of in there. It's good for the region and the state for statistics. And it does cover your buns a little bit on your PCRs legally; there's a lot of stuff that was always missing on a handwritten PCR and with the electronics it forces you to comply with a lot of items."

Another discussed the potential for the standardization of technology across the county:

We were the first corps in Sullivan County to go from paper to electronic PCRs. And at that time, the company that was big in that type of software was a company called Zoll, a big medical outfit. We're now not satisfied with the program they've got; a lot of the companies now are offering cloud-based type of a software, which means that I could do it on my phone. It makes it a lot easier for people to do it instead of having to come to the building at three o'clock in the morning. The trouble is the cost of it is pretty hefty.

We use Zoll, like I said, Tusten uses Zoll, Rock Hill uses Zoll. Mamakating and Rock Hill now they've gone to the software we looked at last night—ESO. They would like to have every company in the County on ESO. Which would then ... we could get a better rate. I think the guy said something like \$2 or something per call would cost you...

But the other thing was that I, if I got on the scene ... we started putting information in and all of a sudden [another corps] comes along and they're going to handle the call. We could actually, if we both had the same software, we can actually transfer the patient and give a number. If they turned around and put down it on their machine, it would take everything off of our machine, put it on their machine.

“Ambulance Abuse”

EMS volunteer responders express concern about the added burden placed upon them by “frequent flyers,” persons who routinely call for medical assistance when emergency intervention is not needed. One captain said: “During COVID, all the 911 calls were critical. Before that we were going for toothaches and stuff like that. It burns a lot of my membership out. To go to a call and see 5 or 6 cars in the driveway and they really don’t need an ambulance.” This creates a disincentive to volunteer, places an unnecessary burden on hospital emergency rooms and drives up costs of medical care. Often these people are well known to dispatchers and crew members, who nonetheless have a legal obligation to respond.¹¹

Though an imperfect method, because it fails to account for calls from nursing homes and other institutions with a single address serving an older or special needs population, we attempted to measure the demand placed upon the system by such callers by counting the percentage of repeat calls during the study period made from a single address. At the low end, 28.9% of Cohecton’s calls are in this category. At the high end, Liberty had 78% of its calls from repeated addresses. There are eight agencies in Sullivan County (nine if MobileMedic, responding from two locations, is counted separately from each), for which “frequent flyer” calls defined in this way comprise more than half of all calls. (Chart IX) For EMS in Jeffersonville, Liberty, Roscoe and Monticello more than 30% originate at the same address 20 or more times (Table II). These totals suggest that specifying the scope and nature of this problem more precisely, and then finding alternative ways to respond to unnecessary calls, would diminish the burden on Sullivan County EMS responders and likely, too, reduce the cost of health care in the county. A recent study for Tompkins County explored examples from across the country of how coordination of care and the use of community para-medicine reduced inappropriate demand upon EMS services.¹² As an initial step, an “ambulance abuse” bill has been introduced in the state legislature requiring a report if an individual summons an ambulance four or more times in a thirty day period.¹³

¹¹ . General Municipal Law (§ 122)

¹² Quetrell Heyward, Melissa Murray and André Hook. Tompkins County Council of Governments Emergency Medical Services Task Force Final Research Report (2017) pp. 15-17.

¹³ A5854 of 2020 (Giglio) Ambulance abuse, or the over use of ambulance services in non-emergency situations, places people's lives in danger because they are unable to get an ambulance fast enough. Further, one trip in an ambulance can cost localities between \$400 and \$500.

Chart IX: Repeat Calls to the Same Address by Unit

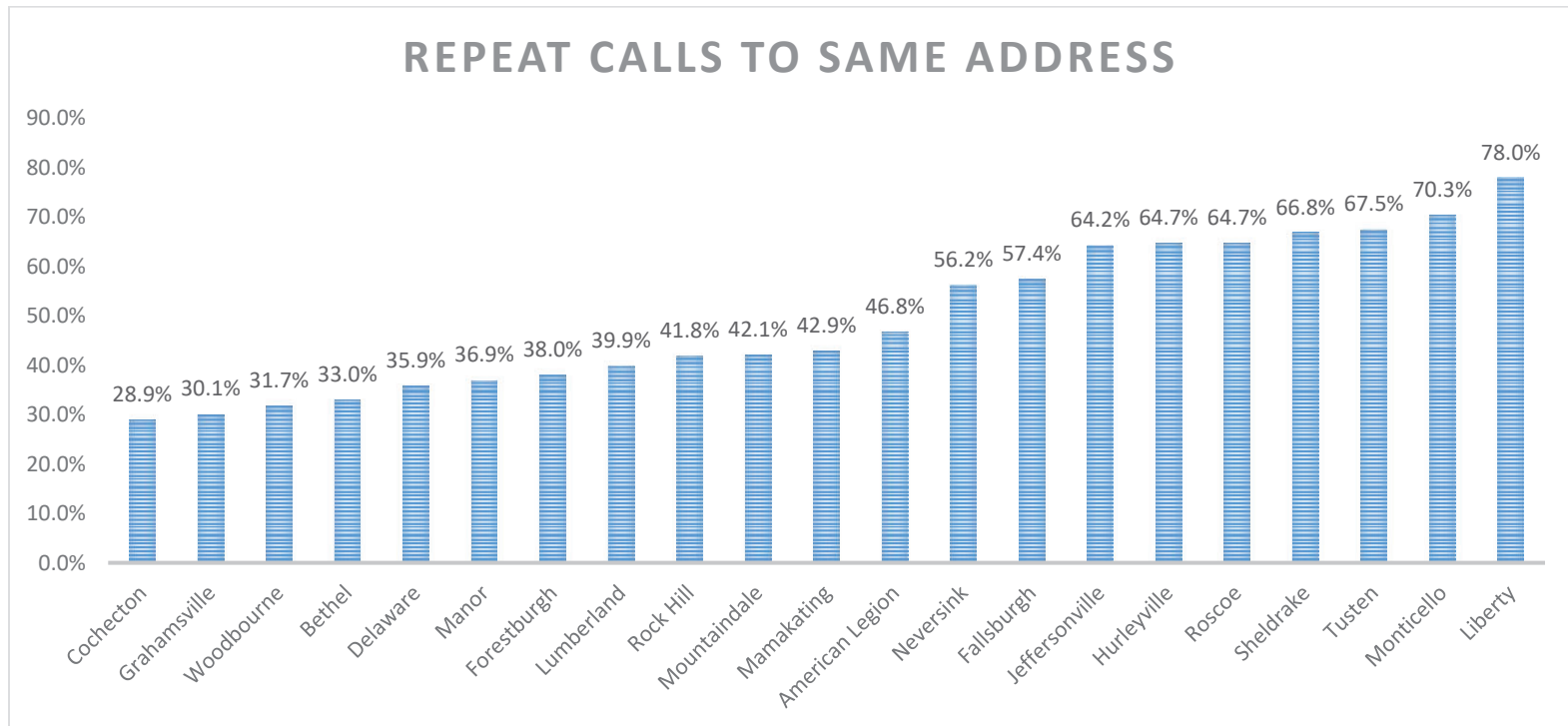


Table II. Repeat Calls from Same Address, by Frequency

Location	1-2 calls same address	3-5 calls same address	6 or more calls same address
American Legion	52%	34%	14%
Bethel	65%	22%	13%
Cochecton	72%	26%	2%
Delaware	64%	29%	7%
Fallsburgh	40%	29%	31%
Forestburgh	59%	29%	12%
Grahamsville	69%	29%	2%
Hurleyville	33%	26%	41%
Jeffersonville	35%	20%	45%
Liberty	20%	16%	63%
Lumberland	58%	27%	15%
Mamakating	57%	30%	13%
Manor	63%	28%	9%
Monticello	28%	27%	45%
Mountaindale	57%	24%	19%
Neversink	43%	32%	25%
Rock Hill	58%	25%	17%
Roscoe	35%	21%	44%
Loch Sheldrake	32%	28%	40%
Tusten	31%	19%	50%
Woodbourne	67%	29%	4%
Total	35%	24%	41%

Staffing and Volunteerism

A statewide survey published in 2019, based upon data gathered in the previous year, reported a 9% decline in qualified EMS providers in New York, affected the ability of both volunteer and for-profit organizations to deliver emergency ambulance services, especially in rural areas.¹⁴

This confirms the findings regarding priority problems facing Emergency Medical Services in the region, identified at the 2019 summit convened by HVREMSCO (Appendix I), and is echoed by leaders of every ambulance company interviewed for this study. Many causes are identified, among them social change, diminished attachment to community by new residents, low compensation and lack of professional opportunity for providers, increased cost of living and a declining or static regional economy.

