

EMS SERVICES DELIVERY REPORT

Steuben County, New York

Final Draft



CPSM[®]

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ICMA

Exclusive Provider of Public Safety Technical Services for
International City/County Management Association

THE ASSOCIATION & THE COMPANY

The International City/County Management Association (ICMA) is a 107-year-old, nonprofit professional association of local government administrators and managers, with approximately 9,000 members spanning thirty-two countries.

Since its inception in 1914, ICMA has been dedicated to assisting local governments in providing services to their citizens in an efficient and effective manner. Our work spans all the activities of local government — parks, libraries, recreation, public works, economic development, code enforcement, Brownfields, public safety, etc.

ICMA advances the knowledge of local government best practices across a wide range of platforms including publications, research, training, and technical assistance. Its work includes both domestic and international activities in partnership with local, state, and federal governments as well as private foundations. For example, it is involved in a major library research project funded by the Bill and Melinda Gates Foundation and is providing community policing training in Panama working with the U.S. State Department. It has personnel in Afghanistan assisting with building wastewater treatment plants and has had teams in Central America providing training in disaster relief working with SOUTHCOM.

The **ICMA Center for Public Safety Management (ICMA/CPSM)** was one of four Centers within the Information and Assistance Division of ICMA providing support to local governments in the areas of police, fire, EMS, emergency management, and homeland security. In addition to providing technical assistance in these areas we also represent local governments at the federal level and are involved in numerous projects with the Department of Justice and the Department of Homeland Security. In each of these Centers, ICMA has selected to partner with nationally recognized individuals or companies to provide services that ICMA has previously provided directly. Doing so will provide a higher level of services, greater flexibility, and reduced costs in meeting members' needs as ICMA will be expanding the services that it can offer to local governments. For example, The Center for Productivity Management (CPM) is now working exclusively with SAS, one of the world's leaders in data management and analysis. And the Center for Strategic Management (CSM) is now partnering with nationally recognized experts and academics in local government management and finance.

Center for Public Safety Management, LLC (CPSM) is now the exclusive provider of public safety technical assistance for ICMA. CPSM provides training and research for the Association's members and represents ICMA in its dealings with the federal government and other public safety professional associations such as CALEA. The Center for Public Safety Management, LLC maintains the same team of individuals performing the same level of service that it has for the past seven years for ICMA.

CPSM's local government technical assistance experience includes workload and deployment analysis using our unique methodology and subject matter experts to examine department organizational structure and culture, identify workload and staffing needs, and identify and disseminate industry best practices. We have conducted more than 269 such studies in 37 states and 204 communities ranging in size from 8,000 population (Boone, Iowa) to 800,000 population (Indianapolis, Ind.).

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EXECUTIVE SUMMARY

The Center for Public Safety Management LLC (CPSM) was retained by Steuben County, New York to conduct a comprehensive study of the emergency medical services system delivery within Steuben County, NY. The system includes the 911 center protocols and procedures, review of the 17 first response services provided by local fire departments and 21 ambulance transport delivery services.

In our review, CPSM interacted extensively with County staff, the service providers, and key stakeholders to obtain and interpret certain documents, data, and information. We used this information/data to familiarize ourselves with the various aspects associated with the effectiveness of EMS and ambulance service delivery in Steuben County.

This information was used to determine the current state of EMS and ambulance service delivery in Steuben County and provide five potential options for future EMS delivery in Steuben County.

Despite significant challenges faced by the County's emergency management team, and all the current EMS system providers, we have been very impressed with the level of professionalism, and dedication of Steuben County staff, and all EMS system stakeholders that we have had the pleasure of interacting with throughout this project.

Summary of Recommendations

Recommendation #1	Steuben County should invest in Medical the Priority Solutions® Medical Priority Dispatch System® ProQA® software to automate the Emergency Medical Dispatching process and enhance EMD QA.	Pg. 19
Recommendation #2	Steuben County and AMR should investigate options and funding to integrate the County and AMR Computer Aided Dispatch systems to enhance efficiency and transparency for the ambulance responses assigned to AMR.	Pg. 20
Recommendation #3	Steuben County and AMR should investigate the option of co-locating communications centers to enhance inter-agency communication, enhance dispatch and response efficiency, as well as ambulance resource transparency.	Pg. 20
Recommendation #4	Steuben County and Steuben County Sheriff's Office should investigate options for expanding the roll of the Sheriff's Office in EMS First Response to provide a safety-net level of first response medical services.	Pg. 20
Recommendation #5	The first arriving transport capable ambulance should be permitted to transport the patient, when transport is required, without the requirement to wait to determine whether or not an ambulance from a primary jurisdiction will be arriving.	Pg. 61

Enhanced Service Delivery Options

Steuben County is at a crossroad regarding the ability for volunteer ambulance agencies to meet the needs of their local communities. On average, ambulance agencies with volunteer providers responded to 49.2 percent of all incidents in their primary service area and arrived at 46.0 percent. The reasons for this very low level of response capability is detailed in this report, but it's become increasingly apparent to local leaders, and agency leaders, that the current service level is not optimal for the residents of Steuben County.

We describe in detail several options for the county and ambulance agency leaders to consider.

Option 1:	Maintain Status Quo.	Pg. 94
Option 2:	Provide Financial Subsidy to Existing Provider Agencies.	Pg. 94
Option 3:	Contract with a Private Ambulance Provider to Support Local Agencies with Continuous Safety-Net Coverage.	Pg. 95
Option 4:	Contract with a Private Ambulance Provider to Support Local Agencies with Peak Demand Safety-Net Coverage.	Pg. 98
Option 5:	Establish a County-Based Ambulance System to Support Local Agencies with Continuous Safety-Net Coverage.	Pg. 99
Option 6:	Establish a County-Based Ambulance System to Support Local Agencies with Peak Demand Safety-Net Coverage.	Pg. 102
Option 7:	Establish a 'Public Utility Model' system through a Joint Powers/Inter-Local Agreement.	Pg. 103

EMS PROVIDERS

Emergency Medical Services (EMS) in Steuben County is provided by a diverse combination of EMS First Response Organizations (FRO), many of them based in fire agencies and districts, and ambulance agencies. Most of these agencies are staffed by dedicated volunteers with a deep commitment to their communities. As is true for many rural communities, many of these FROs and ambulance agencies are provided by dedicated volunteers, many of whom have served their communities valiantly for decades.

The EMS response system in Steuben County is comprised of numerous volunteer fire agencies, many of which also provide ambulance services, 3 paid fire agencies, 2 of which provide ambulance services (one is a federal agency providing services at the Veteran's Administration campus), 5 volunteer ambulance agencies that are not part of a fire department, and one private ambulance provider.

Table 1: Agencies Included in the Steuben County EMS System Assessment

Ambulance Services	First-Responder Fire Departments
Addison Fire Ambulance	Arkport Fire Dept
AMR Ambulance	Campbell Fire Dept
Avoca Fire Ambulance	Caton Fire Dept
Bath Ambulance	Coopers Plains Fire Dept
Bath VA Fire Ambulance	Corning Fire Dept
Bradford Fire Ambulance	East Corning Fire Dept (CJ ST 16)
Cameron Fire Ambulance	Forest View Gang Mills Fire Dept
Canisteo Fire Ambulance	Hornby Fire Dept
Cohocton Valley Ambulance Service (CVAS)	Howard Fire Dept
Fremont Fire Ambulance	North Corning Fire Dept (CJ ST 43)
Greenwood Fire Ambulance	Perkinsville Fire Dept
Hammondsport Ambulance	Savona Fire Dept
Hornell Fire Ambulance	South Corning Fire Dept (CJ ST 34)
Jasper Fire Ambulance	Thurston Fire Dept
Prattsburgh Fire Ambulance	
Pulteney Fire Ambulance	
Springwater-Wayland Ambulance (Spring-Way)	
Troupsburg Fire Ambulance	
Tuscarora Ambulance	
Wayne Fire Ambulance	
Woodhull Fire Ambulance	

Note: All the agencies consist of volunteers except AMR, Hornell, and Bath VA ambulance services.

Volunteers and volunteer agencies have very strong community commitment and are generally viewed as honorable providers serving local communities. Many rural communities have faced increasing challenges recruiting and retaining volunteersⁱ. This is due to a combination of increasing sophistication and expectations for EMS professionals, enhanced training requirements, increasing time commitments for maintaining volunteer roles in EMS agencies, and unstable funding for EMS agencies. A recent study of rural EMS Directors revealed that only 43% of rural EMS agencies in America were fully staffedⁱⁱ.

Across the U.S., rural ambulance agencies face continual challenges to ensure a trained workforce to meet the prehospital emergency care needs of their communities. Reliance on volunteer emergency medical technicians (EMTs) with decreasing volunteerism in rural areas has forced some ambulance agencies to close and others to consider changes in organizational structure and affiliation with other agenciesⁱⁱⁱ.

In recent months, numerous local and national media outlets have profiled the challenges faced by ambulance services in rural communities. All media accounts detail significant challenges with staffing and service delivery. Examples of these media reports are provided in **Appendix 1**.

A private ambulance provider, American Medical Response (AMR), provides Advanced Life Support (ALS) intercept services to many areas of the county when a presumptively assigned Emergency Medical Dispatch (EMD) response determinant indicates a likelihood of the patient needing an ALS level of care. This ALS intercept is provided either by dispatching an ALS “fly car”, a non-transport vehicle staffed by an ALS provider, who boards the primary service area ambulance and provides ALS care on-scene and/or during transport to the hospital. Intercept services are sometimes also provided by an ALS staffed ambulance that co-responds to either the scene of the EMS request, or rendezvous with the primary ambulance while they are transporting to the hospital. In these cases, the ALS provider either boards the primary ambulance unit, or the ALS ambulance transports the patient to the hospital.

AMR also provides a significant proportion of non-emergency, inter-facility transports, generally from a hospital in Steuben County to other medical facilities in the region.

Agency Assessment

During a series of town hall meetings and an on-line survey, Steuben County’s ambulance agencies provided input on a series of questions related to the current status of their agency. These questions included:

- Their current and future challenges.
- What they expect for their agency in the next 3-5 years.
- The challenges of the current EMS/Ambulance delivery in Steuben County, and
- What things they feel should be changed about the current delivery model.

Staffing:

24 out of 30 agencies (80%) expressed increasing challenges maintaining volunteer ambulance staffing, and 10 of the agencies (34%) felt they would either not be in existence or would be merged into regional service districts within 3-5 years.

The difficulties could be categorized in the following themes.

Time demands:

- Two income families working multiple jobs (financial obligations requires job change, overtime, etc.)
- Inability to commit to training/continuing education and recertification demands (unable to meet CEU requirements)
- Non-emergency, lengthy transport/patient contact time (example: long term care patient/clinic visit)
- Additional demands - administrative duties (record keeping, scheduling)

Service related:

- Broader range of services (*new methods and patient care requirements; some do not want added responsibility*)
- Abuse of emergency services by public (*use of ambulance for ride to hospital, non-emergency*)
- Internal challenges (*varying culture among members, age of EMS members may multi-generations*)
- Over-use of ambulance services (*transport of mental patients, LTC patients for outpatient services, and hospital discharged patients: late night/after normal business hours*)
- Leadership challenges (*failure to manage change, lack of coordination*)
- Friction/chronic problems between other health service personnel or agencies (*lack of appreciation of acknowledgment of EMS by other parts of the healthcare system; and/or lack of involvement in seeking solution to problems faced by local providers*)

Social/Community Related:

- Less emphasis on social aspects of volunteering (*lack of incentives*)
- Less community pride/loss of community feeling (*lack of appreciation/recognition*)
- Transience (*EMT moves or seeks full-time employment with urban services*)
- "Me" generation (*self-gratification/personal needs placed over service requirements*)
- Aging communities (*greater number of older people, decline in population*)

Funding Related:

- Challenges raising money for capital equipment and supplies.
- Insufficient ambulance transport volume to generate adequate fee for service revenue.
- A prohibition in the State of New York that prevents fire districts and community owned ambulance agencies from billing for ambulance service.
- Unstable public, ad valorem revenue (*tax support*).
- Inadequate reimbursement from government and insurers for services provided.

Table 2: Agency Overviews

Agency	Provider Type	Role	EMTs	Paramedics	Other	Chief/Admin	Staffing	Governance
Addison FD Ambulance	Volunteer Fire	Ambulance & First Response	2	0	22	7	Volunteer	Municipal
American Medical Response	Private for profit	Ambulance	42	32	4	1	Career	Independent
Arkport Hose Company	Volunteer Fire	First Response						
Atlanta FD	Volunteer Fire	First Response						
Avoca FD Ambulance	Volunteer Fire	Ambulance & First Response	5	0	25	2	Volunteer	Municipal
Bath Ambulance	Private not for profit	Ambulance	22	4	24	9	Combination	Independent
Bath FD	Volunteer Fire	First Response						
Bath VA FD Ambulance	Career Fire	Government						
Bradford FD Ambulance	Volunteer Fire	Ambulance & First Response						
Campbell FD	Governmental	First Response	15	0		5	Volunteer	Fire district
Cameron FD Ambulance	Private not for profit	Ambulance & First Response	1	0	5	8	Volunteer	Independent
Canisteo FD Ambulance	Volunteer Fire	Ambulance & First Response	10	0	40	3	Volunteer	Municipal
Caton FD	Volunteer Fire	First Response	8	0	31	16	Volunteer	Fire district
Cohocton FD	Governmental	First Response	12	1	15	1	Combination	Municipal
Coopers Plains FD	Volunteer Fire	First Response	3	0	10	2	Volunteer	Fire district
Corning City FD	Governmental	First Response	124	24		1	Career	Municipal
Corning Joint Fire District	Volunteer Fire	First Response	18	4	50	3	Volunteer	Fire district
CVAS Ambulance	Volunteer Ambulance	Ambulance						
East Campbell FD	Volunteer Fire	First Response						
Fremont FD Ambulance	Volunteer Fire	Ambulance & First Response	9		27	13	Volunteer	Independent
Gang Mills FD	Volunteer Fire	First Response						
Greenwood FD Ambulance	Private not for profit	Ambulance & First Response	7	0	20	6	Volunteer	Independent
Hammondsport Ambulance	Private not for profit	Ambulance	8	0	9	3	Volunteer	Independent

Hammondsport Fire	Volunteer Fire	First Response	3	0	25	6	Volunteer	Fire district
Hornell FD Ambulance	Career Fire	Ambulance & First Response	8	14	8	1	Career	Municipal
Howard FD	Volunteer Fire	First Response	2	0	5	1	Volunteer	Independent
Jasper FD Ambulance	Volunteer Fire	Ambulance & First Response	6	0	2	2	Volunteer	Fire district
Kanona FD	Private not for profit	First Response	0	0	0	7	Volunteer	Independent
Lindley FD	Volunteer Fire	First Response						
North Hornell FD	Volunteer Fire	First Response						
Painted Post FD	Volunteer Fire	First Response						
Perkinsville FD	Volunteer Fire	First Response						
Prattsburgh FD Ambulance	Volunteer Fire	Ambulance & First Response	11	0	7	6	Volunteer	Fire district
Pulteney FD Ambulance	Volunteer Fire	Ambulance & First Response	8	0	3	2	Volunteer	Fire district
South Dansville FD	Volunteer Fire	First Response						
South Hornell FD	Volunteer Fire	First Response						
Savona FD	Volunteer Fire	First Response	3	0	20	5	Volunteer	Municipal
Spring-Way Ambulance	Private not for profit	Ambulance	11	0	18	2	Volunteer	Independent
Sullivan Park FD	Volunteer Fire	First Response						
Thurston FD	Volunteer Fire	First Response						
Troupsburg FD Ambulance	Volunteer Fire	Ambulance & First Response	3	0	10	4	Volunteer	Independent
Tuscarora Ambulance	Volunteer Ambulance	Ambulance						
Tuscarora FD	Volunteer Fire	First Response						
West Union FD	Volunteer Fire	First Response						
Wallace FD	Volunteer Fire	First Response						
Wayland FD	Volunteer Fire	First Response	1	1	3	12	Volunteer	Fire district
Wayne FD Ambulance	Volunteer Fire	Ambulance & First Response	10	0	25	6	Volunteer	Fire district
Woodhull FD Ambulance	Volunteer Fire	Ambulance & First Response	8		30	10	Volunteer	Fire district

County Ambulance Agency Recommendations

During a series of town-hall meetings and an on-line survey of current EMS and ambulance service system leaders regarding Steuben County's EMS and ambulance services system, several common themes emerged when asked what the agencies would like to see changed about the current service delivery system in Steuben County:

- Lack of coordination between the numerous agencies. Each has their own response plans and procedures.
- Enhanced training opportunities locally, especially in the rural areas.
- More reliable mutual aid services when the primary agency is unable to respond.
- Consolidation of agencies into regional provider systems.
- For those billing for service, many expressed that reimbursement for their services has become more difficult, leading to additional economic challenges.
- Several respondents indicated the county should provide similar opportunities for EMS meetings, sharing of information, and coordination as the county does for fire services.
- Several respondents also suggested that a safety-net ambulance agency, either as a county department, or contracted to the county, would be beneficial. This would provide a reasonable assurance that an ambulance was at least dispatched to requests for EMS and be a valuable back-up resource for ambulance agencies experiencing difficulty mustering ambulance personnel to respond to calls.
- This might also facilitate some agencies to voluntarily convert to first response EMS agencies, which it was felt would help with recruitment and retention of volunteers due to shorter time commitments for responses.

COVID-19 Pandemic Impact

The COVID-19 pandemic had a negative impact on many of the agencies in Steuben County. While response volume did decrease slightly, volunteers were less likely to respond on ambulance calls. This may have been due to not only the concern about contracting a COVID-19 infection, especially the impact of that infection on senior volunteers. Many of the volunteers for the agencies in Steuben County are in the age group that places them at greater medical risk from a COVID-19 infection. The recent emergence of the more highly infectious Delta Variant, and the emerging 'mu' variant may serve to heighten this concern, causing additional ambulance service delivery challenges, especially for Steuben County's volunteer ambulance agencies.

While COVID vaccines are more readily available and are beginning to receive full approval by the FDA, the concern surrounding the current resurgence and the growing threat of additional virus variants may impact the willingness of senior volunteers to respond to medical emergencies for years to come.

Cooperative Mutual Aid Agreements

CPSM conducted a detailed analysis of ambulance responses in 2019 and 2020. The results of this analysis reveal that the majority of Steuben County's volunteer ambulance providers appear to be challenged with providing timely, reliable ambulance responses, likely because of the difficulties staffing volunteers for ambulance response.

Ambulance agencies in Steuben County have strong cooperative agreements to provide mutual aid in the event a primary response agency is unable to respond to an ambulance request in their Primary Service Area (PSA). Steuben County's 911 dispatch center utilizes a structured approach to helping ensure a response to an ambulance request. This process includes not only the notification and dispatch of the primary response agency for the location of the EMS response, but also a process for requesting 'mutual aid' (*a response from a nearby ambulance response agency*) from other agencies, typically farther away from the ambulance call location than the primary ambulance agency. This often results in a delayed response to the medical emergency.

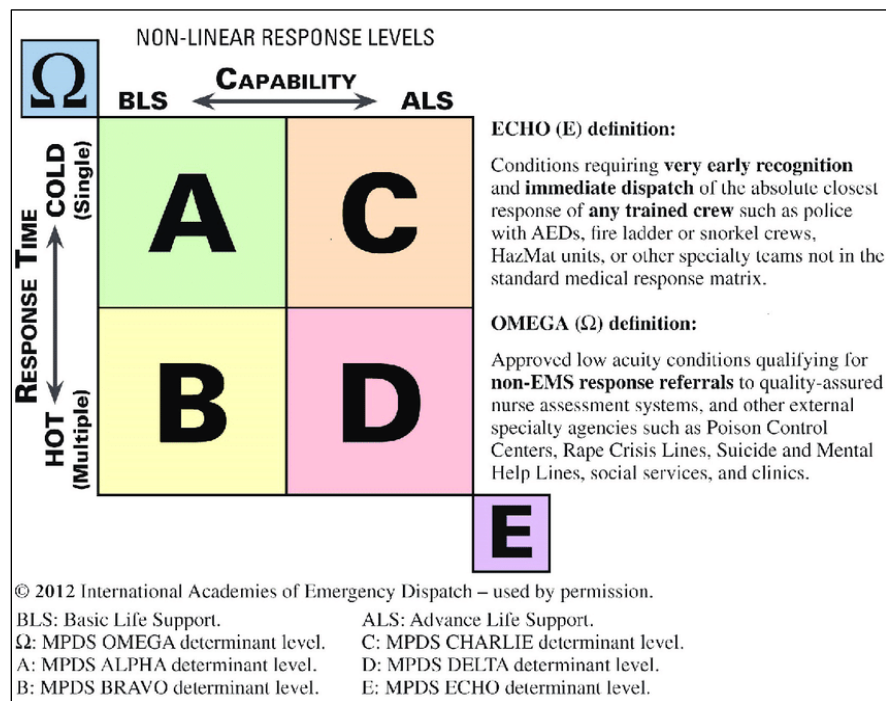
County Dispatch Operations

Steuben County's 911 Public Safety Answering Point (PSAP) utilizes EMS industry standard best practices and appears to provide outstanding service to the County. They employ the use of the Priority Solutions® Medical Priority Dispatch System® for Emergency Medical Dispatch (EMD). This system is a highly respected EMD system and is used most by progressive EMS dispatch agencies.

The PSAP follows evidence-based clinical protocols and call taking processes to assign a response determinant to the EMS request. These response determinants are alpha-numeric codes that inform the responding units specifically what type of medical call they are responding to. If approved by local protocol, the MPDS system can also be used to assign response priorities and modes of response, as well as make determinations regarding the response configuration for the EMS response.

CPSM is impressed with the overall call taking and dispatch process. The unique protocols and processes used by the PSAP to automatically dispatch mutual aid resources to try and assure an ambulance responds to an EMS request is admirable.

Figure 1: MPDS Response Algorithm



Baseline Response Example		
All actual response assignments are decided by local Medical Control and EMS Administration		
Level	Response	Mode
ECHO	Closest Apparatus—Any (includes Truck Companies, HAZMAT, or on-air staff)	HOT
DELTA	Closest BLS Engine Paramedic Ambulance	HOT HOT
CHARLIE	Paramedic Ambulance	COLD
BRAVO	Closest BLS Engine BLS Ambulance (alone HOT if closest)	HOT COLD
ALPHA	BLS Ambulance	COLD
OMEGA	Referral or Alternate Care	
*Note: This is not to be considered the Academy's official recommendation for Baseline Responses.		

Like many rural communities, Steuben County's PSAP has financial limitations which prevents it from using an industry best practice, the ProQA® EMD call taking software. Due to funding challenges, the PSAP utilizes a manual, flip card system for the application of the MPDS protocols. While this is adequate, it is less than ideal, and limits the ability for the PSAP leadership to perform comprehensive quality assurance audits on the EMD call taking process. In the absence of computerized ProQA software, the QA process is a manual process which is time consuming and often misses potential opportunities for improvement. The manual QA review also generally requires significant personnel time to perform the QA function, which consumes valuable personnel time which could be focused on other important functions within the PSAP.

The PSAP Deputy Director indicated that the time necessary for this manual QA review often results in the reviews not being able to be done in a timely, structured manner. Therefore, much of the QA is done 'real time', by listening to the call takers as they are taking calls.

We recommend that the PSAP Deputy Director work with the county and other potential funders, including potential grant opportunities, to upgrade from the manual, flip card system, to the computerized ProQA® system. The estimated cost for this upgrade would be approximately 81,000. This estimate consists of approximately \$22,000, for the software, an estimated personnel cost of \$24,000 for staff training, and estimated \$35,000 for integration with the current Tiburon CAD. There would be annual licensure fee of approximately \$6,000.

Recommendation #1: Steuben County should invest in Medical the Priority Solutions® Medical Priority Dispatch System® ProQA® software to automate the Emergency Medical Dispatching process and enhance EMD QA.

An analysis of data provided from the PSAP reveals what appears to be a slightly extended **Dispatch Time** (*the time from call answer to initial dispatch of an ambulance agency*). This is likely due to the manual EMD process. Dispatch times would likely be shorter if an effective, computer based EMD system was in place. The data analysis also reveals an exceptionally long response **Turnout Time** (*the time from initial dispatch of an ambulance agency to the time a transport capable ambulance notifies the County PSAP that they are responding to the call*), for many of the volunteer ambulance agencies. This is likely due to the time duration between notification by the PSAP of an ambulance response to the local ambulance provider and notification from the local provider that an ambulance responding to the call. This time duration is likely also impacted by the necessity of the PSAP to dispatch mutual aid agencies from other communities when the primary agency does not immediately respond.

AMR is the largest ambulance provider in Steuben County, and operates their own communications/dispatch center, which is separate and apart from county 911. When an ambulance response is dispatched by county 911 to an area in which AMR is the ambulance provider, AMR dispatch takes the responsibility to assign a unit controlled by AMR's dispatch center. Once an AMR ambulance is assigned by AMR's dispatch center, the responding AMR unit contacts county dispatch to advise them of their assignment to the response and their unit number. This is not an uncommon practice, but it does, to some extent, create a duplicative process for dispatching ambulances to a significant proportion of ambulance responses in the county.

Due to their agreements with the communities in Steuben County, as well as their role as often a back-up/mutual aid responder when local ambulances are unable to muster a crew for an ambulance response, AMR is the primary ambulance provider for the greatest number of ambulance requests in Steuben County. The County and AMR should collaborate to investigate options that enhance the integration of their respective dispatch centers, either functionally through a CAD-to-CAD interface, and/or physically co-locating their dispatch operations into the same facility.

Recommendation #2: Steuben County and AMR should investigate options and funding to integrate the County and AMR Computer Aided Dispatch systems to enhance efficiency and transparency for the ambulance responses assigned to AMR.

Recommendation #3: Steuben County and AMR should investigate the option of co-locating communications centers to enhance inter-agency communication, enhance dispatch and response efficiency, as well as ambulance resource transparency.

Enhanced First Responder Services

As part of this assessment, CPSM received direct feedback from the Steuben County Sheriff's Office (SCSO) regarding their role in EMS response. Currently, several of the SCSO are certified Emergency Medical Technicians (EMTs) who can provide essential emergency care at the scene of car crashes and other calls they may be dispatched to. The SCSO has expressed the willingness to participate in a larger role in EMS response if needed. This may be a logical enhancement to the EMS resources in the areas serviced by SCSO. An enhanced role in the EMS response system by the SCSO may require additional training for the SCSO staff, and certification for all Sheriff Deputies to the EMT level.

A SCSO resource could be assigned to any high-priority medical response that occurs in geographic regions of the county served by the SCSO. Since the county PSAP uses the MPDS system, this could mean that a SCSO Deputy could be assigned to a response with time-life-sensitive response determinants of CHARLIE, DELTA, or ECHO (high priority responses).

Recommendation #4: Steuben County and Steuben County Sheriff's Office should investigate options for expanding the roll of the Sheriff's Office in EMS First Response to provide a safety-net level of first response medical services.

Hospitals

Steuben County is fortunate to be served by three acute care hospitals, and one government Veterans Administration hospital.

- **Ira Davenport Hospital**, a 35-bed, acute care facility in Bath, which is part of the Arnot Health System.
- **Guthrie Corning Hospital in Corning**, a 67-bed, acute care facility which is part of the Guthrie Health System.
- **St. James Mercy Hospital in Hornell**, a 15-bed, acute care facility which is an affiliate of the University of Rochester Medical Center.

All hospitals provide essential emergency care, but like many local community hospitals, do not provide comprehensive specialty treatment for acute trauma, cardiac, or stroke emergencies. Patients in need of comprehensive services for these conditions are generally transported to other tertiary hospitals in the region, such as Guthrie Robert Packer Hospital in Sayre, PA; or Arnot Ogden Medical Center in Elmira, NY, or the University of Rochester Medical Center in Rochester, NY.

The hospitals integrate well with the local ambulance services, with little to no issues related to general emergency department closures/diversions, or ambulance patient off-load delays. However, for patients who are suffering from major medical needs, such as significant trauma, cardiac or stroke emergencies, patients must be either transported from the scene of the medical emergency by ground or air ambulance to one of the regional tertiary hospitals. When these patients are transported by ground ambulance, it increases the task time for those transports, which has an impact on both ambulance availability for local communities, and when applicable, volunteers who may be staffing the ambulance.

Patients who the local community hospitals feel require inter-hospital transport to one of the regional, tertiary medical centers are generally transported by ground, or air, dependent on the patient's condition and medical needs. While St. James Mercy Hospital did not indicate significant delays transferring their patients from their hospital, during interviews with senior officials at Ira Davenport and Corning Hospitals, both indicated frequent delays with ground ambulance service provision for transports from there hospital. One hospital official stated it often takes 16-24 hours for an ambulance transport, due largely to a lack of ambulance availability. Another hospital official stated that this is especially true for Critical Care Transports (CCT). A CCT transfer generally requires specially trained and licensed ambulance personnel with a higher scope of practice. These hospital officials feel that AMR sometimes has difficulty providing CCT services, seemingly due to a lack of CCT personnel available for that service level. This could be very detrimental to critical patients who require urgent transfers from Ira Davenport and Corning Hospitals.

It appears that additional capacity is needed not only for the emergency responses, but for inter-facility services as well.

DATA ANALYTICS

This data analysis was prepared as a key component of the study of Steuben County emergency medical services (EMS) which was conducted by the Center for Public Safety Management, LLC (CPSM). This analysis examines all calls in Steuben County between January 1, 2019, and December 31, 2019, as recorded in the computer-aided dispatch (CAD) system of the county's Emergency 9-1-1 Center. This analysis covers 21 ambulance services and 14 first-responder fire departments. The studied agencies are listed in Table 1. During the studied period, these agencies provided EMS services for the 2 cities, 14 villages, and 32 towns inside Steuben County, and one neighboring town outside Steuben County. The service areas associated with corresponding primary agencies are listed by the municipality in Attachment I. General information for each area including population, geography, and demographics are presented in Attachment II.

The COVID-19 pandemic has had a dramatic impact on every aspect of EMS service delivery. CPSM is using 2019 data for the majority of these analytics since the data for 2019 may be a more accurate representation of EMS response characteristics. For some of the analytics, Steuben County provided 2020 data for comparison, and so that we could analyze more relevant response trends. We will identify in what ways we believe the county's EMS system has and will be effected by the on-going public health emergency (PHE) as a result of the pandemic.

This analysis is made up of six parts. The first part focuses on call types and dispatches. The second part explores the EMS workload. The third part presents an analysis of the busiest hours in the year studied. The fourth part studies the EMS service availability. The fifth part provides a response time analysis. The sixth and final part is an analysis of unit transports.

During the study period, the included ambulance services and first-responder fire departments responded to 10,514 EMS calls. The total combined workload (deployed time) for all responding units were 13,429.6 hours. For the first dispatched unit (excluding law enforcement), the average dispatch time was 2.0 minutes and the 90th percentile dispatch time was 3.0 minutes. For the first arriving unit the average dispatch time was 5.9 minutes and the 90th percentile dispatch time was 11.1 minutes. The first arriving unit's average total response time was 10.4 minutes and the 90th percentile total response time was 17.7 minutes.

