

# EMS SERVICES DELIVERY REPORT

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Otsego County, New York

*Final*



## CPSM<sup>®</sup>

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CENTER FOR PUBLIC SAFETY MANAGEMENT, LLC  
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# EXECUTIVE SUMMARY

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The Center for Public Safety Management LLC (CPSM) was retained by Otsego County, New York to conduct a comprehensive study of the emergency medical services system delivery within Otsego County, NY.

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 Otsego County.

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

Despite significant challenges faced by the County's EMS providers and provider agencies, and all the current county EMS staff, we have been extremely impressed with the level of professionalism, and dedication of Otsego County staff, and all EMS and healthcare system stakeholders that we have had the pleasure of interacting with throughout this project.

Although the specific goal of this project is to determine potential sustainability options for the recently established County-Based ambulance service (County ALS), as part of that goal, we feel it is prudent to provide an overall assessment of EMS and ambulance service delivery in the county. This assessment helps serve as a foundation for several recommendations that are part of the project deliverables.

The establishment of the County ALS system appears to have substantially improved ambulance service delivery in Otsego County. County ALS has become the second largest provider of ambulance service in the County.

**Since November 12, 2021, there were 1,670 calls where the local ambulance agency did not arrive, of which the new service of county EMS ambulances arrived at 1,252 calls (75 percent).**

The County ALS service has also decreased the average county-wide response time by seven percent, from 17.8 minutes in 2021 to 16.5 minutes in 2022 and decreased the 90th percentile county-wide response time by nine percent, from 32.4 minutes in 2021 to 29.5 minutes in 2022.

This overall assessment covers 17 ambulance agencies and 12 first-responders shown in **Table 1**. These agencies provide EMS service to Otsego County's municipalities and two towns outside the county (Warren in Herkimer County and part of Sidney in Delaware County). Agency EMS service boundaries are not coincident with municipal boundaries. Some districts/zones are fragmented within municipal boundaries and others extend into multiple municipalities. Communities within Otsego County also contract with out-of-county agencies for both ambulance and first response services in Butternuts, Pittsfield, Plainfield, and the Town of Morris. The ambulance agency and first responder for each EMS zone are provided in Attachment II.

## Summary of Recommendations

<a href="#"><u>Recommendation #1</u></a>	Otsego County should improve communications with local EMS agencies, either through regularly scheduled meetings, or the establishment of a County EMS agency coordinating committee.	Pg. 15
<a href="#"><u>Recommendation #2</u></a>	County ALS should establish a reporting process for ambulance at-destination times and share these reports with hospital leadership.	Pg. 19
<a href="#"><u>Recommendation #3</u></a>	County ALS should establish regular 'C-Suite' meetings to enhance collaborative relationships and share information regarding hospital and EMS agency operations.	Pg. 19
<a href="#"><u>Recommendation #4</u></a>	County ALS and the hospitals should work toward including County ALS in clinical service line meetings to enhance clinical and operational integration for quality assurance purposes enhance per and post-hospital care collaboration.	Pg. 19
<a href="#"><u>Recommendation #5</u></a>	County ALS and Basset Health should investigate opportunities for County ALS to contract with Bassett Health to facilitate expeditious ambulance transfer for patients requiring ambulance transport.	Pg. 20
<a href="#"><u>Recommendation #6</u></a>	The County should establish a distinct accounting process for County ALS with all revenues and expenses related to ambulance service delivery accounted for within this division.	Pg. 94
<a href="#"><u>Recommendation #7</u></a>	Otsego County should adjust its ambulance fee schedule to be at least the same as the regional average fee schedule for similar services.	Pg. 98
<a href="#"><u>Recommendation #8</u></a>	Otsego County should work with other counties to pursue legislative solutions to the low Medicaid fee scheduled and commercial insurer practices.	Pg. 101
<a href="#"><u>Recommendation #9</u></a>	Otsego County should assist with the passage and implementation of a GEMT program to supplement ambulance service revenue shortfalls resulting from low Medicaid reimbursement.	Pg. 104
<a href="#"><u>Recommendation #10</u></a>	Quick Med Claims and County ALS should establish monthly and on-demand dashboard reports to more clearly monitor the revenue cycle for ambulance billing.	Pg. 104
<a href="#"><u>Recommendation #11</u></a>	Quick Med Claims and County ALS should establish regularly scheduled meetings to review revenue cycle management performance.	Pg. 105
<a href="#"><u>Recommendation #12</u></a>	The County should establish a process for unpaid ambulance claims to be placed in a collection agency to enhance revenue generation and reduce taxpayer burden for bad debt.	Pg. 105

## County ALS Service Sustainability Options - Summary

As will be discussed in greater detail throughout this report, due to the increasing challenge of local volunteer EMS agencies mustering volunteers to respond to EMS calls, in November 2021 Otsego County established a career staffed ambulance service to serve as a back-up safety net to local communities and support local communities by helping to assure availability of an Advanced Life Support (ALS) ambulance in the event the local EMS agency serving the community is unable to muster an ambulance crew within a reasonable timeframe.

Initial funding of the county's ambulance service (County EMS) was through America's Rescue Plan Act (ARPA), so little to no local, general revenue (GR) funding was necessary to establish the county-based ambulance service. Although the use of ARPA funding assisted with the start-up of the county EMS department, a key component of this project is to provide a long-term needs assessment and financial viability options for the County. Options are discussed in greater detail in this report, but the potential options are indicated below:

<b>Option 1:</b>	County General Revenue Funding	Pg. 106
<b>Option 2:</b>	Create a County-Wide Public Ambulance Authority and Special Taxing District	Pg. 107
<b>Option 3:</b>	Community Assessment Model	Pg. 109
<b>Option 4:</b>	Community Partnership Model	Pg. 110

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# INTRODUCTION

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This analysis examines EMS operations in Otsego County between **August 1, 2021, and July 31, 2022**. The response analysis is based on data as recorded in the computer-aided dispatch (CAD) system of the county's Emergency 9-1-1 Center during this timeframe. As indicated in the report, some supplemental information was provided for more recent responses to analyze hospital at-destination times for the County's EMS agency, referred to in this report as "County ALS".

The data analysis component of this report 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.

Otsego County is divided into 37 municipalities including 24 towns, nine villages, three hamlets, and one city. General information for each municipality including population and land area is presented in Attachment I.

This analysis covers 17 ambulance agencies and 12 first-responders shown in Table 1. These agencies provided EMS service to Otsego County's jurisdictions, as well as two towns outside the county (Warren in Herkimer County and part of Sidney in Delaware County). The agency's EMS service boundaries are not coincident with municipal boundaries. Some districts/zones are fragmented within municipal boundaries and others extend into multiple municipalities. Otsego County also contracts with out-of-county agencies for both ambulance and first response services in Butternuts, Pittsfield, Plainfield, and the Town of Morris. The ambulance agency and first responder for each EMS zone are provided in Attachment II. Data regarding Non-Emergency, Inter-Facility Transfer (IFT) services were not fully analyzed as part of this report, as those responses are generally managed by agencies not dispatched by the County's 911 center, and the data related to those responses were not available for this analysis.

Between **August 1, 2021, and July 31, 2022**, the ambulance and first-responders responded to 6,238 calls for service in Otsego County. The total combined workload (*deployed time*) for all responding Otsego County units was 8,344.9 hours. For the first arriving transport capable unit, the average dispatch processing time was 3.0 minutes and the 90th percentile dispatch processing time was 4.3 minutes. The first arriving transport capable unit's average total response time was 17.0 minutes and the 90th percentile total response time was 30.4 minutes.

# EMS PROVIDERS

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EMS in Otsego 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.

Volunteers and volunteer agencies have extraordinarily strong community commitment and are viewed as honorable providers serving local communities. Rural communities across the country have faced increasing challenges recruiting and retaining volunteers<sup>i</sup>. 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 often unstable funding for EMS agencies. A recent study of rural EMS Directors revealed that only 43% of rural EMS agencies in America were fully staffed<sup>ii</sup>.

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) and paramedics 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 agencies<sup>iii</sup>.

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

Additionally, the economic model for EMS has been exceptionally fragile for over a decade, with most governmental and even commercial payers reimbursing EMS agencies at a level that is lower than the cost of providing the desired service level in local communities. However, changes in service delivery costs, especially since the COVID-19 pandemic, has created an economic crisis for many communities. A diminishing workforce for EMS agencies, and the rest of the healthcare system, has led to the need to dramatically increase wages for EMS personnel to retain an adequate EMS workforce.

As will be discussed in greater detail throughout this report, due to the increasing challenge of local volunteer EMS agencies mustering volunteers to respond to EMS calls, in November 2021 Otsego County established a career staffed ambulance service to serve as a back-up safety net to local communities and support local communities by helping to assure availability of an Advanced Life Support (ALS) ambulance in the event the local EMS agency serving the community is unable to muster an ambulance crew within a reasonable timeframe.

Initial funding of the county's ambulance service (County EMS) was through America's Rescue Plan Act (ARPA), so little to no local, general revenue (GR) funding was necessary to establish the county-based ambulance service. Although the use of ARPA funding assisted with the start-up of the county EMS department, a long-term needs assessment and financial viability plan is needed to be established to help assure the availability of this safety net resource.

**Table 1: Studied Agencies by EMS Zone in Otsego County**

Agency Code	Agency	Ambulance Service	First Responder
01	Cherry Valley	Yes (1 BLS unit)	
02	Cooperstown	Yes (2 ALS units)	
03	East Worcester		Yes
04	Edmeston	Yes (1 ALS unit)	
05	Fly Creek	Yes (1 ALS unit)	
06	Garrattsville	Yes (1 ALS unit)	
07	Gilbertsville	Yes (1 BLS unit)	
08	Hartwick	Yes (1 ALS unit)	
09	Hartwick Seminary		Yes
10	Laurens	Yes (1 ALS unit)	
11	Middlefield		Yes
12	Milford	Yes (1 ALS unit)	
13	Morris	Yes (1 BLS unit)	
14	Mount Vision		
15	Otego	Yes (1 BLS unit)	
16	City of Oneonta	Yes (2 ALS units)	
17	Richfield Springs	Yes (1 ALS unit)	
18	Schenevus	Yes (1 BLS unit)	
19	Schuyler Lake		Yes
20	Springfield		Yes
21	Unadilla	Yes (1 ALS unit)	
22	Unadilla Forks		Yes
23	Wells Bridge		Yes
24	West Edmeston		Yes
25	Westford		Yes
26	West Laurens		
27	West Oneonta		Yes
28	Worcester	Yes (1 ALS unit)	
29	West Exeter		Yes
30	Pittsfield		Yes
39	County ALS*	Yes (2 ALS units)	

**Note:** \*The two county ALS ambulances were added on November 12, 2021. Of the 17 ambulance services, only the City of Oneonta and County ALS employs professional staff; the rest are volunteers.

## Agency Assessment

During a series of in-person meetings and an on-line survey, Otsego County's ambulance agencies provided input on a series of questions related to the status of their agency. These questions included:

- The agency's top three current and future challenges.
- The challenges of the current EMS/Ambulance delivery in Otsego County,
- The impact of the County's ALS ambulance operations on their agency, and
- What things they feel should be changed about the current delivery model.