The problem is exacerbated for volunteer and hybrid companies because many persons they do attract, encourage, and support for training, and who become formally associated with them, are not in fact available for service when called. This can be seen in the differences in the number of members and active members reported for virtually every Sullivan County volunteer EMS agency in Table I. The county EMS coordinator suggested in an interview that several of Sullivan's volunteer ambulance corps were entirely reliant on "two to four workhorses" and would likely fail if they moved away or ceased to serve.

The county is currently served by a quarter fewer ambulance corps than it was a generation ago. Former squads in Loch Sheldrake, Fallsburg, and Woodridge have long since ceased operations. The Monticello volunteer ambulance corps lost its Certificate of Need (CON) and closed in 2004. Services of the Liberty volunteer corps were provided almost entirely by paid personnel by the time it stopped functioning in 2011. The largest communities in the county now contract with MobileMedic for BLS first responder service. As noted, four additional companies report in this study that they now rely in part on paid personnel, Jeffersonville most heavily.

The sole exception is Hatzalah. It has a 60-person waiting list for potential volunteers. No volunteer is accepted without consultation with his employer and family to be sure all understand the time demands and other implications of service. Volunteers are said to be motivated by cultural emphasis on *Tzedakah*, the intrinsic value of serving the community or others. They also gain status in the community. Chasidic persons interested in providing emergency services have few alternatives: they only rarely become police officers and don't enter the volunteer fire service (except in Kiryas Joel in Orange County).

¹⁴ NYS Emergency Medical Services Council. *EMS Workforce Shortage In NYS: Where Are The Emergency Medical Responders?* (December, 2019)

Leaders of both Hatzalah and a number of the other volunteer companies identified occasional encounters with anti-Semitism. But in general, Hatzalah is widely admired for the quality of the service it provides. Chasidic volunteers have joined three other county corps and have served effectively.

Incentives

There are some modest incentives for volunteering for EMS work made available in state law, for example reimbursement of gasoline costs, enhanced life insurance, limited tax credits and, at local discretion, property tax exemptions.¹⁵ In 2019 a law was passed, sponsored by State Senator Jen Metzger, that increased the maximum cap for the established Length of Service Awards Program (LOSAP) contributions from \$700 to \$1,200 for first responders past retirement age.¹⁶

Other more substantial incentives to volunteer have been proposed. In 2019 Senator James Seward and Assembly-member Chris Tague introduced legislation exempting first responders from state income tax.¹⁷ Sometimes specific local conditions offer opportunity. For example, college students have proven a rich source of volunteers in some areas of the state. SUNY Geneseo First Response (GFR) provides emergency medical care to students, faculty, staff, and visitors [to the college] at the Basic Life Support level and mutual aid to other nearby Genesee County corps. In Port Jefferson, on Long Island, when faced with a volunteer shortage, the EMS corps recruited and trained SUNY Stonybrook medical students to do BLS and retained them by providing 16 living spaces for them at no charge in the corps' facility. ALS coverage in Portchester is provided by paid paramedics, who additionally serve as mentors for student volunteers. Some high schools and BOCES elsewhere in the state are integrating EMT preparation in their regular curricula; students can be certified and serve as volunteers after their 18th birthday.¹⁸

A suggested approach for Sullivan County is to offer free tuition at the community college for a two year degree in exchange for a specified number of hours of volunteer EMT service. Also, within individual Sullivan County squads, some have suggested replacing awarding points for ridership only to acknowledgement of hours on standby. Whatever steps are taken, however, an important barrier persists: In Sullivan County and elsewhere in New York State training as an

¹⁵ <https://www.tax.ny.gov/pit/credits/volunteerfirefighters.htm>.

https://www.tax.ny.gov/research/property/assess/manuals/vol4/pt1/sec4_01/sec466.htm

¹⁶ <https://spectrumlocalnews.com/nys/central-ny/news/2019/11/13/new-law-increases-incentives-for-volunteer-firefighters-and-ems>

¹⁷ [S.5564/A.7655 of 2019th birthday](#).

¹⁸ In Syracuse students at the Public Service Leadership Academy at Fowler will be able to graduate with an emergency medical technician license. The training is provided through a new partnership between the district and Upstate Medical University's paramedic program. Regarding BOCES see: <https://www.e2ccb.org/EMS.cfm>

EMT or paramedic does not open a promising career track for potential volunteers. Pay is low and opportunities for advancement are limited compared to those in nursing, or other medically related fields. This may be the greatest reason that incentives that have thus far been provided are reported to be largely ineffectual by Sullivan County's ambulance corps leadership. Their view is that the idea of service and providing it in life saving circumstances—not the potential for reward—must be the prime driver of volunteer engagement.

Training

Certification (as opposed to licensing which extends the period required for retesting) as an EMT allows a volunteer to provide basic life support (BLS), including: cardiopulmonary resuscitation (CPR); administering oxygen; administering glucose to diabetic patients; helping people who are having asthma attacks or allergic reactions; and removing patients and preparing them for transport to hospital. (Changes in protocols from time to time may add authorized services with additional training, e.g., the use of Narcan.) Paramedics are licensed to provide Advanced Life Support (ALS). They have more training than do EMTs and often hold Associates Degrees. They may: administer medications; start intravenous (IV) lines; provide advanced airway management for patients; resuscitate patients; and help people who have suffered trauma.¹⁹

Volunteer Ambulance corps leaders interviewed for this study indicated that the time it takes to complete training requirements to become a certified EMT or paramedic, and to retain certification once it is obtained, has been a significant barrier to attracting and retaining volunteers. Qualified instructors are in insufficient supply, limiting training opportunities. Sullivan is a big county; training locations were often inconvenient for many when it was scheduled. Frequency of classes, travel distance (and conditions, in winter), added to the already substantial time requirement to successfully complete training. Costs for EMT training preparation sometimes had to be paid out front by trainees, with reimbursement only after training was successfully completed.

State law encourages collaboration with campuses of the state university in the preparation of EMTs and Paramedics.²⁰ Unlike a number of other community colleges, Sullivan County Community College has no regular established degree or certificate programs for this purpose. Regulations provide for course sponsorship by persons or organizations approved by the state health department to provide training programs for certification or recertification of first responders.²¹ The community college is such a sponsor. Currently there is an EMT class with 29 attendees underway at SCCC.

¹⁹ <https://www.health.ny.gov/professionals/ems/>

²⁰ Public Health Law. Section 3002.a

²¹ NYs Emergency Medical Service Code. Part 800.20

In 2020 the county coordinator's office offered leadership training for captains of volunteer EMS squads funded from its very limited budget. One interviewee for this study commented positively about this experience; they noted that it had the additional benefit of opening up useful communication among agencies, facilitating potential additional future collaboration. However, in part because of the coronavirus pandemic, the county will offer no additional or limited training this year.