METHODOLOGY

In this report, CPSM analyzes calls and runs. A call is an emergency service request or incident. A run is a dispatch of a unit (*i.e., a unit responding to a call*). Thus, one call may include multiple runs when more than one unit responds to the call.

We received CAD data from the Steuben County Emergency 911 Center. EMS calls were then assigned detailed categories based on their Medical Priority Solutions® Emergency Medical Dispatch (EMD) response determinant (EMD Code) provided in the call data. For 1,255 calls that did not have city entries in the original data, we used the available latitude and longitude as well as the location entries to identify their municipalities.

We received records for 12,874 calls in 2019. We removed 962 calls entirely for various reasons. 124 calls occurred outside of a Steuben County's ambulance agency's service areas. Based upon their call descriptions, 52 test (EMSTEST) calls and 227 fire (19 hazardous material and 208 structure fire) calls were removed. Also, 556 EMS calls lacked a responding unit from any of the studied agencies and were removed. Finally, we removed all runs that did not have at least an enroute or an arrive time. This led us to exclude another 3 calls.

Throughout the analysis, the calls and workload are examined by both geography and agency. A result broken down by geography is presented in a way that firstly summarizes the result into grouped cities, villages, and towns. Afterward, detailed results are reported for each municipality. Similarly, results are first summarized by agency type and later reported for each individual agency.

AGGREGATE CALL TOTALS AND RUNS

During the year, the studied agencies responded to 10,514 EMS calls.

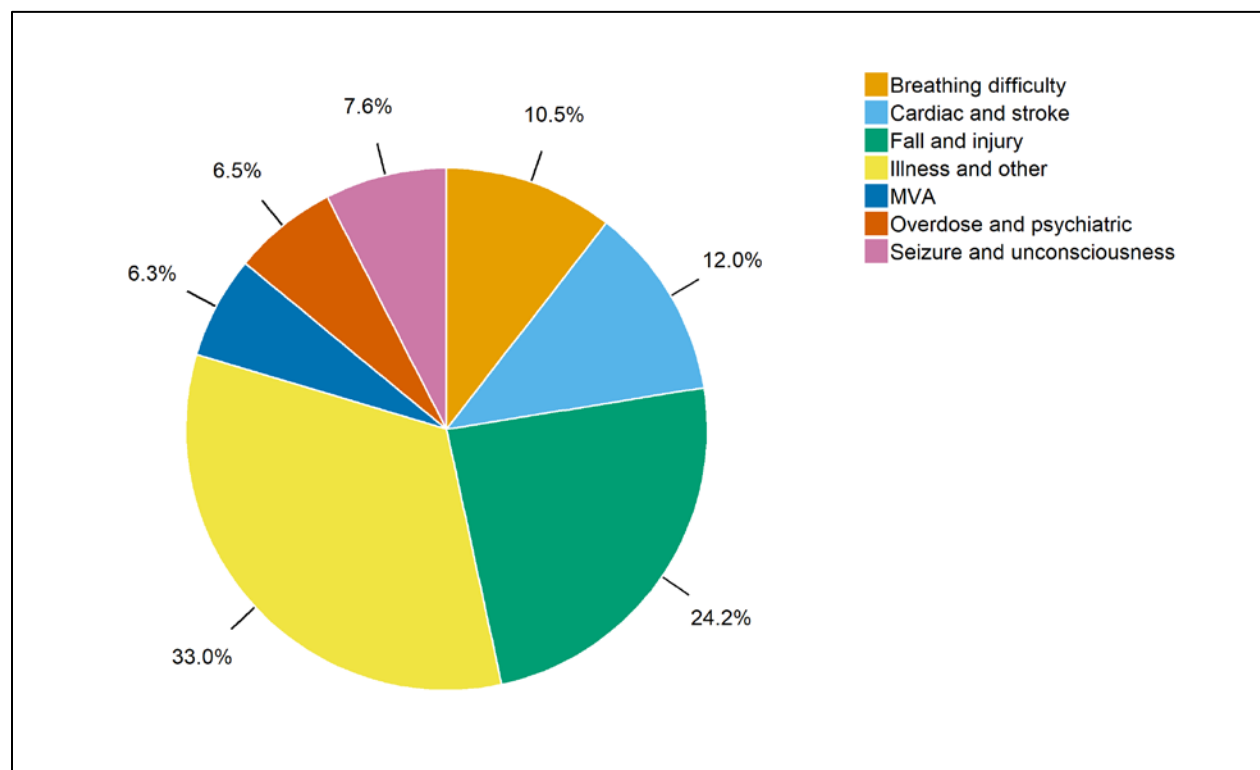
CALLS BY TYPE

Table 3 and Figure 2 show the number of calls by call type, average calls per day, and the percentage of calls that fall into each call type category for the 12 months studied.

Table 3: Call Types

Call Type	Number of Calls	Calls per Day	Call Percentage
Breathing difficulty	1,104	3.0	10.5
Cardiac and stroke	1,257	3.4	12.0
Fall and injury	2,539	7.0	24.1
Illness and other	3,470	9.5	33.0
MVA	667	1.8	6.3
Overdose and psychiatric	682	1.9	6.5
Seizure and unconsciousness	795	2.2	7.6
Total	10,514	28.8	100.0

Figure 2: EMS Calls by Type



Observations:

- Calls for 2019 totaled 10,514, an average of 28.8 calls per day.
- Illness and other calls were the largest category at 33 percent of calls and an average of 9.5 calls per day.
- Cardiac and stroke calls made up 12 percent of calls and an average of 3.4 calls per day.
- Motor vehicle accidents (MVA) made up 6 percent of calls and an average of 1.8 calls per day.

CALLS BY TYPE AND DURATION

Table 4 shows the duration of calls by type using four duration categories: less than 30 minutes, 30 minutes to one hour, one to two hours, and more than two hours.

Table 4: Calls by Type and Duration

Call Type	Less than 30 Minutes	30 Minutes to One Hour	One to Two Hours	More Than Two Hours	Total
Breathing difficulty	140	495	376	93	1,104
Cardiac and stroke	155	449	461	192	1,257
Fall and injury	916	856	596	171	2,539
Illness and other	806	1,372	1,022	270	3,470
MVA	192	210	195	70	667
Overdose and psychiatric	241	274	138	29	682
Seizure and unconsciousness	155	338	235	67	795
Total	2,605	3,994	3,023	892	10,514

Observations:

- On average, there were 10.7 EMS calls per day that lasted more than one hour.
- A total of 6,599 calls (63 percent) lasted less than one hour, 3,023 calls (29 percent) lasted between one and two hours, and 892 calls (8 percent) lasted two or more hours.
- A total of 604 cardiac and stroke calls (48 percent) lasted less than one hour, 461 cardiac and stroke calls (37 percent) lasted one to two hours, and 192 cardiac and stroke calls (15 percent) lasted two or more hours.
- A total of 402 motor vehicle accidents (60 percent) lasted less than one hour, 195 motor vehicle accidents (29 percent) lasted one to two hours, and 70 motor vehicle accidents (10 percent) lasted two or more hours.

CALLS BY TYPE AND GEOGRAPHY

Table 5 summarizes the geographical distribution of the number of calls by call type. Tables 6, 7, and 8 detail the same information for each city, village, and town, respectively. Figures 3 and 4 compare the call volume in each service area for the year.

Table 5: Summary of Calls by Type and Geography

Service Area	Breathing Difficulty	Cardiac and Stroke	Fall and Injury	Illness and Other	MVA	Overdose and Psychiatric	Seizure and Unc.	Total	Pct. Calls
Cities	307	284	681	915	91	199	204	2,681	25.5
Villages	316	372	772	1,097	88	228	228	3,101	29.5
Towns	481	601	1,086	1,458	488	255	363	4,732	45.0
Total	1,104	1,257	2,539	3,470	667	682	795	10,514	100.0

Table 6: Calls by Type and City

City	Breathing Difficulty	Cardiac and Stroke	Fall and Injury	Illness and Other	MVA	Overdose and Psychiatric	Seizure and Unc.	Total	Pct. Calls
Corning	186	180	424	547	57	139	119	1,652	15.7
Hornell	121	104	257	368	34	60	85	1,029	9.8
Total	307	284	681	915	91	199	204	2,681	25.5

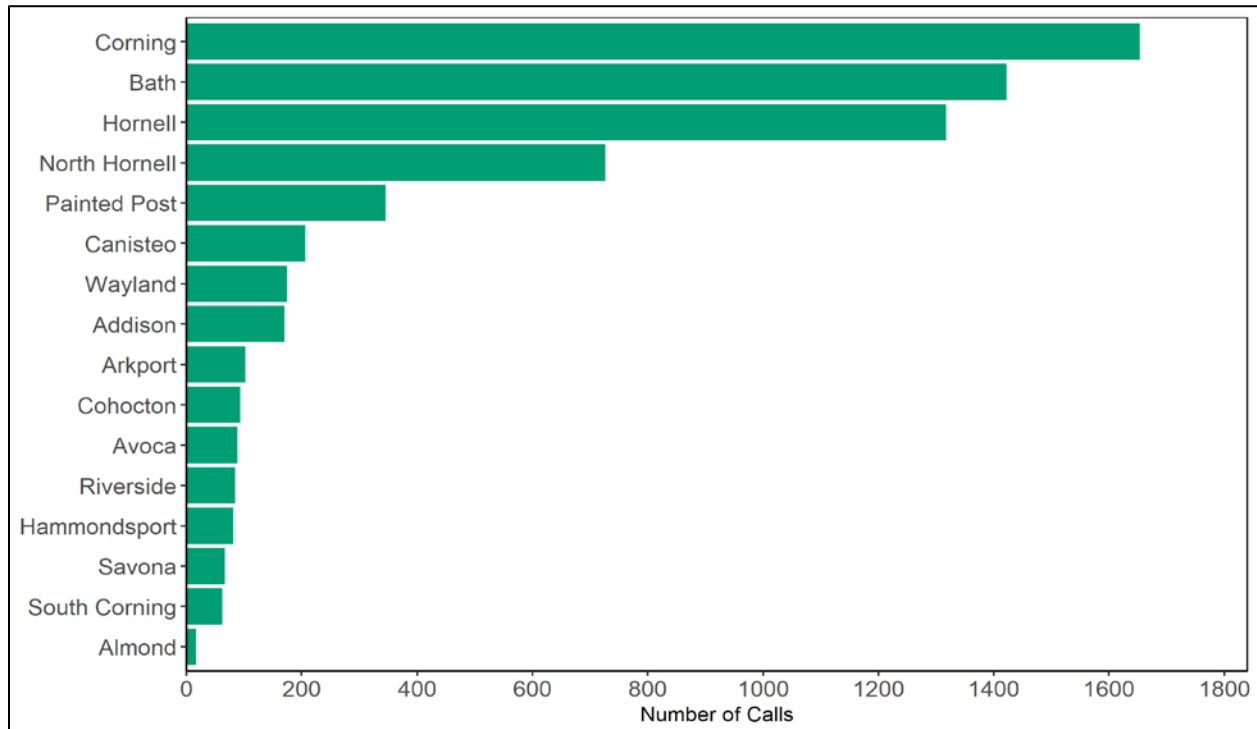
Table 7: Calls by Type and Village

Village	Breathing Difficulty	Cardiac and Stroke	Fall and Injury	Illness and Other	MVA	Overdose and Psychiatric	Seizure and UNC	Total	Pct. Calls
Addison	19	20	37	56	5	11	22	170	1.6
Almond	2	4	1	5	1	0	4	17	0.2
Arkport	9	9	47	27	5	3	2	102	1.0
Avoca	14	8	24	30	3	4	5	88	0.8
Bath	127	172	310	525	35	149	101	1,419	13.5
Canisteo	36	16	70	53	1	9	21	206	2.0
Cohocton	9	20	21	32	1	2	8	93	0.9
Hammondsport	8	5	24	32	2	3	7	81	0.8
North Hornell	24	17	45	90	1	4	10	191	1.8
Painted Post	30	48	86	143	9	16	14	346	3.3
Riverside	3	6	30	16	15	7	7	84	0.8
Savona	8	7	14	25	5	3	5	67	0.6
South Corning	6	12	15	16	2	6	6	63	0.6
Wayland	21	28	48	47	3	11	16	174	1.7
Total	316	372	772	1,097	88	228	228	3,101	29.5

Table 8: Calls by Type and Town

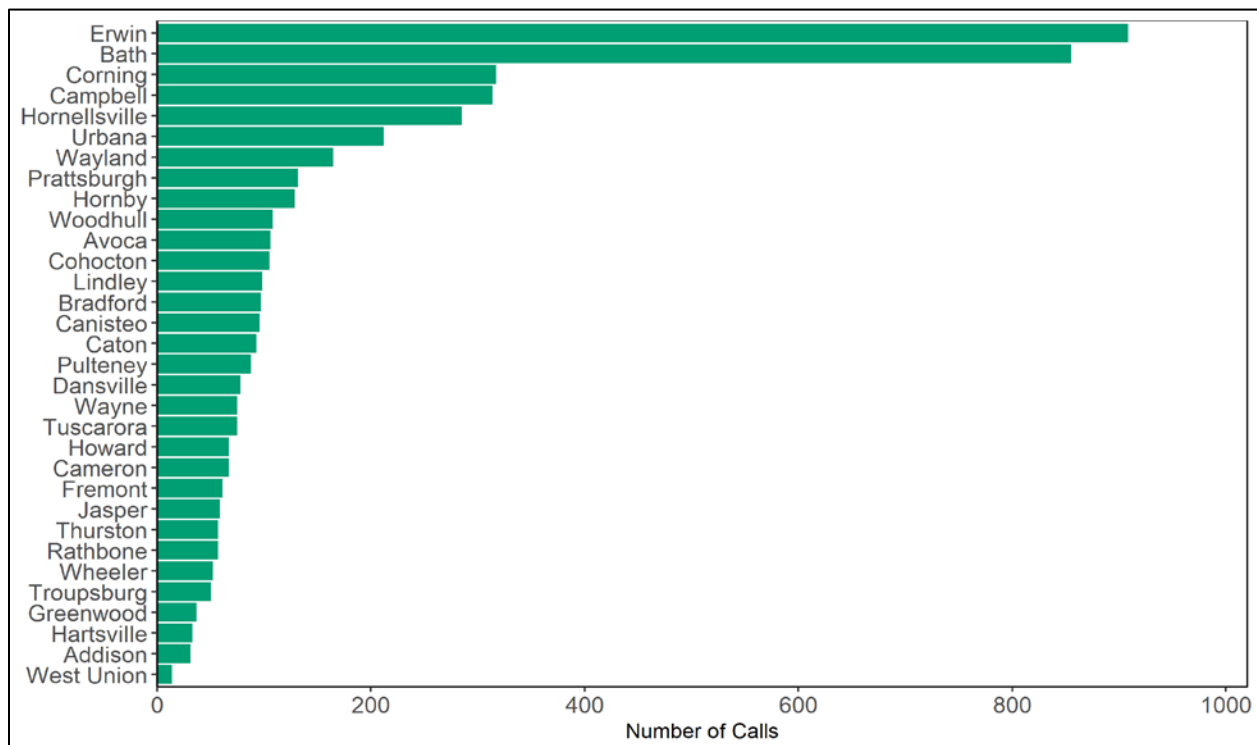
Town	Breathing Difficulty	Cardiac and Stroke	Fall and Injury	Illness and Other	MVA	Overdose and Psychiatric	Seizure and Unc.	Total	Pct. Calls
Addison	0	7	4	9	7	2	2	31	0.3
Avoca	11	19	21	22	18	5	9	105	1.0
Bath	77	97	168	284	43	43	62	774	7.4
Bradford	10	10	35	23	5	5	7	95	0.9
Cameron	10	7	8	26	2	5	8	66	0.6
Campbell	19	43	70	93	35	23	31	314	3.0
Canisteo	10	12	19	35	10	7	3	96	0.9
Caton	9	21	16	31	10	6	0	93	0.9
Cohocton	15	8	24	38	16	2	2	105	1.0
Corning	37	27	51	91	54	28	25	313	3.0
Dansville	7	11	16	21	12	4	7	78	0.7
Erwin	87	108	263	287	48	39	74	906	8.6
Fremont	6	0	12	21	16	1	4	60	0.6
Greenwood	5	6	10	10	2	0	4	37	0.4
Hartsville	3	2	13	11	2	0	1	32	0.3
Hornby	25	14	24	27	19	10	10	129	1.2
Hornellsville	24	32	72	87	25	12	18	270	2.6
Howard	4	11	9	19	14	5	5	67	0.6
Jasper	8	9	10	15	11	1	5	59	0.6
Lindley	4	15	17	26	20	13	3	98	0.9
Orange	1	4	9	4	1	0	3	22	0.2
Prattsburgh	20	23	32	37	5	1	14	132	1.3
Pulteney	6	10	29	22	11	4	6	88	0.8
Rathbone	7	7	7	19	13	1	3	57	0.5
Thurston	4	13	8	12	10	2	8	57	0.5
Troupsburg	5	8	11	13	7	2	3	49	0.5
Tuscarora	14	5	14	23	9	1	9	75	0.7
Urbana	9	18	34	30	12	2	10	115	1.1
Wayland	20	20	28	42	23	21	7	161	1.5
Wayne	7	8	17	28	6	2	6	74	0.7
West Union	1	1	2	6	3	0	1	14	0.1
Wheeler	4	4	12	13	10	3	6	52	0.5
Woodhull	12	21	21	33	9	5	7	108	1.0
Total	481	601	1,086	1,458	488	255	363	4,732	45.0

Figure 3: Call Volume by City and Village



Note: Corning and Hornell are cities. The remaining municipalities are villages.

Figure 4: Call Volume by Town



Observations:

- Corning City, Bath Village, and Hornell City are the municipalities with the three highest call volumes.
- Corning City had 1,652 calls or 16 percent of the total calls.
- Bath Village had 1,419 calls or 13 percent of the total calls.
- Hornell City had 1,029 calls or 10 percent of the total calls.

AVERAGE CALLS BY MONTH AND HOUR

Figure 5 shows the monthly variation in the average daily number of calls handled by all agencies during the year studied. Similarly, Figure 6 illustrates the average number of calls responded to each hour of the day for the year.

Figure 5: Average Calls per Day by Month

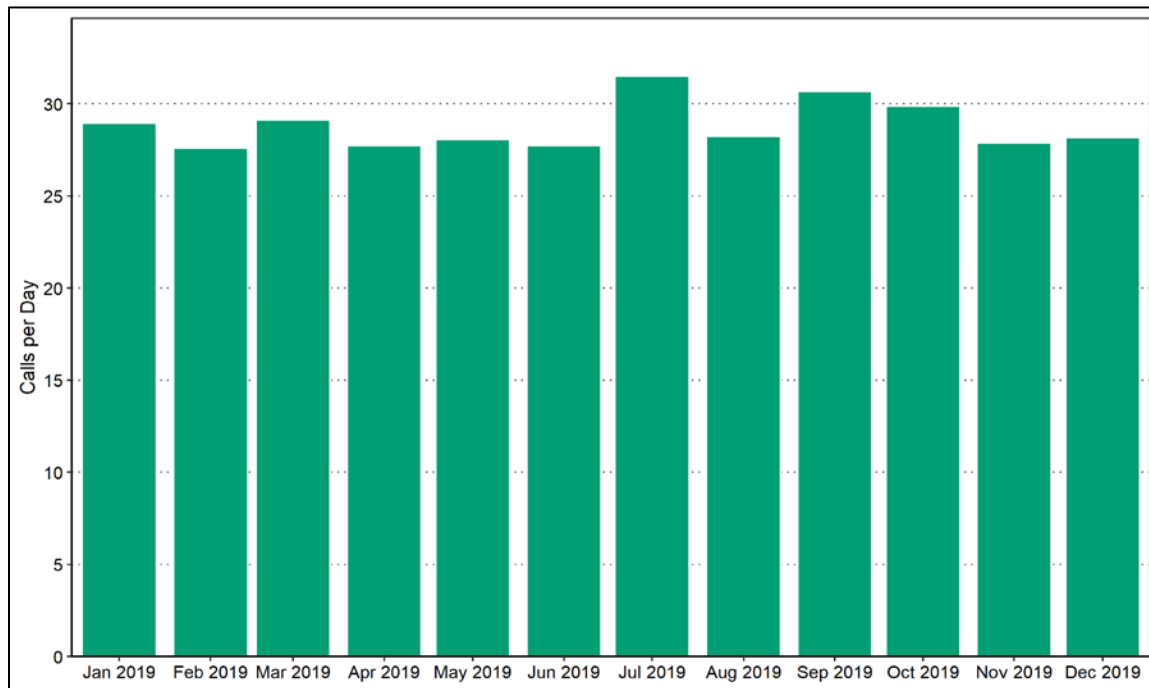
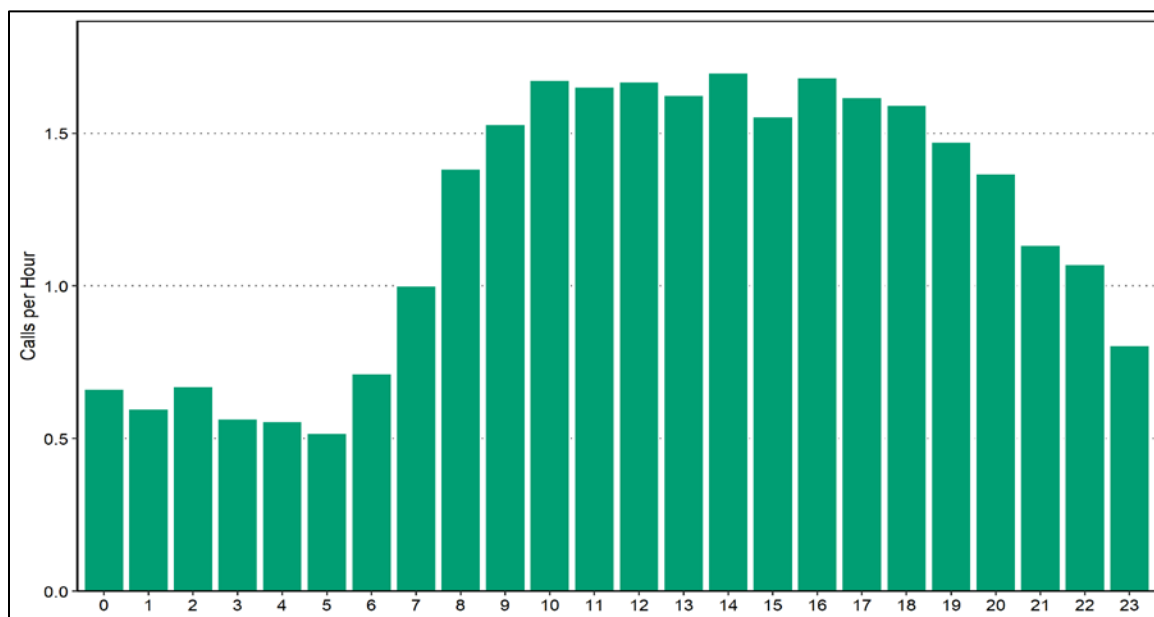


Figure 6: Calls by Hour of Day



Observations:

- Average EMS calls per day ranged from 27.6 in February 2019 to 31.5 in July 2019.
- Average EMS calls per hour ranged from 0.5 between 5:00 a.m. and 6:00 a.m. to 1.7 between 2:00 p.m. and 3:00 p.m.

UNITS ARRIVED AT CALLS

Tables 9 and 10, along with Figure 7 and 8, detail the calls by type based upon the number of responding units. Since units may be dispatched with none arriving, we include columns for no arriving unit, one, two, three, and four or more arriving units. From the studied agency arrived at a call, broken down by call type. We also analyzed the number of arriving units focusing on units from primary agencies (ambulance or fire department first responder) based upon a call's location. Figures 7 and 8 focus on calls with at least one arriving unit and their percentages are adjusted accordingly.

Table 9: Calls by Call Type and Number of Units Arriving

Call Type	Number of Units					Arriving Calls	Total Calls
	None	One	Two	Three	Four or more		
Breathing difficulty	11	439	580	69	5	1,093	1,104
Cardiac and stroke	20	459	686	84	8	1,237	1,257
Fall and injury	101	2,075	327	30	6	2,438	2,539
Illness and other	109	2,592	678	81	10	3,361	3,470
MVA	34	313	153	99	68	633	667
Overdose and psychiatric	116	433	114	16	3	566	682
Seizure and unconsciousness	16	384	342	50	3	779	795
Total	407	6,695	2,880	429	103	10,107	10,514
Percentage	3.9	63.7	27.4	4.1	1.0	96.1	100.0

Table 10: Calls by Call Type and Number of Primary Agency Units Arriving

Call Type	Number of Units					Arriving Calls	Total Calls
	None	One	Two	Three	Four or more		
Breathing difficulty	111	694	259	38	2	993	1,104
Cardiac and stroke	112	803	298	43	1	1,145	1,257
Fall and injury	267	2,075	182	14	1	2,272	2,539
Illness and other	369	2,708	349	41	3	3,101	3,470
MVA	78	376	106	74	33	589	667
Overdose and psychiatric	136	474	59	11	2	546	682
Seizure and unconsciousness	82	532	148	33	0	713	795
Total	1,155	7,662	1,401	254	42	9,359	10,514
Percentage	11.0	72.9	13.3	2.4	0.4	89.0	100.0

Figure 7: Calls by Number of All Units Arriving

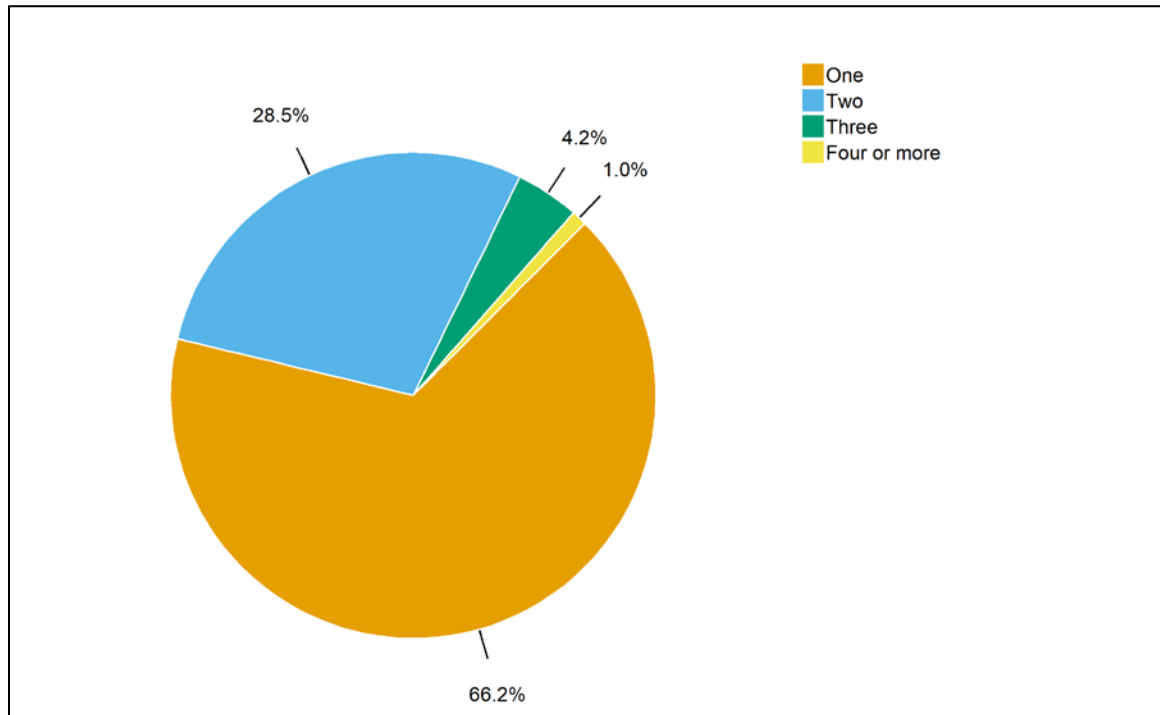
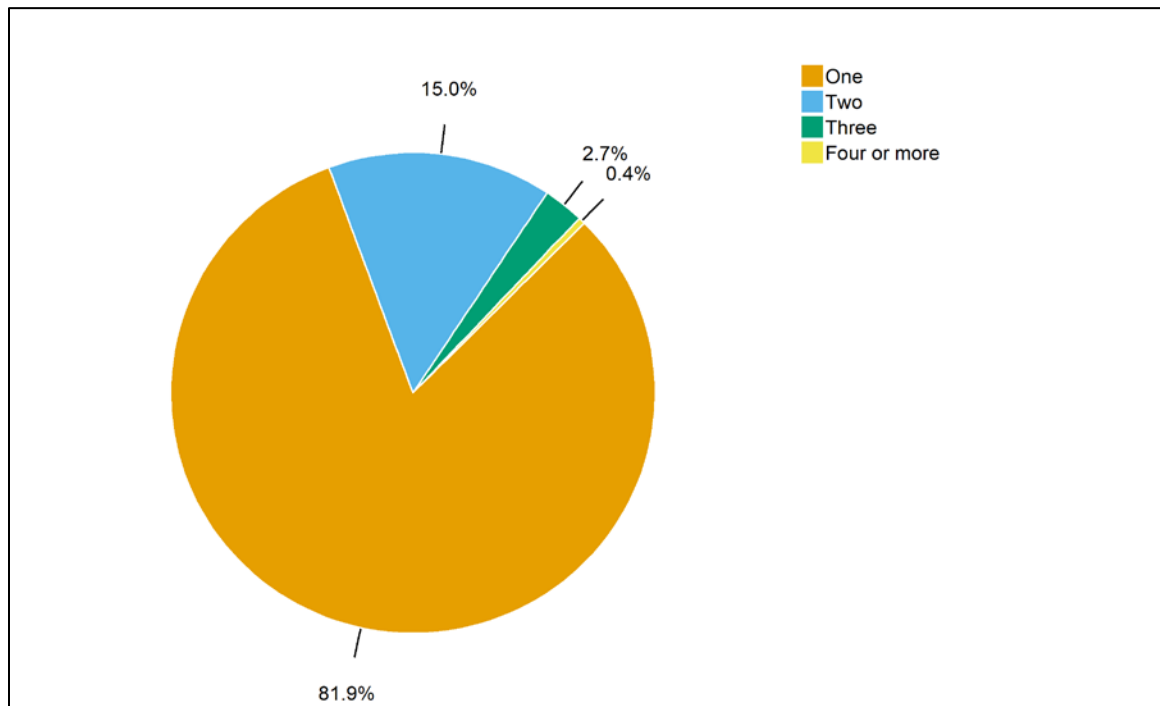


Figure 8: Calls by Number of Primary Agency's Units Arriving



Observations:

- Steuben County EMS agencies arrived at 10,107 calls or 96 percent of total calls. A primary agency's unit arrived at 9,359 calls in their primary service areas, which was 93 percent of the total arriving calls or 89 percent of total calls. Reasons for a primary ambulance not arriving on-scene at a request for an ambulance response may include the inability to muster a crew for the response or being canceled prior to arrival by either the calling party, or by another responder on-scene when it is determined that ambulance transport is not being requested by a patient on scene.
- **All Units Arriving at Calls**
 - On average, when focusing on calls with at least one arriving unit, 1.4 units arrived per call.
 - One unit arrived 66 percent of the time, two units arrived 29 percent of the time, three units arrived 4 percent of the time, and four or more units arrived 1 percent of the time.
- **Primary Agency's Units Arriving at Calls**
 - On average, when focusing on calls where at least one primary agency unit arrived, 1.2 units arrived per call.
 - One unit arrived 82 percent of the time, two units arrived 15 percent of the time, three units arrived 3 percent of the time, and four or more units arrived less than 1 percent of the time.