### **Top Three Challenges:**

Ten out of fourteen agencies providing input as part of this study (71%) expressed increasing challenges maintaining volunteer ambulance staffing.

Across the U.S., difficulties staffing volunteer EMS agencies have been categorized into 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, Long Term Care (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.
- Unstable public, ad valorem revenue (*tax support*).
- Inadequate reimbursement from government and insurers for services provided.

### **Desired Changes:**

During in-person meetings and an on-line survey of current EMS and ambulance service system leaders regarding Otsego 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 Otsego County:

- Several agency leaders stated that the County ALS system serves a valuable role in assuring a more reliable, safety net ambulance response throughout the county.
- A few stated that they have likely lost volunteers who took employment with County ALS.
- Several shared a desire for increased communication between the agencies and the county's EMS agency.
- One EMS stakeholder respondent to an on-line community feedback process shared that senior members of their community do not understand why they are receiving a bill for services when the county responds. When the local agency provides services, there had historically been no billing.

**Recommendation:** Otsego County should improve communications with local EMS agencies, either through regularly scheduled meetings, or the establishment of a County EMS agency coordinating committee.



## COVID-19 Pandemic Impact

As with EMS agencies across the country, the COVID-19 pandemic had a negative impact on many of the agencies in Otsego 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 Otsego County are in the age group that places them at greater medical risk from a COVID-19 infection. While COVID vaccines are readily available, the concern surrounding the resurgence and the growing threat of additional variants, or other infectious diseases, may impact the willingness of senior volunteers to respond to medical emergencies for years to come.

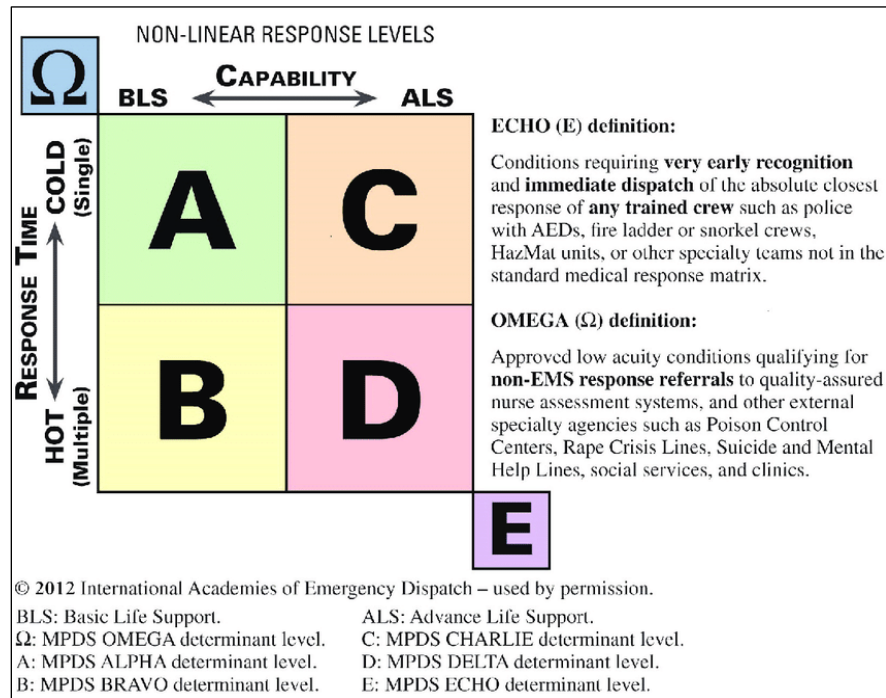
## County Dispatch Operations

Otsego 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 <b>not</b> to be considered the Academy's official recommendation for Baseline Responses.		

## Hospitals

Otsego County is served by two acute care hospitals.

- **Bassett Medical Center** - a 180-bed, acute care inpatient teaching facility in Cooperstown. Bassett Medical Center offers 24-hour emergency and trauma care, comprehensive cancer and heart care, dialysis, and most medical and surgical specialties. The Bassett Clinic is located on the same campus as the medical center and provides outpatient primary and specialty care.
- **A.O. Fox Hospital** – a 67-bed hospital provides emergency services and comprehensive inpatient and outpatient services, including cardiology, cancer services, orthopedic surgery and rehab, spinal surgery, pulmonary medicine, imaging services, and a sleep disorders center.

95% of all EMS patient transports are transported to one of these two hospitals. Both 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.

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.

Table 69 reveals that for the analysis period of August 1, 2021, through July 31, 2022, that the average “at destination” times for patient transports is 34 minutes, a relatively reasonable duration of time at a receiving hospital.

### Ambulance At Destination Times

Ambulance at destination times is an on-going challenge in many communities across the country. In areas this is occurring, delays transferring patients from the care of an EMS crew to the hospital emergency department staff creates stress on the EMS system's ability to have sufficient units to respond to EMS calls in the community. A recent national survey by the Academy of International Mobile Healthcare Integration (AIMHI) found that 71% of EMS agencies responding to the survey have experienced increases in hospital ‘drop’ times, with nearly 20% indicating routine ambulance drop times of greater than 90 minutes<sup>1</sup>.

Supplemental data was supplied to CPSM by the county, and an analysis of 1,440 calls that resulted in a patient transport to a hospital between July 1, 2022, and September 20, 2022, revealed that the average drop time at a hospital was 32 minutes, 22 seconds (32:22) with 90% of the drop times being less than 62 minutes, 7 seconds (62:07). These are not unreasonable drop times; however, the county may wish to implement monthly reports to the hospital and area stakeholders on the average and 90% fractile drop times and meet with the hospitals regularly to review the performance data.

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<sup>1</sup> <https://youtu.be/Jd6p0i5OhJw>

**Recommendation:** County EMS should establish a reporting process for ambulance at-destination times and share these reports with hospital leadership.

### **Hospital Collaboration**

During discussions with both County EMS staff, and hospital representatives, both indicate little to no actual coordination of care between the hospital and the EMS system. An emerging best practice for EMS delivery is a close collaboration between EMS agencies and local hospitals. These collaborations include regularly scheduled meetings between hospital 'C-Suite' members (Chief Executive Officer (CEO), Chief Operating Officer (COO), Chief Medical Officer (CMO), and Chief Nursing Officer (CNO)). These regular get togethers serve to build relationships between the hospital and the EMS agency, as well as serve as a forum for identification and discussion of challenges the hospital or EMS agency may be encountering, to discussion potential options for resolutions.

Further collaborations also include the inclusion of EMS representatives on regularly scheduled meetings for hospital clinical service lines, such as cardiovascular, stroke and trauma services. The inclusion of EMS in these service line meetings augment protocols and procedures related to pre and potentially post-hospital care.

**Recommendation:** County ALS should establish robust continuing relationship with corporate Bassett executive management, including regular meetings with their Chief Executive Officer, Chief Medical Officer, Chief Operations Officer, and Chief Nursing Officer to enhance collaborative relationships and share information regarding hospital and EMS agency operations.

**Recommendation:** County ALS and the hospitals should work toward including County ALS in clinical service line meetings to enhance clinical and operational integration for quality assurance purposes enhance per and post-hospital care collaboration.

### **Inter-Hospital Ambulance Transfers**

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. During interviews with senior officials at BMC, they indicated frequent delays with ground ambulance service provision for transports from their hospital, citing it often takes 16-24 hours for an ambulance transport, due largely to a lack of ambulance availability. The BMC 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. Transfer delays could be very detrimental to critical patients who require urgent transfers from Bassett and A.O. Fox hospitals.

Delays discharging patients from the hospital can cause process challenge getting patients admitted to the hospital, which can have a ripple effect to the ED. Patients may end up waiting in the ED for an available inpatient bed in the hospital, which in turn, limits availability of beds in the ED for incoming ambulance patients.

BMC contracts with a commercial ambulance provider, American Medical Response (AMR) to have an ambulance available, on-site, when possible, to facilitate the expeditious transfer of patients from BMC. BMC pays a monthly contract fee to AMR to help assure availability of ambulance resources for patients being discharged from the hospital. During a recent meeting, BMC leadership expressed increasing difficulty with arranging timely ambulance transport from BMC with their contracted ambulance provider.

An example of this challenge occurred during the month on December, when multiple patients at BMC and A.O. Fox were awaiting ambulance transport for discharge from the hospital. County ALS provided ambulance transport for the patients who had been waiting for discharge from the hospital for several hours.

Commercial ambulance providers, like other EMS agencies, are facing a staffing crisis due to the previously mentioned challenges related to wages and overall workforce availability. The challenge was recently highlighted in a national new report on the CBS Evening News<sup>2</sup>. This may be contributing to the service delivery challenges from BMC's contracted provider, AMR.

**Recommendation:** County ALS and Basset Health should investigate opportunities for County ALS to contract with Bassett Health to facilitate expeditious ambulance transfer for patients requiring ambulance transport.

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<sup>2</sup> <https://www.cbsnews.com/news/emt-shortage-quit-ambulance/>

# DATA ANALYTICS

In this report, CPSM analyzes EMS 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, a call may include multiple runs.

We received CAD data from the Otsego County Emergency 9-1-1 Center. EMS calls were then assigned detailed categories based on their EMD response determinant provided in the call narrative data. For 1,276 calls that did not have EMD response determinant in the original data, we used the available call type entries to identify their categories. The method of call type categorization is shown in Attachment VI.

We received records for 12,187 distinct incidents that either occurred inside Otsego County EMS zones or were responded to by ambulance or first response services that are part of the Otsego County EMS system between **August 1, 2021, and July 31, 2022**. We removed 5,344 calls entirely for various reasons. These removed calls included:

- 1,861 calls with call descriptions that are detailed in Table 2.
- 1,287 calls lacked a responding unit.
- 396 calls to which a unit was dispatched but never responded or arrived.
- 1,666 fire calls without a responding ambulance.
- 86 calls to which administrative units were the sole responders. The workload of these units is documented in Attachment III.
- 48 calls were responded to by units from Otsego County but occurred outside both Otsego County and the service zones of the Otsego County agencies. This additional workload is documented in Attachment IV.

**Table 2: Removed Calls by Description**

Description	Number of Calls
DRILL – DRILL	70
DUPL – DUPLICATE	119
INFO – INFORMATION ONLY	486
OA - ON AIR	361
PAGER – PAGER TEST	175
RC – RADIO CHECK	242
TEST – TEST	244
TRNG – TRAINING	44
VEHM – VEHICLE MAINTENANCE	120
<b>Total</b>	<b>1,861</b>

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, hamlets, towns, and villages. Afterward, detailed results are reported for each municipality. Similarly, results are first summarized by agency type (ambulance and first response) and later reported for each individual agency. An agency that provides both ambulance and first response service is categorized as an ambulance service.

# SUMMARY OF CALLS AND WORKLOAD

In this report, we separated the workload of Otsego County's agencies and the out-of-county (OOC) agencies serving Otsego County's EMS zones. Tables 3 and 4 summarize the number of calls involving each group of agencies and the corresponding workload, broken out by grand call type. The main analysis includes the 6,238 calls responded by the Otsego County ambulance providers and first responders. The response and workload of the out-of-county agencies are presented in Attachment V.