Coordinating and delivering needed training on a regular basis is a role for which the county coordinator's office is well situated and well-suited. One respondent said: "We shouldn't have to be relying on the individual agencies to do the CMEs.... The County could put together day or weekend CMEs once a month at the training center, open to Sullivan County agencies first, with slots that then are open to surrounding areas. Charge the surrounding people coming in a fee to take it. And then the County could recoup costs towards it. I'd also like to see the hospital do something. "

Under recently revised requirements, certified first responders (CFR) require 48-60 hours of training. Becoming a certified EMT now requires completion of CPR certification and between 150 and 190 hours of training. Paramedics must be certified in CPR and require 1,000 to 1,300 hours. For both EMT and Paramedic credentialing, candidates must pass practical and written exams. Since 2001, the Pilot Recertification Program allows EMTs and Paramedics "who have been in continuous practice, demonstrate competency and complete appropriate continuing education to renew their certification... [for three years]... without taking a certification exam."²² A five year pilot program recertification is available for some counties, but not Sullivan.

Responsive to concerns about the burden of training requirements, in 2019 the Bureau of State EMS launched its on-line Vital Signs EMS Academy for all levels of training.²³ The Bureau also reduced the hours of study required for recertification of EMTs and Paramedics and has suggested lengthening the period before required recertification from three years to four.²⁴

Recognition and Public Education

Many ambulance corps volunteers believe that their efforts are insufficiently understood, supported and acknowledged in the communities that they serve, especially in contrast to fire departments. For example, they say, when they dial 911 many citizens think they are just calling for transportation to the hospital; they are unaware of the skills and training required of EMS first responders. One volunteer whose family has given generations of service told us: "There's

²² <https://www.health.ny.gov/professionals/ems/certification/cmerecert.htm>

²³ <https://vitalsignsacademy.com/>

²⁴ https://www.health.ny.gov/professionals/ems/national_education_standards_transition/;
https://www.health.ny.gov/professionals/ems/national_education_standards_transition/docs/faq.pdf

lack of community support. That people expect essential services out of EMS and don't understand that it's still a volunteer agency. And that unless people step up and start doing this job there isn't going to be that service there.... The fire service gets the accolades and the financial backing.... When you look at our budget compared to a fire budget, you're looking at a vast difference. \$.06 per thousand goes to EMS and \$6.40 goes to fire. We cover 225 calls. They may do 20. They don't think they need EMS until something goes really bad....”

Finance

The Sullivan County government has not made a significant financial commitment to supporting the provision of EMS services. Including salaries and benefits, its total budget for EMS coordination in 2020 was \$31,476.

Excluding MobileMedic, which is privately held, and Mountindale, which did not provide data, but including Hatzalah, Sullivan County emergency medical response agencies reported spending totaling \$2.273 million in 2019. Individual agency totals ranged widely in size from \$592,000 in Jeffersonville, which makes extensive use of paid staff, to \$3,000 for Woodbourne. Woodbourne is organizationally a part of a volunteer fire company with taxing authority and is therefore barred from billing by state law; it relies entirely on the fire department for funding. (Table I).

There are three major sources of funding to cover emergency medical costs in Sullivan County: tax revenues, insurance payments, and charitable contributions. There is no standard budgeting template or fiscal model: the pattern varies from organization to organization. One captain said: “We're very disjointed... everybody's got different problems. Like Jeffersonville can be a tax district, they can get monies that way. We're not. Other places might get a grant from the town. So our funding can be a big issue. So some places can buy brand new trucks, brand new equipment and we're scrounging to put our stuff back together. We do soft billing and we send out a donation letter once a year.... People think that since we're in the firehouse, we're part of the fire department, get fire department monies... They'll send back a note with the slip saying, ‘Oh yeah I already gave him my fire tax.’”

Tax Revenues

The provision of ambulance services by NYS counties, cities, towns and villages is discretionary, not mandatory.²⁵ (This is the basis of the idea that EMS is not “an essential service.”) In towns,

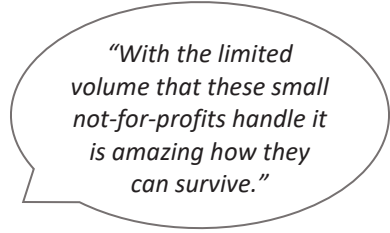
²⁵ General Municipal Law § 122-b. General Ambulance services. 1. Any county, city, town or village, acting individually or jointly, may provide an emergency medical service, a general ambulance service or a combination of such services for the purpose of providing prehospital emergency medical

EMS may be operated directly or contracted for with another government or organization (but not a fire district). The town government may establish an elected or appointed board of commissioners to advise it.²⁶ It may charge a fee for EMS, or use tax money, or both. To access needed funds the town may add to the general tax levy or create a special improvement district. The creation of such a district must be approved at referendum. This approach segregates the cost of the service on tax bills though, unlike for fire districts, the town board is still left in charge. This money must be used for its stated purpose. In Sullivan County, a 2018 survey by the county EMS coordinator's office found that Emergency Medical Service districts are used to support EMS in Jeffersonville, Rock Hill, Upper Delaware, Mamakating, Bethel and Tusten (with the Town of Damascus, PA). American Legion, Tusten, and Upper Delaware accesses tax resources through contracts with municipal government.

Fees for Service

Like municipalities, EMS corps if not attached to fire companies may bill for service. Rates are set by providers. But the amounts government and private insurers actually pay are much lower, are rarely adjusted in any significant way and usually do not cover costs. And payment is rarely sought at all from people without means or insurance.

Bill Shipman is an experienced executive at MultiMed, a company that does billing under contract for many ambulance corps in Sullivan County and across New York State. He estimated that, on average, about half of patients are covered by Medicare, another 20% by Medicaid and between 10% and 20% by private insurance. The remainder are uninsured. "Reimbursement by government programs," Shipman said, "was routinely below costs." Checking his records for examples, he cited as typical an instance in which Medicare, after being billed \$1,000 for a BLS call, authorized a payment of \$365.87. The patient's Medicare HMO paid 78.4% of the authorized amount, less a 20% copay. He found another example, also typical, in which Medicaid paid the same ambulance company \$150 for a BLS call. Full payment is only routinely received from insurance companies in connection with accidents relating to worker



"With the limited volume that these small not-for-profits handle it is amazing how they can survive."

compensation and no fault auto insurance. "With the limited volume that these small not-for-profits handle," he concluded, "it is amazing how they can survive."²⁷

One captain of a Sullivan County company described the local situation regarding ALS as even more difficult: "Medicaid only pays \$250 or \$300 for a run. Medicare only allows you to bill a certain amount and then they only pay you 80% of that. So if they allow us to bill \$420 for an ALS call, they're only paying \$336, but I have a contract for ALS coverage and have to pay Mobile Medic that \$420. I'm down

²⁶ Town Law. Article 12 Section 198.10.f

²⁷ Gerald Benjamin. Interview with Bill Shipman, June 30, 2020. <https://www.multimedbilling.com/>

20% there. Now I've got to hope like hell that the patient's got a secondary insurance to pick up that 20% plus the mileage. (Often they only allow a set rate for mileage and the call.) That's why you'll see a lot of astronomical ambulance corps bills; private insurance has to make up for the losses in Medicare. So by the time you figured payroll, fuel costs ... how much are you actually making? So those you've got to do in volume. I don't really want to be wishing people in the ambulance."

Contractors are retained to provide the billing work for volunteer corps, linked to data available from electronic PCRs, which as noted are increasingly in use. Not all Sullivan County EMS agencies use the same contractors or software. Squads that are private non-profits reported "soft billing," accepting whatever payment was made by insurance companies but not pursuing those served for any remaining balance. Tusten is considering beginning to bill uninsured people directly.

As noted, MobileMedic, a for-profit provider, relies entirely upon billing for service. Some members of volunteer companies were critical of Mobile Medic's "profit motive." Others acknowledge the slim profit margin inherent in emergency service delivery and the high cost of operations: "It costs them like \$4,000 to put a truck on the road for that day. I think it is something like that." The fact that two for-profit ambulance services previously serving Sullivan County have gone under attests to the precariousness of commercial service delivery.