WORKLOAD: RUNS AND TOTAL TIME SPENT

The workload of each unit is measured in two ways: runs and deployed time. The deployed time of a run is measured from the time a unit is dispatched through the time the unit is cleared. Because multiple units respond to some calls, there are more runs than calls, and the average deployed time per run varies from the total duration of calls.

RUNS AND DEPLOYED TIME – ALL UNITS

Deployed time, also referred to as deployed hours, is the total deployment time of all units deployed on all runs. Table 11 shows the total deployed time, both overall and broken down by type of run, for all units of the studied agencies during the year. Table 12 and Figure 9 present the average deployed minutes by hour of day.

Table 11: Annual Runs and Deployed Time by Run Type

Call Type	Annual Runs	Runs per Day	Minutes per Run	Annual Hours	Percent of Hours	Minutes per Day
Breathing difficulty	1,989	5.4	50.9	1,688.2	12.6	277.5
Cardiac and stroke	2,306	6.3	59.1	2,270.1	16.9	373.2
Fall and injury	3,095	8.5	48.3	2,493.7	18.6	409.9
Illness and other	4,577	12.5	52.5	4,007.7	29.8	658.8
MVA	1,447	4.0	50.1	1,207.8	9.0	198.5
Overdose and psychiatric	907	2.5	42.3	639.2	4.8	105.1
Seizure and unconsciousness	1,359	3.7	49.6	1,122.8	8.4	184.6
Total	15,680	43.0	51.4	13,429.6	100.0	2,207.6

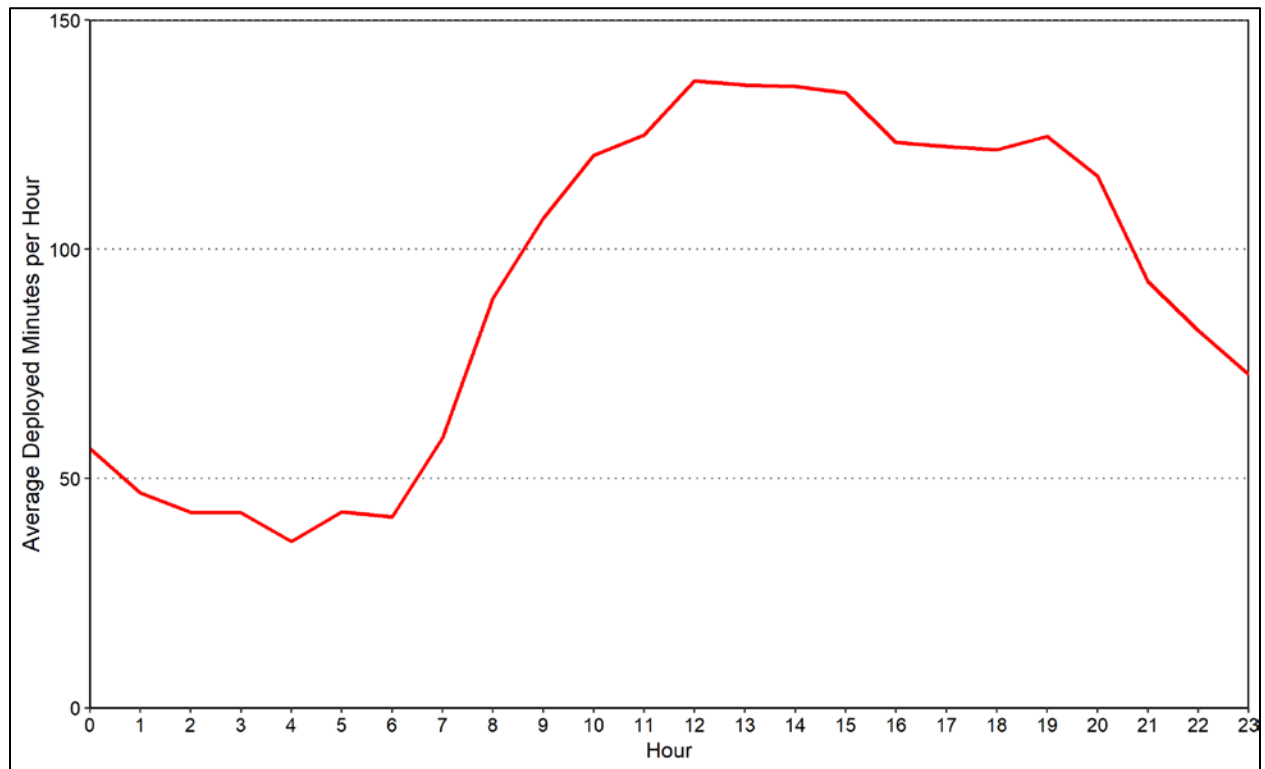
Observations:

- There were 15,680 runs for the year.
- The daily average was 43.0 runs.
- The average deployed time was 51.4 minutes per run.
- Total deployed time for the year was 13,429.6 hours.
- The daily average deployed time was 36.8 hours for all units combined or 92 minutes of work per hour.

Table 12: Average Deployed Minutes by Hour of Day

Hour	EMS
0	56.5
1	46.9
2	42.6
3	42.5
4	36.2
5	42.7
6	41.6
7	58.8
8	89.3
9	106.8
10	120.5
11	124.9
12	136.7
13	135.9
14	135.5
15	134.1
16	123.3
17	122.4
18	121.7
19	124.6
20	116.0
21	92.9
22	82.3
23	72.7
Total	2,207.6

Figure 9: Average Deployed Minutes by Hour of Day



Observations:

- Hourly deployed time was highest during the day from 10:00 a.m. to 8:00 p.m., averaging more than 2 hours of work each hour of the day.
- Average deployed time peaked between noon and 1:00 p.m., averaging 2 hours and 17 minutes.
- Average deployed time was lowest between 4:00 a.m. and 5:00 a.m., averaging 36 minutes.

WORKLOAD BY AGENCY

Table 13 summarizes the total workload of ambulance services and first-responder fire departments. Tables 14 and 15 show the same information for each studied agency. Tables 16 through 21 provide a more detailed view of workload, showing each agency's runs broken out by run type (Tables 16, 17 and 18) and the resulting daily average deployed time by run type (Tables 18, 19 and 20). Figures 10 and 11 compare the total runs made by the studied ambulance services and first-responder fire departments, respectively.

Table 13: Summary of the Total Annual Workload by Agency Type

Agency Type	Annual Runs	Runs per Day	Minutes per Run	Annual Hours	Percent of Hours	Minutes per Day
Ambulance	13,250	36.3	55.4	12,228.5	91.0	2,010.2
First-Responder FD	2,430	6.7	29.7	1,201.1	8.9	197.4
Total	15,680	43.0	51.4	13,429.6	100.0	2,207.6

Table 14: Annual Workload by Ambulance Service

Ambulance Service	Annual Runs	Runs per Day	Minutes per Run	Annual Hours	Percent of Hours	Minutes per Day
Addison	160	0.4	81.9	218.5	1.6	35.9
AMR	6,380	17.5	55.7	5,921.9	44.1	973.5
Avoca	111	0.3	66.8	123.5	0.9	20.3
Bath	2,490	6.8	46.1	1,912.4	14.2	314.4
Bath VA	9	0.0	52.0	7.8	0.1	1.3
Bradford	108	0.3	70.8	127.4	0.9	20.9
Cameron	88	0.2	99.8	146.4	1.1	24.1
Canisteo	280	0.8	46.1	215.1	1.6	35.4
CVAS	301	0.8	70.1	351.7	2.6	57.8
Fremont	137	0.4	64.0	146.2	1.1	24.0
Greenwood	84	0.2	62.4	87.3	0.6	14.4
Hammondsport	115	0.3	61.1	117.1	0.9	19.2
Hornell	2,033	5.6	46.9	1,589.4	11.8	261.3
Jasper	125	0.3	77.3	161.0	1.2	26.5
Prattsburgh	139	0.4	84.2	195.1	1.5	32.1
Pulteney	96	0.3	100.6	160.9	1.2	26.4
Spring-Way	311	0.9	62.6	324.5	2.4	53.3
Troupsburg	25	0.1	81.8	34.1	0.3	5.6
Tuscarora	50	0.1	91.7	76.4	0.6	12.6
Wayne	90	0.2	80.9	121.4	0.9	20.0
Woodhull	118	0.3	96.8	190.4	1.4	31.3
Total	13,250	36.3	55.4	12,228.5	91.0	2,010.2

Table 15: Annual Workload by First-Responder Fire Department

First-Responder Fire Department	Annual Runs	Runs per Day	Minutes per Run	Annual Hours	Percent of Hours	Minutes per Day
Arkport	98	0.3	44.4	72.6	0.5	11.9
Campbell	264	0.7	32.5	143.0	1.1	23.5
Caton	94	0.3	35.2	55.2	0.4	9.1
CJ ST	333	0.9	32.4	179.7	1.3	29.5
Coopers Plains	209	0.6	25.7	89.5	0.7	14.7
Corning City	883	2.4	20.1	296.0	2.2	48.7
Gang Mills	155	0.4	33.6	86.7	0.6	14.3
Hornby	53	0.1	52.2	46.1	0.3	7.6
Howard	100	0.3	48.0	80.0	0.6	13.2
Perkinsville	31	0.1	73.4	37.9	0.3	6.2
Savona	180	0.5	30.1	90.3	0.7	14.8
Thurston	30	0.1	48.2	24.1	0.2	4.0
Total	2,430	6.7	29.7	1,201.1	8.9	197.4

Note: CJ ST is the Corning Town Volunteer Fire Department including CJ ST 16, CJ ST 34, and CJ ST 43.

Table 16: Summary of the Annual Runs by Agency Type and Run Type

Agency Type	Breathing Difficulty	Cardiac and Stroke	Fall and Injury	Illness and Other	MVA	Overdose and Psychiatric	Seizure and Unc.	Total
Ambulance	1,609	1,892	2,825	4,023	984	793	1,124	13,250
First-Responder FD	380	414	270	554	463	114	235	2,430
Total	1,989	2,306	3,095	4,577	1,447	907	1,359	15,680

Table 17: Annual Runs by Ambulance Service and Run Type

Ambulance Service	Breathing Difficulty	Cardiac and Stroke	Fall and Injury	Illness and Other	MVA	Overdose and Psychiatric	Seizure and Unc.	Total
Addison	16	20	29	54	16	8	17	160
AMR	871	1,058	1,205	1,779	482	388	597	6,380
Avoca	10	15	23	28	17	7	11	111
Bath	234	310	547	896	119	202	182	2,490
Bath VA	0	4	0	0	4	0	1	9
Bradford	8	11	43	24	8	5	9	108
Cameron	14	11	15	28	8	5	7	88
Canisteo	40	26	82	72	20	14	26	280
CVAS	28	36	81	104	24	9	19	301
Fremont	9	13	31	40	28	8	8	137
Greenwood	9	7	23	28	8	4	5	84
Hammondsport	8	14	33	30	17	3	10	115
Hornell	255	239	503	664	120	90	162	2,033
Jasper	19	19	15	32	22	5	13	125
Prattsburgh	17	24	36	35	12	2	13	139
Pulteney	7	10	29	29	11	4	6	96
Spring-Way	38	41	68	84	30	29	21	311
Troupsburg	1	1	7	9	4	1	2	25
Tuscarora	8	6	11	15	7	1	2	50
Wayne	8	8	18	39	7	3	7	90
Woodhull	9	19	26	33	20	5	6	118
Total	1,609	1,892	2,825	4,023	984	793	1,124	13,250

Table 18: Annual Runs by First-Responder Fire Department and Run Type

First-Responder Fire Department	Breathing Difficulty	Cardiac and Stroke	Fall and Injury	Illness and Other	MVA	Overdose and Psychiatric	Seizure and Unc.	Total
Arkport	11	21	7	20	29	1	9	98
Campbell	20	34	55	66	41	18	30	264
Caton	10	22	15	25	18	4	0	94
CJ ST	62	49	24	57	99	19	23	333
Coopers Plains	26	21	25	62	46	9	20	209
Corning City	203	190	71	206	63	43	107	883
Gang Mills	11	24	23	27	48	3	19	155
Hornby	11	5	2	5	26	2	2	53
Howard	5	13	9	20	43	5	5	100
Perkinsville	4	2	0	5	18	1	1	31
Savona	17	25	35	54	24	9	16	180
Thurston	0	8	4	7	8	0	3	30
Total	380	414	270	554	463	114	235	2,430

Note: CJ ST is the Corning Town Volunteer Fire Department including CJ ST 16, CJ ST 34, and CJ ST 43.

Table 19: Summary of Daily Average Deployed Minutes by Agency Type and Run Type

Agency Type	Breathing Difficulty	Cardiac and Stroke	Fall and Injury	Illness and Other	MVA	Overdose and Psychiatric	Seizure and Unc.	Total
Ambulance	254.8	343.9	392.0	617.8	135.5	97.2	168.9	2,010.3
First-Responder FD	22.7	29.4	17.9	40.9	63.0	7.9	15.7	197.3
Total	277.5	373.2	409.9	658.8	198.5	105.1	184.6	2,207.6

Table 20: Daily Average Deployed Minutes by Ambulance Service and Run Type

Ambulance Service	Breathing Difficulty	Cardiac and Stroke	Fall and Injury	Illness and Other	MVA	Overdose and Psychiatric	Seizure and Unc.	Total
Addison	4.7	5.6	5.9	11.7	3.0	1.4	3.7	35.9
AMR	136.9	192.8	171.8	273.4	59.9	47.8	90.8	973.5
Avoca	2.5	2.9	3.8	5.0	2.8	1.5	1.8	20.3
Bath	32.5	49.3	61.2	115.8	12.7	21.0	21.9	314.4
Bath VA	0.0	0.4	0.0	0.0	0.6	0.0	0.3	1.3
Bradford	1.8	3.3	5.3	6.0	1.7	0.9	2.0	20.9
Cameron	4.5	3.8	4.3	7.4	1.5	1.1	1.5	24.1
Canisteo	5.1	4.0	9.9	9.1	2.7	1.5	3.1	35.4
CVAS	5.6	7.7	13.9	20.9	4.5	1.0	4.2	57.8
Fremont	1.6	2.4	5.8	7.0	4.7	1.2	1.3	24.0
Greenwood	1.5	1.5	3.4	5.3	1.4	0.3	1.0	14.3
Hammondsport	1.1	2.5	6.1	6.0	1.7	0.4	1.4	19.2
Hornell	32.6	36.0	56.6	91.1	14.4	9.2	21.3	261.3
Jasper	4.7	5.4	3.0	7.0	3.7	0.8	1.9	26.5
Prattsburgh	3.7	6.4	8.2	8.3	2.2	0.3	2.9	32.1
Pulteney	2.5	3.1	6.5	8.4	3.6	0.9	1.4	26.4
Spring-Way	6.9	6.6	11.1	13.7	5.9	5.6	3.5	53.4
Troupsburg	0.4	0.1	1.5	2.1	0.6	0.3	0.6	5.6
Tuscarora	2.3	1.9	2.2	3.8	1.3	0.1	1.0	12.6
Wayne	1.6	2.1	4.0	8.4	1.4	0.7	1.7	20.0
Woodhull	2.3	6.1	7.5	7.4	5.2	1.2	1.6	31.3
Total	254.8	343.9	392.0	617.8	135.5	97.2	168.9	2,010.3

Table 21: Daily Average Deployed Minutes by First-Responder Fire Department and Run Type

First-Responder Fire Departments	Breathing Difficulty	Cardiac and Stroke	Fall and Injury	Illness and Other	MVA	Overdose and Psychiatric	Seizure and Unc.	Total
Arkport	1.1	1.5	0.4	1.8	6.4	0.1	0.6	11.9
Campbell	1.4	3.1	3.7	5.0	5.8	1.5	2.9	23.5
Caton	0.8	2.4	1.2	2.1	2.3	0.3	0.0	9.1
CJ ST	3.9	4.1	1.4	4.3	13.0	1.4	1.4	29.5
Coopers Plains	1.5	1.6	1.8	3.7	4.1	0.8	1.2	14.7
Corning City	10.5	10.3	4.0	12.0	3.8	2.3	5.8	48.6
Gang Mills	0.7	1.8	1.4	2.0	7.1	0.2	1.1	14.3
Hornby	0.9	0.6	0.1	0.4	5.2	0.2	0.2	7.6
Howard	0.2	1.1	1.0	3.2	6.8	0.4	0.4	13.1
Perkinsville	0.5	0.4	0.0	0.7	4.3	0.1	0.2	6.2
Savona	1.1	1.8	2.1	4.3	3.2	0.8	1.5	14.8
Thurston	0.0	0.7	0.7	1.2	1.1	0.0	0.3	4.0
Total	22.7	29.4	17.9	40.9	63.0	7.9	15.7	197.3

Note: CJ ST is the Corning Town Volunteer Fire Department including CJ ST 16, CJ ST 34, and CJ ST 43.

Figure 10: Annual Runs by Ambulance Service

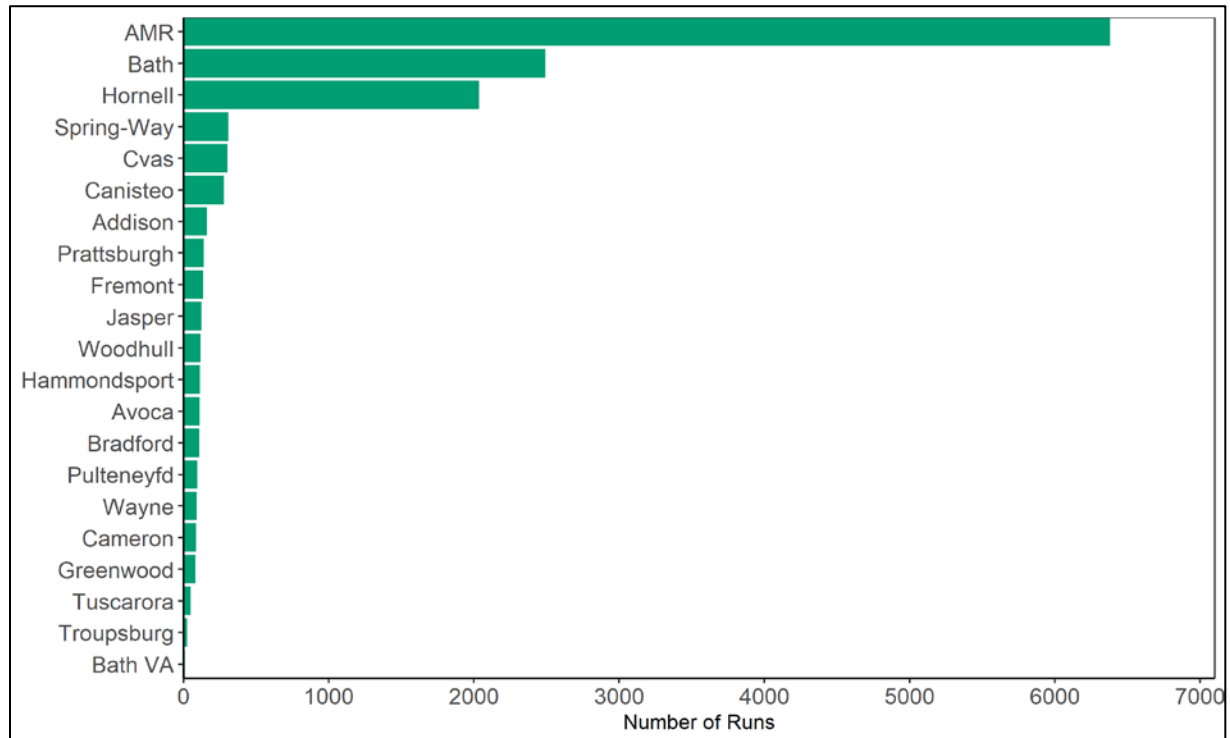
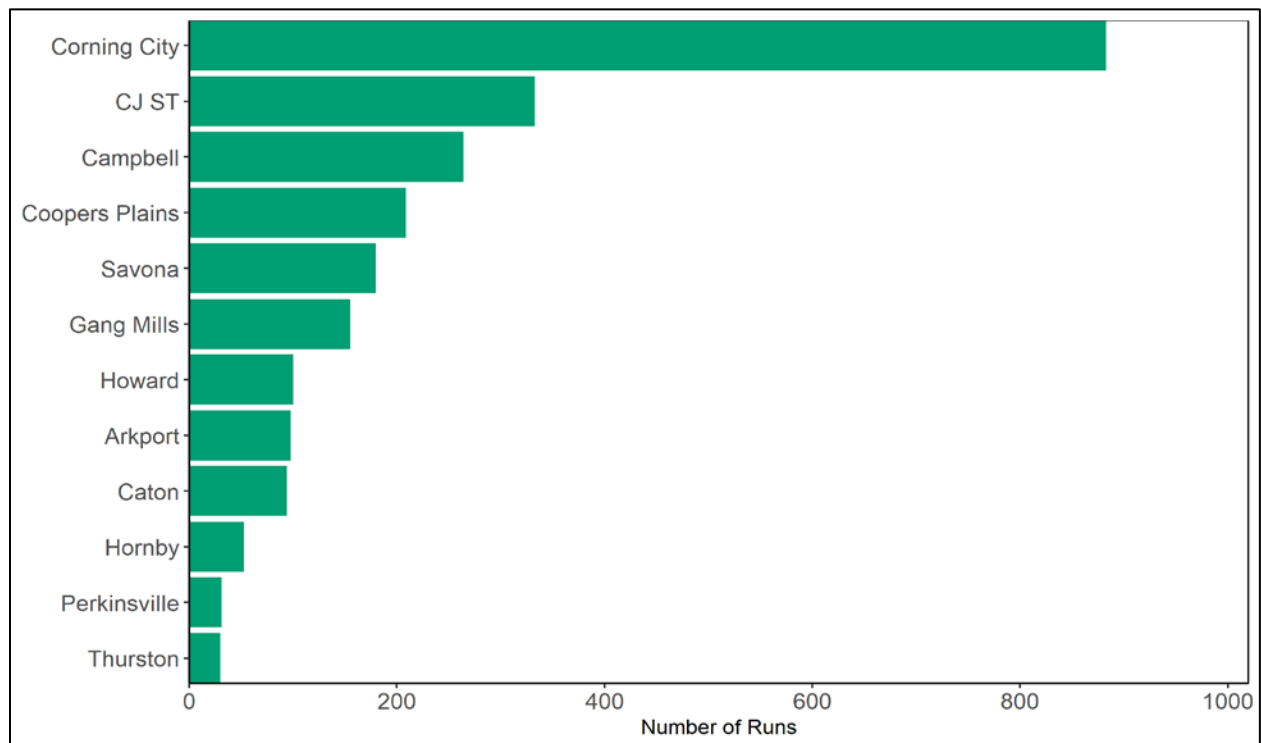


Figure 11: Annual Runs by First-Responder Fire Department



Note: CJ ST is the Corning Town Volunteer Fire Department including CJ ST 16, CJ ST 34, and CJ ST 43.

Observations:

■ Ambulance Services

- Ambulance services made 13,250 runs or an average of 36.3 runs per day.
- Ambulance service runs involved 12,228.5 hours of annual deployed time or an average of 33.5 hours per day.
- AMR made the most runs (6,380 or an average of 17.5 runs per day) and had the highest total annual deployed time (5,921.9 hours or an average of 16.2 hours per day).
- Bath made the second-most runs (2,490 or an average of 6.8 runs per day) and had the second-highest total annual deployed time (1,912.4 or an average of 5.2 hours per day).
- Hornell made the third-most runs (2,033 or an average of 5.6 runs per day) and had the third-highest total annual deployed time (1,589.4 or an average of 4.4 hours per day).

■ First-Responder Fire Departments

- First-responder fire departments made 2,430 runs or 6.7 runs per day.
- First-responder fire department runs involved 1,201.1 hours of annual deployed time or an average of 3.3 hours per day.
- Corning City made the most runs (883 or an average of 2.4 runs per day) and had the highest total annual deployed time (296.0 or an average of 0.8 hours per day).
- Corning Town (CJ ST) made the second-most runs (333 or an average of 0.9 runs per day) and had the second-highest total annual deployed time (179.7 or an average of 0.5 hours per day).
- Campbell made the third-most runs (264 or an average of 0.7 runs per day) and had the third-highest total annual deployed time (143.0 or an average of 0.4 hours per day).

WORKLOAD BY GEOGRAPHY

Table 22 summarizes the workload broken down by individual service areas and grouped by type of municipality in Steuben County. Tables 23, 24, and 25 present the same information for each city, village, and town, respectively.

Table 22: Summary of Annual Workload by Geography

Service Area	Annual Runs	Runs Per Day	Minutes Per Run	Annual Hours	Percent of Work	Minutes Per Day
Cities	3,698	10.1	40.7	2,505.4	18.7	411.9
Villages	4,302	11.8	47.9	3,431.7	25.6	564.1
Towns	7,680	21.0	58.5	7,492.4	55.8	1,231.6
Total	15,680	43.0	51.4	13,429.6	100.0	2,207.6

Table 23: Annual Workload by City

City	Annual Runs	Runs per Day	Minutes per Run	Annual Hours	Percent of Hours	Minutes per Day
Corning	2,612	7.2	40.0	1,739.3	13.0	285.9
Hornell	1,086	3.0	42.3	766.1	5.7	125.9
Total	3,698	10.1	40.7	2,505.4	18.7	411.9

Table 24: Annual Workload by Village

Village	Annual Runs	Runs Per Day	Minutes Per Run	Annual Hours	Percent of Work	Minutes per Day
Addison	237	0.6	71.3	281.6	2.1	46.3
Almond	19	0.1	80.5	25.5	0.2	4.2
Arkport	137	0.4	47.1	107.5	0.8	17.7
Avoca	126	0.3	67.0	140.7	1.0	23.1
Bath	2,018	5.5	40.9	1,375.3	10.2	226.1
Canisteo	301	0.8	43.7	219.2	1.6	36.0
Cohocton	137	0.4	73.2	167.1	1.2	27.5
Hammondsport	120	0.3	52.1	104.2	0.8	17.1
North Hornell	195	0.5	50.6	164.4	1.2	27.0
Painted Post	364	1.0	52.6	319.1	2.4	52.5
Riverside	98	0.3	45.0	73.5	0.5	12.1
Savona	186	0.5	47.6	147.6	1.1	24.3
South Corning	104	0.3	38.0	66.0	0.5	10.8
Wayland	260	0.7	55.4	240.0	1.8	39.4
Total	4,302	11.8	47.9	3,431.7	25.6	564.1

Table 25: Annual Workload by Town

Town	Annual Runs	Runs Per Day	Minutes Per Run	Annual Hours	Percent of Work	Minutes Per Day
Addison	55	0.2	67.3	61.7	0.5	10.1
Avoca	183	0.5	71.3	217.5	1.6	35.7
Bath	1,254	3.4	53.1	1,109.1	8.3	182.3
Bradford	147	0.4	62.2	152.3	1.1	25.0
Cameron	117	0.3	94.6	184.4	1.4	30.3
Campbell	611	1.7	49.3	502.3	3.7	82.6
Canisteo	142	0.4	52.2	123.4	0.9	20.3
Caton	193	0.5	56.5	181.9	1.4	29.9
Cohocton	158	0.4	67.5	177.8	1.3	29.2
Corning	578	1.6	45.5	438.3	3.3	72.1
Dansville	98	0.3	60.7	99.1	0.7	16.3
Erwin	1,283	3.5	48.8	1,044.6	7.8	171.7
Fremont	100	0.3	56.4	93.9	0.7	15.4
Greenwood	58	0.2	68.5	66.2	0.5	10.9
Hartsville	41	0.1	50.7	34.6	0.3	5.7
Hornby	259	0.7	60.0	258.9	1.9	42.6
Hornellsville	316	0.9	49.3	259.4	1.9	42.6
Howard	189	0.5	56.4	177.5	1.3	29.2
Jasper	116	0.3	69.8	135.0	1.0	22.2
Lindley	113	0.3	69.5	131.0	1.0	21.5
Orange	31	0.1	67.7	35.0	0.3	5.7
Prattsburgh	218	0.6	81.5	296.1	2.2	48.7
Pulteney	132	0.4	79.0	173.8	1.3	28.6
Rathbone	91	0.2	98.2	148.9	1.1	24.5
Thurston	128	0.4	61.0	130.1	1.0	21.4
Troupsburg	94	0.3	85.7	134.3	1.0	22.1
Tuscarora	122	0.3	78.5	159.5	1.2	26.2
Urbana	180	0.5	57.4	172.2	1.3	28.3
Wayland	281	0.8	64.1	300.1	2.2	49.3
Wayne	112	0.3	77.0	143.7	1.1	23.6
West Union	23	0.1	64.4	24.7	0.2	4.1
Wheeler	80	0.2	70.9	94.5	0.7	15.5
Woodhull	177	0.5	78.2	230.6	1.7	37.9
Total	7,680	21.0	58.5	7,492.4	55.8	1,231.6

Observations:

- Corning City, Bath (Village and Town), and Erwin Town are the municipalities with the highest workloads.
- **Corning City**
 - There were 2,612 runs or 17 percent of the total runs. The daily average was 7.2 runs.
 - The total deployed time for the year was 1,739.3 hours or 13 percent of the total annual workload. The daily average was 4.8 hours for all units combined.
- **Bath Village**
 - There were 2,018 runs or 13 percent of the total runs. The daily average was 5.5 runs.
 - The total deployed time for the year was 1,375.3 hours or 10.2 percent of the total annual workload. The daily average was 3.8 hours for all units combined.
- **Erwin Town**
 - There were 1,283 runs or 8 percent of the total runs. The daily average was 3.5 runs.
 - The total deployed time for the year was 1,044.6 hours or 7.8 percent of the total annual workload. The daily average was 2.9 hours for all units combined.
- **Bath Town**
 - There were 1,254 runs or 8 percent of the total runs. The daily average was 3.4 runs.
 - The total deployed time for the year was 1,109.1 hours or 8.3 percent of the total annual workload. The daily average was 3.0 hours for all units combined.

BUSIEST HOURS

There is significant variability in the number of calls from hour to hour. One special concern relates to the resources available for hours with the heaviest workload. We tabulated the data for each of the 8,760 hours in the year. Table 26 shows the number of hours in the year in which there were zero to four or more calls during the hour. Table 27 shows the 10 one-hour intervals which had the most calls during the year. Tables 28 examines the number of times a call within a service area overlapped with another call within the same area.