**TABLE 3: Summary of Calls by Responding Agency and Grand Call Type**

Responding Agency	Number of Calls	Percent of Calls
Otsego County Agencies only	5,551	81.1
OOC Agencies only	605	8.8
Both Otsego and OOC Agencies	687	10.0
<b>Total</b>	<b>6,843</b>	<b>100.0</b>

**Note:** The Otsego County ambulance and first response agencies are provided in Table 1. The out-of-county ambulance services include American Medical Response (AMR), Bridgewater, Franklin, Lifenet (Air Methods), New Berlin, South New Berlin, Sidney, and West Winfield Ambulance services.

**TABLE 4: Summary of Workload by Responding Agency and Grand Call Type**

Responding Agency	Runs	Work Hours
Otsego County Agencies	8,727	8,344.9
OOC Agencies	1,440	1,667.2
<b>Total</b>	<b>10,167</b>	<b>10,012.2</b>

## Observations:

- Otsego County ambulance and first response services responded to 6,238 or 91 percent of total calls. 96 percent of these calls included a responding ambulance.
- Out-of-county ambulance services responded to 1,292 or 19 percent of total calls. 98 percent of these calls included a responding ambulance.



# AGGREGATE CALL TOTALS AND RUNS

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Between **August 1, 2021, and July 31, 2022**, the studied Otsego County agencies responded to 6,238 calls, of which the ambulance service was included in 195 fire calls (fire standby) that occurred inside Otsego County.

## CALLS BY TYPE

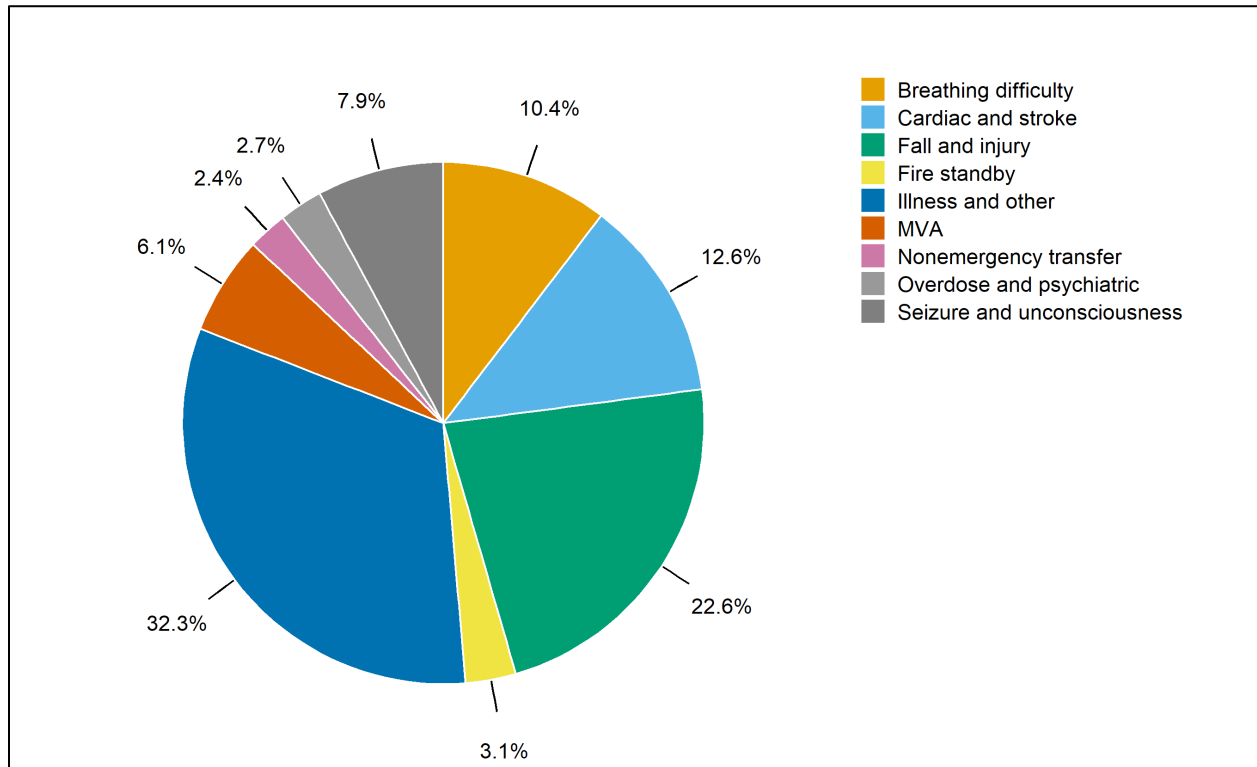
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Table 5 and Figure 2 show the number of calls by call type, average calls per day, and the percentage of calls that fall into each call type category for the 12 months studied.

**TABLE 5: Calls by Type**

Call Type	Number of Calls	Calls per Day	Call Percentage
Breathing difficulty	646	1.8	10.4
Cardiac and stroke	784	2.1	12.6
Fall and injury	1,409	3.9	22.6
Fire Standby	195	0.5	3.1
Illness and other	2,012	5.5	32.3
MVA	381	1.0	6.1
Non-emergency transfer	151	0.4	2.4
Overdose and psychiatric	169	0.5	2.7
Seizure and unconsciousness	491	1.3	7.9
<b>Total</b>	<b>6,238</b>	<b>17.1</b>	<b>100.0</b>

Figure 2: EMS Calls by Type



### Observations:

- Otsego County ambulance and first response services responded to 6,238 calls, an average of 17.1 calls per day.
- Illness and other calls were the largest category at 32 percent of calls and an average of 5.5 calls per day.
- Cardiac and stroke calls made up 13 percent of calls and an average of 2.1 calls per day.
- Motor vehicle accidents (MVA) made up six percent of calls and an average of 1.0 calls per day.

## CALLS BY TYPE AND DURATION

Table 6 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 6: 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	64	230	299	53	646
Cardiac and stroke	97	303	331	53	784
Fall and injury	367	557	403	82	1,409
Fire standby	64	46	38	47	195
Illness and other	478	811	595	128	2,012
MVA	76	94	170	41	381
Non-emergency transfer	7	64	68	12	151
Overdose and psychiatric	52	74	32	11	169
Seizure and unconsciousness	90	187	181	33	491
<b>Total</b>	<b>1,295</b>	<b>2,366</b>	<b>2,117</b>	<b>460</b>	<b>6,238</b>

### Observations:

- On average, there were 7.1 calls per day that lasted more than one hour.
- A total of 3,661 calls (59 percent) lasted less than one hour, 2,117 calls (34 percent) lasted between one and two hours, and 460 calls (seven percent) lasted two or more hours.
- A total of 400 cardiac and stroke calls (51 percent) lasted less than one hour, 331 cardiac and stroke calls (42 percent) lasted one to two hours, and 53 cardiac and stroke calls (seven percent) lasted two or more hours.
- A total of 170 motor vehicle accidents (45 percent) lasted less than one hour, 170 motor vehicle accidents (45 percent) lasted one to two hours, and 41 motor vehicle accidents (11 percent) lasted two or more hours.

## CALLS BY TYPE AND GEOGRAPHY

Table 7 summarizes the geographical distribution of the number of calls to which the studied Otsego County agencies responded, by call type. Tables 8 to 11 detail the same information for each city, village, hamlet, and town, respectively. Figures 2 and 3 compare the call volume in each service municipality for the year.

**TABLE 7: Summary of Calls by Type and Geography**

Service Area	BD	Cardiac and Stroke	Fall and Injury	Fire Stand by	Illness and Other	MVA	NE Transfer	OD	Seizure and Unc.	Total	Pct. Calls
City	106	171	374	19	554	31	29	89	121	1,494	23.9
Hamlet	27	38	41	6	58	5	0	3	17	195	3.1
Town	445	475	832	143	1,121	327	85	62	290	3,780	60.6
Village	68	100	162	27	279	18	37	15	63	769	12.3
<b>Total</b>	<b>646</b>	<b>784</b>	<b>1,409</b>	<b>195</b>	<b>2,012</b>	<b>381</b>	<b>151</b>	<b>169</b>	<b>491</b>	<b>6,238</b>	<b>100</b>

**Note:** BD=Breathing Difficulty; OD=Overdose and Psychiatric; UNC=Unconsciousness; NE=Non-Emergency.

**TABLE 8: Calls by Type and City**

City	BD	Cardiac and Stroke	Fall and Injury	Fire Stand by	Illness and Other	MVA	NE Transfer	OD	Seizure and Unc.	Total	Pct. Calls
Oneonta	106	171	374	19	554	31	29	89	121	1,494	23.9

**TABLE 9: Calls by Type and Village**

Village	BD	Cardiac and Stroke	Fall and Injury	Fire Stand by	Illness and Other	MVA	NE Transfer	OD	Seizure and Unc.	Total	Pct. Calls
Cherry Valley	3	7	9	0	12	0	0	2	3	36	0.6
Cooperstown	13	26	77	10	79	6	37	2	21	271	4.3
Gilbertsville	1	18	5	3	16	1	0	0	1	45	0.7
Laurens	2	1	7	2	13	0	0	0	3	28	0.4
Milford	8	8	16	2	19	4	0	0	2	59	0.9
Morris	3	8	3	2	13	0	0	4	8	41	0.7
Otego	9	3	7	4	19	3	0	1	6	52	0.8
Richfield Springs	19	23	21	2	79	2	0	5	13	164	2.6
Unadilla	10	6	17	2	29	2	0	1	6	73	1.2
<b>Total</b>	<b>68</b>	<b>100</b>	<b>162</b>	<b>27</b>	<b>279</b>	<b>18</b>	<b>37</b>	<b>15</b>	<b>63</b>	<b>769</b>	<b>12.3</b>