Ambulance corps cannot bill unless the patient has been transferred to a hospital. This provides no incentive to resolve problems on site, even though the ability to do so is within the competence of the responding EMT or paramedic, acting under guidance, if required, of an off-site physician. In fact, it provides a perverse financial incentive to transport even when not necessary to assure the well-being of the patient. Under the innovative Emergency Triage, Treat, and Transport (ET3) program, for which implementation has been delayed due the coronavirus pandemic, a new voluntary, five-year payment model will be tested by providers across the country, including in some NYS counties, to lower costs and avoid unnecessary transports for Medicare Fee-for-Service (FFS) beneficiaries. The Centers for Medicare & Medicaid Services (CMS) will pay participating ambulance suppliers and providers to 1) transport an individual to a hospital emergency department (ED) or other destination covered under the regulations, 2) transport to an alternative destination partner (such as a primary care doctor's office or an urgent care clinic), or 3) provide treatment in place with a qualified health care partner, either on the scene or connected using telehealth. The model will also encourage local governments, their designees, or other entities that operate or have authority over one or more 911 dispatches to establish a medical triage line for 911 calls.²⁸

²⁸ Interview with Ryan Greenberg, NYS Bureau of EMS, June 15, 2020; <https://innovation.cms.gov/innovation-models/et3>

Three Major Issues

Three major financial issues were raised by ambulance corps leaders who were interviewed for this study:

1. Ambulance companies associated with taxpayer support volunteer fire departments are barred by state law from billing for service.²⁹ Removing this limitation has long been a priority issue for fire districts associated EMS agencies across the state. State legislation has been regularly entered toward this end, justified as essential to the continued survival of many EMS corps.³⁰ It is resisted as “double dipping” for public funds and for the prospect that it will increase Medicare and Medicaid costs. In this connection it is critical to understand that New York counties bear a larger share of Medicaid costs than those in any other states.
2. Modest levels of reimbursement provided by Medicaid and Medicare do not cover enough of the costs of service provision, which threatens the financial viability of EMS providers. One interviewee commented: “We haven't had a Medicaid increase in 20 years now, which is crazy. Although the state recognizes the fact that we operate and get reimbursed from Medicaid at below cost. [W]e need to graduate away from leaning on the counties to just give us these tax dollars and try to make the case that we're a professional service, just like an emergency room and the hospital and the doctor's office. And we deserve to be reimbursed properly from the healthcare channels....”
3. Insurance companies require providers to accept their fee schedules to get direct payment. Their practice of paying insureds rather than providers when the provider is not specified as preferred often results in funds being retained by patients, and, despite collection efforts, not reaching the providing agency. Legislation has been introduced to address this problem.³¹

A County-Based EMS System

Sullivan County does not face the choice of whether or not to change its EMS delivery system. That choice has already been made by default. Regionalization within the county and re-centering at the county level has already been occurring for decades. And this current analysis shows that further change in these directions is inevitable. Dispatch is countywide. For BLS coverage, a quarter of the county's volunteer provider corps have closed their doors; several

²⁹ General Municipal Law 209.b.4

³⁰ A1778 of 2020 (Jones); S03685B (Brooks)

³¹ A6211B of 2020 (Magnarelli)

more may close; three are already responding collaboratively to calls. For ALS coverage, the response system is already virtually countywide through MobileMedic. The other near-unique EMS resource in the county, Hatzalah, operates countywide as well.

A relatively small and diminishing number of dedicated volunteers continue to provide extraordinary EMS response in much of Sullivan County. Their encouragement and continued involvement for as long as possible is essential. Efforts to augment their number can and should persist; some approaches are suggested in this report. For volunteer squads, a county-based system has the benefit of allowing them to operate, and bill, outside their limited CON area without a loss of community identity. Greater recognition of their life-saving work and acknowledgment of its value, also essential, requires leadership at the county level.

But both local leaders and officials with a statewide or regional perspective agreed that a town-based EMS system, as reliant as Sullivan County's currently is on volunteers, cannot survive in the middle- and long-term. One said, in summary, that a county-based system, not necessarily directly operated by the county government but with county responsibility for assuring that quality service is delivered, is more likely to achieve economies of scale and recruit and retain providers for a longer period of time for career, salary, and pension reasons.

The challenges that face Sullivan County are not unique. Several other counties that have studied this matter have arrived at similar conclusions. County-based systems have already been recommended for Columbia and Essex counties.³² Putnam County has instituted one. Dutchess County has been urged to consider the creation of a county-wide public authority to deliver EMS services.³³ A study commission in Tompkins County wrote: "Unification of resources and entities has demonstrated the potential to eliminate duplicative equipment expenditures, improve response times, and standardize the accounting, billing, and budgeting of organizations. Furthermore, studies have shown that it helps to reduce duplicative operational and administrative costs, as well as share equipment expenditures, oversight, and quality control. In addition, these studies show that it can improve flexibility in the deployment of responders, management of call volume, as well as regional collaboration."³⁴

³² <https://www.nysac.org/files/CCEMS%20Presentation.pdf>; https://www.cgr.org/17_R-1857_EssexCountyEMS.pdf

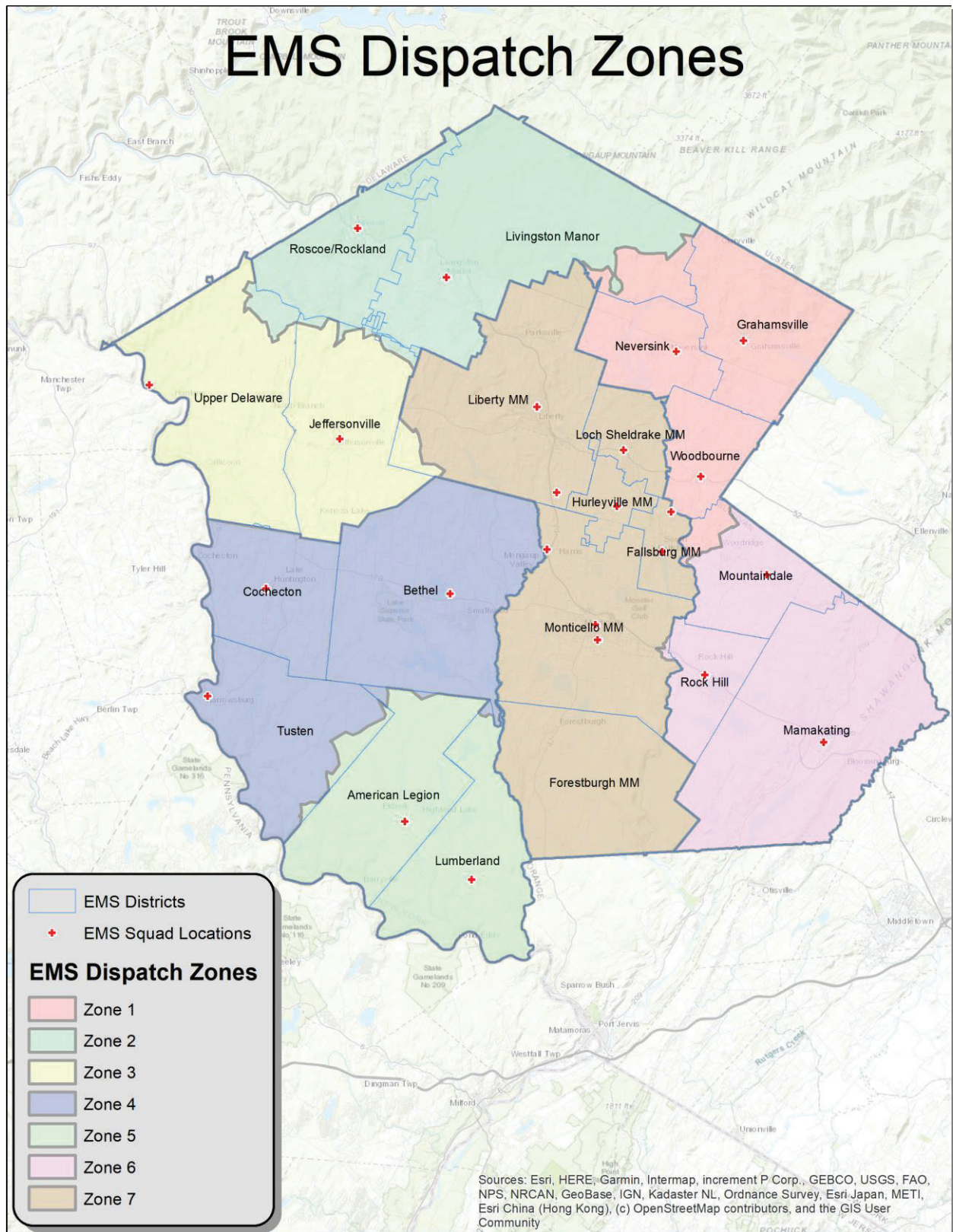
³³ <https://www.dutchessny.gov/Departments/County-Executive/34404.htm>