Table 26: Number of Calls In An Hour

Calls in an Hour	Frequency	Percentage
0	2,904	33.2
1	2,955	33.7
2	1,682	19.2
3	821	9.4
4+	398	4.5
Total	8,760	100.0

Table 27: Top 10 Hours with the Most Calls Received

Hour	Number of Calls	Number of Runs	Total Hours
4/9/2019 2:00 p.m. to 3:00 p.m.	7	13	12.0
10/6/2019 11:00 a.m. to noon	7	12	16.2
10/13/2019 1:00 p.m. to 2:00 p.m.	7	10	5.5
12/1/2019 8:00 a.m. to 9:00 a.m.	7	8	8.0
7/11/2019 2:00 p.m. to 3:00 p.m.	7	8	4.4
11/20/2019 10:00 a.m. to 11:00 a.m.	7	7	8.7
1/14/2019 1:00 p.m. to 2:00 p.m.	7	7	6.9
7/19/2019 5:00 p.m. to 6:00 p.m.	6	18	15.6
12/14/2019 3:00 p.m. to 4:00 p.m.	6	13	17.1
10/19/2019 5:00 p.m. to 6:00 p.m.	6	12	10.1

Note: Total hours is a measure of the total time spent responding to calls received in the hour, and which may extend into the next hour or hours. The number of runs and deployed hours only includes units of the studied agencies.

Observations:

- During 398 hours (4.5 percent of all hours), four or more calls occurred; in other words, Steuben County EMS agencies responded to four or more calls in an hour roughly once a day.
- The highest number of calls to occur in an hour was 7, which happened 7 times. The hour with both the most calls and runs was 2:00 p.m. to 3:00 p.m. on April 9, 2019. The hour's 7 calls involved 13 individual dispatches resulting in 12.0 hours of deployed time. These 7 calls included three fall and injury calls, one cardiac and stroke call, one illness and other call, one MVA call, and one overdose and psychiatric call.

Table 28: Frequency of Overlapping Calls by Geography

Area	Scenario	Number of Calls	Percent of All Calls in the area	Total Hours
Bath Town	No overlapped call	715	92.4	687.6
	Overlapped with one call	51	6.6	25.2
	Overlapped with two calls	7	0.9	1.8
	Overlapped with three calls	1	0.1	0.5
Bath Village	No overlapped call	1,287	90.7	896.7
	Overlapped with one call	120	8.5	51.3
	Overlapped with two calls	12	0.8	3.0
Corning City	No overlapped call	1,406	85.1	1,198.8
	Overlapped with one call	223	13.5	103.7
	Overlapped with two calls	22	1.3	9.7
	Overlapped with three calls	1	0.1	1.1
Corning Town	No overlapped call	300	95.8	308.3
	Overlapped with one call	13	4.2	6.7
Erwin Town	No overlapped call	808	89.2	785.3
	Overlapped with one call	90	9.9	50.0
	Overlapped with two calls	8	0.9	3.0
Hornell City	No overlapped call	965	93.8	704.7
	Overlapped with one call	64	6.2	22.7
Other	No overlapped call	4,355	98.5	2,500.0
	Overlapped with one call	66	1.5	28.5
Total	No overlapped call	9,836	93.5	7,081.4
	Overlapped with one call	627	6.0	288.1
	Overlapped with two calls	49	0.5	17.5
	Overlapped with three calls	2	0.0	1.6

Note: "Other" includes all areas that do not have overlapped calls or have less than 10 overlaps with one call.

Observations:

- Total number of overlapped calls within the same area during the year was 678 (6 percent of total calls)
- Total overlapped hours during the year was 307.2 hours.

SERVICE AVAILABILITY

In this section, we analyze when a service area's primary agency is available to respond to its calls for each are throughout the county. We also examine the availability of advanced life support (ALS). This ALS availability is detailed by the day of the month, the time of the day, and by geography.

PRIMARY AGENCY'S SERVICE AVAILABILITY BY GEOGRAPHY

The primary agency's service availability by geography is summarized in Table 29 and detailed in Tables 30, 31, 32 and 33 for each city, village, town, and agency respectively. Almond Village is not included in this analysis because none of the primary agencies of Almond Village (Almond FD AMB and Almond FD) are studied in this work.

For each area, we count the number of calls to where at least one unit arrived. Next, we focus on units from the primary agency to see if any units responded, arrived, or arrived first. The total number of arrived calls in Table 29 is different from that given in Table 9 because the 12 arrived calls in Almond Village are not included. The primary agencies of Almond are not studied in this analysis.

Table 29: Summary of Primary Agency Availability by Geography

Service Area	Calls in Area	Primary Responded	Percent Responded	Primary Arrived	Percent Arrived	Primary First	Percent First
Cities	2,598	2,595	99.9	2,595	99.9	2,595	99.9
Villages	2,972	2,702	90.9	2,698	90.8	2,572	86.5
Towns	4,525	4,081	90.2	4,066	89.9	3,833	84.7
Total	10,095	9,378	92.9	9,359	92.7	9,000	89.2

Table 30: Primary Agency Availability by City

City	Calls in Area	Primary Responded	Percent Responded	Primary Arrived	Percent Arrived	Primary First	Percent First
Corning	1,599	1,596	99.8	1,596	99.8	1,596	99.8
Hornell	999	999	100.0	999	100.0	999	100.0
Total	2,598	2,595	99.9	2,595	99.9	2,595	99.9

Table 31: Primary Agency Availability by Village

Village	Calls in Area	Primary Responded	Percent Responded	Primary Arrived	Percent Arrived	Primary First	Percent First
Addison	161	86	53.4	86	53.4	83	51.6
Arkport	96	96	100.0	96	100.0	96	100.0
Avoca	85	35	41.2	35	41.2	31	36.5
Bath	1,377	1,340	97.3	1,336	97.0	1,251	90.8
Canisteo	199	159	79.9	159	79.9	154	77.4
Cohocton	90	88	97.8	88	97.8	81	90.0
Hammondsport	73	38	52.1	38	52.1	34	46.6
North Hornell	187	187	100.0	187	100.0	187	100.0
Painted Post	334	329	98.5	329	98.5	328	98.2
Riverside	77	76	98.7	76	98.7	76	98.7
Savona	66	65	98.5	65	98.5	65	98.5
South Corning	59	59	100.0	59	100.0	59	100.0
Wayland	168	144	85.7	144	85.7	127	75.6
Total	2,972	2,702	90.9	2,698	90.8	2,572	86.5

Table 32: Primary Agency Availability by Town

Town	Calls in Area	First Due Responded	Percent Responded	First Due Arrived	Percent Arrived	First Due First	Percent First
Addison	30	19	63.3	19	63.3	18	60.0
Avoca	102	35	34.3	35	34.3	26	25.5
Bath	753	733	97.3	729	96.8	663	88.0
Bradford	93	78	83.9	78	83.9	73	78.5
Cameron	65	42	64.6	42	64.6	41	63.1
Campbell	296	293	99.0	292	98.6	266	89.9
Canisteo	90	62	68.9	62	68.9	60	66.7
Caton	88	88	100.0	88	100.0	88	100.0
Cohocton	104	100	96.2	99	95.2	83	79.8
Corning	299	299	100.0	299	100.0	296	99.0
Dansville	67	61	91.0	61	91.0	60	89.6
Erwin	871	866	99.4	866	99.4	863	99.1
Fremont	60	57	95.0	57	95.0	57	95.0
Greenwood	35	33	94.3	33	94.3	33	94.3
Hartsville	30	20	66.7	20	66.7	20	66.7
Hornby	123	122	99.2	121	98.4	106	86.2
Hornellsville	254	254	100.0	254	100.0	254	100.0
Howard	62	61	98.4	61	98.4	57	91.9
Jasper	56	52	92.9	52	92.9	52	92.9
Lindley	89	89	100.0	89	100.0	89	100.0
Orange	21	20	95.2	20	95.2	20	95.2
Prattsburgh	129	104	80.6	103	79.8	95	73.6
Pulteney	86	79	91.9	79	91.9	78	90.7
Rathbone	56	35	62.5	35	62.5	33	58.9
Thurston	54	54	100.0	54	100.0	35	64.8
Troupsburg	48	17	35.4	17	35.4	17	35.4
Tuscarora	73	31	42.5	31	42.5	27	37.0
Urbana	109	58	53.2	53	48.6	41	37.6
Wayland	151	137	90.7	136	90.1	114	75.5
Wayne	70	66	94.3	65	92.9	62	88.6
West Union	13	12	92.3	12	92.3	12	92.3
Wheeler	49	41	83.7	41	83.7	33	67.3
Woodhull	99	63	63.6	63	63.6	61	61.6
Total	4,525	4,081	90.2	4,066	89.9	3,833	84.7

Table 33: Primary Agency Availability by Agency

Ambulance Service	Requested	Responded	Pct. Responded	Arrived	Pct. Arrived
AMR	6,020	5,867	97.5	5,376	89.3
Bath	2,525	2,377	94.1	2,260	89.5
CVAS	315	258	81.9	234	74.3
Hornell	1,642	1,638	99.8	1,559	94.9
Career AMB Total	10,502	10,140	96.6	9,429	93.0
Addison	360	154	42.8	148	41.1
Avoca	332	101	30.4	91	27.4
Bath VA	7	4	57.1	1	14.3
Bradford	166	105	63.3	104	62.7
Cameron	283	86	30.4	81	28.6
Canisteo	406	277	68.2	264	65.0
Fremont	147	137	93.2	128	87.1
Greenwood	168	84	50.0	70	41.7
Hammondsport	276	110	39.9	98	35.5
Jasper	249	93	37.3	87	34.9
Prattsburgh	183	137	74.9	130	71.0
Pulteney	123	91	74.0	88	71.5
Spring-Way	392	301	76.8	284	72.4
Troupsburg	128	24	18.8	22	17.2
Tuscarora	246	51	20.7	46	18.7
Wayne	107	88	82.2	78	72.9
Woodhull	399	113	28.3	107	26.8
Volunteer AMB Total	3,972	1,956	49.2	1,827	46.0
Total	14,474	12,096	83.6	11,256	77.8

Observations:

- On average, ambulance agencies with paid providers responded to 96.6 percent of all incidents in their primary service area and arrived at 93.0 percent.
- On average, ambulance agencies with volunteer providers responded to 49.2 percent of all incidents in their primary service area and arrived at 46.0 percent.
- On average, the local agencies arrived first at 89.2 percent of all incidents in their primary service area.
- In the top three areas with the highest call volumes including Corning City, Bath Village, and Hornell City, the primary agencies arrived at 100, 97, and 100 percent of local incidents, respectively.
- In Avoca town, Avoca Village, Troupsburg Town, Tuscarora Town, and Urbana Town, the primary agencies arrived to less than 40 percent of the local incidents.

ALS SERVICE AVAILABILITY

In Steuben County, Advanced Life Support (ALS) service is primarily provided by American Medical Response (AMR), Hornell, and Bath VA. In the Northwest End of the County ALS is also provided by Livingston County ALS. In the Northeastern portion of the County, ALS is provided by Yates County. Other areas outside of Steuben County may also occasionally provide ALS services as requested.

Calls with "C", "D", or "E" MPDS response determinants required ALS service and were identified as ALS calls. In our analysis, ALS availability was measured by the percentage of ALS calls where at least one ALS-unit arrived. ALS units include both ALS ambulances and ALS fly cars. A list of all ALS units by the agency are shown in [Attachment V](#).

The ALS availability by geography is summarized in Table 34 and detailed in Tables 35, 36, and 37 for each city, village, and town in Steuben County. The ALS availability by day of month and time of day are shown in Figures 12 and 13, respectively.

Table 34: Summary of ALS Service Availability by Geography

Service Area	ALS-Required Calls in Area	ALS-Agency Responded	Percent Responded	ALS-Agency Arrived	Percent Arrived
Cities	1,080	1,076	99.6	1,073	99.4
Villages	1,171	1,117	95.4	998	85.2
Towns	2,067	1,946	94.1	1,801	87.1
Total	4,318	4,139	95.9	3,872	89.7

Table 35: ALS Service Availability by City

City	ALS-Required Calls in Area	ALS-Agency Responded	Percent Responded	ALS-Agency Arrived	Percent Arrived
Corning	673	669	99.4	666	99.0
Hornell	407	407	100.0	407	100.0
Total	1,080	1,076	99.6	1,073	99.4

Table 36: ALS Service Availability by Village

Village	ALS-Required Calls in Area	ALS-Agency Responded	Percent Responded	ALS-Agency Arrived	Percent Arrived
Addison	80	77	96.2	67	83.8
Almond	10	7	70.0	7	70.0
Arkport	29	27	93.1	27	93.1
Avoca	34	33	97.1	30	88.2
Bath	515	500	97.1	426	82.7
Canisteo	93	79	84.9	69	74.2
Cohocton	41	35	85.4	29	70.7
Hammondsport	26	26	100.0	25	96.2
North Hornell	60	60	100.0	60	100.0
Painted Post	115	113	98.3	113	98.3
Riverside	26	25	96.2	25	96.2
Savona	32	32	100.0	30	93.8
South Corning	29	29	100.0	29	100.0
Wayland	81	74	91.4	61	75.3
Total	1,171	1,117	95.4	998	85.2

Table 37: ALS Service Availability by Town

Town	ALS-Required Calls in Area	ALS-Agency Responded	Percent Responded	ALS-Agency Arrived	Percent Arrived
Addison	17	16	94.1	15	88.2
Avoca	58	56	96.6	52	89.7
Bath	302	294	97.4	262	86.8
Bradford	43	41	95.3	33	76.7
Cameron	33	33	100.0	30	90.9
Campbell	131	131	100.0	127	96.9
Canisteo	45	36	80.0	33	73.3
Caton	43	43	100.0	43	100.0
Cohocton	45	42	93.3	38	84.4
Corning	132	132	100.0	132	100.0
Dansville	40	15	37.5	13	32.5
Erwin	336	336	100.0	336	100.0
Fremont	23	18	78.3	16	69.6
Greenwood	23	16	69.6	14	60.9
Hartsville	10	8	80.0	7	70.0
Hornby	63	63	100.0	61	96.8
Hornellsville	108	108	100.0	107	99.1
Howard	29	23	79.3	23	79.3
Jasper	28	21	75.0	18	64.3
Lindley	51	51	100.0	51	100.0
Orange	8	6	75.0	3	37.5
Prattsburgh	71	69	97.2	59	83.1
Pulteney	41	34	82.9	22	53.7
Rathbone	31	28	90.3	27	87.1
Thurston	31	31	100.0	29	93.5
Troupsburg	25	19	76.0	16	64.0
Tuscarora	42	41	97.6	36	85.7
Urbana	54	50	92.6	46	85.2
Wayland	80	75	93.8	66	82.5
Wayne	35	30	85.7	24	68.6
West Union	7	5	71.4	4	57.1
Wheeler	27	26	96.3	21	77.8
Woodhull	52	48	92.3	37	71.2
Total	2,067	1,946	94.1	1,801	87.1

Figure 12: ALS Availability Percentage by Month

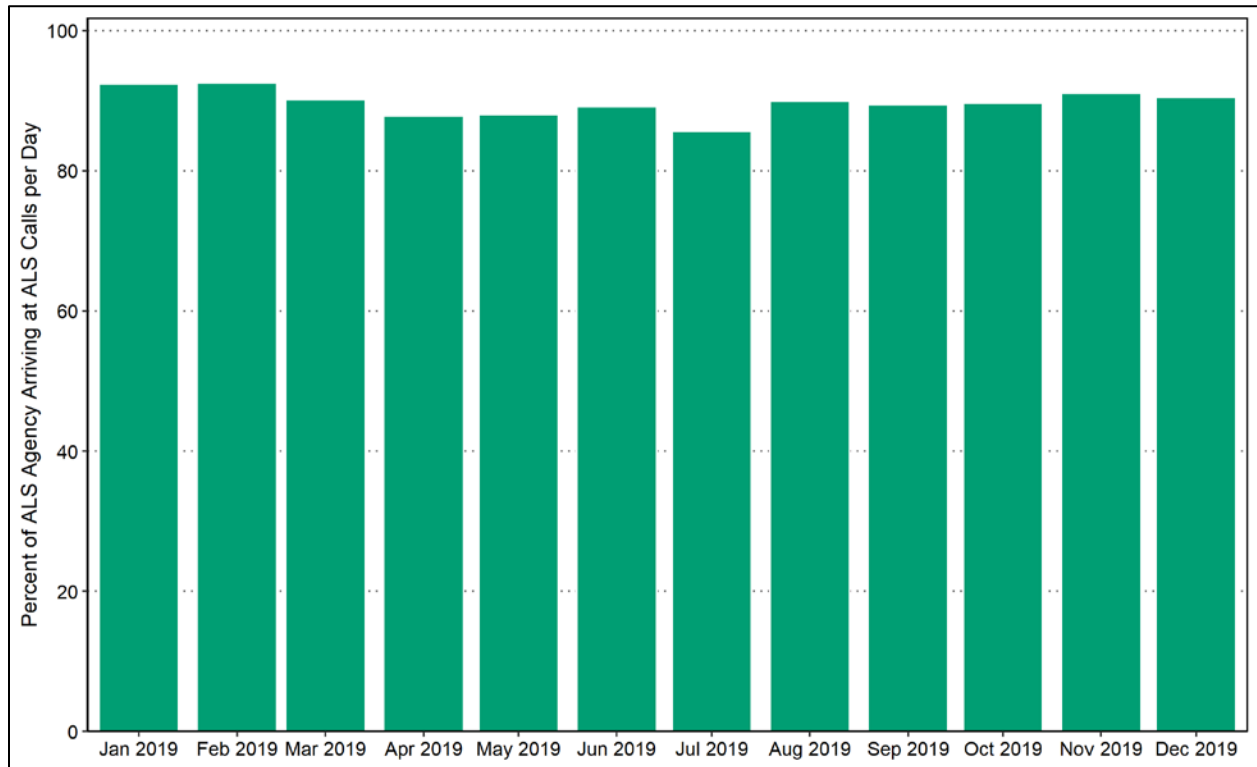
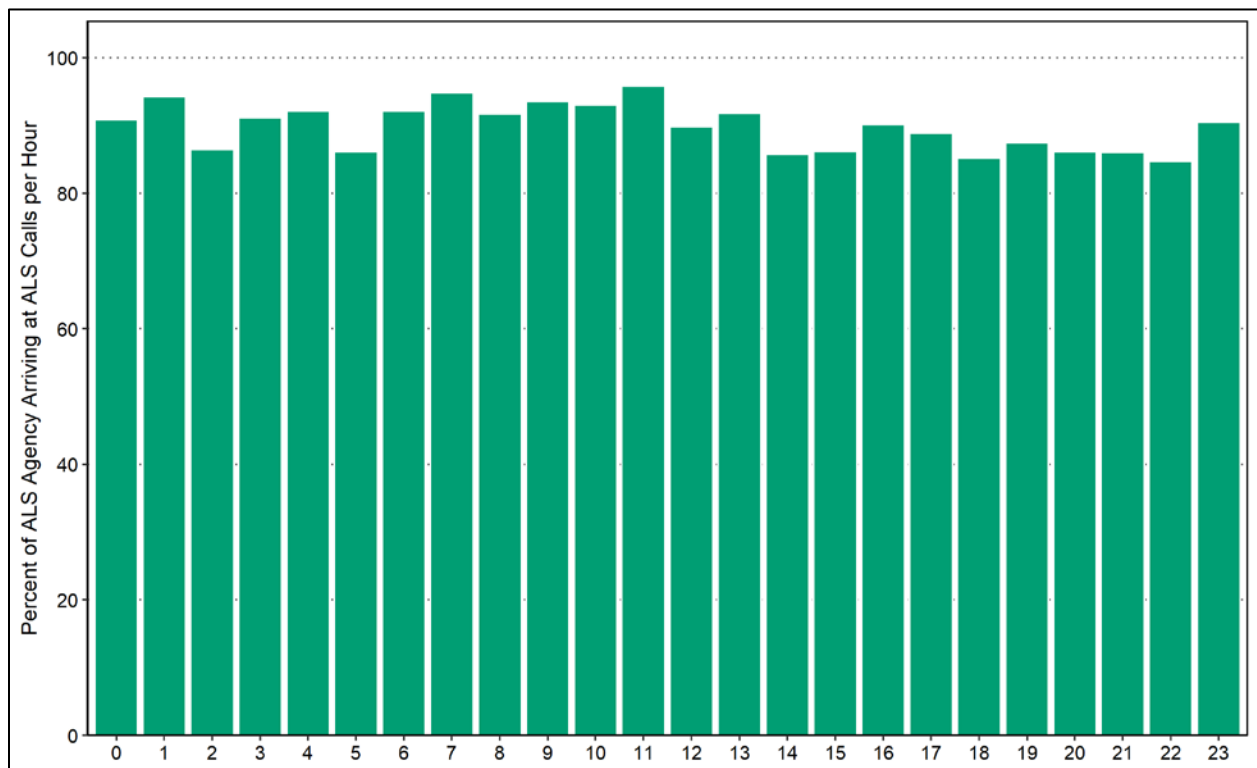


Figure 13: ALS Availability by Hour of Day



ALS Intercept Using Transport Capable Units

During conversations with an AMR official, he stated that periodically, AMR will respond to an ALS request with a transport capable ALS ambulance instead of an ALS fly car. Occasionally, a transport capable AMR ambulance arrives at the scene of the emergency call prior to the arrival of the ambulance from the primary jurisdiction who requested the ALS response. The ambulance from the responding primary agency could be significantly delayed, and at times, it may be a transport capable back-up/mutual aid agency that arrives. During this time, the patient may have been already assessed, patient care initiated, and perhaps already be in the patient compartment of the transport capable AMR unit.

The AMR official stated that periodically, when the ambulance from the primary jurisdiction (or back-up agency) arrives on scene, the patient may be removed from the AMR ambulance and placed into the patient compartment of the other ambulance for transport. This arrangement is less than ideal from a patient care perspective. It would be preferable to allow AMR to initiate transport in these cases. However, the AMR representative stated that the facilitation of allowing AMR to do the transport in these circumstances may require a change in the mutual aid process.

During subsequent follow-up interviews with several ambulance agencies who use AMR for ALS intercept, these agencies stated that this rarely happens, and they generally allow the on-scene transport capable AMR ambulance to facilitate the patient's transport.

Recommendation #5: The first arriving transport capable ambulance should be permitted to transport the patient, when transport is required, without the requirement to wait to determine whether or not an ambulance from a primary jurisdiction will be arriving.

Observations:

- Overall ALS availability was 90 percent.
- The average availability of ALS service varied by month from 86 percent in July 2019 to 93 percent in February 2019.
- The average availability of ALS service varied by the hour from 85 percent between 10:00 p.m. and 11:00 p.m. to 96 percent between 11:00 a.m. and noon.
- Municipalities with the most ALS calls were also those with the most calls overall: Corning City, Bath Village, and Hornell City. ALS availability in these municipalities was 99, 83, and 100 percent, respectively.
 - These communities are also served by agencies that have dedicated ALS transport units.
- ALS availability in Dansville Town and Orange Township was less than 40 percent; however, there was only a combined total of 48 ALS calls in these municipalities during 2019.

RESPONSE TIME

In this part of the analysis, we present response time statistics for different call types, agencies, and areas. We separate response time into its identifiable components. **Call Processing Time** is the difference between the time a call is received by the Steuben County Public Safety Answering Point (PSAP) and the time a unit is notified to respond to a call (dispatched). Dispatch time includes call processing time, which is the time required to determine the nature of the emergency and types of resources to dispatch. **Activation Time** is the difference between dispatch time and the time a unit is enroute to a call's location. *Travel time* is the difference between the time enroute and arrival on scene. *Response time* is the total time elapsed between receiving a call to arriving on scene.

In this analysis, we included all calls in Steuben County to which at least one non-administrative unit from the studied agencies responded. All EMD codes including a C, D, or E code were included as emergencies. Other codes (A, B, and O) were identified as non-emergencies. Also, we focused on units that had complete time stamps, that is, units with all components of time recorded, so that we could calculate each segment of response time.

RESPONSE TIME BY TYPE OF CALL

Table 38 provides the average Call Processing, Activation, Travel, and Total Response Times for calls to which an agency responded and arrived, broken out by call type. Table 39 gives the corresponding 90th percentile response times broken out in the same manner. A 90th percentile means that 90 percent of calls had response times at or below that number. For example, Table 39 shows a 90th percentile response time of 24.5 minutes, which means that 90 percent of the time, a call had a response time of no more than 24.5 minutes.

NOTE: These are county-wide data. The cities of Corning and Hornell, and the village of Bath together account for 36.5% of the ambulance responses in Steuben County. These communities are served by career, or combination career and volunteer ambulance agencies. As such, the Activation Times for county-wide data is somewhat skewed due to the large percentage of responses in those three communities, versus the responses in other areas.

Our analysis of the response is based on the first arriving unit at a call. Steuben County 911 applies a 9-minute timer wait until a unit from a dispatched agency becomes available. If after 9 minutes, no unit ambulance unit response, a mutual aid agency is dispatched. This procedure causes long activation times when dispatched agencies do not respond. For this calculation, we use the earliest dispatched time of a non-law enforcement unit for each call.

The rest of the response time analysis is based on the response of the first arriving ambulance unit to a call.

Table 38: Average Response Time (Minutes) of First Arriving Unit, by Call Type

Call Type	Call Processing	Activation	Travel	Response	Number of Calls
Breathing difficulty	2.4	3.0	6.6	12.0	1,061
Cardiac and stroke	2.4	2.9	7.2	12.5	1,194
Fall and injury	3.0	4.5	6.4	14.0	2,385
Illness and other	3.0	4.3	6.5	13.9	3,050
MVA	4.3	4.0	7.3	15.6	603
Overdose and psychiatric	4.1	4.5	7.9	16.5	536
Seizure and unconsciousness	2.6	3.1	6.6	12.4	758
Total	3.0	4.0	6.7	13.7	9,587

Table 39: 90th Percentile Response Time (Minutes) of First Arriving Unit, by Call Type

Call Type	Call Processing	Activation	Travel	Response	Number of Calls
Breathing difficulty	4.0	5.9	13.9	21.4	1,061
Cardiac and stroke	3.7	5.9	14.9	22.4	1,194
Fall and injury	4.5	11.9	12.5	25.0	2,385
Illness and other	4.4	11.4	13.5	25.6	3,050
MVA	8.4	9.1	13.8	26.8	603
Overdose and psychiatric	7.9	10.8	16.7	28.7	536
Seizure and unconsciousness	4.1	6.7	14.4	20.9	758
Total	4.5	10.1	13.8	24.5	9,587

Observations:

■ First Dispatched Unit

- The average Call Processing time was 2.0 minutes.
- The 90th percentile Call Processing time was 3.0 minutes.

■ First Arriving Unit

- The average Activation time was 4.0 minutes.
- The average Travel Time was 6.7 minutes.
- The average Total Response time was 13.7 minutes.
- The 90th percentile Call Processing Time was 4.5 minutes
- The 90th percentile Activation Time was 10.1 minutes.
- The 90th percentile Travel Time was 13.8 minutes.
- The 90th percentile Total Response Time was 24.5 minutes.

RESPONSE TIMES BY AGENCY

The average and 90th percentile response times broken down by the primary ambulance services and first-responder fire departments are summarized in Table 40 and detailed in Tables 41 and 42 for each agency. For this analysis, we used only 3,438 high priority EMS requests.

Table 40: Summary of Average and 90th Percentile Response Time (Minutes) of First Arriving Unit, by Agency Type

Agency Type	Call Processing + Activation	Travel	Response Time	90th Percentile Response Time	Number of Calls
Ambulance	6.0	4.8	10.8	18.5	2,697
First-Responder FD	6.1	2.9	9.1	14.9	741
Total	6.1	4.4	10.4	17.7	3,438

Table 41: Average and 90th Percentile Response Time (Minutes) of First Arriving Unit, by Primary Ambulance Service

Ambulance Service	Dispatch + Turnout	Travel	Response Time	90th Percentile Response Time	Number of Calls
Addison	10.3	3.3	13.6	19.0	54
AMR	4.4	6.4	10.9	17.6	873
Avoca	11.0	4.4	15.4	21.6	24
Bath	4.9	3.7	8.7	13.9	622
Bradford	10.2	6.4	16.6	24.8	31
Cameron	12.7	5.6	18.3	26.9	29
Canisteo	9.9	3.3	13.1	19.8	106
CVAS	7.4	4.2	11.7	20.2	53
Fremont	9.8	7.2	17.0	23.8	47
Greenwood	9.8	5.6	15.3	23.4	24
Hammondsport	11.0	3.6	14.5	23.4	24
Hornell	4.0	4.0	8.0	12.6	548
Jasper	14.3	4.9	19.1	27.9	20
Prattsburgh	9.4	4.3	13.7	20.2	45
Pulteney	11.5	3.8	15.3	21.1	33
Spring-Way	11.8	3.3	15.2	20.1	92
Troupsburg	13.5	4.6	18.1	27.0	9
Tuscarora	15.0	5.0	20.0	22.7	10
Wayne	10.4	4.1	14.5	20.1	26
Woodhull	11.8	4.5	16.3	23.1	27
Total	6.0	4.8	10.8	18.5	2,697

Table 42: Average and 90th Percentile Response Time (Minutes) of First Arriving Unit, by Primary First-Responder Fire Department

First-Responder Fire Department	Call Processing + Activation	Travel	Response Time	90th Percentile Response Time	Number of Calls
Arkport	9.4	3.2	12.6	19.6	38
Campbell	9.4	3.0	12.4	16.4	50
Caton	9.7	4.1	13.8	17.8	31
CJ ST	7.8	2.8	10.6	15.4	66
Coopers Plains	5.3	2.7	8.0	11.9	35
Corning City	4.1	2.6	6.6	8.6	402
Gang Mills	8.5	1.9	10.3	13.2	39
Hornby	9.9	4.5	14.4	22.1	8
Howard	11.3	5.7	16.9	23.6	16
Perkinsville	10.1	5.6	15.7	22.3	9
Savona	8.5	2.4	10.9	13.9	39
Thurston	12.4	8.0	20.4	25.2	8
Total	6.2	2.9	9.0	14.9	741

Note: CJ ST is the Corning Town Volunteer Fire Department including CJ ST 16, CJ ST 34, and CJ ST 43.

Observations:

■ Ambulance Agencies

- The average Call Processing + Activation Time is 6.0 minutes
- The average travel time was 4.8 minutes.
- The average total response time was 10.8 minutes.
- The 90th percentile total response time was 18.5 minutes.

■ First-Responder Fire Departments

- The average Call Processing + Activation Time is 6.2 minutes.
- The average travel time was 2.9 minutes.
- The average total response time was 9.0 minutes.
- The 90th percentile total response time was 14.9 minutes.

RESPONSE TIMES BY GEOGRAPHY

The geographical distribution of the average and 90th percentile response times are summarized in Table 43 and detailed in Tables 44, 45, and 46 for cities, villages, and towns, respectively.