**TABLE 10: Calls by Type and Hamlet**

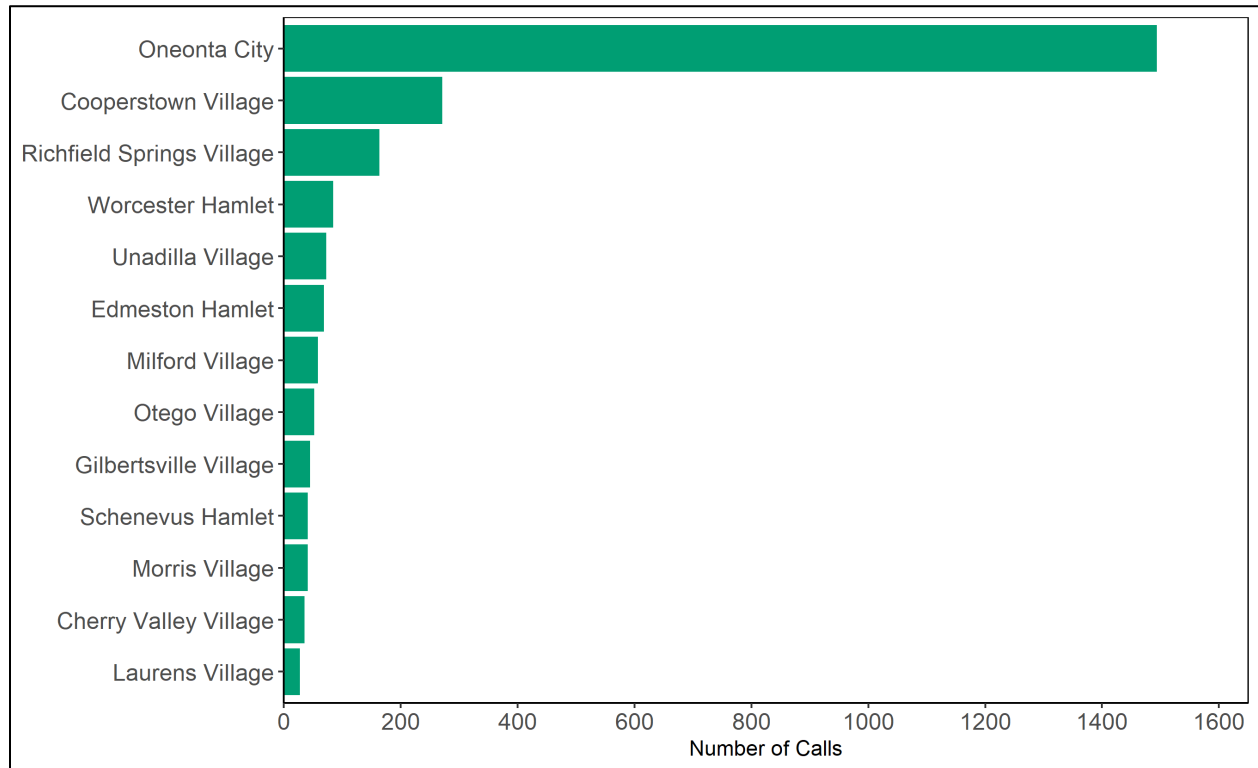
Hamlet	BD	Cardiac and Stroke	Fall and Injury	Fire Stand by	Illness and Other	MVA	NE Transfer	OD	Seizure and Unc.	Total	Pct. Calls
Edmeston	7	12	14	4	28	2	0	0	2	69	1.1
Schenevus	5	9	12	0	9	1	0	0	5	41	0.7
Worcester	15	17	15	2	21	2	0	3	10	85	1.4
<b>Total</b>	<b>27</b>	<b>38</b>	<b>41</b>	<b>6</b>	<b>58</b>	<b>5</b>	<b>0</b>	<b>3</b>	<b>17</b>	<b>195</b>	<b>3.1</b>

**TABLE 11: Calls by Type and Town**

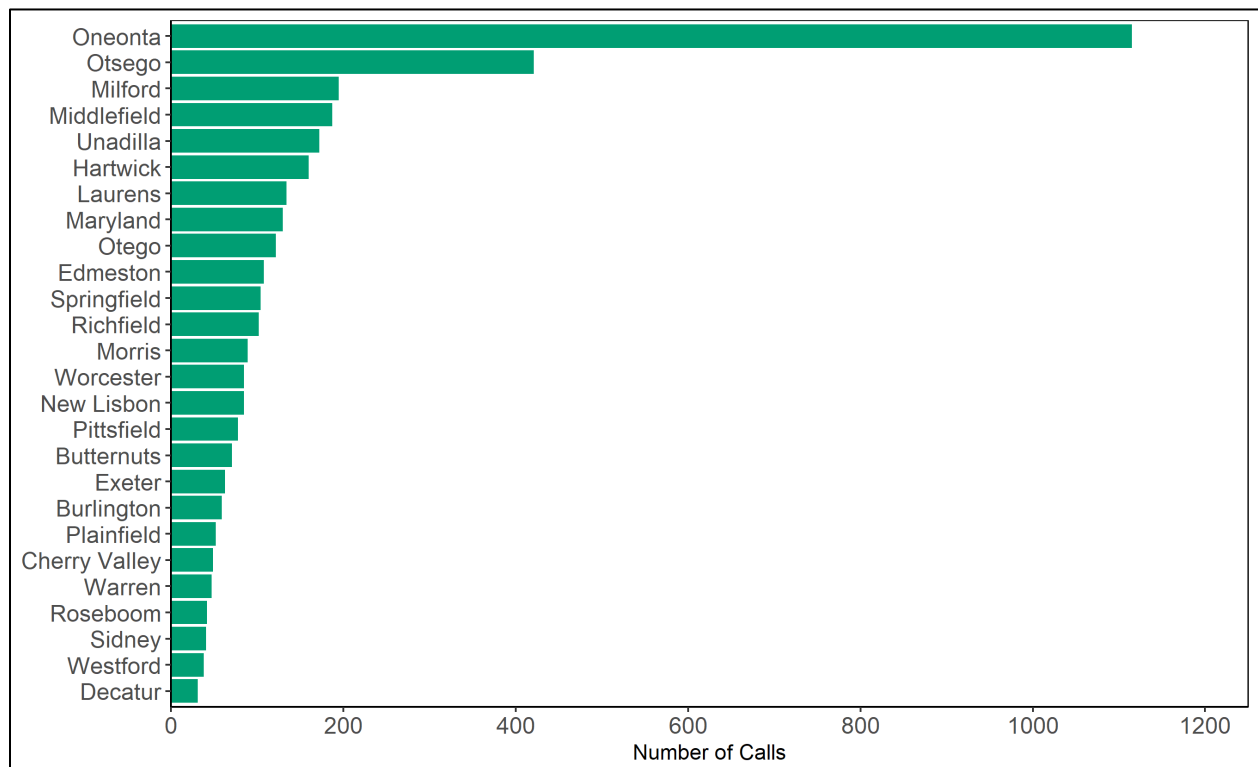
Town	BD	Cardiac and Stroke	Fall and Injury	Fire Stand by	Illness and Other	MVA	NE Transfer	OD	Seizure and Unc.	Total	Pct. Calls
Burlington	7	5	9	4	18	5	0	4	7	59	0.9
Butternuts*	7	11	15	1	29	4	0	1	3	71	1.1
Cherry Valley	5	8	15	9	4	7	0	0	1	49	0.8
Decatur	3	6	8	0	11	0	0	0	3	31	0.5
Edmeston	12	20	18	5	31	12	0	2	8	108	1.7
Exeter	10	17	7	6	7	11	0	0	5	63	1.0
Hartwick	14	21	32	13	54	10	0	3	13	160	2.6
Laurens	17	18	31	6	41	13	0	2	6	134	2.1
Maryland	23	19	27	3	38	12	0	0	8	130	2.1
Middlefield	13	15	25	6	37	25	54	1	11	187	3.0
Milford	23	24	23	22	61	17	0	5	20	195	3.1
Morris*	9	6	15	6	33	12	0	3	5	89	1.4
New Lisbon	13	11	21	5	18	9	0	1	7	85	1.4
Oneonta	111	138	304	16	355	54	29	26	82	1,115	17.9
Otego	19	14	21	3	35	21	0	1	8	122	2.0
Otsego	61	54	97	12	132	21	1	4	39	421	6.7
Pittsfield*	9	8	11	1	21	16	0	0	12	78	1.3
Plainfield*	5	5	8	1	20	8	0	1	4	52	0.8
Richfield	12	10	32	1	22	15	0	0	10	102	1.6
Roseboom	8	5	5	5	7	4	1	1	6	42	0.7
Sidney**	3	5	13	1	8	8	0	1	2	41	0.7
Springfield	8	9	26	11	28	12	0	1	9	104	1.7
Unadilla	30	24	37	2	54	13	0	2	10	172	2.8
Warren**	10	4	6	2	12	9	0	0	4	47	0.8
Westford	2	9	5	1	13	3	0	1	4	38	0.6
Worcester	11	9	21	1	32	6	0	2	3	85	1.4
<b>Total</b>	<b>445</b>	<b>475</b>	<b>832</b>	<b>143</b>	<b>1,121</b>	<b>327</b>	<b>85</b>	<b>62</b>	<b>290</b>	<b>3,780</b>	<b>60.6</b>

**Note:** \*Otsego County community partially covered by out-of-county EMS agencies; \*\*Out-of-County community partially covered by Otsego County EMS agencies.

**Figure 3: Call Volume by City, Village, and Hamlet**



**Figure 4: Call Volume by Town**



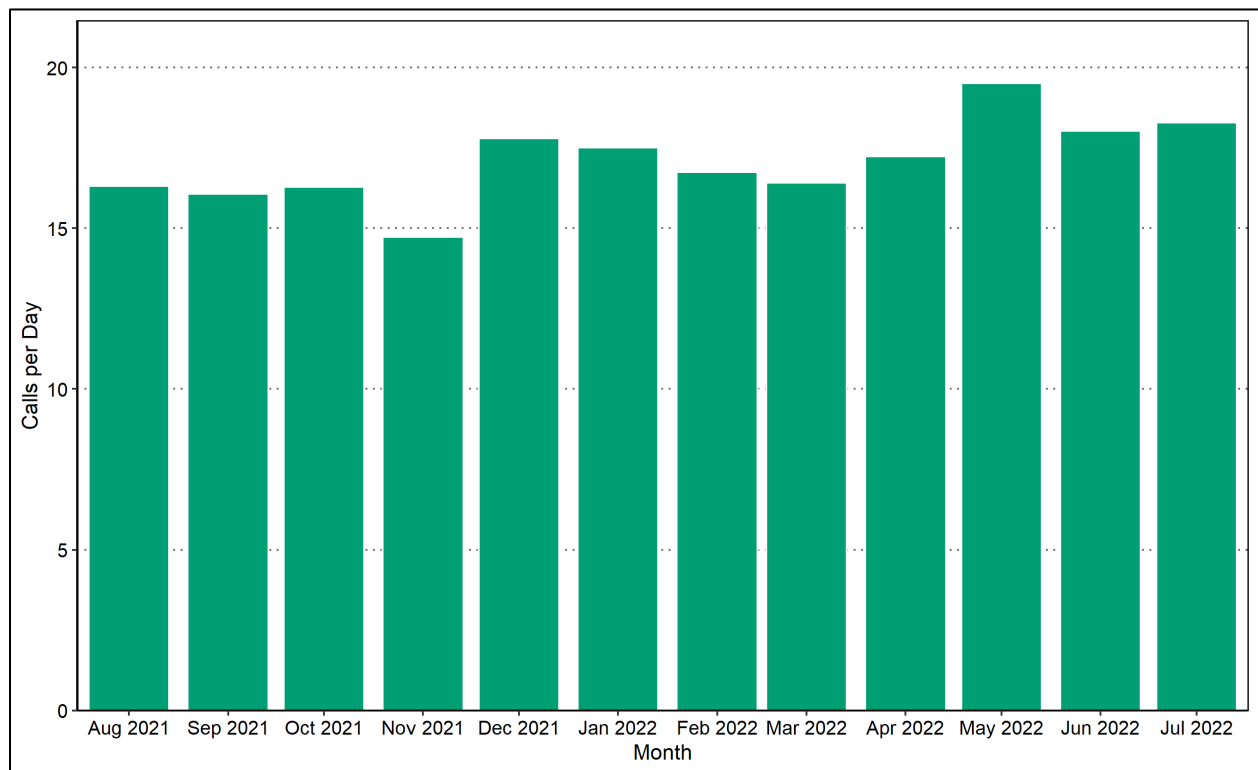
## Observations:

- Oneonta City, Oneonta Town, and Otsego Town are the municipalities with the three highest call volumes.
- Oneonta City had 1,494 calls or 24 percent of the total calls.
- Oneonta Town had 1,115 calls or 18 percent of the total calls.
- Otsego Town had 421 calls or seven 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 studied 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**

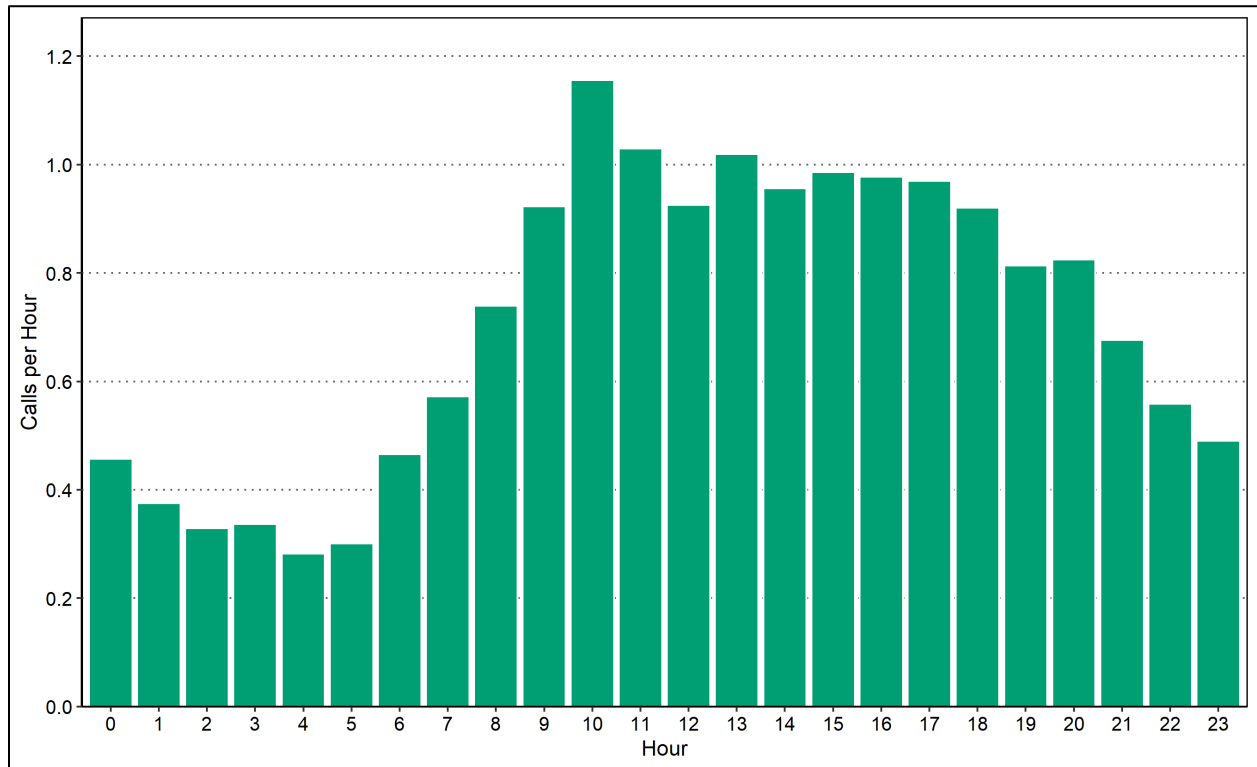


### Observations:

- Average calls per day overall ranged from 14.7 in November 2021 to 19.5 in May 2022.



Figure 6: Calls by Hour of Day



### Observations:

- Average calls per hour ranged from 0.3 between 4:00 a.m. and 5:00 a.m. to 1.2 between 10:00 a.m. and 11:00 a.m.

## UNITS ARRIVED AT CALLS

Table 12 along with Figure 7 details the number of calls with one, two, three, and four or more response units arriving at a call, broken down by call type. Here we limit ourselves to calls where a unit arrives (6,052 out of 6,238 calls had arriving units). For this reason, there are fewer calls in Table 12 than in Table 5. We also analyzed the number of arriving units focusing on units from the local ambulance and first response services based on a call's location and present the results in Table 13 and Figure 7.

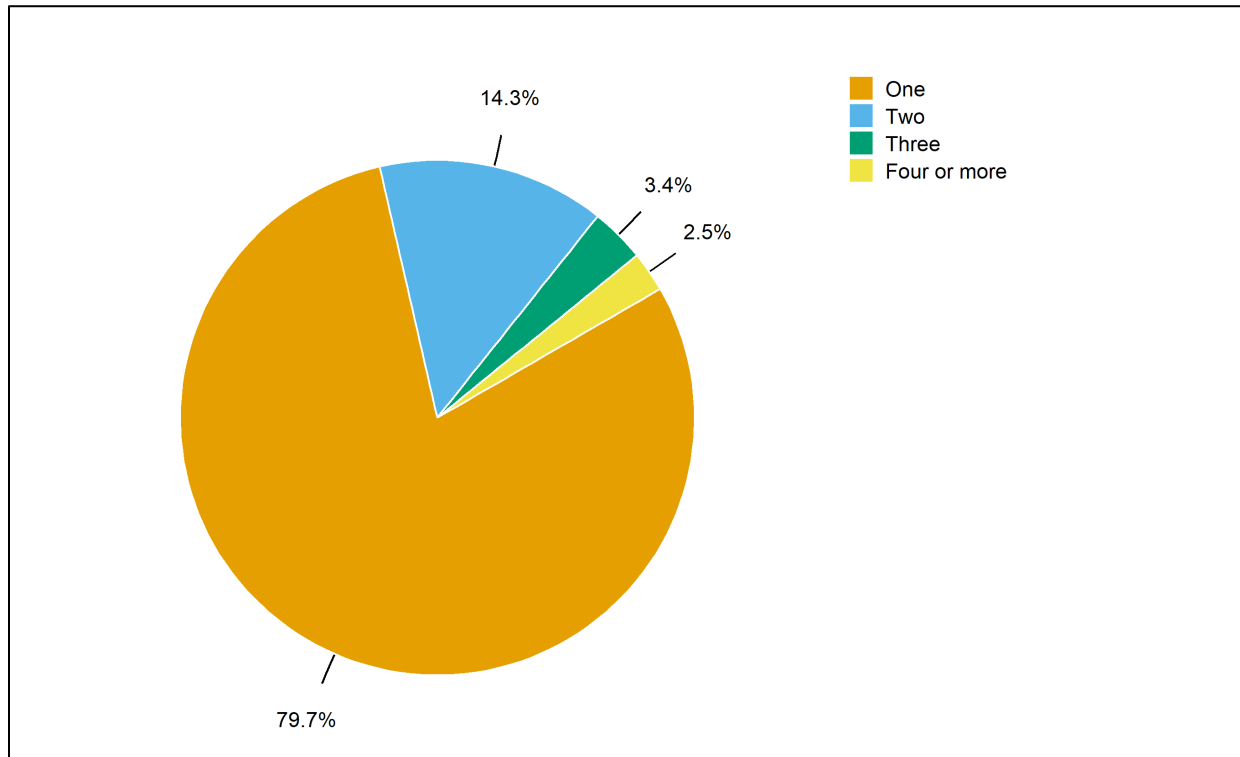
**TABLE 12: Calls by Call Type and Number of Units Arriving**

Call Type	Number of Units				Arriving Calls
	One	Two	Three	Four or more	
Breathing difficulty	513	100	16	1	630
Cardiac and stroke	601	147	18	4	770
Fall and injury	1,209	150	18	1	1,378
Fire Total	71	23	42	48	184
Illness and other	1,689	208	22	4	1,923
MVA	80	118	77	93	368
Non-emergency transfer	145	3	2	0	150
Overdose and psychiatric	146	18	3	1	168
Seizure and unconsciousness	371	99	10	1	481
<b>Total</b>	<b>4,825</b>	<b>866</b>	<b>208</b>	<b>153</b>	<b>6,052</b>
<b>Percentage</b>	<b>79.7</b>	<b>14.3</b>	<b>3.4</b>	<b>2.5</b>	<b>100.0</b>

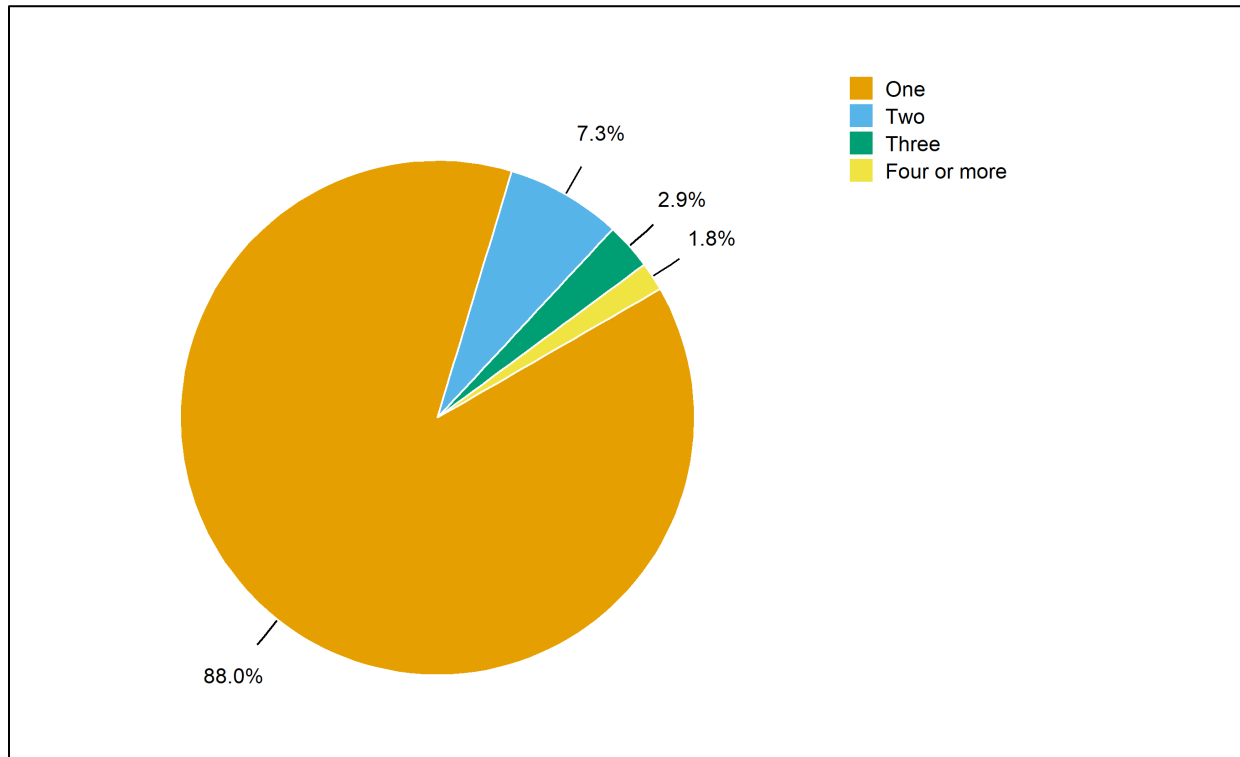
**TABLE 13: Calls by Call Type and Number of Local Agency's Units Arriving**