³⁴ https://tompkinscountyny.gov/files2/ctyadmin/documents/EMSTeam%20_FinalReport_31May2017.pdf. p.20

Table III: County-based EMS Models in New York State

Columbia County	Essex County	Putnam County	Dutchess County (Proposed)
<p>Agencies contract with County while maintaining primary responsibility for own territory.</p> <p>County provides payment for standby and provides EPCR system</p> <p>County staff manages all ambulances in county and provides reimbursement to agencies for ambulance relocation to depleted areas</p>	<p>County contracts with commercial EMS provider(s) for transport.</p> <p>Volunteer agencies retained as first responders for on-scene care thereby recognizing volunteer contribution while alleviating time commitments.</p>	<p>County contracts with commercial agency (now Emstar, formerly Transcare) to disperse ambulances and respond throughout the county</p> <p>Townships may retain volunteer hybrid agencies at will with EmStar for ALS assistance</p>	<p>County creates an autonomous Emergency Services Public Authority by local law, with a governing board and professional staff, to envision, coordinate and otherwise provide the delivery of EMS. Funded through fees for service (and local government support, as necessary).</p>

MAP 11: EMS DISPATCH ZONES



ACTION PLAN AND OPTIONS

PHASE ONE
<ul style="list-style-type: none"> • THE SULLIVAN COUNTY LEGISLATURE PASSES A RESOLUTION <ul style="list-style-type: none"> ○ Declaring EMS an “essential function” of county government ○ Committing to a county-wide system, and ○ Making the position of EMS coordinator full time and placing them at the system’s head <ul style="list-style-type: none"> ▪ ESTIMATED COST: Provides an initial appropriation of \$150,000 for the coordinator’s salary and benefits and to launch this system
<ul style="list-style-type: none"> • ALS <ul style="list-style-type: none"> ○ Advanced Life Support (ALS) continues to be delivered countywide (except in Jeffersonville) by MobileMedic. ○ Backup (as needed) continues to be provided by Hatzalah. <ul style="list-style-type: none"> ▪ ESTIMATED COST: \$0
<ul style="list-style-type: none"> • RECOGNITION AND PUBLIC EDUCATION <ul style="list-style-type: none"> ○ Legislature adopts and implements a “life-saver” initiative to <ul style="list-style-type: none"> ▪ Recognize EMS volunteers ▪ Educate the public on the nature of this service ▪ Diminish ambulance abuse ▪ ESTIMATED COST: \$0
PHASE TWO
<ul style="list-style-type: none"> • BLS <ul style="list-style-type: none"> ○ CON: The County government obtains a Certificate of Need (CON) to deliver Basic Like Support (BLS) countywide ○ Seven BLS response zones would be defined within the county (Map 10 above) ○ The county contracts with the volunteer/hybrid squads to provide BLS response within their zones ○ Dispatch is simultaneous of all units within each zone <ul style="list-style-type: none"> ▪ ESTIMATED COST: \$0

<ul style="list-style-type: none"> • TRAINING <ul style="list-style-type: none"> ○ In collaboration with SUNY Sullivan, Sullivan BOCES and Catskill Regional Hospital, develop and deliver programs to meet state requirements for EMT and Paramedic certification and recertification <ul style="list-style-type: none"> ▪ ESTIMATED COST: Minimal, net positive if open to paid outside county as participants
<ul style="list-style-type: none"> • FINANCES <ul style="list-style-type: none"> ○ Countywide budgeting instituted ○ County bills for service ○ BLS PRIMARY RESPONSE/ALS INTERCEPT <ul style="list-style-type: none"> ▪ County enters a reimbursement contract with MobileMedic (and Hatzalah as back-up) for ALS services on county ambulances ○ ALS <ul style="list-style-type: none"> ▪ MobileMedic and Hatzalah continue to bill independently for direct aid ○ County shares billing revenues from private and government sources under contractual terms with corps (including fire district-based corps) <ul style="list-style-type: none"> ▪ ESTIMATED ANNUAL REVENUE: \$1.05M
PHASE THREE
<ul style="list-style-type: none"> • OPTION 1 <ul style="list-style-type: none"> ○ Contract with one or both ALS agencies in the county to provide dedicated back-up in under-served, poor-response zones. Status manage based on existing data. <ul style="list-style-type: none"> ▪ ESTIMATED COST: To be determined (Putnam County Contract; see Appendix II: Putnam County RFP)
<ul style="list-style-type: none"> • OPTION 2 <ul style="list-style-type: none"> ○ County deploys up to three county-staffed ambulances for 40 hours a week using existing ambulances under contract with volunteer corps <ul style="list-style-type: none"> ▪ ESTIMATED COST: Personnel at \$79,000 per ambulance if county supplies both EMT and driver
<ul style="list-style-type: none"> • OPTION 3 <ul style="list-style-type: none"> ○ County purchases 2 to 3 ambulances to be staffed by county personnel <ul style="list-style-type: none"> ▪ ESTIMATED COST: Personnel at \$79,000 per ambulance if county supplies both EMT and driver; ambulances at \$150K to \$200K each

PHASE FOUR

- **SPECIAL TAXING DISTRICT:** Seek creation of a countywide special taxing district for ambulance services by special state legislation (see, Essex County model)
 - Town taxing districts dissolved
 - \$1.35M estimated difference between revenue from fees and operating costs prorated by taxing district on properties in service zones, based upon demand for service. (Note: Does not include additional cost for part-time county backup staffing of ambulances above. Add \$79K for each, if county supplies full crew) ³⁵
 - All purchasing of administrative and communication hardware and software standardized; proceeds through county government
 - Volunteer corps option retained for direct purchase of ambulances, medical supplies and equipment
 - Volunteer Corps retained as First Responders
 - **ESTIMATED COST: \$1,350,000** (excluding county personnel)
 - **ESTIMATED COST: \$1,587,000** (including county personnel)

PHASE FIVE

- **INNOVATION**
 - Seek inclusion as a rural test site in national and statewide programs to increase efficiency and reduce costs in EMS service delivery
 - Referral for review of frequent callers to a newly established countywide team for consideration for alternative services
 - Greater reliance on experience for recertification for qualified county EMTs and paramedics
 - Seek accreditation for the county system when state initiative is introduced

³⁵ See CGR. Essex County EMS Strategic Plan (2017) p. 12.

APPENDICES

APPENDIX I: Sullivan County EMS Agencies

Bethel Volunteer Ambulance Corps, Inc.

PO Box 31
White Lake, NY 12786
(845)583-5004
Captain Charlie Stackhouse

Catskills Hatzalah

1070 McDonald Ave
Brooklyn, NY 11230
(718)387-1750
Captains Yehuda Feig, Yomtov Malik, Eli Serebrowski & Bernie Gips

Cochecton Vol Ambulance Corps, Inc., Town of

PO Box 4
Lake Huntington, NY 12752
(845)932-8138
Captain April White

Grahamsville First Aid Squad, Inc.