Table 43: Summary of Average and 90th Percentile Response Time (Minutes) of First Arriving Unit, by Geography

Service Area	Call Processing + Activation	Travel	Response Time	90th Percentile Response Time	Number of Calls
Cities	4.1	2.7	6.8	9.2	1,036
Villages	6.2	3.0	9.2	14.8	872
Towns	7.2	6.3	13.5	20.6	1,530
Total	6.1	4.4	10.4	17.7	3,438

Table 44: Average and 90th Percentile Response Time (Minutes) of First Arriving Unit, by City

City	Call Processing + Activation	Travel	Response Time	90th Percentile Response Time	Number of Calls
Corning	4.1	2.5	6.6	8.6	649
Hornell	4.1	3.0	7.1	10.7	387
Total	4.1	2.7	6.8	9.2	1,036

Table 45: Average and 90th Percentile Response Time (Minutes) of First Arriving Unit, by Village

Village	Call Processing + Activation	Travel	Response Time	90th Percentile Response Time	Number of Calls
Addison	10.5	1.8	12.3	16.3	36
Arkport	7.4	3.6	10.9	13.6	27
Avoca	11.2	1.4	12.7	24.1	8
Bath	5.0	2.7	7.6	11.1	397
Canisteo	10.2	1.8	11.9	19.0	67
Cohocton	7.3	2.2	9.5	19.7	29
Hammondsport	10.4	1.2	11.6	19.6	9
North Hornell	2.4	5.1	7.5	11.0	56
Painted Post	4.6	5.1	9.6	13.3	106
Riverside	4.1	4.8	8.9	15.2	24
Savona	7.6	3.4	10.9	13.8	31
South Corning	5.5	3.0	8.5	11.4	28
Wayland	12.1	1.6	13.7	17.6	54
Total	6.2	3.0	9.2	14.8	872

Table 46: Average and 90th Percentile Response Time (Minutes) of First Arriving Unit, by Town

Location	Call Processing + Activation	Travel	Response Time	90th Percentile Response Time	Number of Calls
Addison	9.1	6.0	15.1	18.7	11
Avoca	11.6	5.1	16.7	21.6	13
Bath	5.2	5.2	10.4	15.4	224
Bradford	10.3	7.0	17.3	27.4	24
Cameron	12.6	5.9	18.5	26.9	21
Campbell	7.1	7.8	14.8	20.1	111
Canisteo	10.1	5.4	15.4	23.0	29
Caton	8.5	6.0	14.4	19.4	40
Cohocton	7.5	6.6	14.2	20.6	24
Corning	6.0	5.6	11.5	16.0	127
Dansville	10.5	7.3	17.8	23.8	38
Erwin	5.0	6.1	11.1	15.1	318
Fremont	9.5	5.4	14.9	18.2	21
Greenwood	9.8	3.8	13.7	22.0	18
Hartsville	6.8	6.3	13.1	16.9	5
Hornby	5.7	7.9	13.6	16.7	47
Hornellsville	4.9	6.5	11.4	14.9	103
Howard	10.1	6.5	16.5	22.4	24
Jasper	14.3	4.9	19.1	27.9	20
Lindley	4.7	14.7	19.4	22.8	47
Orange	9.7	4.4	14.2	22.4	7
Prattsburgh	9.6	4.2	13.7	20.2	43
Pulteney	11.5	3.8	15.3	21.1	33
Rathbone	11.5	6.7	18.1	26.5	19
Thurston	8.7	12.7	21.4	25.2	14
Troupsburg	13.5	4.6	18.1	27.0	9
Tuscarora	15.0	5.0	20.0	22.7	10
Urbana	11.3	5.0	16.3	25.9	15
Wayland	11.3	5.7	16.9	23.0	46
Wayne	10.4	4.1	14.5	20.1	26
West Union	9.6	10.7	20.3	28.3	6
Wheeler	7.0	9.2	16.2	21.6	13
Woodhull	12.2	3.8	15.9	22.3	24
Total	7.2	6.3	13.5	20.6	1,530

TRANSPORT CALL ANALYSIS

In this section, we present an analysis of the agency's unit activity that involved transporting patients, the variations by hour of day, and the average time for each stage of transport service. The geographical distribution of transport calls and mutual aid associated with patient transport is also examined.

We identified transport calls by requiring that at least one responding ambulance recorded both a "beginning to transport" time and an "arriving at the hospital" time. In responding to EMS calls, Steuben County's EMS system used three types of medical units including basic life support (BLS) ambulances, advanced life support (ALS) ambulances, and ALS fly units. Normally, BLS and ALS ambulances transport patients, while ALS fly units functionally upgrade BLS ambulances to ALS ambulances. However, in some cases, an ALS fly unit may also act as a transporting rig. A list of all medical units operating within Steuben County is provided in Attachment V.

TRANSPORT CALLS BY TYPE

Table 47 shows the number of calls by call type broken out by transport and non-transport calls.

Table 47: Calls by Call Type and Transport

Call Type	Number of Calls			Conversion Rate
	Non-Transport	Transport	Total	
Breathing difficulty	235	869	1,104	78.7
Cardiac and stroke	313	944	1,257	75.1
Fall and injury	1,224	1,315	2,539	51.8
Illness and other	1,047	2,423	3,470	69.8
MVA	410	257	667	38.5
Overdose and psychiatric	268	414	682	60.7
Seizure and unconsciousness	221	574	795	72.2
Total	3,718	6,796	10,514	64.6

Observations:

- Overall, 65 percent of EMS transfer calls involved transporting one or more patients.
 - This is a relatively low transport ratio, especially since residents of rural areas generally do not call 911 unless the request is due to a serious medical emergency.
- On average, there were approximately 19 calls per day that involved transporting one or more patients.

TRANSPORT CALLS BY GEOGRAPHY

The geographic distribution of non-transport and transport calls is summarized in Table 48 and detailed in Tables 49, 50, and 51 for all cities, villages, and towns, respectively. A call was labeled "ALS" if at least one ALS unit **responded** to it, labeled "BLS" if the responding medical units were BLS only, and labeled "First Response" if all of the responding units were the non-medical units from the first-responder fire departments.

Table 48: Summary of EMS Calls by Geography and Transport

Service Area	Non-Transport Calls			Transport Calls		Total	Conversion Rate
	BLS	ALS	First Response	BLS	ALS		
Cities	4	947	28	1	1,701	2,681	63.5
Villages	532	490	13	758	1,308	3,101	66.6
Towns	542	1,111	51	742	2,286	4,732	64.0
Total	1,078	2,548	92	1,501	5,295	10,514	64.6

Table 49: EMS Calls by City and Transport

City	Non-Transport Calls			Transport Calls		Total	Conversion Rate
	BLS	ALS	First Response	BLS	ALS		
Corning	4	571	28	1	1,048	1,652	63.5
Hornell	0	376	0	0	653	1,029	63.5
Total	4	947	28	1	1,701	2,681	63.5

Table 50: EMS Calls by Village and Transport

Village	Non-Transport Calls			Transport Calls		Total	Conversion Rate
	BLS	ALS	First Response	BLS	ALS		
Addison	28	28	0	37	77	170	67.1
Almond	0	12	3	0	2	17	11.8
Arkport	0	50	5	0	47	102	46.1
Avoca	20	10	0	25	33	88	65.9
Bath	354	113	0	517	435	1,419	67.1
Canisteo	38	16	0	48	104	206	73.8
Cohocton	27	11	0	22	33	93	59.1
Hammondsport	26	11	0	24	20	81	54.3
North Hornell	0	34	0	0	157	191	82.2
Painted Post	2	117	0	3	224	346	65.6
Riverside	0	42	1	0	41	84	48.8
Savona	9	8	2	18	30	67	71.6
South Corning	0	20	2	0	41	63	65.1
Wayland	28	18	0	64	64	174	73.6
Total	532	490	13	758	1,308	3,101	66.6

Table 51: EMS Calls by Town and Transport

Town	Non-Transport Calls			Transport Calls		Total	Conversion Rate
	BLS	ALS	First Response	BLS	ALS		
Addison	5	7	0	5	14	31	61.3
Avoca	15	18	0	28	44	105	68.6
Bath	178	68	1	256	271	774	68.1
Bradford	27	13	1	20	34	95	56.8
Cameron	1	10	0	20	35	66	83.3
Campbell	1	111	6	1	195	314	62.4
Canisteo	18	7	0	24	47	96	74.0
Caton	0	35	1	0	57	93	61.3
Cohocton	28	11	0	30	36	105	62.9
Corning	1	112	9	0	191	313	61.0
Dansville	20	5	15	24	14	78	48.7
Erwin	2	337	13	3	551	906	61.1
Fremont	12	5	0	19	24	60	71.7
Greenwood	8	6	0	9	14	37	62.2
Hartsville	12	0	0	5	15	32	62.5
Hornby	0	50	1	1	77	129	60.5
Hornellsville	0	109	1	0	160	270	59.3
Howard	19	6	1	14	27	67	61.2
Jasper	15	4	0	16	24	59	67.8
Lindley	0	42	0	0	56	98	57.1
Orange	11	5	0	3	3	22	27.3
Prattsburgh	23	22	0	30	57	132	65.9
Pulteney	24	15	0	28	21	88	55.7
Rathbone	6	9	0	17	25	57	73.7
Thurston	0	14	2	0	41	57	71.9
Troupsburg	7	6	0	16	20	49	73.5
Tuscarora	5	18	0	19	33	75	69.3
Urbana	31	16	0	30	38	115	59.1
Wayland	31	19	0	49	62	161	68.9
Wayne	13	7	0	27	27	74	73.0
West union	3	1	0	4	6	14	71.4
Wheeler	7	12	0	15	18	52	63.5
Woodhull	19	11	0	29	49	108	72.2
Total	542	1,111	51	742	2,286	4,732	64.0

Observations:

- Overall, ALS **capability** was included in 78 percent of transport calls.
- The top three areas with the highest percentage of total transport calls were Corning City (15 percent), Bath Village (14 percent), and Hornell City (10 percent).

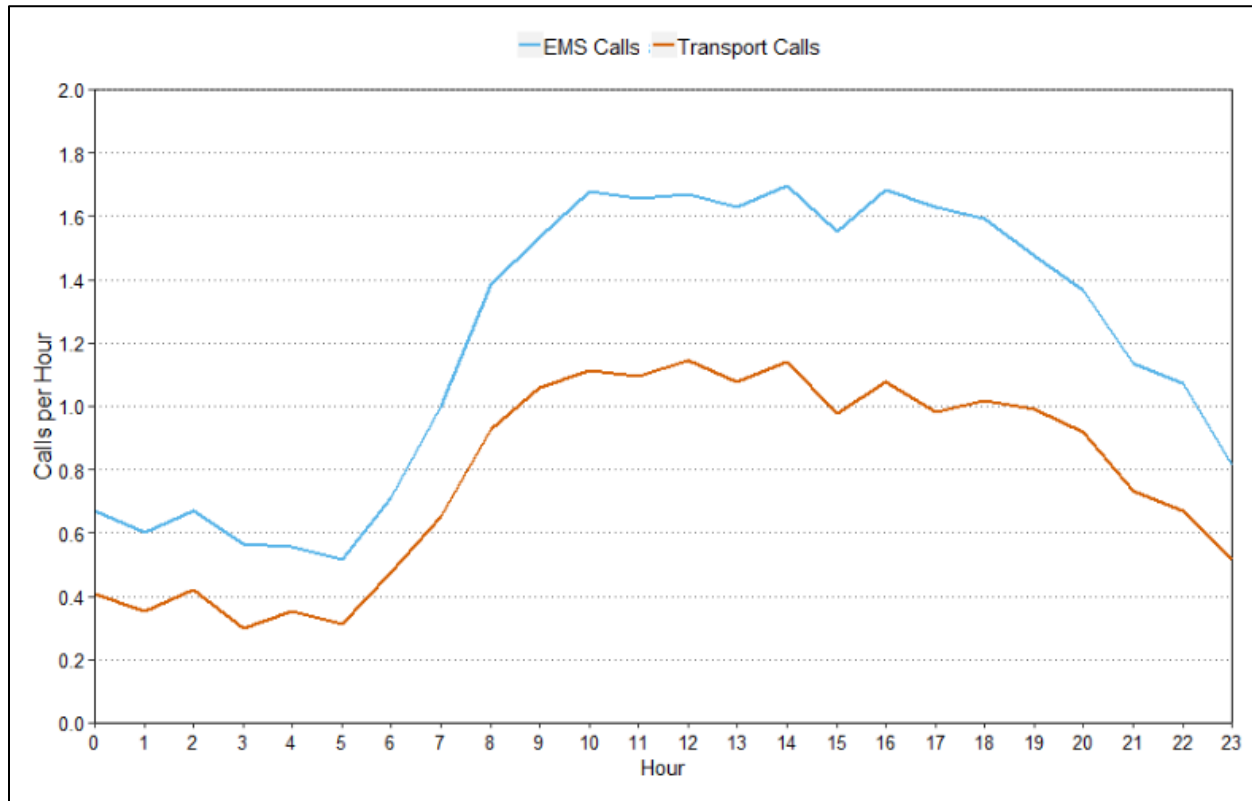
AVERAGE TRANSPORT CALLS PER HOUR

Table 52 and Figure 14 show the average number of runs that resulted in a transport received each hour of the day for the year and the average number of runs that resulted in a transport.

Table 52: EMS Transport Calls by Hour

Hour	Total Calls		Calls per Day		Conversion Rate
	EMS	Transport	EMS	Transport	
0	242	147	0.7	0.4	60.7
1	218	128	0.6	0.4	58.7
2	245	154	0.7	0.4	62.9
3	206	109	0.6	0.3	52.9
4	203	128	0.6	0.4	63.1
5	189	114	0.5	0.3	60.3
6	260	173	0.7	0.5	66.5
7	365	237	1.0	0.6	64.9
8	505	339	1.4	0.9	67.1
9	558	386	1.5	1.1	69.2
10	611	405	1.7	1.1	66.3
11	603	397	1.7	1.1	65.8
12	609	414	1.7	1.1	68.0
13	593	393	1.6	1.1	66.3
14	620	414	1.7	1.1	66.8
15	567	353	1.6	1.0	62.3
16	614	392	1.7	1.1	63.8
17	590	354	1.6	1.0	60.0
18	581	370	1.6	1.0	63.7
19	537	361	1.5	1.0	67.2
20	499	335	1.4	0.9	67.1
21	414	265	1.1	0.7	64.0
22	391	243	1.1	0.7	62.1
23	294	185	0.8	0.5	62.9
Total	10,514	6,796	28.8	18.6	64.6

Figure 14: Average EMS Transport Calls per Day by Hour



Observations:

- EMS calls per hour were highest during the day from 10:00 a.m. to 7:00 p.m., averaging more than 1.5 calls each hour.
- EMS calls per hour peaked between 2:00 p.m. and 3:00 p.m., averaging 1.7 calls per hour.
- EMS calls per hour were lowest between 5:00 a.m. and 6:00 a.m., averaging 0.5 calls per hour.
- Hourly transport calls were highest during the day from 9:00 a.m. to 8:00 p.m., averaging more than 1.0 calls per hour.
- Hourly transport calls peaked between noon and 1:00 p.m., averaging 1.1 calls per hour.
- Hourly transport calls were lowest between 3:00 a.m. and 4:00 a.m., averaging 0.3 calls per hour.
- The hourly transport conversion rate peaked between 9:00 a.m. and 10:00 a.m. at 70 percent.
- The hourly transport conversion rate was lowest between 3:00 a.m. and 4:00 a.m. at 53 percent.

TRANSPORT CALLS BY TYPE AND DURATION

Table 53 shows the average duration of transport calls by call type.

Table 53: Transport Call Duration by Call Type

Call Type	Non-transport		Transport	
	Average Duration	Number of Calls	Average Duration	Number of Calls
Breathing difficulty	54.4	235	67.4	869
Cardiac and stroke	60.5	313	78.6	944
Fall and injury	33.5	1,224	68.6	1,315
Illness and other	43.1	1,047	66.2	2,423
MVA	45.3	410	85.2	257
Overdose and psychiatric	30.7	268	58.4	414
Seizure and unconsciousness	39.5	221	69.0	574
Total	41.3	3,718	69.0	6,796

Note: The duration of a call is defined as the longest deployed time of any of the units responding to the same call.

Observations:

- The average duration was 41.3 minutes for non-transport EMS calls.
- The average duration was 69.0 minutes for EMS calls where one or more patients were transported to a hospital.

TRANSPORT TIME COMPONENTS

Table 54 gives the average deployed time for an ambulance on a transport call, along with three major components of the deployed time: on-scene time, travel to hospital time, and at-hospital time.

The on-scene time is the interval from the unit arriving on-scene time through the time the unit departs the scene for the hospital. Travel to hospital time is the interval from the time the unit departs the scene to travel to the hospital through the time the unit arrives at the hospital. At-hospital time is the interval from the time the unit arrives at the hospital until the unit is cleared.

Table 54: Time Component Analysis for Ambulance Transport Runs by Call Type (Minutes)

Call Type	Average Time Spent per Run				Number of Runs
	On Scene	Traveling to Hospital	At Hospital	Deployed	
Breathing difficulty	17.4	14.3	27.5	65.0	889
Cardiac and stroke	17.7	18.1	32.9	75.2	985
Fall and injury	17.5	15.1	29.1	68.0	1,331
Illness and other	15.3	14.8	28.4	65.0	2,454
MVA	18.7	16.9	33.4	76.1	310
Overdose and psychiatric	12.6	12.3	24.1	57.2	415
Seizure and unconsciousness	17.0	14.6	29.3	66.7	586
Total	16.5	15.2	29.1	67.2	6,970

Note: Average unit deployed time per run is lower than average call duration for some call types because call duration is based on the longest deployed time of any of the units responding to the same call, which may include an engine or ladder. Total deployed time is greater than the combination of on-scene, transport, and hospital wait times as it includes turnout, initial travel, and hospital return times.

Observations:

- The average time spent on-scene for a transport call was 16.5 minutes.
- The average travel time from the scene of the call to the hospital was 15.2 minutes.
- The average deployed time spent on transport calls was 67.2 minutes.
- The average deployed time at the hospital was 29.1 minutes, which accounts for approximately 43 percent of the average total deployed time for a transport call.

AMBULANCE TRANSPORT RUNS BY AGENCY

The studied ambulance services made 13,250 runs during the year. Table 54 shows the number of non-transport and transport runs made by each agency, broken out by the types of EMS unit including BLS and ALS ambulances and ALS fly cars.

Table 55: EMS Runs by Agency and Transport

Unit Type	Agency	Non-Transport Runs	Transport Runs	Total
ALS	AMR	1,786	2,706	4,492
	Bath VA	7	2	9
	Hornell	668	1,104	1,772
	Subtotal	2,461	3,812	6,273
ALS Fly Car	AMR	1,823	65	1,888
	Hornell	258	3	261
	Subtotal	2,081	68	2,149
BLS	Addison	50	110	160
	Avoca	47	64	111
	Bath	889	1,601	2,490
	Bradford	51	57	108
	Cameron	26	62	88
	Canisteo	82	198	280
	CVAS	124	177	301
	Fremont	46	91	137
	Greenwood	36	48	84
	Hammondsport	56	59	115
	Jasper	62	63	125
	Prattsburgh	40	99	139
	Pulteney	44	52	96
	Spring-Way	93	218	311
	Troupsburg	9	16	25
	Tuscarora	20	30	50
	Wayne	27	63	90
	Woodhull	36	82	118
	Subtotal	1,738	3,090	4,828
Total		6,280	6,970	13,250

Observations:

- AMR, Bath, and Hornell made the top three EMS transport runs. They made 39, 23, and 16 percent of the total transport runs, respectively.
- ALS and BLS units made 56 and 44 percent of the total transport runs, respectively.

MUTUAL AID IN TRANSPORT

A mutual aid transport occurs when the primary agency's ambulance is unavailable, and another agency transported the patient instead. We identified a mutual aid call by noting at least one ambulance from a nonprimary agency arriving on scene and recording a pair of transport time stamps. As there were situations where both a primary agency arrived AND yet a nonprimary agency transported a patient, there were two mutual-aid scenarios. The first recorded mutual aid while the local agency still arrived and the second recorded mutual aid without an arriving local agency unit.

Table 56 shows the number of transport runs made by each agency, including the runs to the agency's primary service area and the aid-given runs to the agency's nonprimary service area. The distribution of mutual aid calls by geography is summarized in Table 57 and detailed in Tables 58, 59, and 60 for all cities, villages, and towns, respectively.

Table 56: Transport Runs by Agency and Mutual Aid Given

Ambulance Service	Primary Transport Run	Aid-Given Transport Run		Total Run	Percent Aid Given
		Local Agency Arrived	Local Agency Did Not Arrive		
Addison	80	2	28	110	27.3
AMR	2,538	71	162	2,771	8.4
Avoca	50	0	14	64	21.9
Bath	1,476	7	118	1,601	7.8
Bath VA	0	1	1	2	100.0
Bradford	49	2	6	57	14.0
Cameron	49	0	13	62	21.0
Canisteo	194	1	3	198	2.0
CVAS	117	2	58	177	33.9
Fremont	80	0	11	91	12.1
Greenwood	30	2	16	48	37.5
Hammondsport	56	0	3	59	5.1
Hornell	1,020	32	55	1,107	7.9
Jasper	38	0	25	63	39.7
Prattsburgh	89	0	10	99	10.1
Pulteney	41	1	10	52	21.2
Spring-Way	214	1	3	218	1.8
Troupsburg	12	1	3	16	25.0
Tuscarora	20	0	10	30	33.3
Wayne	52	0	11	63	17.5
Woodhull	50	1	31	82	39.0
Total	6,255	124	591	6,970	10.3

Table 57: Summary of Transport Calls by Geography and Mutual Aid Received

Service Area	No Aid Call	Aid-Received Call		Total	Percent Aid Received
		Local Agency Arrived	Local Agency Did Not Arrive		
Cities	1,701	0	1	1,702	0.1
Villages	1,394	465	207	2,066	32.5
Towns	2,148	522	358	3,028	29.1
Total	5,243	987	566	6,796	22.9

Table 58: Transport Calls by City and Mutual Aid Received

City	No Aid Call	Aid-Received Call		Total	Percent Aid Received
		Local Agency Arrived	Local Agency Did Not Arrive		
Corning	1,048	0	1	1,049	0.1
Hornell	653	0	0	653	0.0
Total	1,701	0	1	1,702	0.1

Table 59: Transport Calls by Village and Mutual Aid Received

Village	No Aid Call	Aid-Received Call		Total	Percent Aid Received
		Local Agency Arrived	Local Agency Did Not Arrive		
Addison	39	22	53	114	65.8
Almond	0	0	2	2	100.0
Arkport	47	0	0	47	0.0
Avoca	12	6	40	58	79.3
Bath	632	286	34	952	33.6
Canisteo	56	62	34	152	63.2
Cohocton	30	24	1	55	45.5
Hammondsport	16	6	22	44	63.6
North Hornell	157	0	0	157	0.0
Painted Post	223	1	3	227	1.8
Riverside	41	0	0	41	0.0
Savona	24	23	1	48	50.0
South Corning	41	0	0	41	0.0
Wayland	76	35	17	128	40.6
Total	1,394	465	207	2,066	32.5

Table 60: Transport Calls by Town and Mutual Aid Received

Town	No Aid Call	Aid-Received Call		Total	Percent Aid Received
		Local Agency Arrived	Local Agency Did Not Arrive		
Addison	8	4	7	19	57.9
Avoca	11	12	49	72	84.7
Bath	341	162	24	527	35.3
Bradford	25	18	11	54	53.7
Cameron	16	20	19	55	70.9
Campbell	192	3	1	196	2.0
Canisteo	27	22	22	71	62.0
Caton	57	0	0	57	0.0
Cohocton	38	25	3	66	42.4
Corning	190	1	0	191	0.5
Dansville	21	12	5	38	44.7
Erwin	550	1	3	554	0.7
Fremont	21	22	0	43	51.2
Greenwood	9	12	2	23	60.9
Hartsville	4	7	9	20	80.0
Hornby	76	0	2	78	2.6
Hornellsville	160	0	0	160	0.0
Howard	7	16	18	41	82.9
Jasper	17	20	3	40	57.5
Lindley	56	0	0	56	0.0
Orange	4	2	0	6	33.3
Prattsburgh	39	36	12	87	55.2
Pulteney	33	8	8	49	32.7
Rathbone	11	13	18	42	73.8
Thurston	41	0	0	41	0.0
Troupsburg	7	5	24	36	80.6
Tuscarora	17	3	32	52	67.3
Urbana	23	10	35	68	66.2
Wayland	62	39	10	111	44.1
Wayne	35	17	2	54	35.2
West union	5	4	1	10	50.0
Wheeler	15	12	6	33	54.5
Woodhull	30	16	32	78	61.5
Total	2,148	522	358	3,028	29.1

Observations:

- 10 percent of transport runs made by ambulance services were aid-given.
- For 15 percent of transport calls, a non-primary agency unit assisted with transport although a primary agency unit arrived.
- For 8 percent of transport calls, a non-primary agency unit transported, and no primary agency unit arrived.

PRIMARY SERVICE AREAS

Table 61: Service Cities inside Steuben County

City	Primary Ambulance	Primary FD
Corning	AMR*	Corning City*
Hornell	Hornell*	Hornell

Note: *Agency studied in this analysis.

Table 62: Service Villages inside Steuben County

Village	Primary Ambulance	Primary FD
Addison	Addison*	Addison
Almond	Almond	Almond
Arkport	Hornell*	Arkport*
Avoca	Avoca*	Avoca
Bath	Bath*	Bath, Bath VA
Canisteo	Canisteo*	Canisteo
Cohocton	CVAS*	Cohocton
Hammondsport	Hammondsport*	Hammondsport
North Hornell	Hornell*	N. Hornell
Painted Post	AMR*	Painted Post
Riverside	AMR*	Painted Post
Savona	Bath*	Savona*
South Corning	AMR*	CJ St 34*
Wayland	Spring-Way*	Wayland

Note: *Agency studied in this analysis.

Table 63: Service Towns inside Steuben County

Town	Primary Ambulance Services	First-Responder Fire Departments
Addison	Addison*	Addison, Campbell*
Avoca	Avoca*	Avoca, Wallace
Bath	Bath*, Bath VA*	Bath, Kanona, Savona*
Bradford	Bradford*	Bradford
Cameron	Cameron*	Cameron
Campbell	AMR*	Campbell*, East Campbell
Canisteo	Canisteo*	Canisteo
Caton	AMR*	Caton*
Cohocton	CVAS*	Atlanta, Cohocton
Corning	AMR*	CJ St 16*, 34*, 43*, Gibson
Dansville	Dansville, Fremont*	Arkport *, Dansville, Perkinsville*, S. Dansville
Erwin	AMR*	Coopers Plains*, Gang Mills*
Fremont	Fremont*	Fremont
Greenwood	Greenwood*	Greenwood
Hartsville	Alfred Station, Canisteo*	Alfred Station, Canisteo
Hornby	AMR*	Hornby *
Hornellsville	Hornell*	Arkport*, N. Hornell, S. Hornell
Howard	Avoca*, Canisteo*, Fremont	Howard*
Jasper	Jasper*	Jasper
Lindley	AMR*	Lindley
Orange**	Bradford*	Bradford
Prattsburgh	Naples, Prattsburgh*	Naples, Prattsburgh
Pulteney	Pulteney*	Branchport, Pulteney
Rathbone	Addison*, Cameron*, Woodhull*	Addison, Cameron, Woodhull
Thurston	AMR*	Thurston*
Troupsburg	Troupsburg*	Troupsburg
Tuscarora	Tuscarora*	Tuscarora
Urbana	Hammondsport*	Hammondsport
Wayland	Spring-Way*	Perkinsville*, Wayland
Wayne	Wayne*	Wayne
West Union	Greenwood*, Independence	West Union, Whitesville
Wheeler	Avoca*, Bath*, Prattsburgh*	Avoca, Bath, Prattsburgh
Woodhull	Woodhull*	Woodhull

Note: *Agency studied in this analysis; **Orange town in Schuyler County was partially covered by Steuben County EMS in the 12-month study period.

DEMOGRAPHICS AND AREA

Tables 64, 65, and 66 briefly present the demographics and geography data of the cities, villages, and towns in Steuben County, respectively. The data was collected based on available information from the United States Census Bureau.

Table 64: Demographics and Area by City

City	Population		Median Age*	Percentage of Seniors*	Median Income*	Land Area**
	2019	2018				
Corning	10,538	10,789	38.4	15.8	\$49,539	3.26
Hornell	8,302	8,308	37.9	16.4	\$41,861	2.83

Note: *Year 2018; **Year 2010 and in units of square miles.

Table 65: Demographics and Area by Village

Village	Population		Median Age*	Percentage of Seniors*	Median Income*	Land Area**
	2019	2019				
Addison	1,652	1,753	37.0	13.9	\$56,667	1.90
Almond	430	494	35.2	18.1	\$61,458	45.72
Arkport	791	853	34.6	13.4	\$53,472	0.70
Avoca	894	960	39.3	16.9	\$51,875	1.20
Bath	5,472	5,572	45.2	20.7	\$34,604	2.90
Canisteo	2,135	2,262	43.1	22.9	\$53,458	0.93
Cohocton	791	899	34.0	9.0	\$47,386	1.50
Hammondsport	622	492	54.5	34.8	\$35,481	0.40
North Hornell	737	768	58.1	40.0	\$71,667	0.60
Painted Post	1,924	1,727	39.1	21.4	\$52,222	1.30
Riverside	472	514	48.2	30.5	\$44,091	0.30
Savona	780	840	34.7	14.5	\$45,000	1.00
South Corning	1,084	1,157	45.0	20.5	\$55,313	0.60
Wayland	1,764	1,810	43.1	14.9	\$53,125	1.00

Note: *Year 2018; **Year 2010 and in units of square miles.

Table 66: Demographics and Area by Town

Town	Population		Median Age*	Percentage of Seniors*	Median Income*	Land Area**
	2019	2018				
Addison	2,472	2,566	37.2	16.6	\$53,281	25.55
Avoca	2,143	1,978	46.4	20.5	\$48,669	36.25
Bath	11,929	12,064	45.3	20.2	\$40,916	95.32
Bradford	809	705	43.0	17.4	\$46,875	25.12
Cameron	915	921	37.4	18.6	\$46,397	46.76
Campbell	3,232	3,293	49.9	22.0	\$48,484	40.69
Canisteo	3,202	3,273	44.7	21.8	\$52,880	54.35
Caton	2,113	2,026	44.9	16.3	\$73,900	37.56
Cohocton	2,448	2,435	40.2	15.1	\$52,500	56.08
Corning	6,175	6,274	43.5	16.0	\$61,395	36.85
Dansville	1,787	1,947	41.8	14.4	\$51,447	48.10
Erwin	8,136	8,313	41.0	17.4	\$69,555	38.66
Fremont	956	1,001	46.6	20.9	\$57,734	32.2
Greenwood	763	719	46.8	25.6	\$60,938	41.34
Hartsville	576	721	41.0	18.4	\$59,837	36.14
Hornby	1,648	1,815	40.7	13.7	\$62,321	40.85
Hornellsville	3,978	4,037	47.5	24.2	\$47,212	43.33
Howard	1,395	1,647	42.8	15.7	\$63,229	60.55
Jasper	1,369	1,571	27.3	12.7	\$40,469	52.64
Lindley	1,894	1,863	40.6	15.8	\$56,319	37.60
Prattsburgh	1,953	2,131	40.3	19.4	\$49,773	51.67
Pulteney	1,261	1,288	52.0	23.1	\$53,409	33.14
Rathbone	1,092	1,062	38.3	15.5	\$45,909	36.02
Thurston	1,279	1,260	47.2	17.1	\$58,750	36.35
Troupsburg	1,262	1,102	36.6	16.1	\$51,944	61.24
Tuscarora	1,444	1,354	42.3	17.9	\$51,250	37.63
Urbana	2,233	2,098	56.4	32.8	\$55,104	40.95
Wayland	3,904	3,980	48.2	20.4	\$49,875	39.0
Wayne	990	1,022	52.5	27.7	\$55,156	20.58
West Union	300	322	47.5	22.7	\$44,375	40.90
Wheeler	1,245	1,091	42.4	17.7	\$50,469	46.07
Woodhull	1,636	1,951	35.5	13.7	\$49,150	55.39

Note: *Year 2018; **Year 2010 and in units of square miles.