Call Type	Number of Units				Arriving Calls
	One	Two	Three	Four or more	
Breathing difficulty	401	24	1	0	426
Cardiac and stroke	555	30	3	0	588
Fall and injury	1,033	53	3	0	1,089
Fire Total	43	21	39	37	140
Illness and other	1,388	50	8	1	1,447
MVA	89	133	81	46	349
Non-emergency transfer	119	2	2	0	123
Overdose and psychiatric	146	4	0	0	150
Seizure and unconsciousness	336	22	0	0	358
<b>Total</b>	<b>4,110</b>	<b>339</b>	<b>137</b>	<b>84</b>	<b>4,670</b>
<b>Percentage</b>	<b>88.0</b>	<b>7.3</b>	<b>2.9</b>	<b>1.8</b>	<b>100.0</b>

Figure 7: Calls by Number of All Units Arriving



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



## Observations:

- EMS services arrived at 6,052 calls or 97 percent of total calls.
- A **local agency's** unit arrived at **4,670** calls in their primary service areas, which was **77 percent of the total arriving calls**.
- **All Units Arriving at Calls**
  - On average, when focusing on calls with at least one arriving unit, 1.3 units arrived per call.
  - One unit arrived 80 percent of the time, two units arrived 14 percent of the time, three units arrived three percent of the time, and four or more units arrived three percent of the time.
- **Local 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 88 percent of the time, two units arrived seven percent of the time, three units arrived two percent of the time, and four or more units arrived two 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 14 shows the total deployed time of the studied Otsego County agencies, both overall and broken down by type of run, for all units of the studied agencies during the year. Table 15 and Figure 9 present the average deployed minutes by an hour the of day.

**TABLE 14: Annual Runs and Deployed Time by Run Type**

Run Type	Annual Runs	Runs per Day	Minutes per Run	Annual Hours	Minutes per Day	Percent of Hours
Breathing difficulty	830	2.3	62.3	861.4	141.6	10.3
Cardiac and stroke	1,058	2.9	57.4	1,012.1	166.4	12.1
Fire standby	548	1.5	102.2	933.5	153.5	11.2
Fall and injury	1,703	4.7	50.2	1,423.7	234.0	17.1
Illness and other	2,478	6.8	52.9	2,183.9	359.0	26.2
MVA	1,074	2.9	55.1	986.0	162.1	11.8
Non-emergency transfer	164	0.4	64.9	177.3	29.1	2.1
Overdose and psychiatric	213	0.6	44.7	158.6	26.1	1.9
Seizure and unconsciousness	659	1.8	55.4	608.4	100.0	7.3
<b>Total</b>	<b>8,727</b>	<b>23.9</b>	<b>57.4</b>	<b>8,344.9</b>	<b>1,371.8</b>	<b>100.0</b>

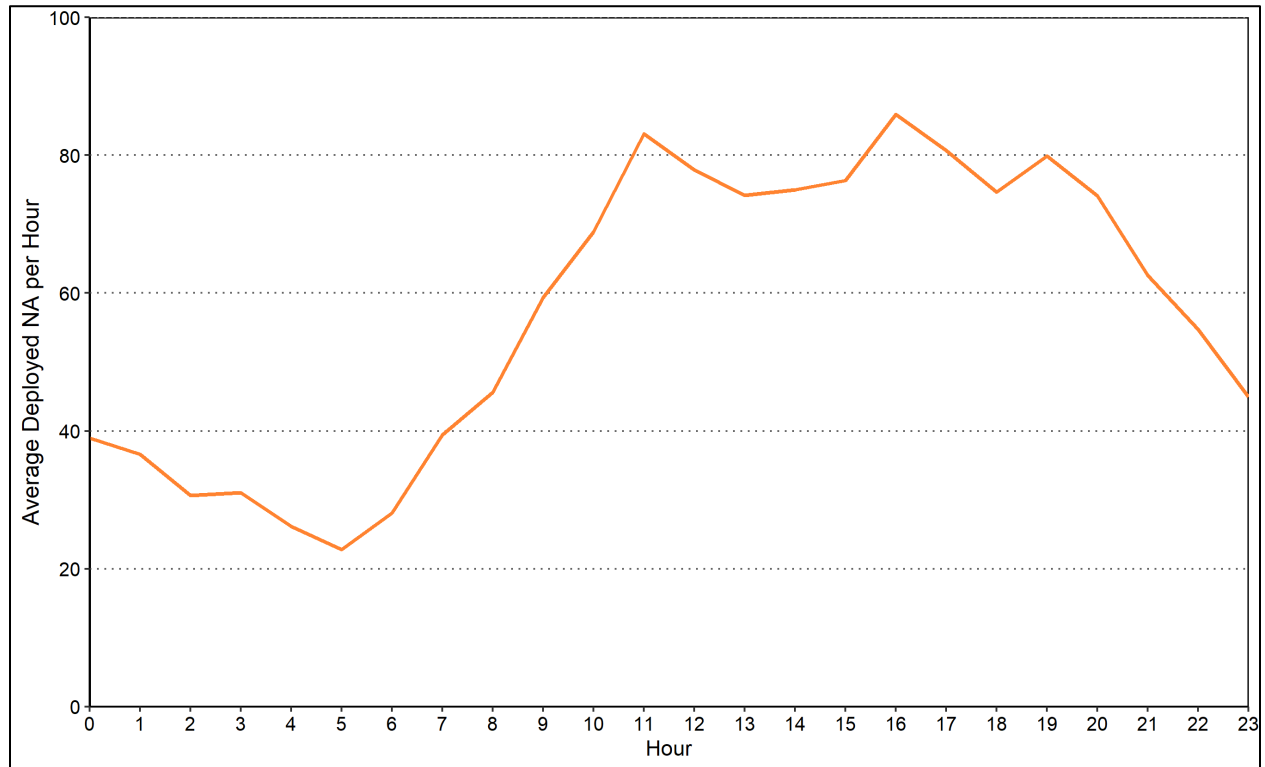
### Observations:

- There were 8,727 runs for the year.
- The daily average was 23.9 runs.
- The average deployed time was 57.4 minutes per run.
- Total deployed time for the year was 8,344.9 hours.
- The daily average deployed time was 22.9 hours for all units combined or 57.2 minutes of work per hour.

**TABLE 15: Average Deployed Minutes by Hour of Day**

Hour	Total
0	38.9
1	36.6
2	30.6
3	31.1
4	26.1
5	22.8
6	28.1
7	39.5
8	45.6
9	59.4
10	68.9
11	83.1
12	77.9
13	74.2
14	75.0
15	76.3
16	85.9
17	80.7
18	74.7
19	79.9
20	74.1
21	62.6
22	54.7
23	44.9
<b>Total</b>	<b>1,371.8</b>

**Figure 9: Average Deployed Minutes by Hour of Day**



### Observations:

- Hourly deployed time was highest during the day from 11:00 a.m. to 9:00 p.m., averaging between 74.1 minutes and 85.9 minutes.
- Average deployed time peaked between 4:00 p.m. and 5:00 p.m., averaging 85.9 minutes.
- Average deployed time was lowest between 5:00 a.m. and 6:00 a.m., averaging 22.8 minutes.



## WORKLOAD BY AGENCY

Table 16 summarizes the total workload of ambulance agencies and first responders. Tables 17 and 18 show the same information for each ambulance agency (Table 17) and first responder (Table 18). Tables 19 through 24 provide a more detailed view of workload, showing each agency's runs broken out by run type (Tables 19, 20, and 21) and the resulting daily average deployed time by run type (Tables 22, 23, and 24). Figures 10 and 11 compare the total runs made by the studied ambulance agencies and first responders, respectively. In this analysis, if an agency provides both ambulance and first response service, we grouped it into ambulance service. In addition, Otsego County routinely operates two ALS ambulances serving throughout the county. We use "County ALS" to represent this ambulance service in the following sections. It is important to note that County ALS initiated service on November 12, 2021.

**TABLE 16: Summary of the Total Annual Workload by Agency Type**

Agency Type	Annual Runs	Runs per Day	Minutes per Run	Annual Hours	Minutes per Day	Percent of Hours
Career Ambulance	5,108	14.0	48.3	4,112.3	676.0	49.3
Volunteer Ambulance	2,967	8.1	74.8	3,701.3	608.4	44.3
First-Responder	652	1.8	48.9	531.3	87.3	6.4
<b>Total</b>	<b>8,727</b>	<b>23.9</b>	<b>57.4</b>	<b>8,344.9</b>	<b>1,371.8</b>	<b>100.0</b>

**TABLE 17: Annual Workload by Ambulance Service**

Ambulance Service	Annual Runs	Runs per Day	Minutes per Run	Annual Hours	Minutes per Day	Percent of Hours
Oneonta	2,792	7.6	41.6	1,936.8	318.4	23.2
County ALS*	2,316	8.9	56.4	2,175.5	504.0	26.1
<b>Career AMB Subtotal</b>	<b>5,108</b>	<b>14.0</b>	<b>48.3</b>	<b>4,112.3</b>	<b>676.0</b>	<b>49.3</b>
Cherry Valley	99	0.3	88.2	145.6	23.9	1.7
Cooperstown	602	1.6	58.3	585.0	96.2	7.0
Edmeston	198	0.5	88.8	293.0	48.2	3.5
Fly Creek	176	0.5	73.1	214.5	35.3	2.6
Garratville	83	0.2	78.1	108.1	17.8	1.3
Gilbertsville	127	0.3	76.6	162.2	26.7	1.9
Hartwick	211	0.6	91.2	320.6	52.7	3.8
Laurens	163	0.4	67.3	182.8	30.0	2.2
Milford	361	1.0	76.6	460.7	75.7	5.5
Morris	126	0.3	88.3	185.4	30.5	2.2
Otego	71	0.2	58.6	69.4	11.4	0.8
Richfield Springs	300	0.8	76.5	382.3	62.8	4.6
Schenevus	120	0.3	62.2	124.5	20.5	1.5
Unadilla	92	0.3	57.9	88.8	14.6	1.1
Worcester	238	0.7	95.4	378.4	62.2	4.5
<b>Volunteer AMB Subtotal</b>	<b>2,967</b>	<b>8.1</b>	<b>74.8</b>	<b>3,701.3</b>	<b>608.4</b>	<b>44.2</b>
<b>Total</b>	<b>8,075</b>	<b>22.1</b>	<b>58.1</b>	<b>7,813.6</b>	<b>1,284.4</b>	<b>93.5</b>

**Note:** \*County ALS served 259 days between November 12, 2021, and July 31, 2022. We used the averages over 365 days in the table to ensure consistency between agencies. **The actual daily averages for County ALS are 8.9 runs per day and 504.0 minutes per day.**

**TABLE 18: Annual Workload by First-Responder**

First Responder	Annual Runs	Runs per Day	Minutes per Run	Annual Hours	Minutes per Day	Percent of Hours
East Worcester	48	0.1	38.1	30.5	5.0	0.4
Hartwick Seminary	17	0.0	76.9	21.8	3.6	0.3
Middlefield	22	0.1	54.0	19.8	3.3	0.2
Pittsfield	70	0.2	55.4	64.6	10.6	0.8
Schuyler Lake	20	0.1	60.9	20.3	3.3	0.2
Springfield	150	0.4	45.0	112.4	18.5	1.3
Unadilla Forks	41	0.1	43.9	30.0	4.9	0.4
Wells Bridge	98	0.3	41.4	67.6	11.1	0.8
West Edmeston	108	0.3	57.3	103.1	16.9	1.2
West Exeter	19	0.1	47.4	15.0	2.5	0.2
West Oneonta	32	0.1	49.7	26.5	4.4	0.3
Westford	27	0.1	43.8	19.7	3.2	0.2
<b>Total</b>	<b>652</b>	<b>1.8</b>	<b>48.9</b>	<b>531.3</b>	<b>87.3</b>	<b>6.3</b>

**Note:** The first responders include agencies that provide *only first response service*.

### Observations:

- Oneonta made the most runs (2,792 or an average of 7.6 runs per day) and had the second-highest total annual deployed time (1,936.8 hours or an average of 5.3 hours per day).
- **County ALS** started service on November 12, 2021. ***Between November 12, 2021, and July 31, 2022, it made the second-most runs (2,316 or an average of 8.9 runs per day) and had the highest total annual deployed time (2,175.5 or an average of 8.4 hours per day).***
- Cooperstown made the third-most runs (602 or an average of 1.6 runs per day) and had the third-highest total annual deployed time (585.0 or an average of 1.6 hours per day).