PO Box 152
Grahamsville, NY 12740
(845)985-2839
Captain Desiree Jimenez

Jeffersonville Volunteer First Aid Corps, Inc

PO Box 396
Jeffersonville, NY 12748
(845)482-3110
Captain Ruth Ackermann

Lumberland Fire Department, Inc.

PO Box 91
Glen Spey, NY 12737

(845)856-7515
Captain Faith Robles

Mamakating First Aid Squad, Inc.
PO Box 525
Wurtsboro, NY 12790
(845)888-2544
Captain Rebecca Goodman

Mountaindale Fire Department First Aid Squad
PO Box 203
Mountaindale, NY 12763
(845)434-3425
Captain Norman Prentice

Neversink Fire Department, Inc.
PO Box 468
Neversink, NY 12765
(845)985-7198
Captain Ann Bivins

Roscoe & Rockland Volunteer Ambulance Corp
PO Box 321
Roscoe, NY 12776
(607)498-4600
Captain Karrie Jara

Rock Hill Volunteer Ambulance Corps, Inc
PO Box 1
Rock Hill, NY 12775
(845)794-6985
Captain Neal Meddaugh

Sullivan Paramedicine, Inc. (MobileMedic)

PO Box 1
Hurleyville, NY 12747
(845)436-9111
Captain Albee Bockman

Sylvan Liebla American Legion Post #1363

PO Box 63
Eldred, NY 12732
(845)557-8915
Captain Tony LaRuffa

Tusten Volunteer Ambulance Service, Inc.

PO Box 34
Narrowsburg, NY 12764
(845)252-3336
Captain Jason Welton

Upper Delaware Ambulance Corps, Inc.

PO Box 258
Hankins, NY 12741
(845)887-6070
Captain Connor Duffy

Volunteer Ambulance Corps of Livingston Manor Inc.

PO Box 1
Livingston Manor, NY 12758
(845)439-4150
Captain Joel Sherwood

Woodbourne Fire Company No. 1, Inc.

P.O. Box 322
Woodbourne, NY 12788
(845)434-6763
Captain Nancy McClain

APPENDIX II: Putnam County RFP

SECTION A –PROJECT SPECIFICATIONS**1. INTRODUCTION**

Putnam County, New York is situated on the outer rim of the New York Metropolitan Region in the Mid-Hudson Valley. Putnam County's land area is 235 square miles; its borders are the Hudson River to the west, the State of Connecticut to the east, Westchester County, New York to the south and Dutchess County, New York to the north. As of 2013, the United States Census Bureau estimates there are 100,000 people residing in Putnam County.

Putnam County is dedicated to providing prompt and efficient emergency medical assistance to the residents and visitors of Putnam County. Basic Life Support Ambulance services are provided by seven (7) volunteer fire departments and four (4) volunteer ambulance corps. Annual EMS call volume in the county is approximately:

2014: 7,577 calls

2015: 7,542 calls

Additional countywide call data can be found in Section C of this document.

All 911 calls in Putnam County are dispatched by a single public safety answering point (PSAP) located at the Bureau of Emergency Services (BES). All dispatchers at BES are certified in Emergency Medical Dispatch (EMD).

Putnam County currently contracts with a private vendor to supply advanced life support (ALS) first response service. The contractor also provides a BLS ambulance on a limited basis to supplement the local volunteer ambulances. The vendor provides five vehicles dedicated to the Putnam County 911 Emergency Medical Service System. There are three (3) advanced life support first response (ALSFR) (Paramedic Fly Cars). There is one Type II ALS ambulance staffed by a Paramedic and an EMT during the day Monday through Friday 6AM-6PM. From 6PM to 6AM Mon- Fri. and all day on Sat & Sun that ambulance serves as a Fly Car, and is staffed by a Paramedic only. There is one BLS Type II ambulance staffed by two EMT's 6AM-10PM, 7 days a week. The BLS ambulance transports patients when volunteer rigs are unable to respond to calls in eastern Putnam. Ideally, the Fly Cars and /or ALS ambulance arrive first to treat the patient(s). The paramedic can either turn a BLS patient over to the local volunteer ambulance for transport or if the patient requires ALS care, the medic will ride in the back of the volunteer ambulance with the patient. In 2015, the vendor was dispatched to 5,890 calls, of which 2,196 required advanced life support. The BLS ambulance was used to supplement the county's volunteer ambulances 938 times in 2015 and served as the transporting ambulance for 796 calls in 2015. The average response time for the vendor in 2015 was 10 minutes 32 seconds. The ALS Service contract is managed by the Commissioner of the Bureau of Emergency Services.

2. OBJECTIVE

The County of Putnam intends to contract with a single entity for professional services to provide advanced life support first response(ALSFR) and ambulance services to Putnam County based upon responses to this Request for Proposal (RFP).

3. TERM OF CONTRACT

The term of the contract will be for a minimum of three (3) years, but in no event will be greater than five years. The contract will commence upon contract execution and will terminate upon the conclusion of the term. Putnam County will reserve the option to renew this agreement for two additional years, renewed one year at a time, on the same terms and conditions as provided in this RFP.

4. MANDATORY REQUIREMENTS

Putnam County will apply for a Certificate of Authority to operate an ambulance service within its geographical boundaries upon an award letter being issued to the successful vendor. The vendor need not possess a valid NYS-DOH ambulance service certificate to operate in Putnam County. The successful vendor shall cooperate with any and all request by Putnam County and the State to obtain the certificate of authority

The vendor shall participate cooperatively with the Bureau of Emergency Services in training activities to assist the county's volunteer EMS agencies.

The vendor may, from time to time be asked to participate with the Bureau of Emergency Services at community events.

The vendor agrees to provide assistance pursuant to the conditions outlined in the current Putnam County Mutual Aid Plan The mutual aid plan is available upon request. .

The vendor will operate in accordance with all New York State and Hudson Valley Regional EMS requirements pertaining to BLS ambulance, ALS ambulance and first response services as well as all other regulatory agency requirements.

5. SCOPE OF SERVICES**A. GENERAL**

The vendor is required to provide Putnam County with Advanced Life Support first response (ALSFR) and ambulance service full time (24 hours a day/7 days a week) under the terms indicated in this RFP.

The vendor will manage all day-to-day activities, including but not limited to, personnel, medical equipment & supplies, maintenance and vehicles.

The vendor will be required to provide adequate supervision for the day-to-day operation of the ALS service and staff. The vendor must include a description of this supervision in the response to this RFP.

Vendor will manage all aspects related to the ALS service, including but not limited to inspection, documentation, data submission, record retention, record submission and renewals.

Vendor will be responsible to see that all employees are courteous and professional. and that all field personnel receive the proper orientation and training and are currently certified at the

appropriate state level for providing pre-hospital care in Putnam County and as listed in their roster. All personnel must remain certified for the duration of their employment..

Vendor will be responsible for the billing of patients treated and/or transported in vendor vehicles.

Vendor will be responsible to complete agreements with BLS ambulance transporting services that bill for service for reimbursement of ALS portion proceeds.

Vendor shall assure it provides all controlled substances as per NYS & Hudson Valley Regional Emergency Medical Advisory Committee protocols and shall at all times remain compliant with Chapter VI of Title 10 (Health) Part 80.136 Rules & Regulations on Controlled Substances for Emergency Medical Services.

The successful vendor will be financially responsible for all utilities, supplies, equipment, personnel, vehicles and any other expense, including insurance, which are required to operate the ALS service.

Vendor will be responsible for all equipment maintenance, i.e. fuel, lubricants, repairs, initial supply inventory and re-supply.

Vendor shall maintain a good working relationship with health care facilities, first responders, (Fire-Police-EMS) as well as with Dispatch Centers.

Vendor's employees must demonstrate comprehension of system operations; knowledge of Putnam and surrounding area geography and competence in operational protocols.