Present and future community demographics and impending impacts on EMS

Overall, Steuben County has experienced a population decrease during the past decade^{iv}. Fewer people generally result in fewer EMS responses, however, as populations age, EMS response volume generally increases. Like most of the U.S., Steuben County's residents are aging. The median age of Steuben County residents increased from 42.6 in 2017 to 43.3 in 2018^v.

Based on population and age trends, EMS volumes in Steuben County are likely to remain relatively stable, with slight increases annually, as older residents require additional healthcare services.

Table 67: Steuben County Population by Year

Year	Population	# Change	% Change
2021	94,417	-481	-0.51%
2020	94,898	-481	-0.50%
2019	95,379	-481	-0.50%
2018	95,860	-500	-0.52%
2017	96,360	-598	-0.62%
2016	96,958	-593	-0.61%
2015	97,551	-614	-0.63%
2014	98,165	-678	-0.69%
2013	98,843	-82	-0.08%
2012	98,925	-223	-0.22%
2011	99,148	143	0.14%
2010	99,005	-83	-0.08%

ADDITIONAL/ADMINISTRATIVE PERSONNEL

Table 68: Workload of Administrative Units

Unit ID	Unit Agency	Annual Hours	Annual Runs
c2	Arkport FD	43.5	58
c201	Arkport FD	35.7	51
c9	Campbell FD	50.5	87
c901	Campbell FD	96.5	194
c903	Campbell FD	44.2	72
c904	Campbell FD	31.9	50
c1101	Caton FD	10.9	20
c1102	Caton FD	20.1	41
c1104	Caton FD	16.9	29
c13	Coopers Plains FD	22.0	46
c16	CJ St 16	16.7	28
c1601	CJ St 16	9.6	15
c17	Gang Mills FD	51.8	85
c1701	Gang Mills FD	56.5	109
c1702	Gang Mills FD	51.8	94
c22	Hornby FD	41.9	55
c2202	Hornby FD	18.0	26
c24	Howard FD	18.0	29
c29	Perkinsville FD	17.4	17
c2901	Perkinsville FD	12.8	7
c2902	Perkinsville FD	18.0	14
c3301	Savona FD	14.5	19
c3302	Savona FD	10.0	11
c3304	Savona FD	53.5	110
c34	CJ St 34	22.9	55
c3401	CJ St 34	12.6	25
c3701	Thurston FD	17.8	18
c43	CJ St 43	28.2	34
c4301	CJ St 43	12.7	13
c4302	CJ St 43	16.9	20
c4303	CJ St 43	19.4	23
Other		88.0	126
Total		981.2	1,581

Note: "Other" includes 18 administrative units with less than 9 hours of annual workload each.

NON-EMERGENCY TRANSFERS

Table 69 presents the non-emergency transfer service broken down by ambulance service.
Note: AMR did not supply data for this summary.

Table 69: Non-emergency Transfer Service by Agency

Ambulance	Calls	Percent of Calls	Runs	Runs Per Day	Minutes Per Run	Annual Hours	Percent of Work	Minutes Per Day
Bath	177	12.7	187	0.5	124.1	386.9	12.4	63.6
Hornell	1,193	85.7	1,212	3.3	133.7	2,701.4	86.4	444.1
Other	22	1.6	23	0.1	95.6	36.6	1.2	6.0
Total	1,392	100.0	1,422	3.9	131.9	3,125.0	100.0	513.7

Note: "Other" includes 12 agencies with less than 5 transfers each.

ALS AND BLS UNITS

Table 70: Steuben County ALS and BLS Units

ALS Ambulance		ALS Fly Car		BLS Ambulance	
Unit ID	Unit Agency	Unit ID	Unit Agency	Unit ID	Unit Agency
A111 – A115	Hornell	ALS-101*	AMR	A4, A14	Spring-Way
A120 – A122	Bath VA	ALS-102	AMR	A5	Canisteo
A160 – A179	AMR	ALS-103*	AMR	A7, A16, A23	CVAS
		ALS-104	AMR	A8	Pulteney
		ALS-105	AMR	A9	Wayne
		Medic-110	Hornell	A10	Woodhull
				A11	Greenwood
				A12	Jasper
				A15, A27	Cameron
				A17, A25	Addison
				A18, A28	Fremont
				A19	Avoca
				A21, A29	Bradford
				A22	Troupsburg
				A24	Tuscarora
				A30	Prattsburgh
				B1 – B5, B6**, ATV-9***	Bath
				H1, H2	Hammondsport

Note: *May also be a transporting Rig; **BLS fly car; ***Off-road vehicle.

RESPONSE TIME OF NONPRIMARY AGENCIES

For 612 analyzed calls, a nonprimary agency's unit arrived first. Table 71 shows the components of response time, broken out by call type. The average and 90th percentile response times broken down by the studied ambulance services and first-responder fire departments are summarized in Tables 72 and detailed in Tables 73 and 74 for each agency. Nonprimary agencies that did not arrive first to one of these 612 calls are not shown in Tables 73 or 74.

Table 71: Average and 90th Percentile Response Time (Minutes) of First Arriving Unit by Call Type, Nonprimary Agency

Call Type	Call Processing + Activation	Travel	Total Response Time	90th Percentile Response Time	Number of Calls
Breathing difficulty	6.8	10.6	17.4	27.5	145
Cardiac and stroke	7.1	9.7	16.8	26.0	157
Fall and injury	6.3	10.3	16.6	23.0	37
Illness and other	6.9	10.0	16.9	26.7	132
MVA	5.6	8.1	13.8	22.5	34
Overdose and psychiatric	6.4	8.9	15.3	21.8	18
Seizure and unconsciousness	6.2	9.9	16.1	24.5	89
Total	6.9	9.9	16.7	25.7	612

Table 72: Summary of Average and 90th Percentile Response Time (Minutes) of First Arriving Unit, by Agency Type

Agency Type	Call Processing + Activation	Travel	Response Time	90th Percentile Response Time	Number of Calls
Ambulance	6.6	10.2	16.8	26.0	567
First-Responder FD	7.9	6.6	14.5	20.1	45
Total	6.7	9.9	16.7	25.7	612

Table 73: Average and 90th Percentile Response Time (Minutes) of First Arriving Unit, by Nonprimary Ambulance Service

Ambulance Service	Call Processing + Activation	Travel	Response Time	90th Percentile Response Time	Number of Calls
Addison	13.5	5.9	19.4	26.2	12
AMR	5.4	10.5	15.9	25.0	455
Bath	9.8	9.1	18.9	24.6	22
Bath VA	10.7	8.5	19.1	19.1	1
Cameron	12.4	9.8	22.2	22.2	1
Canisteo	11.0	14.2	25.1	28.2	3
CVAS	9.8	6.8	16.7	25.6	7
Fremont	4.4	10.2	14.7	14.7	1
Greenwood	15.4	11.4	26.8	29.7	4
Hornell	10.9	9.6	20.5	29.0	29
Jasper	13.2	7.7	20.9	26.0	14
Prattsburgh	9.5	7.7	17.2	20.7	3
Pulteney	12.9	9.6	22.6	23.8	2
Troupsburg	15.4	12.0	27.4	27.4	1
Tuscarora	10.8	11.6	22.4	28.3	2
Wayne	16.5	11.5	28.0	29.8	3
Woodhull	12.6	11.6	24.3	29.4	7
Total	6.6	10.2	16.8	26.0	567

Table 74: Average and 90th Percentile Response Time (Minutes) of First Arriving Unit, by Nonprimary First-Responder Fire Department

First-Responder Fire Department	Call Processing + Activation	Travel	Response Time	90th Percentile Response Time	Number of Calls
Arkport	11.7	5.6	17.3	17.3	1
Campbell	10.8	7.3	18.1	21.5	13
Caton	9.6	6.2	15.9	15.9	1
CJ ST	7.1	7.2	14.3	18.2	14
Coopers Plains	5.6	6.5	12.1	15.7	6
Corning City	3.1	4.1	7.3	11.8	3
Howard	7.3	8.7	17.1	17.1	1
Perkinsville	10.2	1.9	12.1	12.1	1
Savona	6.7	5.4	12.1	19.8	5
Total	7.9	6.6	14.5	20.1	45

Note: CJ ST is the Corning Town Volunteer Fire Department including CJ ST 16, CJ ST 34, and CJ ST 43.

FUTURE SERVICE DELIVERY OPTIONS

EMS in Steuben County is at a crossroads. Many volunteer agencies are struggling to maintain service levels for their local communities, often relying on neighboring jurisdictions for an EMS response. Our analysis of volunteer ambulance responses reveals that the primary volunteer ambulance agency only responded on 49.2 percent of their calls, and only arrived on scene 46.0 percent of the time. Due to the challenges facing rural EMS providers across the country, and feedback from community stakeholders in Steuben County, these challenges are likely to increase in the future.

The County has several potential options for ensuring the availability of reliable EMS services in the county. These recommended options seem to be supported by many of the current EMS system agency leaders.

Option 1: Maintain Status Quo

The county could choose to take no action to intervene in the EMS and ambulance delivery system in Steuben County. However, the current state, and future state, without significant modification, will continue to suffer service failures. Trends like reductions in the volunteer and even career EMS workforce are well researched and documented, and will likely exacerbate in the years to come.

Based on our review and analysis, given the current state of EMS and ambulance delivery in Steuben County, taking no action is a dangerous option.

Option 2: Provide Financial Subsidy to Existing Provider Agencies

Some, but not most of the service delivery challenges with most of the agencies Town and Village could be helped with funding from the County. However, the feedback from the vast majority of the agencies is that their primary issue is lack of volunteers. Funding to provide meaningful support for ambulance operations would likely go directly to compensating personnel. This compensation could come in the form of stipends for on-call personnel, pay for covering actual calls, or perhaps paying wages for coverage either during peak times, or times that are difficult to cover with volunteer shifts.

While it is possible that paid and volunteer members of ambulance agencies can co-exist, more often than not, approaches such as these tend to lead to a further decline in volunteerism, as friction is created between those volunteering and those getting paid for their time. Volunteers eventually either stop volunteering, or transition to a paid, or paid on-call position. This leads to further costs, and is still a less than optimal solution.

Also, one of the challenges with Steuben County's ambulance system is the number of different agencies, each with very low response and transport volumes. Individually funding these numerous agencies is a very inefficient use of public funding.

Option 3: Contract with a Private Ambulance Provider to Support Local Agencies with Continuous Safety-Net Coverage.

American Medical Response (AMR) is currently the ambulance provider for the City of Corning, and is largest ambulance provider in the County, both in terms of resources available to respond to EMS calls, but also the number of calls handled in the County. AMR also provides Advanced Life Support (ALS) intercept to many areas of the county when a presumptively assigned Emergency Medical Dispatch (EMD) response determinant indicates a likelihood of the patient needing an ALS level of care.

AMR is the primary ambulance provider in several parts of Steuben County, and many jurisdictions also use them for mutual aid when they are unable to muster an ambulance crew to respond to a medical call. When requested as a mutual aid provider, the request typically comes after attempts by the local EMS agency to muster a crew. This often results in a significant response delay.

The county could seek a proposal from AMR, or other private ambulance providers, to serve as the simultaneously dispatched ambulance provider. The service could be offered either county-wide, or specifically for the communities that have a low prevalence of mustering an ambulance crew to respond to an emergency call.

The wide geography of Steuben County, combined with the relatively low response volume, makes it financially challenging for AMR, or any contracted ambulance provider, to allocate dedicated resources to the County to enhance their state of readiness to reduce response times. It is likely that Steuben County would need to provide a financial subsidy to the contracted ambulance provider in order to assure the service is available.

The goal for this arrangement would be for County 911 to simultaneously dispatch the ambulance agency from the local jurisdiction AND an AMR ambulance. If the primary ambulance provider can muster a crew to respond, they can notify county 911, who will cancel the response of the assigned AMR unit and the local ambulance agency will complete the response and potential transport to a hospital.

This model would eliminate the delay of using the current dispatch process of dispatching the primary provider, waiting 9 minutes, then dispatching a mutual aid resource. If the mutual aid resource does not respond, then a 3rd provider, usually from a greater distance from the scene of the call is requested to respond.

An enhancement of this option could be that each ambulance agency in the county should notify the county that they have a scheduled, *staffed* and in service ambulance, ready to respond. This notice should be provided daily, at least every 12 hours. This way, the contracted provider and the county PSAP would be able to plan for gaps in geographic coverage, and potentially pre-position ambulances to cover those gaps.

This option would assure that AN ambulance is responding to the call during peak times, in the event the primary provider is unable to respond.

It is unlikely that the revenue generated from these additional EMS responses and transports will cover the costs associated with the enhanced resource deployment required by AMR to provide this service. As such, the county will likely need to provide a subsidy for the additional staffing required.

To determine the additional resources necessary to provide reliable ambulance service to the agencies that have difficulty mustering an ambulance for a response, CPSM derived the response reliability for all ambulance agencies in the county. This is represented in Table 75 below.

**Table 75: Steuben County Ambulance Provider Response Coverage Profiles
(Based on 2020 Response Data)**

Agency	Responses	Primary Responded	%	Secondary Responded	%	Response Canceled	%
Hornell FD Ambulance	3,414	3,364	98.5%	6	0.2%	44	1.3%
American Medical Response	4,006	3,890	97.1%	16	0.4%	100	2.5%
Fremont FD Ambulance	87	84	96.6%	2	2.3%	1	1.1%
Bath Ambulance	2,678	2,405	89.8%	165	6.2%	108	4.0%
Greenwood FD Ambulance	73	64	87.7%	7	9.6%	2	2.7%
Bradford FD Ambulance	127	111	87.4%	9	7.1%	7	5.5%
Wayne FD Ambulance	109	95	87.2%	9	8.3%	5	4.6%
Bath VA FD Ambulance	6	5	83.3%	1	16.7%	0	0.0%
Prattsburg FD Ambulance	146	120	82.2%	22	15.1%	4	2.7%
Jasper FD Ambulance	81	65	80.2%	9	11.1%	7	8.6%
Pulteney FD Ambulance	100	80	80.0%	14	14.0%	6	6.0%
Tuscarora Ambulance	93	73	78.5%	15	16.1%	5	5.4%
CVAS Ambulance	311	243	78.1%	34	10.9%	34	10.9%
Spring-Way Ambulance	452	343	75.9%	80	17.7%	29	6.4%
Woodhull FD Ambulance	131	97	74.0%	27	20.6%	7	5.3%
Cameron FD Ambulance	127	94	74.0%	26	20.5%	7	5.5%
Addison FD Ambulance	268	176	65.7%	73	27.2%	19	7.1%
Canisteo FD Ambulance	417	253	60.7%	126	30.2%	38	9.1%
Hammondsport Ambulance	211	97	46.0%	96	45.5%	18	8.5%
Avoca FD Ambulance	295	129	43.7%	115	39.0%	51	17.3%
Troupsburg FD Ambulance	57	20	35.1%	30	52.6%	7	12.3%
Overall	13,189	11,808	89.5%	882	6.7%	499	3.8%

As shown, 11 ambulance agencies responded to fewer than 80% of EMS requests in their primary service area.

This represents 2,462 responses in 2020 used for our analysis.

We then analyzed the ambulance resources, defined as Unit Hours (*one staffed ambulance for one hour*) will likely be required to cover these responses in Steuben County, given an average 'task time' (*the time from dispatch to available for another response*) of 90 minutes.

Table 76 estimates the response and transport volume, and the ambulance unit hours necessary to cover all ambulance responses in Steuben County, with the exception of the communities that are able to respond to > 80% of the current response volume.

Table 76: Fiscal Analysis: County Contracted Provider for Continuous Safety-Net Coverage

Responses	
Uncovered Ambulance Responses	2,462
Responses per Hour	0.281
Time on Task per Hours	1.50
Ambulance Unit Annual Hours Necessary	17,520
Cost per Unit Hour	\$67.50
Annual Cost of Coverage	\$1,182,600
Transports (@45% Transport Ratio)	1,108
Average Revenue per Transport	\$350
Annual Revenue From Transports	\$387,765
Annual Revenue Shortfall	\$794,835

Based on these projections, CPSM estimates the county would likely need to provide a **\$794,835** subsidy to a county-wide ambulance contractor to assure financial sustainability of the service delivery 24 hours a day, 7 days a week.

Option 4: Contract with a Private Ambulance Provider to Support Local Agencies with Peak Demand Safety-Net Coverage.

This option takes the concepts of Option 1 and applies it the peak EMS response volume periods, essentially 7a – 7p. The processes would be the same, however, the hours needed for staffing, and the response, transport and revenue projections are modified for a focused coverage period option of 12 hours per day, vs. 24 hours per day.

Table 77: Estimated Costs for Contracted County-Wide Ambulance Safety-Net Coverage During Peak Response Volume Periods

Responses	
Uncovered Ambulance Responses	1,477
Responses per Hour	0.169
Time on Task per Hours	1.50
Ambulance Unit Annual Hours Necessary	8,760
Cost per Unit Hour	\$67.50
Annual Cost of Coverage	\$591,300
Transports (@45% Transport Ratio)	665
Average Revenue per Transport	\$350
Annual Revenue From Transports	\$232,659
Annual Revenue Shortfall	\$358,641

For this option, the county would likely need to provide a **\$359,000** annual subsidy to assure reliable 'safety-net' coverage during peak response volume periods.

Option 5: Establish a County-Based Ambulance System to Support Local Agencies with Continuous Safety-Net Coverage.

The concept behind this option is essentially the same as the contracted, county-wide service described in Option 1, however, using a county-operated ambulance system. This option may need to be considered in the event the county is unable to select a private provider for the county-wide contracted services.

The anticipated required unit hours, responses and transports would be essentially similar, however, the cost per unit hour will likely be higher since there would be higher costs of capital equipment acquisition and initial supply purchases.

An example budget, including personnel, startup and infrastructure costs are presented below:

Table 78: Example Personnel Costs – County-Run Ambulance service

County Operated Ambulance Service	
Personnel	
Annual EMT FTE Expense	\$52,510
Annual Paramedic FTE Expense	\$83,398
EMS/Ambulance Coordinator	\$94,500
EMT FTEs <i>Per Ambulance</i>	4.5
Paramedic FTEs <i>Per Ambulance</i>	4.5
EMT Expense <i>Per Ambulance</i>	\$236,293
Paramedic Expense <i>Per Ambulance</i>	\$375,289
Staffed Ambulances	2
Annual Personnel Expense	\$1,223,165

For this analysis, we assumed full-time staffing for the field positions, and a full-time coordinator. It may be possible to marginally reduce expenses for this option by using part-time personnel.

Table 79: Example Start-up and Infrastructure Costs – County-Run Ambulance service

Ambulance Acquisition	
Ambulance	\$250,000
Equipment	\$105,000
Supplies	\$25,000
Sub-Total: Ambulance & Equipment	\$380,000
Ambulances Needed	3
Ambulance Acquisition Expense	\$1,140,000
Annual Depreciation Expense Per Ambulance	\$54,286
<i>(7 years useful life)</i>	
Ambulance Fuel/Maintenance	
Annual Miles	100,000
Fuel Expended (gallons)	\$20,000
Fuel Cost (@ \$3.50/gallon)	\$70,000
Maintenance	\$15,000
Annual Ambulance Operating Expense	\$85,000
Annual Ambulance Expense	\$139,286
Total Annual Expenses	\$1,362,451
Unit Hours Staffed (8,760 annual hours x 2)	17,520
Total Expense per Unit Hour	\$77.77

Using the same revenue analysis as we used for Option 1, the annual on-going subsidy to establish a **county operated** ambulance service for **continual county coverage** is illustrated below.

Table 80: Financial Analysis – County-Run Full Time Safety-Net Coverage

Responses	
Uncovered Ambulance Responses	2,462
Responses per Hour	0.281
Time on Task per Hours	1.50
Ambulance Unit Annual Hours Necessary	17,520
Cost per Unit Hour	\$77.77
Annual Cost of Coverage	\$1,362,451
Transports (@45% Transport Ratio)	1,108
Average Revenue per Transport	\$350
Annual Revenue From Transports	\$387,765
Annual Revenue Shortfall	\$974,686

For this option, the county would likely experience a **\$974,686** annual loss, while assuring reliable ‘safety-net’ coverage 24 hours a day, 365 days a year.

Option 6: Establish a County-Based Ambulance System to Support Local Agencies with Peak Demand Safety-Net Coverage.

This option takes the concepts of Option 3 and applies it the peak EMS response volume periods, essentially 7a – 7p. The processes would be the same, however, the hours needed for staffing, and the response, transport and revenue projections are modified for a focused coverage period option of 12 hours per day, vs. 24 hours per day.

Table 81: County Ambulance Provider During Peak Response Volume Times

Responses	
Uncovered Ambulance Responses	1,477
Responses per Hour	0.169
Time on Task per Hours	1.50
Ambulance Unit Annual Hours Necessary	8,760
Cost per Unit Hour	\$77.77
Annual Cost of Coverage	\$681,225
Transports (@45% Transport Ratio)	665
Average Revenue per Transport	\$350
Annual Revenue From Transports	\$232,659
Annual Revenue Shortfall	\$448,566

Based on this analysis, it is likely that a county-run ambulance agency, operating 12-hours per day to cover peak response volume periods would require a subsidy of **\$448,566**.

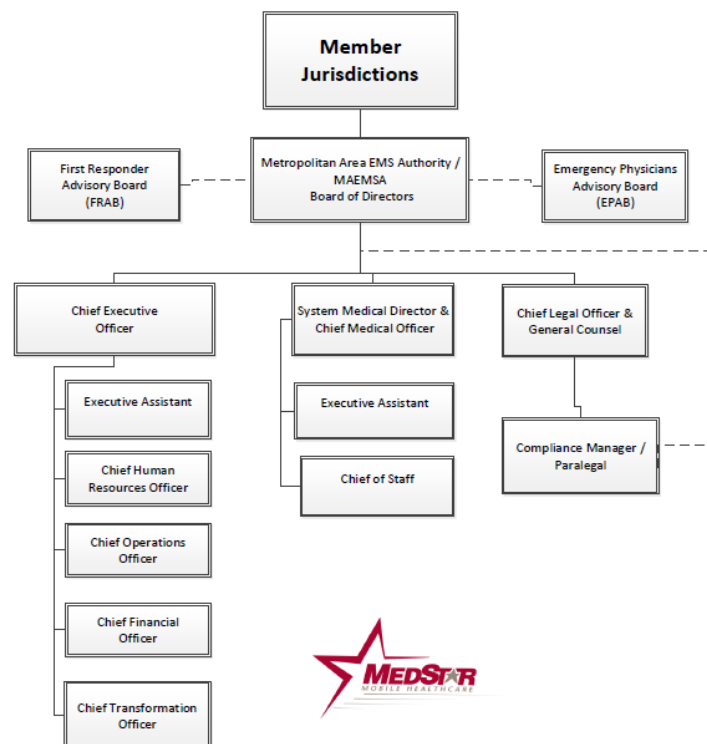
Option 7: Establish a 'Public Utility Model' system through a Joint Powers/Inter-Local Agreement.

The concept of a Public Utility Model (PUM) EMS system was initially established in the 1980's. The concept is that an independent governmental authority is established by communities with an interest in establishing a publicly accountable agency, that maximizes clinical and operational effectiveness, balanced with fiscal efficiency. Participating jurisdictions enter into a Joint Powers Agreement (JPA), or an Inter-Local Agreement (ILA), to form an independent governmental administrative agency that serves as the governing and operating entity for the ambulance service. These types of arrangements can often be found for regional shared services, such as an economic development corporation, a transportation authority, or even a shared jail facility that serves a geographic region and inures to the benefit of participating jurisdictions.

Examples of the PUM EMS system are found in Fort Worth, Texas; Tulsa and Oklahoma City, OK; Reno, NV; Little Rock, AR; Richmond, VA and Pinellas County, FL.

An example of the system structure for the Metropolitan Area EMS Authority in Fort Worth Texas is shown in Figure 15.

Figure 15: Example Public Utility Model Structure of Governance



These systems combine the benefit of a publicly accountable EMS agency, with a nimble governance structure that creates an environment for innovation. The governing board is comprised of members appointed by the jurisdictions participating in the Authority through the JPA/ILA. The Authority Board has two stakeholder boards that serve in an advisory capacity, one comprised of physicians (the Emergency Physicians Advisory Board (EPAB)) which serves as the clinical oversight for the EMS system, and the other comprised of the first response agencies (First Responder Advisory Board (FRAB)) that participate as part of the EMS response system.

Steuben County could consider establishing a Public Utility Model/EMS Authority system comprised of all jurisdictions who agree to participate in the authority. Participation in the authority would provide the participating jurisdictions with a seat on the governing board, and typically include a financial commitment to help fund the system, should the costs of operating the system as the level desired by the jurisdictions exceed the revenue generated through operations. The Authority Board would also be empowered by the member jurisdictions to set ambulance fees, contract for services, and obtain a Certificate of Need on behalf of all participating jurisdictions.

A sample Inter-local agreement from the Metropolitan Area EMS Authority is included in this report as Appendix XX.

The budget and operations of the EMS Authority would be economically like a county-run EMS agency, but would have independent public governance, and joint ownership by all participating jurisdictions.

What if you call 911 and no one comes?

Inside the collapse of America's emergency medical services.

By Erika Edwards

Oct. 22 2019



<https://www.nbcnews.com/health/health-care/there-s-shortage-volunteer-ems-workers-ambulances-rural-america-n1068556>

The night of June 15, 2016, was perfect for a softball game in Hebron, North Dakota. The temperature had reached almost 80 degrees that day, and even though Jerrid Soupir had been feeling pretty lousy — like maybe he was catching a summer cold — he was itching to get out on the field.

It was a doubleheader that night. Soupir, then 46, was playing shortstop in the second game. He remembers helping his teammates make a double play, getting two players out.

He turned to walk back to his position, went limp and fell straight to the ground. Soupir had gone into [cardiac arrest](#), meaning his heart stopped working suddenly. It's often fatal if the victim doesn't get help quickly.

There is no hospital in Hebron. In fact, when someone calls 911, there isn't even a law that requires anyone in Hebron to answer the phone. Like so many other low-income, rural communities across the country, the small town's ambulance runs on altruism alone.

And those ambulance services are closing in record numbers, putting around 60 million Americans at risk of being stranded in a medical emergency. Because so many emergency medical services (EMS) agencies have been struggling financially, some states are stepping in with funding. But emergency medical experts say it's not enough to cure the dire situation.

Organizing and providing emergency medical care is left to the people living in Hebron, which has a population of 677. Luckily for Soupir, the softball field was the right place to be when he collapsed.

At the game that night were not one, but two people who worked with the local [ambulance service](#). A third player had a CPR kit in his car. A fourth emergency worker happened to be out on her evening walk by the park.

The softball team turned makeshift [emergency department](#) got Soupir to the hospital in Bismarck — 60 miles away — and saved his life that night. "If there had been no ambulance, and people wouldn't have acted the way they did," Soupir said, "I wouldn't be alive."

Like so many other small towns in America, Hebron relies almost exclusively on volunteers, making it difficult to keep its EMS going.

"We struggle getting enough staff to cover every shift, 24 hours a day, seven days a week," Steven Maershecker, squad leader of the Hebron ambulance service, said.

Maershbecker, 54, also owns the town grocery store, called Jack & Jill Grocery, on Main Street. Working full time and donating any extra time to the community is just what people in towns like Hebron do.

"The way I was brought up, you give it your all. You give 120 percent all the time," Maershbecker said.

Two hours to the southwest of Hebron, close to the state's border with Montana, the EMS situation in the tiny town of Marmarth, North Dakota, (population 143) is so dire that it's at risk of shutting down.

"We are literally one person away from closing," said Erick Hartse, a volunteer paramedic with the Marmarth ambulance service.

There are 12 EMS personnel in Marmarth, and they each take 12-hour shifts. Two people must be on call at the same time: usually one to drive the ambulance and another to administer more advanced medical care. All 12 donate their time, without compensation of any kind. That means they must also work a full-time job to support their families.

"We've been relying on volunteers to be the backbone in EMS for a long time, and unfortunately, that needs to change," Hartse, 30, said. "Could you imagine being a volunteer doctor? It's unfathomable."

Still, Hartse, a third-generation paramedic, can't imagine any other way of life.

"It was something that was ingrained in me at a very young age," he said. "It's a strong sense of community and a strong sense of being willing to help other people. You take a little bit of time out of your day to help somebody else that's having the worst day of their lives."

Shrinking, aging populations

The situations in Hebron and Marmarth aren't isolated; they come at a time when demand for [health care in rural America](#) far exceeds the supply of people necessary to provide that care.

According to the [U.S. Census Bureau](#), in 1900, 60 percent of the population was considered "rural." By 2010, that percentage had fallen to 19.3 percent. (The Census Bureau defines a rural community as one with a population of less than 2,500.) However, the vast majority of land in the U.S. — more than 95 percent — is rural.

Younger, healthier members of the community often leave small towns for urban areas, leaving behind aging, often poor, older adults who tend to be the ones calling 911 with [heart attacks](#), [strokes](#) and other health emergencies.

That leaves few people available — and willing — to volunteer as emergency medical personnel.

"As the population in these communities shrinks, you've got a finite pool of people who are willing to volunteer," said Wayne Denny, chief of Idaho's Bureau of Emergency Medical Services and Preparedness.

EMS volunteer work requires hours of initial training that costs hundreds of dollars, even at the most basic levels. In North Dakota, for example, emergency medical responders need 50 to 60 hours of training to learn how to drive an ambulance and assist with basic CPR and first aid. Those classes can cost at least \$600, which must be shouldered by the unpaid volunteer.

Training commitment hours and costs rise steadily as the volunteers become more skilled, climbing the ranks from basic emergency medical technician to advanced emergency medical technician to paramedic. And every two years, volunteers need continuing education.

Maershbecker, of Hebron, is an emergency medical responder, or EMR. That role requires 16 hours of additional training every two years. Emergency medical technicians, or EMTs, need at least 40 hours.

"We only need 16, but all of us are taking 40-plus because we want to be able to assist our EMTs as fully as we possibly can," Maershbecker said. "The more we know, the more we can help them."