**TABLE 19: Summary of the Annual Runs by Agency and Run Type**

Agency Type	BD	Cardiac and Stroke	Fall and Injury	Fire Stand by	Illness and Other	MVA	NE Transfer	OD	Seizure and UNC	Total
Career Ambulance	527	655	1,154	124	1,661	310	80	159	438	5,108
Volunteer Ambulance	242	326	439	424	661	574	84	42	175	2,967
First-Responder	61	77	110	0	156	190	0	12	46	652
<b>Total</b>	<b>830</b>	<b>1,058</b>	<b>1,703</b>	<b>548</b>	<b>2,478</b>	<b>1,074</b>	<b>164</b>	<b>213</b>	<b>659</b>	<b>8,727</b>

**Note:** BD=Breathing Difficulty; NE=Non-Emergency; OD=Overdose and Psychiatric; UNC=Unconsciousness. Career Ambulance agencies include Oneonta and County ALS.

**TABLE 20: Annual Runs by Ambulance Service and Run Type**

Ambulance Service	BD	Cardiac and Stroke	Fall and Injury	Fire Stand by	Illness and Other	MVA	NE Transfer	OD	Seizure and UNC	Total
Oneonta	225	322	697	53	945	162	53	120	215	2,832
County ALS	302	333	457	71	716	148	27	39	223	2,328
<b>Career AMB Subtotal</b>	<b>527</b>	<b>655</b>	<b>1,154</b>	<b>124</b>	<b>1,661</b>	<b>310</b>	<b>80</b>	<b>159</b>	<b>438</b>	<b>5,108</b>
Cherry Valley	4	5	12	23	9	41	1	1	3	122
Cooperstown	40	55	101	67	132	92	76	6	33	632
Edmeston	18	29	28	41	36	33	0	2	11	211
Fly Creek	9	16	25	26	29	51	2	0	18	183
Garrattsville	6	9	16	12	14	21	0	1	4	101
Gilbertsville	8	28	18	7	48	10	0	2	6	134
Hartwick	23	26	38	18	75	12	1	3	15	228
Laurens	20	19	33	11	50	15	2	6	7	174
Milford	27	26	28	116	62	81	2	5	14	398
Morris	9	9	10	30	29	26	0	5	8	136
Otego	2	6	8	6	9	35	0	0	5	109
Richfield Springs	31	30	41	32	67	77	0	4	18	324
Schenevus	15	15	24	8	24	26	0	1	7	144
Unadilla	7	11	12	7	18	30	0	1	6	108
Worcester	23	42	45	20	59	24	0	5	20	248
<b>Volunteer AMB Subtotal</b>	<b>242</b>	<b>326</b>	<b>439</b>	<b>424</b>	<b>661</b>	<b>574</b>	<b>84</b>	<b>42</b>	<b>175</b>	<b>2,967</b>
<b>Total</b>	<b>769</b>	<b>981</b>	<b>1,593</b>	<b>548</b>	<b>2,322</b>	<b>884</b>	<b>164</b>	<b>201</b>	<b>613</b>	<b>8,075</b>

**TABLE 21: Annual Runs by First-Responder and Run Type**

<b>First-Responder</b>	<b>BD</b>	<b>Cardiac and Stroke</b>	<b>Fall and Injury</b>	<b>Illness and Other</b>	<b>MVA</b>	<b>OD</b>	<b>Seizure and UNC</b>	<b>Total</b>
East Worcester	5	5	10	18	2	2	6	48
Hartwick Seminary	0	1	0	3	13	0	0	17
Middlefield	3	1	3	4	10	0	1	22
Pittsfield	6	7	8	15	27	0	7	70
Schuyler Lake	0	1	1	2	16	0	0	20
Springfield	10	19	27	33	44	3	14	150
Unadilla Forks	4	2	7	17	7	1	3	41
Wells Bridge	15	15	22	26	15	0	5	98
West Edmeston	11	13	20	23	31	4	6	108
West Exeter	5	6	2	1	3	1	1	19
West Oneonta	0	1	6	7	18	0	0	32
Westford	2	6	4	7	4	1	3	27
<b>Total</b>	<b>61</b>	<b>77</b>	<b>110</b>	<b>156</b>	<b>190</b>	<b>12</b>	<b>46</b>	<b>652</b>

**TABLE 22: Summary of Daily Average Deployed Minutes by Agency and Run Type**

Agency Type	BD	Cardiac and Stroke	Fall and Injury	Illness and Other	MVA	NE Transfer	OD	Seizure and UNC	Fire	Total
Career Ambulance	83.7	95.1	139.7	208.6	28.8	14.9	16.8	59.5	28.9	676.0
Volunteer Ambulance	50.0	61.3	81.6	134.8	98.7	14.3	8.1	35.2	124.6	608.6
First-Responder	7.7	10.1	12.8	15.6	34.7	0.0	1.2	5.2	0.0	87.3
<b>Total</b>	<b>141.6</b>	<b>166.4</b>	<b>234.0</b>	<b>359.0</b>	<b>162.1</b>	<b>29.1</b>	<b>26.1</b>	<b>100.0</b>	<b>153.5</b>	<b>1,371.8</b>

**Note:** BD=Breathing Difficulty; NE=Non-Emergency; OD=Overdose and Psychiatric; UNC=Unconsciousness. Career Ambulance agencies include Oneonta and County ALS.

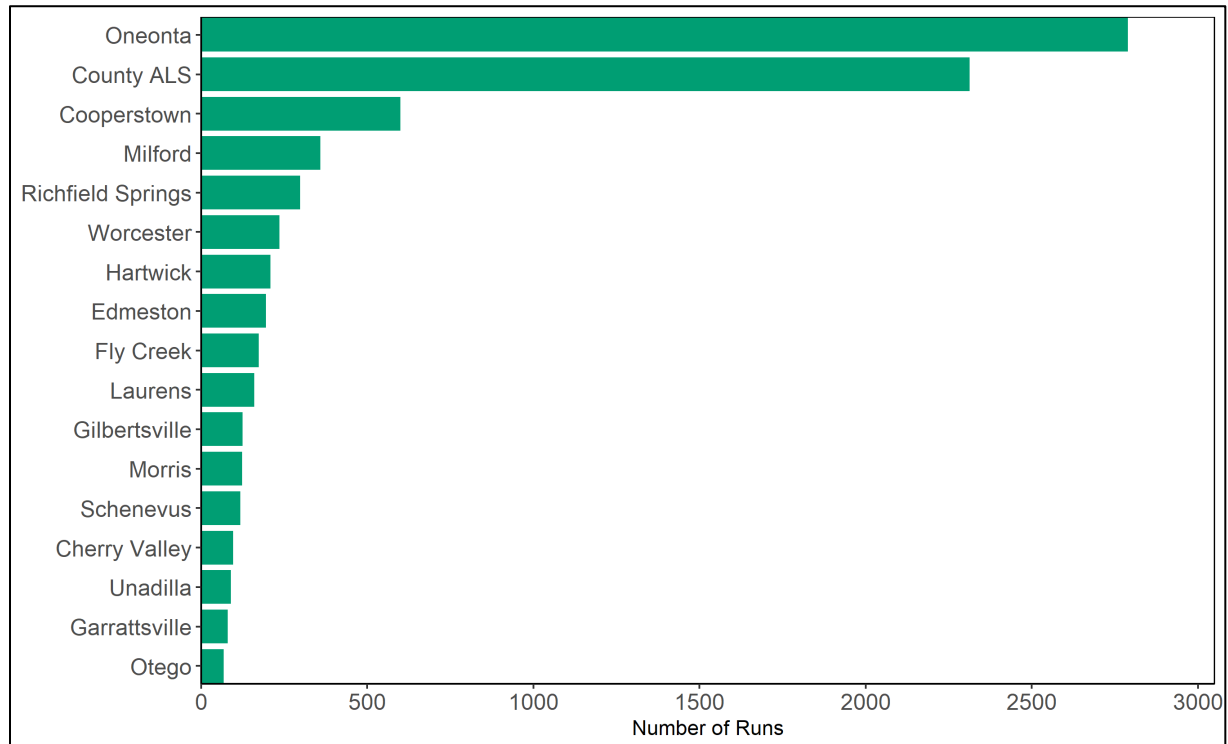
**TABLE 23: Daily Average Deployed Minutes by Ambulance Agency and Run Type**

Ambulance Service	BD	Cardiac and Stroke	Fall and Injury	Illness and Other	MVA	NE Transfer	OD	Seizure and UNC	Fire	Total
Oneonta	28.7	41.5	71.1	97.7	13.7	9.7	11.0	24.0	21.0	318.4
County ALS	55.0	53.6	68.6	110.9	15.1	5.2	5.8	35.5	7.9	357.6
<b>Career AMB Subtotal</b>	<b>83.7</b>	<b>95.1</b>	<b>139.7</b>	<b>208.6</b>	<b>28.8</b>	<b>14.9</b>	<b>16.8</b>	<b>59.5</b>	<b>28.9</b>	<b>676.0</b>
Cherry Valley	0.6	0.9	2.4	3.5	7.6	0.3	0.0	0.7	7.9	23.9
Cooperstown	7.6	8.8	13.7	20.7	12.9	12.6	1.0	5.9	13.1	96.2
Edmeston	3.6	6.0	6.4	8.5	6.8	0.0	0.4	2.7	13.8	48.2
Fly Creek	1.4	2.2	3.4	4.1	10.3	0.3	0.0	2.8	10.7	35.3
Garrattsville	0.8	1.5	3.0	3.3	4.0	0.0	0.4	0.4	4.4	17.8
Gilbertsville	1.5	4.3	4.3	10.7	1.4	0.0	0.4	1.6	2.5	26.7
Hartwick	5.2	5.9	9.1	16.8	3.3	0.2	0.9	3.4	8.0	52.7
Laurens	4.4	3.4	6.4	7.4	2.2	0.3	0.7	1.6	3.5	30.1
Milford	6.2	5.0	4.2	19.5	13.3	0.6	1.4	3.2	22.5	75.7
Morris	1.5	1.4	3.0	6.0	5.1	0.0	0.6	2.4	10.5	30.5
Otego	0.3	1.0	1.5	1.0	6.0	0.0	0.0	0.8	0.7	11.4
Richfield Springs	7.7	6.3	8.3	13.5	13.7	0.0	0.5	4.0	8.8	62.8
Schenevus	1.4	1.4	3.5	4.7	5.1	0.0	0.4	0.6	3.5	20.5
Unadilla	1.6	2.1	1.6	1.9	4.2	0.0	0.3	0.8	1.9	14.6
Worcester	6.2	11.1	10.8	13.2	2.8	0.0	1.1	4.3	12.7	62.2
<b>Volunteer AMB Subtotal</b>	<b>50.0</b>	<b>61.3</b>	<b>81.6</b>	<b>134.8</b>	<b>98.7</b>	<b>14.3</b>	<b>8.1</b>	<b>35.2</b>	<b>124.6</b>	<b>608.6</b>
<b>Total</b>	<b>133.7</b>	<b>156.4</b>	<b>221.3</b>	<b>343.4</b>	<b>127.5</b>	<b>29.2</b>	<b>24.9</b>	<b>94.7</b>	<b>153.5</b>	<b>1284.6</b>