The vendor will participate in quality assurance and continuous quality improvement (QA/CQI) activities in accordance with the rules and regulations set forth by the Hudson Valley Regional Medical Advisory Committee and NYS-DOH.

Vendor will be responsible for the proper disposal of used sharps and bio-hazard waste.

Vendor is responsible for prompt response to; and follow up with; inquiries and complaints.

B. EQUIPMENT/VEHICLES

Initially, a total of five (5) vehicles will be stationed within the County with the following designations and configurations:

- Medic 1, four –wheel drive sport utility, ALS first-response unit (flycar).
- Medic 2, four –wheel drive sport utility, ALS first-response unit (flycar).
- Medic 3, ALS Type II ambulance
- Medic 4, four –wheel drive sport utility, ALS first-response unit (flycar).
- BLS 4, BLS (Basic Life Support) Type II ambulance

All vehicles, except BLS 4, shall be in service 24 hours/day, 7 days/week. BLS 4 shall be in service from 6:00 am to 10:00 pm, 7 days/week.

All vehicles shall be equipped with a power shoreline and heater/cooler to allow for climate control of the patient compartment to keep equipment, medications, fluids etc. at an acceptable range year round(as determined by fluid/medication package inserts and NYS Guidelines).

All vehicles and equipment therein will meet or exceed all current New York State Department of Health (NYS-DOH) certification requirements for advanced life support first response units, basic or advanced life support ambulances, as appropriate. The vendor shall equip vehicles in compliance with all requirements set forth by the Hudson Valley Regional Emergency Medical Advisory Committee (REMAC) even if that may exceed state requirements, or as required by the County.

Upon commencement of the contract, all vehicles that the vendor places in the county for permanent service shall be either new or no more than one (1) year old. Vendor shall be responsible for all vehicle maintenance.

All vehicles shall be dedicated solely to emergency responses for Putnam County as specified in this RFP.

At no time will the vendor utilize the vehicles assigned to Putnam County to fulfill any obligations not outlined in this RFP.

Each vehicle is required to display a reference to Putnam County s and must display "911" on the vehicle. Vehicles may not display any other telephone numbers on exterior vehicle surface.

All vehicles are required to be equipped with the necessary radio equipment to receive dispatches from the county's 911 center and must allow two-way communication with the 911 center from both inside and away from the vehicles. Said radio equipment must also allow two-way communications with the county's EMS and fire department field units and local hospitals. Compliance will require operation on VHF low band, VHF high band, as well as other frequency bands required by the agency for operational communications.

Automatic vehicle location (AVL) systems that are compatible with equipment at the county's 911 communications center must be installed on all vehicles for the purpose of real-time tracking of vehicle location.

C. VEHICLE LOCATION

The vendor will work closely with the County to select locations for the vehicles so that response times to calls will be minimized. The County will work with vendor to seek permission to locate in first response agencies or similar agencies that would help minimize response time. Vendor is ultimately responsible to furnish "station space" for all units and shall be responsible for all fees associated with securing stations.

- Medic 1 Philipstown Ambulance, 14 Cedar St, Cold Spring, NY
- Medic 2 Putnam Valley Ambulance, 218 Oscawana Lake Rd., Putnam Valley, NY
- Medic 3 725 Route 6, Mahopac, NY (Next to Mahopac FD)
- Medic 4 Brewster FD substation, 515 Route 312, Brewster, NY
- BLS 4 Patterson FD substation, 170 Bullet Hole Rd, Patterson, NY

The county reserves the right to reconfigure the system during the term of this agreement. Such changes may be the number; type; location; and/or staffing of units in the field to better service Putnam County. If the County requires changes, the compensation remitted will be adjusted after negotiation with vendor.

During periods of high call volumes, or in the event of a mass casualty incident, the vendor will make a reasonable good faith effort to provide mutual aid backup coverage by re-allocating units not assigned to Putnam County on an as-available basis.

D. PERSONNEL

The four ALS response units (3 Advance Life Support First Response Vehicle (ALSFRV)& 1 Type II Advance Life Support (ALS) ambulance) shall be staffed twenty-four hours per day, seven days per week) by one New York State Department of Health (NYSDOH) Certified Paramedic Level Advanced Emergency Medical Technician (NYS AEMT-P). Under the current agreement the 1 ALS Type II Ambulance shall also be staffed by 1 NYSDOH Certified EMT-B (Emergency Medical Technician -Basic) between the hours of 06:00-18:00 Monday thru Friday. The BLS (Basic Life Support) Type II Ambulance shall be staffed by 2 NYSDOH Certified Emergency Medical Technicians (EMT's) 6:00 am to 10:00 pm, 7 days per week.

All Advance Emergency Medical Technician Paramedic (AEMTP) Paramedics shall be required to maintain current Hudson Valley Regional Medical Advisory Committee certification to practice in Putnam County. This is in addition to maintaining current NYSDOH Paramedic AEMTP credentialing. At no time shall the vendor staff Putnam EMS units with personnel having less than 2 years full-time paid or volunteer experience as a Paramedic, or EMT (Emergency Medical Technician), unless approved prior by the County. The vendor shall verify compliance with training and experience standards requirement through the submission of quarterly certification statements to the Bureau of Emergency Services. The County shall have the right to direct the vendor to remove any Paramedic or EMT from Putnam County EMS service whose conduct, demeanor, job performance or appearance has been deemed objectionable by Commissioner of Emergency Services.

E. DISPATCH/RESPONSE

Vendor shall endeavor to maintain the lowest possible response time while operating in a safe manner. Response time under this agreement is to be measured from the moment the 911 Center dispatches the EMS Unit(s) until the unit arrives at the location of the call.

Putnam Hospital Center Emergency Room is designated as the primary medical control facility for the Putnam EMS System. Patients in the Putnam EMS system shall be transported to the most appropriate destination hospital as determined by protocol, the mechanism of injury, or the presenting condition. Destination hospitals shall be selected in accordance with NYSDOH and HVREMAC Protocols. In addition to Putnam Hospital Center, patients may routinely be transported to NY Presbyterian- Hudson Valley Hospital, or Danbury Hospital, Patients are to be transported to Article 28 facilities only. Putnam EMS units will be dispatched primarily by the County 911 communications center on the fire and EMS frequency (46.380 MHz). The vendor shall be required to have additional frequencies in each unit operating in the County. The required frequency list:

Low band: 46.380
 46.500
 46.300
 46.040
 46.440 receive and 46.540 transmit (this should be programmed into a single channel)
 46.440 transmit and receive (separate channel from above)
 46.100
 46.540 receive only (separate channel from above)

High band: 154.4375
 155.340
 155.400
 155.220
 155.280
 155.205

Vendor may periodically need to include or delete frequencies as radio systems used in the County evolve and change. These changes will be completed within 30 days of receipt of written notice by the County at contractors' expense.

EMS Dispatches in Putnam County shall be made according to a nationally recognized priority dispatch protocol. ALS units shall be dispatched to all calls meeting ALS criteria. The County reserves the right to dispatch ALS Units to other priority calls as it deems appropriate. The closest available ALS unit will be dispatched simultaneously with the appropriate volunteer BLS ambulance service for the jurisdiction the call originates in, along with any other resources necessary.

Upon arrival at the scene, the Paramedic will work in conjunction with the volunteer ambulance crew, conducting patient assessment and initiating care. If ALS intervention is required, the paramedic and ALS equipment will accompany the patient in the volunteer ambulance. If it is deemed that ALS intervention is not required, the paramedic will assist the ambulance crew as appropriate and go back in service as the volunteer ambulance transports the patient BLS. If the volunteer ambulance arrives on a scene first, the volunteer ambulance crew chief (EMT) may cancel the ALS unit if he/she has made patient contact, conducted an assessment and determines that ALS care is not required.