"The more we know, the more we can help them," Maershbecker said. (Ackerman + Gruber / for NBC News)

In many shrinking rural communities, agencies like the ones in Hebron and Marmarth are "hanging on by the skin of their teeth," said Andy Gienapp, head of the Office of Emergency Medical Services for the Wyoming Department of Health.

"The reason that they're managing to hang on is that some of the volunteers just look around and say, 'Well, good grief, if I don't continue to do this, who will?'" Gienapp said.

Hartse in Marmarth, North Dakota, agrees. "Can you imagine sitting in a place and dialing 911 and not having anybody show up?" he asked. "That's very difficult for me to sit back and try to accept."

When one EMS agency closes, even temporarily, it puts a tremendous strain on surrounding services that must [travel farther to help those in need](#).

"In Idaho, like other western states, it's not like there's a neighboring community five miles up the road. It might be 30 miles. It might be 50 miles," Denny said.

Adding to the strain, a report from the University of North Carolina Cecil G. Sheps Center for Health Services Research found that 118 rural hospitals across the country have closed since 2010, though that number does not take into account small facilities that had to shut their doors temporarily and then reopened. Many of those hospitals are in states that did not expand Medicaid under the Affordable Care Act.

"We've never had this many hospitals close this fast in this country," said Nikki King, a member of the National Rural Health Association, a nonprofit organization that advocates for rural health issues.

Fewer rural hospitals mean ambulances need to travel even farther distances, often in rough terrain or on unmarked roads.

"You're talking about an older, sicker, poorer population that's more likely to rely on EMS that is now farther and farther away from health care," King said.

What's more, most EMS programs get paid by each emergency call they go on, through reimbursements from Medicare, Medicaid or private payers. Longer drives mean fewer calls, and consequently, less money.

And EMS services respond to calls regardless of patients' ability to pay.

"Mixed in with those patients who have private insurance, or the financial means to pay an ambulance bill, is a fair amount of underinsured or those who have no insurance whatsoever," Gienapp explained.

Very often, EMS funding cannot cover the cost of having a working ambulance and crew on standby, waiting for an emergency call. Some calls end up with [no patient to bill](#): the call could be canceled; the person may refuse to go to the hospital; or the patient may die before going to the hospital.

Other funding can come from a variety of sources, but usually not the state legislature. A majority of states do not consider local emergency medical services "essential" by law, as they do for fire and police.

Sometimes money comes from local taxes, a well that's drying up with the shrinking rural population. In Idaho, for example, there is a 25 cent fee on motor vehicle registrations that's allocated for EMS in each county.

"But in these smaller counties that are very rural, the number of motor vehicle registrations they have every year is small," Denny said.

King said communities are forced to support their EMS agencies in any way possible.

"We have critical care emergency services being funded by fish fries and spaghetti dinners."

How did we get here?

In the 1950s, it was funeral homes that actually provided many of the country's ambulance services because they had vehicles — namely, hearses — that could accommodate a person who needed to lie down. It was an ominous predictor of what was to happen over the next decade.

As the U.S. highway system modernized and flourished, motor vehicle fatalities increased. By 1962, tens of thousands of people were [dying in car accidents](#).

Four years later, the National Academy of Sciences [published](#) what is now considered to be a landmark report, called "Accidental Death and Disability: The Neglected Disease of Modern Society."

It laid the groundwork for a system of pre-hospital medical care by spotlighting unnecessary deaths and disability from accidental injuries — in particular, motor vehicle accidents. Lives could be saved, the report concluded, if injured drivers and their passengers could get to a hospital quickly.

"All ambulance services really began with the concept: how do we get somebody off the highway from a motor vehicle crash and get them to a hospital?" Gienapp, of the Wyoming Department of Health, said.

But in 1960, just a handful of states had developed standardized courses for emergency rescuers, and fewer than half of all EMS personnel had even minimal first aid training.

Over the following years, the system evolved to transport people who have had other medical emergencies, such as heart attacks and strokes. As a result, EMS fell under the National Highway Traffic Safety Administration, not the Department of Health and Human Services.

EMS “grew up overnight,” Gienapp said. “In rural America, it was very easy. If you wanted an ambulance service, you just got two or three of your friends together and went out and got a truck.” Dorothy Baron did just that.

In 1977, Baron and a few other residents in her hometown of Moorcroft, Wyoming, (population 1,009) saw a gap in emergency health care, and took it upon themselves to take the necessary training courses and then start their own volunteer ambulance service.

Their first “ambulance” was a used Chevy Suburban with a board in the back that acted as a gurney. It stuck so far out of the vehicle’s backend that Baron’s crew couldn’t get the door closed.

As emergency medicine technology evolved, so did Baron. Over time, she became an advanced EMT, and her EMS agency was able to purchase real ambulances.

She did this in addition to raising seven children. “It was just something I could do to contribute to the community,” Baron explained.

Baron, who turns 82 this month, continues her volunteer EMS work to this day. She had to cut her interview for this story short; a call about a car accident demanded her attention.

Pensions for the unpaid

Recruiting and holding on to people like Baron who spend decades serving their community can be difficult.

There is no 401K that comes with [volunteer work](#), no big payout at the end of service, and very often, no benefits other than the satisfaction of helping neighbors in need. Gienapp estimates that nearly three-quarters of the EMS workers in his home state of Wyoming are either grossly undercompensated, or receive no pay whatsoever.

“Really, what we’re talking about is that 70 percent to 74 percent of the emergency medical services are provided by people for whom that is not their full-time job,” he said.

Some communities try to offset the compensation gap by offering volunteers modest stipends or breaks on property taxes. Others utilize what are called Length of Service Award Programs. These are like pensions, but under the current tax code, contributions from an employer for retirement plans can’t be higher than compensation. That’s a problem if your compensation is zero.

A [bipartisan bill](#) before the U.S. Senate aims to change that, so Length of Service Award Programs can function like traditional employer retirement plans.

The Volunteer Emergency Services Recruitment and Retention Act, sponsored by Sens. Susan Collins (R-Maine) and Ben Cardin (D-Maryland), would allow higher contributions and make those contributions into the program tax deferred, guaranteed and eligible for rollover to a different plan.

"If you're serving your community through volunteer service as either an emergency medical person or firefighter," Cardin said, "you want to make sure that your family is protected later in life because you're giving up some of your ability to put resources away with a traditional employer."

"We gotta make it easier for volunteers to serve," he said.

Pride versus profit

Still, it's unclear whether bills like this one are enough to solve the problem.

Gienapp and other rural health experts say a system that relies exclusively on the goodwill of people is simply unsustainable. EMS agencies need money to recruit and retain qualified workers, and for upkeep of the equipment.

When they don't have sufficient funding, they close.

Solutions to a broken rural health care system require sensitivity in communities that have deep emotional ties to their volunteer EMS workers. The idea of folding or contracting ambulance services from other towns or companies is often met with resistance, because the services don't feel "hometown" anymore, Gienapp said.

So, rural EMS agencies need to get creative. One immediate option is to seek out work that's sure to result in payment.

That's how the EMS system serving Campbell County Memorial Hospital in Gillette, Wyoming, went from losing money to turning a profit within the past three years.

"We started partnering with different departments in the hospital to either help them deliver their service line or do it more effectively, more efficiently," said Christopher Beltz, EMS director for Campbell County Health. This includes transporting patients between facilities if they require specialty care, such as patients with [kidney disease](#) who must travel for dialysis treatments.

But this is not a salve for all rural EMS systems. The agency in Gillette is affiliated with a major hospital, and is able to pay its staff a modest salary. Even then, Beltz said it's difficult to compete with higher-paying jobs.

"As a rural EMS agency, it's hard to get people just to walk in the door and apply for a job," he said. "We are in the heart of coal country here in Wyoming and people can make a lot more money per hour working in the coal mines."

Serving their own

Rebecca Bumgardner helps support her family by working 40 hours a week at a motel in Baker, Montana. She and her husband also volunteer with their local fire department. And they have a two-year-old daughter who goes to work with Bumgardner at the motel.

"I've got a few irons in the fire," she joked.

But every Tuesday, Bumgardner leaves her family and her day job to work the night shift — 6 p.m. to 6 a.m. — as a volunteer EMT in Marmarth, North Dakota, the town in danger of losing its ambulance services.

"I'm spread thin. But it's something that matters to me," said Bumgardner, 26. "So even if it's only one night a week, I make it work."

The thought of Marmarth's EMS service closing is unacceptable to Bumgardner. She knows the town well; as a young girl, her family often traveled to Marmarth to look for dinosaur bones.

The thought of Marmarth's EMS agency closing is unacceptable to Bumgardner. (Ackerman + Gruber / for NBC News)

A strong connection to community is illustrative of another element of rural EMS agencies that sets them apart from many others in the country.

"Almost every time this ambulance leaves," Hartse, the volunteer Marmarth paramedic, said, "we know the person we're gonna go help."

It gets to the root of Hartse's biggest fear about losing the local emergency medical service.

"What happens if my family's the one that needs the ambulance, and there's nobody here?"

Rural ambulance crews are running out of money and volunteers. In some places, the fallout could be nobody responding to a 911 call

By Lucy Kafanov, CNN
Sat May 22, 2021



<https://www.cnn.com/2021/05/22/us/wyoming-pandemic-ems-shortage/index.html>

Worland, Wyoming (CNN) America's rural ambulance services, often sustained by volunteers, are fighting for their survival -- a crisis hastened by the impact of [Covid-19](#).

More than one-third of all rural EMS are in danger of closing, according to Alan Morgan, CEO of the National Rural Health Association. "The pandemic has further stretched the resources of our nation's rural EMS."

In Wyoming, the problem is especially dire. It may have the smallest population in America, but when it comes to land, Wyoming is the ninth-largest.

In Washakie County, which lies in Wyoming's southern Bighorn Basin, it means a tradeoff for the nearly 8,000 residents living here: While there is vast open space, the nearest major trauma hospital is more than 2.5 hours away.

On a recent drive from Cody -- the closest town with an airport -- the land stretched endlessly while cattle and wildlife outnumbered people. The sole reminders of civilization were the occasional oil rigs pumping silently in the distance.

But for the residents, speedy access to emergency medical services -- paramedics and an ambulance -- can be a matter of survival.

It's a fact Luke Sypherd knows all too well. For the past three years, he has overseen Washakie County's volunteer ambulance service. But on May 1, the organization was forced to dissolve. "We just saw that we didn't have the personnel to continue," Sypherd said. "It was an ongoing problem made worse by Covid with fewer people interested in volunteering with EMS during a pandemic and patients afraid of getting taken to a hospital."

A nearby hospital system, Cody Regional Health, has agreed to provide ambulance service for Washakie County, averting a crisis. But it's a problem playing out across rural America: Ambulance crews are running out of money and volunteers.

Phillip Franklin, the EMS Director for Cody Regional Health, said the crisis is a result of several problems.

"The majority of the ambulance service staff are not paid so if you don't have your volunteers, they can't run calls," Franklin said. "Another problem is that there's simply just not enough volume to keep ambulance service afloat and in the state of Wyoming, EMS is not essential, which means there's nobody responsible to fund these entities."

Sypherd said the funding model for EMS is fundamentally flawed, with most service providers reimbursed only if they take patients to a hospital or clinic. In rural areas like Washakie County, smaller populations mean fewer calls, and consequently, less money.

"You're reimbursed based on the number of patients that you transport to a hospital so you could get called 1,000 times a year and only transport 750 patients -- those other 250 calls you made no money on," Sypherd said.

Plea for federal assistance

The American Ambulance Association [sent a letter](#) earlier this month to the US Department of Health and Human Services asking the agency to earmark \$1.425 billion in federal aid for its members, warning that emergency medical systems across the US are "on the brink of collapse." "It is critical that we not let the financial hardship caused by the pandemic to permanently deteriorate our EMS systems, especially in rural areas where an ambulance service may be the only emergency medical service provider, and ensure that all Americans continue to have access to vital emergency 9-1-1 and medically necessary non-emergency ground ambulance services," the letter said.

According to the National Association of State EMS Officials, just eight states consider local emergency medical services "essential" by law, as they do for fire and police.

"That mandate means that somebody has to consciously think and plan and ensure that EMS is available," Sypherd said. "If you're in one of the states that doesn't mandate EMS as an essential service and your local ambulance provider shuts down because they lost funding or there weren't enough volunteers -- that means if you call 911 it might be that nobody shows up."

"When you look at what's happening here (in Washakie County, it) is just the tip of the iceberg," said Franklin. "There's other services throughout the state that are just one bad year away from closure."

'A matter of life and death'

One of those is Fremont County -- home to the Wind River Indian Reservation. Fremont is roughly the size of the state of Vermont. An economic downturn and budget cuts prompted the county to privatize its ambulance service in 2016. But the private company, American Medical Response, says it can't afford to keep going after losing \$1.5 million in revenue last year. AMR announced it won't renew its contract when it runs out on June 30. No others have bid.

"We just couldn't renew that current contract because it was set up for a financial failure," said Matt Strauss, Regional Director for AMR parent company, Global Medical Response.

One of the problems, according to Fremont County Commissioner Larry Allen, is the so-called payer mix. Many of the county's residents rely on Medicare, Medicaid and Indian Health Services, which reimburse ambulance providers at a lower rate. And without state or federal designation of EMS as an essential service, Allen said "there's no source of revenue to operate an ambulance."

"Because of the distance and the ruralness of this county, we just don't have people standing in line wanting to provide ambulance service," Allen said.

The Wind River Indian Reservation stretches across more than 2 million acres and is shared by two Native American tribes, the Eastern Shoshone and the Northern Arapaho. It has three tiny clinics but no ambulance services and relies on Fremont County for EMS.

"Right now the response time is pretty slow and it's going to be nonexistent," said Northern Arapaho tribal member Juan Willow. His grandfather struggled with health problems and Willow said there were many times when the family couldn't wait for an ambulance and had to find other ways of getting to the hospital. "Not everyone here has a car," he said.

It's a concern shared by Jordan Dresser, the chairman of the Northern Arapaho Tribe.

"I think if we didn't have access to ambulances, death rates would be higher," said Dresser, adding that many tribal members don't have working vehicles and therefore can't take themselves to the hospital or clinics. "It's a matter of life and death for us."

Rural Ambulance Crews Have Run Out of Money and Volunteers

Strained by pandemic-era budget cuts, stress and a lack of revenue, at least 10 ambulance companies in Wyoming are in danger of shuttering — some imminently.

By Ali Watkins

April 29, 2021

The New York Times

<https://www.nytimes.com/2021/04/25/us/rural-ambulance-coronavirus.html>

WORLAND, Wyo. — For three years, Luke Sypherd has run the small volunteer ambulance crew that services Washakie County, Wyo., caring for the county's 7,800 residents and, when necessary, transporting them 162 miles north to the nearest major trauma center, in Billings, Mont.

In May, though, the volunteer Washakie County Ambulance Service will be no more.

"It's just steadily going downhill," Mr. Sypherd said. The work is hard, demanding and almost entirely volunteer-based, and the meager revenue from bringing patients in small cities like Worland to medical centers was steeply eroded during much of 2020 when all but the sickest coronavirus patients avoided hospitals.

Washakie County's conundrum is reflective of a troubling trend in Wyoming and states like it: The ambulance crews that service much of rural America have run out of money and volunteers, a crisis exacerbated by the demands of the pandemic and a neglected, patchwork 911 system. The problem transcends geography: In rural, upstate New York, crews are struggling to pay bills. In Wisconsin, older volunteers are retiring, and no one is taking their place.

The situation is particularly acute in Wyoming, where nearly half of the population lives in territory so empty it is still considered the frontier. At least 10 localities in the state are in danger of losing ambulance service, some imminently, according to an analysis reviewed by The New York Times.

Many of the disappearing ambulances are staffed by volunteers, and some are for-profit ambulance providers that say they are losing money. Still others are local contractors hired by municipalities that, strained by the budget crisis of the pandemic, can no longer afford to pay them. Thousands of Wyoming residents could soon be in a position where there is no one nearby to answer a call for help.

"Nobody can figure out a solution," said Andy Gienapp, the recent administrator for emergency medical services at the Wyoming Department of Health. "Communities are faced with confronting the very real crisis of, 'We don't know how we're going to do this tomorrow, because nobody's doing it for free.'"

‘Nobody wants to pay for it’

About 230 miles southwest of Washakie County, Ron Gatti is preparing to close up Sweetwater Medics, a small ambulance provider in Sweetwater County, where 42,000 people are spread across 10,000 square miles. Facing a budget crisis, the county is expected to end its contract with Mr. Gatti’s ambulance service in June.

The situation is a direct result of the pandemic, Mr. Gatti and county officials said. Rock Springs, the town that Sweetwater Medics serves, was looking for budget cuts; the ambulance contract was one of them. Mr. Gatti’s company proposed transitioning to a public, tax-supported service, funded by the county, he said, but the money was not there.

“Everybody wants it and nobody wants to pay for it,” said Jeff Smith, a commissioner in Sweetwater County.

Instead, after June 30, the regional hospital will have to respond on its own to emergency calls.

Mr. Sypherd, who is also president of the Wyoming E.M.S. Association, keeps a list in his head of ambulance companies, large and small, in imminent danger of closing. There is Sweetwater Medics, which could be gone by autumn. Sublette County’s service was recently saved after voters approved a small tax increase, which will fund a new hospital and the affiliated ambulance. Albin, near Cheyenne, no longer has enough volunteers to fill its crew.

“The ambulance at Albin is fiscally healthy. There’s just nobody to give it to,” said Carrie Deselms, who helps direct the program.

Fremont County, home to the state’s Wind River Indian Reservation, is set to lose its only ambulance service, American Medical Response, a national for-profit company that merged recently with the company that has handled the county’s ambulance service since 2016.

Now, American Medical Response says its profit margins cannot justify remaining there. The company has informed county officials that it will not rebid when its contract runs out this summer.

“The call volume in Fremont County plummeted, making it impossible to cover increasing operational costs without a subsidy” said Randy Lyman, the Northwest regional president for Global Medical Response, the parent company of American Medical Response. “The revenue alone simply wasn’t sufficient.”

An unsustainable model, strained further

There is a misconception, fueled by stories of astronomical bills and post facto charges, that ambulance service is a sustainable — even lucrative — business model. The truth, medical professionals say, is that those bills are rarely paid in full, by Medicare, private insurance or otherwise. Even in New York City, which operates ambulance services alongside its Fire Department, ambulances do not make enough money on their own to survive.

“Revenue does not come close to covering the full cost of operating E.M.S.,” said Frank Dwyer, a Fire Department spokesman.

For years, paramedics and emergency technicians have warned that these unreliable revenue streams put the country's emergency medical systems in danger of collapse. The current crisis in rural service, experts say, was almost certain to arrive at some point, but the pandemic expedited it.

"It is a universal issue," said Tristan North, a senior vice president with the American Ambulance Association, which represents crews in rural and urban areas. "If you have a pretty steady volume, then you can get some efficiencies of scale and have a better idea as far as budgeting, whereas in a rural area, it's far less predictable because you have a smaller population."

Critical to an ambulance's survival is its ability to transport patients to hospitals, which allows it to bill for a transport. That limited revenue stream dried up during the pandemic, according to workers across the country, when crews were discouraged from transporting all but the sickest of patients.

Instead of transporting patients to hospitals, crews were being directed to provide care on scene, Mr. Gienapp, of the Wyoming health department, said. "E.M.S. doesn't get paid for any of that," he said.

At the same time, many of the standard sorts of medical emergencies that helped keep ambulances afloat disappeared, either because people were moving around less, or were fearful of going to a hospital and exposing themselves to the coronavirus.

"There is not sufficient E.M.S. volume in this entire service area to make this a profitable, break-even venture," Mr. Gatti, of Rock Springs, said. "This is an essential service that doesn't pay for itself."

In dense urban areas like New York or Los Angeles, there are enough people and everyday maladies that an ambulance service can come closer to sustaining itself, and enough of a tax base that cities can support it. But in places like Wyoming, the least populous state and one notoriously averse to tax increases, each missed transport in 2020 was critically lost revenue.

Unlike fire and police departments, many states do not consider ambulances to be "essential services." Only a handful of states require local governments to provide them.

For most of the country, access to an ambulance is a lottery. Some municipalities provide them as a public service, funded by taxpayers, while some contract with for-profit ambulance companies. Most rely on the willingness of volunteer companies, like Mr. Sypherd's in Washakie County, which are buoyed by a patchwork system of public and private funding streams.

But across the country, E.M.S. professionals say fewer and fewer people are willing to volunteer for the job, a phenomenon accelerated by the stress of the pandemic. Many municipalities expect volunteers to take time away from work, something few people can now afford to do.

"The donated labor is not there anymore," Mr. Gienapp said.

Same job, new patch

On May 1, Mr. Sypherd will put on a new uniform.

For more than a year, he had known Washakie County's system was unsustainable. In an effort to ensure an ambulance remained in Worland, Mr. Sypherd reached out to Cody Regional Health, a hospital system based near Yellowstone National Park, and began exploring whether the agency would take over his ambulance company.

It is a trend that is gaining traction in rural states like Wyoming: In the absence of volunteer ambulance crews or sustainable funding from local governments, some struggling ambulance services are accepting takeovers from local hospitals and health care systems.

The system is not ideal, experts acknowledge, and it could leave large swaths of rural America disconcertingly far from ambulance service. Still, faced with the alternative, many crews like Mr. Sypherd's are grudgingly accepting the help. In May, Washakie County Ambulance Service will become a Cody Regional Health ambulance company, and will keep many of Mr. Sypherd's original crew on staff.

"It's the right thing to do," said Phillip Franklin, the director of Cody Regional Health's ambulance program.

So far, Mr. Franklin and his team have taken over two struggling ambulance companies in northwest Wyoming, and they are trying to help others with their workload.

The reality, he says, is that without help from systems like Cody's, many of the ambulances in rural Wyoming will fail.

"Someone is always going to have to subsidize rural America," he said.

Ralls Residents Face Uncertainty as the Rural Community's EMS is in Jeopardy

JULY 20, 2021

By Jayme Lozano



<https://www.pbs.org/wgbh/frontline/article/ralls-texas-emergency-medical-service/>

On a Tuesday evening earlier this month, outside Ralls' City Hall, nearly two dozen residents waited in the 90-degree Texas heat. For two hours, they anxiously awaited word from their city leaders on whether they will keep their Emergency Medical Service (EMS) — the city's last-standing lifeline following a string of budget cuts.

The rural town is in a tight bind that has become a common reality in other rural Texas communities where access to healthcare has been crippled. Crosbyton Clinic Hospital is about nine miles away with only two beds, and Ralls is between Crosbyton and Lubbock. The clinic is mainly used to stabilize patients before transferring them to Lubbock, which is another 30 miles, and a drive back through Ralls, away.

Crosby County has less than six thousand residents, and according to data from American Public Media Research Lab, 19 percent of their residents are uninsured. The 2019 Census shows that 19 percent of the county's residents are 65-years-old or older.

Recently, the Ralls City Council considered closing the EMS service since it's been operating over budget, with little revenue being brought in. During a city meeting last month, residents expressed how important the service was to their community. Suddenly, without notice, the EMS was temporarily shut down last week.

Residents have already seen the effects of that choice.

"The day after we suspended our ambulance, my mother fell," said Kathylynn Sedgwick, a Ralls native who takes care of her 80-year-old mother. She described the situation in detail during a public hearing this week.

"She cut her head enough to get seven staples," said Sedgwick. "It broke my heart, as someone that's been here my whole life. So, I loaded her up and we went to the emergency room in Lubbock."

Sedgwick was one of eight residents who voiced their concerns at the hearing, and while some acknowledged the lack of funds, no one who spoke was in favor of the station closing. About 20 minutes into the event, the council broke out into a two-hour executive session, shutting the doors to the public.

Sarah Jamerson was the director of Ralls EMS, but resigned last month. She grew up in Ralls, and her grandmother started the service, so she jumped at the chance to come back and help keep the station open last year.

But the budget is tight — the City of Ralls operates the EMS service and Jamerson said \$40,000 is allocated to the station from the city council, but that it's not enough to keep the station running.

"The citizens of this city's health and welfare is worth more than the \$40,000 that's in our budget right now," said Jamerson during the meeting.

"I feel betrayed," Jamerson said. "I did everything I could to save it, but at the end of the day, I couldn't do it by myself and I definitely couldn't do it with a council that's going to stab me in the back while I'm trying to."

Texas Tech Public Media has spoken with Jamerson several times while working on a project with Texas Newsroom and the PBS series FRONTLINE that focuses on rural healthcare in the state.

In May, she explained that the EMS service operates in the red due to a lack of revenue and growing expenses for equipment and training.

"The thing with EMS, as it grows as an industry, it becomes inherently more expensive to do it," explained Jamerson, "and the revenue stream does not keep up and evolve as fast as the expenses do."

Jamerson added, "The training and personnel get more expensive, the equipment and requirements get more expensive and the ambulances cost more. And gas gets more expensive too, but reimbursement rates don't."

It doesn't help, Jamerson said, that the pay being offered to potential employees is lower than in neighboring towns, such as Idalou where they're offering paramedics and advanced EMTs \$3 an hour more than in Ralls. In Ralls, the pay ranges between \$8 to \$10 an hour and taxes aren't withheld.

After she resigned, four other EMS employees quit the station. Chris Pickering was named the interim EMS director, but the financing issues didn't go away. He resigned on July 9.

"When the last four people who quit have stated it's pay and taxes," said Jamerson during the meeting, "and we say you've got to fix the pay and the answer is a categorical no, that's absolutely nothing to do with me or with Chris [Pickering]. That has to do with the people who make decisions on what the budget is in this room."

Mayor Don Hamilton reminded everyone at the start of the meeting that the city council was not obligated to respond or answer to any of the comments made that night, so little was said by the council that night.

With Ralls EMS closed, Crosbyton EMS is the only ambulance service in the county. It only has two trucks. Pickering addressed the city leaders with his main concern. "Crosbyton is under no obligation to answer 911 calls to Ralls and Lorenzo."

"They can't operate on the budget they have, and continue to run this whole county," he continued. "They're doing everything they can because they love the citizens in this community, but there is quickly approaching a day where y'all could call 911 and nobody answers."

Pickering said he was "beating his head against the wall" trying to figure out how to attract new employees and fix the personnel problem. The only solution he could come up with is offering better pay — something that would require reallocating funds from other areas of the budget.

"If Ralls folds, it folds the whole system," said Pickering. "And the ultimate suffering is by everyone in this room."

Steve Beck, the CEO of Crosbyton Clinic Hospital, said that Crosbyton EMS faces the same staffing issue and also serves as a transport service for patients from Crosbyton to Lubbock, so it's not always readily available at a moment's notice.

"If you have a crew that's transferring a patient into Lubbock, you have a good 30-45 minutes to travel in and then go through the process to hand off that patient," Beck explained. "Then they have to turn around and drive back to Crosbyton, so you're talking about a two-hour time span. When that happens, that county is now without that service."

"What's more important — the budget, or our citizens?" Jamerson asked. "My wife and I have already had the serious conversation of [whether or not] we can feel safe living in a community that doesn't have EMS."

She comes from a long line of Ralls residents — seven generations total. While her family has dedicated their lives to the health and safety of their hometown through the EMS, she's now left with the thought: "I don't know that it's safe for us to be here anymore."

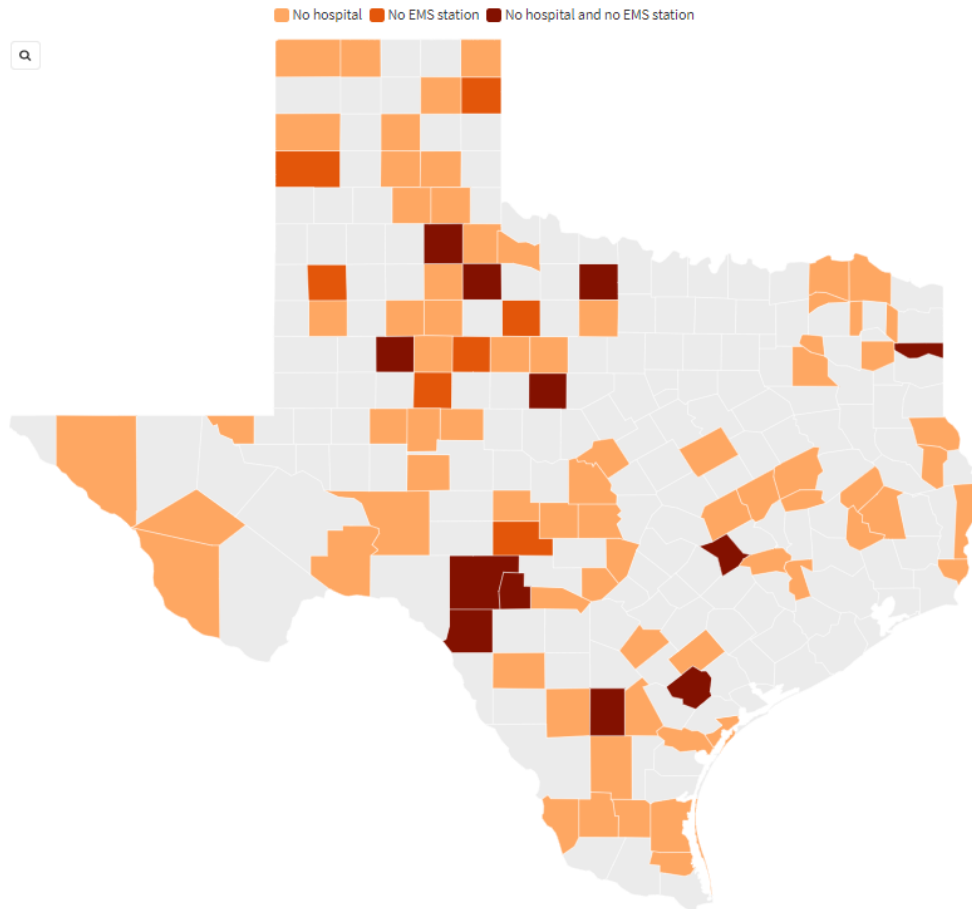
When the City Hall doors reopened two hours later, Mayor Don Hamilton and the Council accepted the resignation of Chris Pickering as interim EMS director and voted on Bobby Beene as his replacement. Within two minutes of being called back to session, the meeting was adjourned. Residents were left confused.

"So are the [EMS] doors open?" Jamerson asked. One council member shrugged her shoulders, while others provided unclear responses.

Nearly two weeks after the meeting, Kim Perez, the Ralls city administrator, said Beene has put together a new crew for the station and it is currently reopened.

85 Texas counties have no hospital, 19 have no EMS station and 12 have neither

Map shows data as of July 2021



Sources: APM Research Lab analysis of data from [Texas Department of State Health Services](#), [Texas Health and Human Services](#) • An emergency medical service (or EMS) is a service providing out-of-hospital acute care and transport to definitive care, to patients with illnesses and injuries which the patient believes constitute a medical emergency.

Appendix 2: Example Inter-Local Agreement for Public Utility Model Joint Powers Agreement

RESTATED AND AMENDED INTERLOCAL COOPERATIVE AGREEMENT

WHEREAS, the State of Texas, in the Interlocal Cooperation Act, has provided in Chapter 791 of the Tex. Government Code that this jurisdiction (hereinafter, "this Jurisdiction") may jointly exercise with other local governments the power to provide governmental services for the public health and welfare, and such services include Ambulance Services; and

WHEREAS, it is in the best interests of the public health and welfare of the people of this Jurisdiction to have available to them a regulated prehospital emergency medical services, mobile integrated healthcare, and medical transportation system which can provide quality clinical care with performance measures and standards, with the goal of facilitating the best possible outcomes for each patient;

WHEREAS, through the adoption of a Uniform EMS Ordinance and Interlocal Cooperative Agreement between local governments ("Member Jurisdictions"), the Area Metropolitan Ambulance Authority (the "Authority") was created in 1988 as a governmental administrative agency to administer and operate a prehospital emergency medical services, mobile integrated health, and medical transportation system in a service area comprised of the Member Jurisdictions ("Service Area"); and

WHEREAS, providing for a multi-jurisdictional emergency physicians advisory board will provide for professional oversight of the clinical performance of the prehospital emergency medical services, mobile integrated health, and medical transportation system; and

WHEREAS, establishing a multi-jurisdictional first responder advisory board will facilitate coordination and communication between first responder agencies in the service area, the Emergency Physicians Advisory Board and the Board of Directors of the Authority;

WHEREAS, due to the relatively low population and low population density of some portions of the Service Area and the extremely high, start-up and fixed operating costs of a state-of-the-art prehospital emergency medical services, mobile integrated health, and medical transportation system, it is necessary to designate a single provider of emergency and nonemergency ambulance transportation within this Jurisdiction in order to maximize clinical proficiency, enhance operational effectiveness, and maximize economies of scale for providing such services; and

WHEREAS, the Member Jurisdictions entered into a Restated Interlocal Cooperative Agreement effective June 19, 2017, which, among other things, changed the name of the Authority to the "Metropolitan Area EMS Authority"; and

WHEREAS, it is the desire of this Jurisdiction and the other Member Jurisdictions to amend and restate the Restated Interlocal Cooperative Agreement in its entirety as set forth herein; and

THEREFORE, be it resolved that this Jurisdiction, which has joined with the other Member Jurisdictions to adopt this Restated and Amended Interlocal Cooperative Agreement (the "Agreement"), to be effective as of the date of the last of the Member Jurisdictions to execute the Agreement, agrees as follows:

ARTICLE I. MEMBERSHIP/CONTINUATION

1.1 This Jurisdiction has elected to continue to be a member of the Authority by the adoption of this Agreement and the concurrent adoption of the Uniform EMS Ordinance (which is attached hereto as Exhibit A and incorporated herein by reference). Capitalized terms used in this Agreement shall have the same meaning as used in the Uniform EMS Ordinance unless otherwise defined. Other terms are defined in this Agreement as follows:

1.1.1 Deleted by agreement of the parties.

1.1.2 Medical Protocol. Any diagnosis-specific or problem-oriented written statement of standard procedure, or algorithm, promulgated by the Medical Director as the standard of care and course of treatment for a given clinical condition.

1.1.3 Mobile Integrated Healthcare Provider (MIH Provider). A person who has additional training in physiology, disease processes, injury and illness prevention, and medical system navigation; and who focuses on providing out-of-hospital services to clients who may benefit from effective management of out of hospital care (including without limitation the elderly, underserved, and chronic condition-patient populations); by providing primary care under the direction of a physician or by acting as the enrolled client's advocate to connect them to a variety of beneficial social and medical services outside the emergency department or hospital.

1.1.4 System. The regulated prehospital emergency medical services, mobile integrated healthcare, medical transportation system, and any other medical services provided by the Authority or the Member Jurisdictions' First Responders.

1.2 The existence of the Authority is perpetual unless and until all Member Jurisdictions withdraw. The withdrawal of less than all the Member Jurisdictions shall not cause the dissolution of the Authority.

1.3 The name of the Authority is the "Metropolitan Area EMS Authority."

1.4 A Member Jurisdiction may withdraw, for any reason, on (i) the renewal or termination date of a contract for Ambulance Service if a competitively selected contractor is the provider of Ambulance Services, or (ii) the last day of the fiscal year of the Authority, if the Authority is the operator of the Ambulance Service. Notice of such intention to withdraw shall not be effective unless given in writing to the Authority and to each Member Jurisdiction not less than twelve months before the proposed effective date of withdrawal.

1.5 To ensure the continuation of the Authority's services to other Member Jurisdictions, any Member Jurisdiction that withdraws from the Authority pursuant to Section 1.4 above forfeits all rights, title, interest or claim to any asset or combination of assets of the Authority except as specifically provided in Section 4.4 below.

ARTICLE II. BOARD OF DIRECTORS

2.1 The Authority shall be administered by a Board of Directors (the "Board") which shall provide overall direction with respect to all matters within the scope of this Agreement.

2.2 The Board shall be composed of nine voting members and two non-voting, ex-officio members, subject to Section 2.4 and 2.5 below. The Board receives no compensation for service.

2.3 Voting members of the Board are required to have knowledge or experience in healthcare, finance or accounting, business administration, law, or other relevant knowledge or experience.

2.4 The Board shall be constituted as follows:

2.4.1 The City of Fort Worth shall appoint four directors who are residents of Fort Worth. The four directors shall serve at the pleasure of the City of Fort Worth and may be replaced by the City of Fort Worth at any time, with or without cause.

2.4.2 One director who is a resident of the Service Area shall be elected by the combined vote of the other Member Jurisdictions as follows:

(a) Whenever the term of the director is expiring or open, each Member Jurisdiction other than Fort Worth shall be entitled to nominate one candidate for the available position. The candidates nominated by the Member Jurisdictions shall be named on the "Candidates List."

(b) The Candidates List shall be submitted to the governing body of each Member Jurisdiction, with the exception of Fort Worth.

(c) Each Member Jurisdiction other than Fort Worth shall cast all of its votes for one (1) of the eligible candidates on the Candidates List. Each Member Jurisdiction shall be entitled to the number of votes which corresponds to the number of residents residing in that Member Jurisdiction, based on then-current population estimates reported by the North Central Texas Council of Governments.

(d) The candidate for the available position receiving the most votes shall be certified by Chair of the Board as the winner of the election to that seat.

(e) The director may be removed and replaced prior to the end of a term upon the vote of two-thirds of the Member Jurisdictions other than Fort Worth.

2.4.3 The Emergency Physicians Advisory Board ("EPAB") shall elect two of its members who are residents of or actively or formerly practice in the Service Area, with a preference given to those who live or practice medicine in the Service Area, to serve as voting directors of the Board.

2.4.4 The First Responders Advisory Board shall appoint two voting directors of the Board, one of whom shall be the Fort Worth Fire Chief (or designee) and one of whom shall be a Fire Chief of one of the other Member Jurisdictions.

2.4.5 The Chief Executive Officer of the Authority and the Medical Director shall all be ex-officio members of the Board, without voting rights.

2.4.6 The Board may add other non-voting members as it deems appropriate by an affirmative vote of two-thirds of the Board, including members who are experienced in issues of community concern. By way of example and not for purposes of limitation, "issues of community concern" shall include homelessness, mental health, drug abuse, diversity and inclusion, and domestic violence. Non-voting members of the Board shall not be counted for purposes of determining a quorum.

2.5 The Board may add additional voting directors to provide additional representation of new Member Jurisdictions by unanimous vote and may provide the mechanism for electing or appointing the additional voting directors in the Authority's bylaws; provided that the addition of any new director must maintain proportional representation among the Member Jurisdictions in accordance with their populations (based on the then-current population estimates reported by the North Central Texas Council of Governments). Any other changes to the number of voting members of the Board must be unanimously approved by the Member Jurisdictions.

2.6 Non-voting members of the Board do not have a fixed term. The terms of office of all voting members of the Board shall be three years, except for the Fort Worth Fire Chief (or designee), who shall not have a fixed term. No later than sixty days prior to the expiration of the three year term of a Board member appointed or elected by a Member Jurisdiction, EPAB, or FRAB, the Authority will send written notice to the Member Jurisdiction(s), EPAB, or FRAB, as the case may be, of the expiration of such Board member's term with a request that the Member Jurisdiction(s), EPAB, or FRAB either re-appoint the existing director for an additional term or appoint a new director for the next three year term. Directors shall serve until their successors are duly appointed.

2.7 Members of the Board shall act in compliance with all laws applicable to service on the Board, including but not limited to conflict of interest laws.

2.8 Any voting member of the Board who fails to attend any three consecutive, regularly scheduled Board meetings or who fails to attend at least 50% of the regularly scheduled meetings in any twelve month period without good cause may be removed from the Board at the request of a majority of their appointing jurisdiction(s) and their position will be filled for the remainder of their term as provided in by Section 2.4 above.

2.9 The Board shall hire, employ, direct, and discharge the Chief Executive Officer, the General Counsel, and the Medical Director (collectively, the "Executive Personnel"). Whenever, in the judgment of the Board, the best interests of the organization will be served, any Executive Personnel may be terminated or non-renewed by the affirmative vote of two-thirds of the entirety of the Board, not only of those present. The Board shall establish written protocols and procedures for the hiring and termination of Executive Personnel, subject to the requirements of Section 6.4(g).

2.9.1 The Chief Executive Officer shall:

(i) be hired by a majority affirmative vote of the Board;

(ii) have the responsibility of operating, managing, and directing the operations of the Authority, including the employment of individuals (except employees of the General Counsel and Medical Director) to carry out the purposes and operations of the Authority; and

(iii) perform any other duties as assigned by the Board.

2.9.2 The General Counsel shall:

(i) be hired by a majority affirmative vote of the Board;

(ii) be the chief legal counsel for the Authority, and advise the Board, Executive Personnel, EPAB, FRAB, and the Authority employees on legal matters and compliance, new and existing laws, and risk mitigation; notwithstanding anything herein, the Board may retain outside counsel as needed.

(iii) hire, employ, direct, manage, and discharge employees that report to the General Counsel in the performance of his or her duties, and, as applicable, ensure all such employees follow the written policies, rules, and procedures applicable to all Authority employees as set forth or approved by the Board; and

(iii) perform other duties as assigned by the Board.

2.9.3 The Medical Director shall:

(i) be hired by a majority affirmative vote of the Board.

(ii) be the independent medical director for the System, in accordance with state law, and as further set forth in Article VII;

(iii) if an employee of Authority, hire, employ, direct, manage, and discharge employees who report to the Medical Director and assist the Medical Director in the performance of his or her duties, and ensure all such employees follow the written policies, rules, and procedures applicable to all Authority employees as set forth or approved by the Board; if a contractor of Authority, the Board shall, for the purpose of independent medical direction, ensure that the employees of the OMD report directly to the Board through an alternate structure adopted by the Board, and do not report to the Chief Executive Officer of the Authority; and

(iv) perform other duties as assigned by the Board.

ARTICLE III. NEW MEMBERS

3.1 Requirements for a new member ("New Member") to join the Authority shall be as follows:

3.1.1 The New Member must be a "Local Government" (as such term is defined in Chapter 791 of Tex. Government Code).

3.1.2 The New Member must be approved by the Board of the Authority. The Board shall set the terms and conditions of the New Member's admission based on the services required by the New Member and the fiscal and operational impact that providing such services would have on the Authority.

3.1.3 The New Member shall concurrently adopt this Agreement and the Uniform EMS Ordinance (attached hereto as Exhibit A).

ARTICLE IV. RESPONSIBILITIES OF MEMBERS

4.1 Each Member Jurisdiction agrees to the following as a condition of membership in the Authority:

4.1.1 To adopt and enforce the Uniform EMS Ordinance and this Agreement;

4.1.2 To establish, operate, and fund a First Responder program in support of the Uniform EMS Ordinance, which may be an Emergency Care Attendant program approved by the Authority.

4.1.3 To abide by the medical protocols, credentialing requirements, and medical policies for First Responders established by the Medical Director in consultation with EPAB.

4.1.4 Deleted by agreement of the parties.

4.1.5 Support Infrastructure: Each Member Jurisdiction agrees to provide a mechanism for transferring 911 calls requesting medical assistance from the Member's 911 center to the Authority's designated EMS Communications Center and shall transfer 911 callers in accordance with System performance standards adopted by the Authority.

4.2 This Jurisdiction accepts no financial responsibility or commitment in exchange for its membership in the Authority except for the cost of furnishing a mechanism for transferring 911 callers requesting medical assistance from the Jurisdiction's 911 communications center to Authority's designated EMS Communications Center. Any decision by the Authority affecting the financial obligations of a Member Jurisdiction, contingent or otherwise, shall be subject to prior approval by the governing body of the affected Member. In no event shall this Agreement be construed to mandate the appropriation of specific funds by any Member Jurisdiction beyond the Member's next fiscal year without the annual approval of the Member's governing body.

4.3 A Member Jurisdiction is in default if it fails to substantially comply with any of its obligations under this Agreement and such failure continues for a period of six months without an ongoing good faith attempt to cure the default after it receives written notice of such failure from the Board of the Authority. If a Member Jurisdiction is in default under this Agreement, the Board may terminate that Member Jurisdiction's membership in the Authority and any services provided to that Member Jurisdiction by the Authority shall cease. In such event, the removed Member Jurisdiction forfeits any financial or other interest in the Authority.

4.4 In the event of repeated and chronic failure of the Authority to provide adequate Ambulance Service (whether directly or by contract) within a Member Jurisdiction, and after written notice to the Authority and reasonable opportunity to correct such deficiencies, that Member Jurisdiction may withdraw from the Authority, subject to the following terms:

4.4.1 The Member Jurisdiction must give written notice to the Authority that it intends to invoke this Section of this Agreement;

4.4.2 Upon a continued failure for the following three consecutive full calendar months, or four of the following six full calendar months, after receipt by the Authority of the written notice described above, the Member Jurisdiction may withdraw by giving written notice to the Authority, such notice to be effective ten days after receipt by the Authority.

4.4.3 Upon the effective date of the withdrawal, the Authority shall cease being the exclusive provider of Ambulance Service in the withdrawing Member Jurisdiction and the Authority shall remit to the withdrawing Member Jurisdiction its pro rata share of the Authority's Net Worth, as defined in Subsection 4.4.4 below. In the event that more than one Member Jurisdiction gives notice of its intent to withdraw under this Section 4.4 during a three month notice period and there are not sufficient cash reserves to remit the share of "Net Worth" of each withdrawing Member Jurisdiction in full, the available funds will be distributed pro rata to the withdrawing Member Jurisdictions. Notwithstanding the foregoing, any Member Jurisdiction who is admitted after the date of this Agreement and who does not pay to the Authority an initial fee for start-up of services, shall not be entitled to Net Worth distributions as provided in Subsection 4.4.4 or to any other distribution of the assets of the Authority under any circumstances.

4.4.4 Net Worth shall be defined as the cash or cash equivalents of the Authority, exclusive of funds specifically allocated for operations or debt service, or budgeted for capital improvements by the Board, and exclusive of the amount of prudent operating reserves required under Subsection 5.5.2 below. Each Member Jurisdiction's pro-rata share of the Net Worth shall be calculated at least once every fiscal year based upon the current population estimate of each Member Jurisdiction compared to the total population of all Member Jurisdictions (as reported by the North Central Texas Council of Governments).

ARTICLE V: POWERS AND DUTIES OF AUTHORITY

5.1 To ensure delivery of quality Ambulance Service and prehospital emergency medical services, the Board shall determine whether the Authority shall directly provide Ambulance Service or engage a contractor to provide Ambulance Service or any part thereof by way of a request for proposals. The provider of Ambulance Service, be it the Authority or the Authority's private contractor, shall be required to provide all such service in each Member Jurisdiction, except for those services exempted in Section 7 of the Uniform EMS Ordinance adopted concurrently herewith.

5.2 Whether the Authority is providing Ambulance Service directly or through a contractor, the Authority shall:

5.2.1 Through its Board, set System performance standards for the Service Area and, if a competitively selected contractor is the operator of the Ambulance Service, enforce compliance therewith through contractually imposed financial penalties.

5.2.2 Provide each Member Jurisdiction with emergency and non-emergency Advanced Life Support and Basic Life Support Ambulance Service; such service to comply with all applicable laws, rules and regulations, and with the clinical standards, credentialing requirements and medical policies that may be promulgated from time to time by the Medical Director.

5.2.3 Fund the Authority's Office of the Medical Director ("OMD") in an amount approved by the Board that is sufficient to fulfill the Medical Director's powers and duties.

5.3 If the Authority is providing Ambulance Service directly, the Authority shall provide Member Jurisdictions' First Responders opportunity to participate in the Authority's continuing education training without charge to the Member Jurisdictions.

5.4 The Authority is authorized to enter into contracts to provide additional related services that the Board deems appropriate in its discretion to advance the public health and welfare or financial stability of the Authority, including without limitation:

5.4.1 Mobile integrated healthcare services ("MIH Services") that are designed to enhance, coordinate, effectively manage, and integrate out of hospital care, in order to improve outcomes, enhance an enrolled client's experience of care, and improve the efficiency and effectiveness of healthcare services provided to the client. MIH Services may include, but are not limited to, patient education and navigation services that promote patient self-management of disease processes, injury prevention programs, admission/readmission prevention programs, chronic disease management, a demand management system, and any other related services; and

5.4.2 Other services related to Ambulance Service, such as 911 nurse triage programs, event medical standby, nurse or physician-staffed critical transports, or wheelchair or ambulatory non-emergency transports.

5.5 To fund the Authority's financial obligations and to ensure use of sound business controls and financial management practices, the Authority shall:

5.5.1 Adopt sound business practices and accounting methods, in accordance with generally accepted accounting standards applicable to independent enterprise agencies, as prescribed by the Governmental Accounting Standards Board;

5.5.2 Establish and maintain a prudent operating reserve of cash or cash equivalents in an amount set by the Board in the Authority's Bylaws, which shall be at least three months of operating capital;

5.5.3 Adopt a fiscal year beginning October 1st;

5.5.4 Develop and implement a financial management plan designed to ensure long-range financial stability and reinvestment into the System; and

5.5.5 Secure annual audits of the Authority by an independent certified public accounting firm.

5.6 If the Authority is providing Ambulance Service directly, it shall:

5.6.1 Present written reports of the operational performance of the medical transportation, MIH, and prehospital emergency medical services at meetings of the Board and make the reports available to Authority members upon request;

5.6.2 For each fiscal year, prepare and provide to each Member Jurisdiction a comprehensive review and summary of the financial, clinical and operational performance of the Authority during such fiscal year. This report must be submitted to the Member Jurisdictions no later than 120 days after the end of the fiscal year; and

5.6.3 Upon the written request of a majority of Member Jurisdictions or the request of Member Jurisdiction(s) whose combined population exceeds 50% of the total population of all Member Jurisdictions (based on the then-current population estimates reported by the North Central Texas Council of Governments), provide to each Member Jurisdiction an audit of the clinical and operational performance of the Authority during the preceding fiscal year prepared by a qualified and independent third party. This audit must be completed no later than one hundred twenty (120) days after the date of such written request.

5.7 The Authority shall manage accounts, subscriptions, payments and billing practices related to the services it provides as follows:

5.7.1 Deleted by agreement of the parties.

5.7.2 The Authority shall bill patients, third-party payers or other responsible parties, and collect the revenue from such bills, for all services provided.

5.7.3 The Authority shall implement an Ambulance Service subscription program (unless otherwise prohibited by law) and shall offer memberships in the program to all residents of the Member Jurisdictions.

5.7.4 The Authority shall maintain a separate account for the balance of funds allocated to EPAB prior to the enactment of the Restated and Amended Interlocal Cooperative Agreement. Those funds shall be expended upon the recommendation of EPAB and approval of the Board solely for the purposes of System enhancement, research, and medical direction.

5.8 The Authority is authorized to purchase, lease, acquire, accept, own or hold real or personal property, to operate or maintain the same, to borrow or incur debt in its own name, to accept gifts, grants or bequests, to insure itself and its Member Jurisdictions for any liabilities which might be incurred through performance of this Agreement, to contract in its own name and to sue or be sued in its own name; provided that nothing in this grant of authority shall be construed to waive any immunity otherwise afforded by law to the Authority and its officers, employees and agents or the Member Jurisdictions or their officers, employees and agents.

5.9 The Authority, through its Board, shall adopt performance goals and standards for the System and shall review such goals and standards on at least an annual basis, acting on recommendations from the Medical Director and a System performance committee as described below.

5.9.1 The Board shall appoint a System performance committee consisting of representatives of EPAB, FRAB, the Executive Personnel, and any other individuals the Board deems necessary in its discretion to develop performance standards for the System (the "System Performance Committee"). The proposed standards shall include but not be limited to: reasonable and medically appropriate response times for the Ambulance Service; response time goals for First Responders; call processing time goals for participating communication centers; clinical performance standards; standards for data collection and sharing; and standards for reporting System performance. The proposed goals and standards shall be presented to the Board for review and approval.

5.9.2 The System Performance Committee shall thereafter meet as needed, but no less than on a semi-annual basis, to review System performance, address any deficiencies, and make appropriate recommendations for modification of the standards.

5.10 In addition to the powers set forth in this Agreement or the Uniform EMS Ordinance, the Authority shall have all of the powers allowed or provided by Chapter 791 of the Tex. Government Code, the "Interlocal Cooperation Act."

5.11 To the extent permitted by law, the Authority shall indemnify and hold harmless members of the Board, and FRAB, from liability for actual damages, including costs and attorney's fees, arising from any claim, lawsuit, or judgment resulting from their acts or omissions in the scope and course of their office, provided that such liability arises out of, or in connection with, the provision of any and all services through the Authority; provided that nothing in this Agreement shall limit or waive any defense or immunity as to claims by third parties that is otherwise available to the Authority and its officers, employees, and agents or to the Member Jurisdictions or their officers, employees, and agents.

5.12 To the extent permitted by law, the Authority shall indemnify and hold harmless members of EPAB, the Medical Director, and Associate Medical Directors, from liability for actual damages, including costs and attorney's fees, arising from any claim, lawsuit, or judgment resulting from their acts or omissions in the scope and course of their office, provided that such liability arises out of, or in connection with, the provision of any and all services through the System; provided that nothing in this Agreement shall limit or waive any defense or immunity as to claims by third parties that is otherwise available to the Authority and its officers, employees, and agents or to the Member Jurisdictions or their officers, employees, and agents.

5.13 This Agreement is not intended to designate MAEMSA as the single provider of standby emergency medical services for any Member Jurisdiction. Nothing herein prohibits any Member Jurisdiction from regulating, managing, and governing standby emergency medical services and the provider(s) thereof in its own jurisdiction.

ARTICLE VI: EMERGENCY PHYSICIANS ADVISORY BOARD

6.1 EPAB's membership shall be composed as follows:

- (a) Hospital Members: From each full-service hospital located in the Service Area, the Medical Director of the Emergency Department (or their designee, who must actively practice at the hospital and have board certification in Emergency Medicine or Pediatric Emergency Medicine).
- (b) Community Physicians: Upon the request of EPAB, additional physicians with currently or formerly active specialties or sub-specialties of benefit in developing standards for emergency pre-hospital care, all of whom shall be appointed by and serve at the pleasure of the Tarrant County Medical Society, provided that the number of physicians appointed by the Medical Society shall not exceed one less than the number of Hospital Members with voting rights under paragraph (a) above.
- (c) Non-Voting Members: EPAB may add other non-voting members as it deems appropriate by an affirmative vote of two-thirds of EPAB. Non-voting members of EPAB shall not be counted for purposes of determining a quorum. Non-voting members of EPAB are not required to be a physician licensed to practice medicine in the State of Texas.

6.2 EPAB shall conduct meetings in compliance with Chapter 551 of the Tex. Government Code (the Open Meetings Act). The manner of determining a quorum shall be set forth in EPAB's bylaws.

6.3 The officers of EPAB shall be Chair, Vice-Chair, Secretary, and Treasurer, and such other officers as may be provided in EPAB's bylaws. All voting members of EPAB are required to be physicians licensed to practice medicine in the State of Texas.

6.4 The parties recognize that EPAB exists to provide independent medical oversight to the System, inclusive of the First Responders who are (i) Emergency Care Attendants, Emergency Medical Technicians, and Paramedics, (ii) employees of the parties, and (iii) not in any way controlled by the Authority. However, the parties have elected not to establish a framework for direct advising of and reporting to the governing bodies of the parties by EPAB with regard to independent medical oversight of the First Responders. Therefore, EPAB shall provide all independent medical oversight for the System as an advisory board to the Authority, and shall report directly to the Board of the Authority. EPAB shall provide independent medical advice and oversight for clinical matters by:

- a. advising the Authority about the clinical performance of the System and the Authority's MIH programs;
- b. reviewing and approving medical protocols for the System and making recommendations to the Medical Director;
- c. representing the interests of the medical community and providers by making recommendations for improvement of the System;
- d. promoting the System's programs to the medical community;
- e. serving as an advisory appeals board for credentialing actions of the Medical Director;
- f. recommending and reviewing research conducted within the System; and
- g. participating in the selection of the Medical Director and review of the Medical Director's clinical performance through processes established by the Board, including matters related to the termination or non-renewal of all contracts for medical direction. The process established by the Board for the selection of the Medical Director and the review of the Medical Director's clinical performance shall include participation and input from the members of EPAB.

ARTICLE VII. MEDICAL DIRECTOR

7.1 The Medical Director for the System shall be retained through a contract with the Board of the Authority. The Medical Director must be a licensed physician who is board-certified in emergency medicine and meets all state requirements.

7.2 The Board shall adopt procedures for soliciting input and recommendations from EPAB and FRAB when selecting the Medical Director and reviewing the Medical Director's performance.

7.3 The Medical Director shall be the Chief Medical Officer of the Authority, shall report to the Board of the Authority, and shall have all the powers and duties afforded and required of EMS medical directors under state law. The parties recognize that the Medical Director provides independent medical direction to the System, inclusive of the First Responders who are (i) Emergency Care Attendants, Emergency Medical Technicians, and Paramedics, (ii) employees of the parties, and (iii) not in any way controlled by the Authority. However, the parties have elected not to establish a framework for direct reporting to the governing bodies of the parties by the Medical Director with regard to independent medical direction of the First Responders. The Medical Director shall provide all independent medical direction and is the exclusive source of medical direction and oversight for the System. The Medical Director and the OMD shall report directly to the Board and not to the Chief Executive Officer of the Authority. To the extent not in conflict with state law, the Medical Director shall have the following powers and duties:

- (a) To establish patient care standards for all medical services provided by the System;
- (b) To develop medical protocols, credentialing requirements, and medical policies, for all medical services for the System and periodically revise the same; and to provide necessary training to the System regarding the same;
- (c) To recommend to the Authority medically appropriate performance measures and standards for the Service Area, including but not limited to standards for equipment on ambulances and First Responder vehicles in the Service Area;
- (d) To direct the activities of the Authority's employees assigned to the OMD, subject to the provisions of Section 2.9.3;
- (e) To provide medical direction to the Authority's EMS Communication Center, including quality assurance and protocol review;
- (f) To provide medical direction to the System's clinical education and training programs;

- (g) To develop, direct, and conduct the System's quality assurance and medical review programs for Medical Transportation, MIH, and prehospital emergency medical service;
- (h) To develop, direct, and conduct the System's programs for the credentialing of Medical Transportation, MIH, and prehospital emergency medical service personnel in the Service Area, including ambulance personnel, MIH Providers, First Responders, and EMS Communication Center personnel; to provide training for purposes of credentialing, and to credential qualified personnel;
- (i) To monitor the clinical performance of the System;
- (j) To present written and oral reports of the clinical performance of the System at meetings of the Board and EPAB and to make the written reports available to Member Jurisdictions upon request;
- (k) To approve standards governing the operation of Specialized Mobile Intensive Care units within the Service Area, including standards limiting the types of Patients which may be transported thereby;
- (l) To approve standards governing the operation of Aeromedical Transportation Units within the Service Area, including standards defining the circumstances under which such units may be deployed to emergency scenes;
- (m) To credential First Responders, Medical Transportation providers, and ambulance standby providers through the Authority's permitting and credentialing process;
- (n) To the extent feasible, and in coordination and collaboration with the participating organization's administration, develop, implement and oversee an organized ongoing program of EMS research to improve the System and contribute to the EMS knowledge base;
- (o) To conduct inspections of System vehicles, equipment and supplies;
- (p) To periodically conduct intensive reviews of the System's performance relative to specific clinical modalities and to revise medical protocols and such other standards of the System as may be appropriate in light of the findings;
- (q) To serve as medical director for the Authority and for First Responders of Member Jurisdictions when they provide medical services outside the Service Area; and
- (r) To perform any other duties pursuant to the powers granted to the Medical Director pursuant to state law.

7.4 The Board of the Authority may retain Associate Medical Directors as it deems necessary to support the Medical Director and the System's programs. Associate Medical Directors shall report to the Medical Director.

7.5 The Board shall include funding for the OMD in its budget in an amount sufficient to carry out the power and duties of the Medical Director under this Agreement. Expenditure of budgeted OMD funds shall be in accordance with the Authority's policies and procedures.

ARTICLE VIII: FIRST RESPONDERS ADVISORY BOARD

8.1. The First Responder Advisory Board ("FRAB") shall advise the Authority and EPAB on matters related to first response and prehospital emergency medical services in the Service Area.

8.2 FRAB's membership shall include:

- (a) One First Responder agency representative from every Member Jurisdiction.
- (b) Executive Personnel, who shall be non-voting, ex-officio members.
- (c) Any other non-voting members added by FRAB by an affirmative vote of two-thirds of FRAB.

Non-voting members of FRAB shall not be counted for purposes of determining a quorum.

8.3 FRAB shall:

- (a) Participate in the System Performance Committee.
- (b) Facilitate the collection and reporting of information related to System performance by First Responders.
- (c) Coordinate training and credentialing activities for First Responder personnel with OMD.
- (d) Inform and advise the Board regarding issues related to medical first response in the Service Area.

ARTICLE IX: MISCELLANEOUS

9.1 Notwithstanding anything herein to the contrary, neither the Authority nor the Medical Director may require the Member Jurisdictions to expend funds for equipment purchases, training, implementation of protocols, or any other requirement necessitating an expenditure of funds, over the objection of the governing body of the Member Jurisdiction.

9.2 The provisions of this Agreement are severable. Should any provision of this Agreement be or become unenforceable or impossible of performance under current or future law, so long as applicable law does not substantially impair the intent of the parties, the parties shall continue to be bound hereunder and shall perform consistent with the intent of this Agreement.

This Agreement shall become effective on the date it is executed by all of the Member Jurisdictions.

Agreed and entered into by the following Member Jurisdictions:

ⁱ [Rural Policy Health Institute: Characteristics and Challenges of Rural Ambulance Agencies – A Brief Review and Policy Considerations](#); January 2021

ⁱⁱ [Rural Health Research and Policy Center: Issues in Staffing Emergency Medical Services: A National Survey of Local Rural and Urban EMS Directors](#); May 2008

ⁱⁱⁱ <https://www.cnn.com/2021/05/22/us/wyoming-pandemic-ems-shortage/index.html>

^{iv} <https://worldpopulationreview.com/us-counties/ny/steuben-county-population>

^v [DATA USA: Steuben County, NY](#)