If the vendor's BLS or ALS ambulance arrives at a scene and if there is no response from volunteer service on location, ~~dispatch~~, the vendor ambulance shall be authorized to transport the patient without awaiting the volunteer service. Volunteer ambulance personnel who respond directly to the scene of a call will be permitted to ride in the vendor ambulances to assist with patient care during transport.

From time to time as requested by the BES Commissioner, vendor personnel may be assigned during "down time" to participate in community outreach, in training activities, and other related emergency service activities. Such activities shall not take precedence over responding to emergency calls unless prior arrangements have been made to provide additional coverage during these activities.

F. ADMINISTRATION

The vendor agrees to preserve and make available to Putnam County, upon request of the County Commissioner of Emergency Services or his designee, any information related to operational oversight of the service provided by the vendor. Requested information shall include but not be limited to:

- Documentation necessary to approve personnel prior to working in the system
- Training/orientation/evaluation of personnel
- Review of work schedules
- Clinical/quality improvement issues
- Vehicle movements/relocations
- Any and all documentation to support that vehicles are properly maintained
- Any and all documentation related to motor vehicle accidents occurring during service to the County.

The vendor will provide the county with monthly reports, providing a summary of activity for each month. The summary will include information on the number, type and locations of calls, response times, destination hospitals and other information as may be requested by the county. The vendor will also provide quarterly financial summaries, outlining expenses and revenues generated for the period. In addition, the vendor's equipment, training records, certifications, dispatch logs and financial records shall be available to the County for examination or inspection at any time during the contract period.

The vendor may from time to time be required to attend meetings with the County Executive's staff or with the Protective Services Committee of the Putnam County Legislature. The vendor shall be prepared to provide updates to the CE and committee on general operations, as well as the information provided in routine and special reports prepared for the County.

6. FEE PROPOSAL

The County will provide compensation to the vendor for costs associated with providing the dedicated resources that are requested in this RFP. Vendors are required to submit base fee and alternate fees. In addition vendors have the option to include a separate, stand-alone alternative fee proposal that is not in conformance with the Equipment/Vehicles and location requirements

A. Base Fee

Vendors are required to submit an annual fee for ALS services. The County shall divide this amount into twelve equal monthly payments. The fee must include all cost associated with the services as outlined in this RFP. Payment shall be rendered for the previous months service, no later than the 15th of the following month.

B. Alternate Fees

Vendors are required to submit alternate pricing for the following changes to vehicles and staffing:

1. Deleting a Fly Car staffed by a paramedic and replacing with an ALS Type II ambulance staffed by a paramedic and an EMT.
2. Adding an additional ALS Type II ambulance staffed by a paramedic and EMT for varying schedule.
 - a.) 16 hr. day M-F
 - b.) 24 hr. day M-F
 - c.) 16 hr. day 7days
 - b.) 24 hr. day 7days
3. Adding an additional BLS Type II ambulance staffed by two EMT's for:
 - a.) 16 hr. day M-F
 - b.) 24 hr. day M-F
 - c.) 16 hr. day 7days
 - d.) 24 hr. day 7days
4. Hourly rates for Emergency Medical Technician-Basic (EMT-B).
(These EMT's may be utilized to staff ambulances in a municipality or volunteer EMS (FD or VAC) in Putnam County.
5. Hourly rates for Emergency Medical Technician-Paramedic (EMT-P)

C. Optional Fee Proposal

Vendors have the option to include a separate, stand-alone alternative fee proposal that is not in conformance with the Equipment/Vehicles and location requirements. The optional proposal should be submitted in a separate sealed envelope. Vendors must clearly present why their alternative proposal would be more advantageous to the county, how they propose to provide ALS services at a level equal or superior to the level that presently exists and must comply with all the legal requirements of this RFP. Vendor should include sufficient detail to permit the County to evaluate the proposals fairly. All proposals will be evaluated using the criteria indicated in the Proposal Evaluation section of this RFP.

7. CONTRACT PRICE ADJUSTMENTS UPON RENEWAL (NOT APPLICABLE)

The proposed rates shall remain firm through the first contract period with no wage adjustments allowed. If the County exercises any of the option years of the contract, vendor may submit a request for adjustment on the yearly anniversary date of the contract. Any request for price adjustment(s) shall be submitted thirty (30) days in advance in writing to the Director of Purchasing. Any and all price adjustments will be limited to the percentage increase in the CPI – Index – All Urban Consumers for the preceding 12 months. The County reserves the right to reject any request for price increase deemed excessive.

8. BILLING

The vendor will be responsible for billing all patients for the ALS first response and ambulance services provided in accordance with this RFP, all federal and state laws as well as regulations pertaining to EMS billing. The vendor will provide the County with a list of rates for all services, which will be billed for in the delivery of the services, required by this RFP and will notify the County of any changes to the rates during the contract period.

The vendor will be responsible to have agreements with volunteer BLS services to be reimbursed for ALS & BLS treatments administered by vendor staff while operating in the volunteer ambulance.

9. PERFORMANCE

Vendor is expected to maintain high standards and perform the services requested in this RFP with a high level of consistency. In particular, the vendor shall:

1. Reasonably comply with response time goals.
2. Provide the requested services without interruption.
3. Maintain personnel with proper state and regional credentials necessary to provide basic and advanced life support care.
4. Provide personnel with the required experience level (except when mutually agreed upon by both parties.)
5. Comply with all applicable federal, state and regional regulations regarding vehicles, equipment and supplies.

Vendor will be considered in default of contract if they fail to comply with the performance standards. Putnam County shall retain the right to pursue any and all legal and equitable remedies available by law.

10. PROPOSAL EVALUATION

An evaluation team composed of representatives of Putnam County will evaluate proposals on a variety of criteria. All proposals shall be evaluated using the same criteria. Putnam County reserves full discretion to determine the professional and/or financial competence and responsibility of vendor. Vendors must provide in timely manner any and all information that Putnam County may deem necessary to make a decision.

The Evaluation Team reserves the right to:

- Select for contract or for negotiations a proposal other than that with lowest costs.
- Reject any and all proposals or portions of proposals received in response to this RFP or to make no award or issue a new RFP.
- Waive or modify any information, irregularity, or inconsistency in proposals received.
- Request modification to proposals from any or all vendors during the contract review and negotiation.
- Negotiate any aspect of the proposal with any vendor and negotiate with more than one vendor at the same time.

The evaluation will be made based on the information submitted by the respondents. The evaluation team will not be responsible for vendors that fail to include complete information or who do not adequately represent their capabilities using the forms and the process defined in this RFP. While attempts may be made to seek clarification from vendors on certain aspects of a proposal, the evaluator(s) has no responsibility to garner this information from vendors. Absence of information will be considered to be the absence of the relative capability, function or feature.

Submitted pricing information for the technically compliant RFP responses will be compiled and analyzed.

The technical proposals should demonstrate an understanding of the services requested by Putnam County, and demonstrate ability for administration and delivery of service while being cost effective. The technical aspects of each submission will be evaluated for the overall suitability for Putnam County.

Proposals will be evaluated considering the vendor's technical and managerial experience, qualifications, and the availability of personnel who are proposed to work on the project; project organization and management structure; and prior experience in managing projects similar in type, technology, size and complexity. The professional qualifications, personal background, and resume(s) of key personnel will be evaluated. Vendor shall have a satisfactory record of performance in past agreements/contracts and shall provide three (3) references supporting such performance.

Cost Proposals will be evaluated with respect to adequacy and reasonableness. This evaluation will include consideration of the probable cost to the County of doing business with each vendor; the possible growth in proposed costs during the course of the contract; the features of each vendor's work plan that could cause the estimate cost to vary; and cost-sharing if proposed. If after the evaluation of technical proposals, two or more competing overall proposals are considered in the competitive range, the evaluated probable cost to the County may be a deciding factor for selection. That is, the highest technical proposal may not necessarily be selected when cost considerations are taken into account.

APPENDIX III: HVREMSCO EMS Summit 2019 Problem & Solution Table