**TABLE 24: Daily Average Deployed Minutes by First-Responder and Run Type**

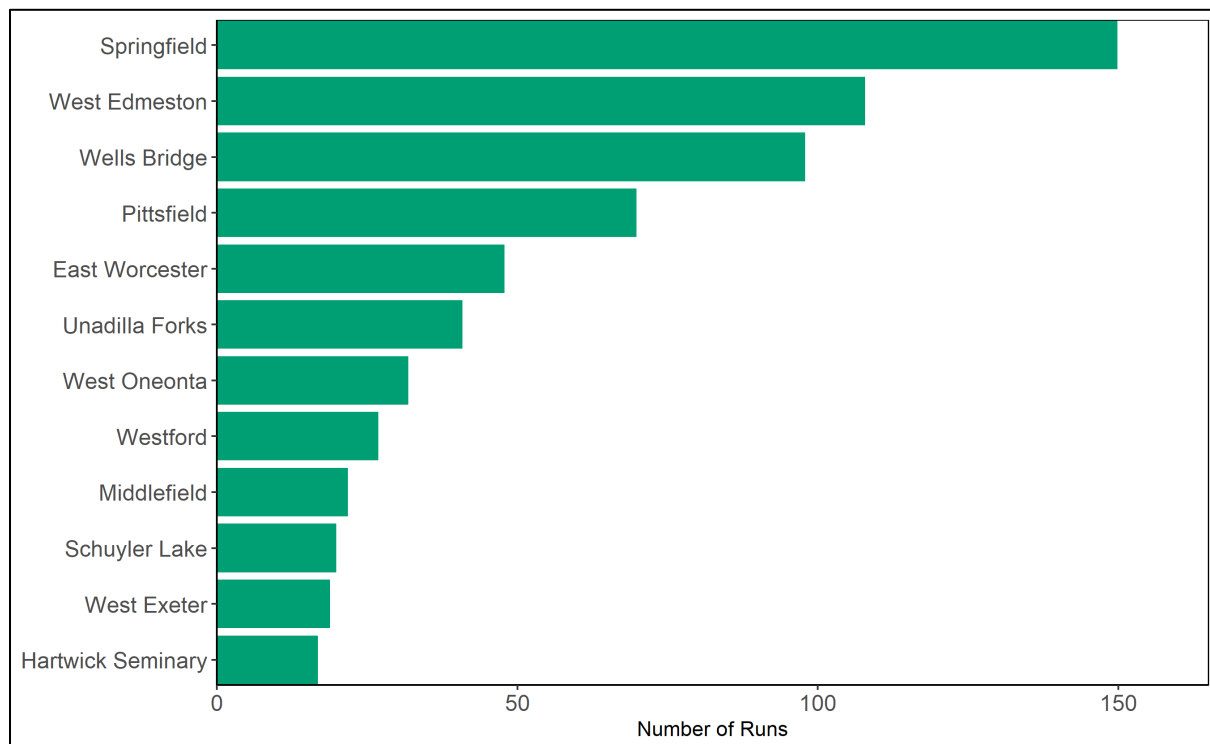
<b>First-Responder</b>	<b>BD</b>	<b>Cardiac and Stroke</b>	<b>Fall and Injury</b>	<b>Illness and Other</b>	<b>MVA</b>	<b>OD</b>	<b>Seizure and UNC</b>	<b>Total</b>
East Worcester	0.5	0.6	0.9	1.9	0.4	0.2	0.6	9.3
Hartwick Seminary	0.0	0.1	0.0	0.1	3.4	0.0	0.1	9.8
Middlefield	0.4	0.1	0.3	0.6	1.7	0.0	0.1	9.3
Pittsfield	0.6	0.8	0.8	1.3	6.2	0.0	0.8	16.7
Schuyler Lake	0.0	0.3	0.2	0.1	2.8	0.0	0.0	13.0
Springfield	1.7	2.5	3.6	3.5	5.3	0.4	1.5	42.7
Unadilla Forks	0.6	0.2	0.7	1.7	1.4	0.1	0.3	5.9
Wells Bridge	1.6	2.1	2.6	2.5	1.9	0.0	0.4	17.3
West Edmeston	1.3	1.7	2.6	2.6	7.3	0.4	0.9	27.1
West Exeter	0.7	0.7	0.2	0.1	0.6	0.0	0.1	12.4
West Oneonta	0.0	0.1	0.5	0.5	3.2	0.0	0.1	14.6
Westford	0.3	0.9	0.4	0.7	0.5	0.1	0.3	6.2
<b>Total</b>	<b>7.7</b>	<b>10.1</b>	<b>12.8</b>	<b>15.6</b>	<b>34.7</b>	<b>1.2</b>	<b>5.2</b>	<b>87.3</b>

**Figure 10: Annual Runs by Ambulance Service**



**Note:** Oneonta and County ALS are career agencies. The rest are volunteer agencies.

**Figure 11: Annual Runs by First-Responder**



**Note:** None of the above first responders provided ambulance service.

## WORKLOAD BY GEOGRAPHY

Table 25 summarizes the workload broken down by individual service areas and grouped by type of municipality to which the studied Otsego County agencies provided service. Tables 26 to 29 present the same information for each city, hamlet, village, and town, respectively.

**TABLE 25: Summary of Annual Workload by Geography**

Service Area	Annual Runs	Runs Per Day	Minutes Per Run	Annual Hours	Minutes Per Day	Percent of Work
City	1,606	4.4	38.9	1,040.3	171.0	12.5
Hamlet	319	0.9	71.4	379.5	62.4	4.5
Town	5,712	15.6	61.7	5,870.2	965.0	70.3
Village	1,090	3.0	58.1	1,055.0	173.4	12.6
<b>Total</b>	<b>8,727</b>	<b>23.9</b>	<b>57.4</b>	<b>8,344.9</b>	<b>1,371.8</b>	<b>100.0</b>

**TABLE 26: Annual Workload by City**

City	Annual Runs	Runs per Day	Minutes per Run	Annual Hours	Minutes per Day	Percent of Hours
Oneonta	1,606	4.4	38.9	1,040.3	171.0	12.5

**TABLE 27: Annual Workload by Hamlet**

Hamlet	Annual Runs	Runs Per Day	Minutes Per Run	Annual Hours	Minutes per Day	Percent of Work
Edmeston	102	0.3	60.8	103.3	17.0	1.2
Schenevus	66	0.2	60.5	66.5	10.9	0.8
Worcester	151	0.4	83.3	209.7	34.5	2.5
<b>Total</b>	<b>319</b>	<b>0.9</b>	<b>71.4</b>	<b>379.5</b>	<b>62.4</b>	<b>4.5</b>

**TABLE 28: Annual Workload by Village**

Village	Annual Runs	Runs Per Day	Minutes Per Run	Annual Hours	Minutes per Day	Percent of Work
Cherry Valley	64	0.2	67.7	72.2	11.9	0.9
Cooperstown	348	1.0	47.2	273.6	45.0	3.3
Gilbertsville	69	0.2	73.6	84.6	13.9	1.0
Laurens	45	0.1	58.3	43.7	7.2	0.5
Milford	95	0.3	55.7	88.2	14.5	1.1
Morris	84	0.2	101.0	141.3	23.2	1.7
Otego	63	0.2	50.7	53.2	8.7	0.6
Richfield Springs	224	0.6	59.1	220.7	36.3	2.6
Unadilla	98	0.3	47.4	77.4	12.7	0.9
<b>Total</b>	<b>1,090</b>	<b>3.0</b>	<b>58.1</b>	<b>1,055.0</b>	<b>173.4</b>	<b>12.6</b>



**TABLE 29: Annual Workload by Town**

<b>Town</b>	<b>Annual Runs</b>	<b>Runs Per Day</b>	<b>Minutes Per Run</b>	<b>Annual Hours</b>	<b>Minutes Per Day</b>	<b>Percent of Work</b>
Burlington	123	0.3	92.5	189.6	31.2	2.3
Butternuts*	121	0.3	68.3	137.7	22.6	1.6
Cherry Valley	115	0.3	77.6	148.7	24.4	1.8
Decatur	54	0.1	84.5	76.1	12.5	0.9
Edmeston	221	0.6	72.5	267.1	43.9	3.2
Exeter	123	0.3	90.4	185.3	30.5	2.2
Hartwick	296	0.8	75.9	374.2	61.5	4.5
Laurens	221	0.6	57.6	212.1	34.9	2.5
Maryland	207	0.6	67.8	233.9	38.5	2.8
Middlefield	312	0.9	63.4	329.5	54.2	3.9
Milford	377	1.0	63.0	396.0	65.1	4.7
Morris*	160	0.4	73.1	195.0	32.1	2.3
New Lisbon	160	0.4	67.5	179.9	29.6	2.2
Oneonta	1,251	3.4	46.8	975.0	160.3	11.7
Otego	169	0.5	62.5	176.1	28.9	2.1
Otsego	566	1.6	59.6	562.5	92.5	6.7
Pittsfield*	115	0.3	56.6	108.5	17.8	1.3
Plainfield*	70	0.2	42.3	49.4	8.1	0.6
Richfield	149	0.4	67.9	168.5	27.7	2.0
Roseboom	69	0.2	82.9	95.3	15.7	1.1
Sidney**	67	0.2	43.1	48.1	7.9	0.6
Springfield	233	0.6	52.6	204.4	33.6	2.4
Unadilla	237	0.6	59.9	236.8	38.9	2.8
Warren**	72	0.2	77.6	93.2	15.3	1.1
Westford	69	0.2	57.7	66.4	10.9	0.8
Worcester	155	0.4	62.2	160.8	26.4	1.9
<b>Total</b>	<b>5,712</b>	<b>15.6</b>	<b>61.7</b>	<b>5,870.2</b>	<b>965.0</b>	<b>70.3</b>

**Note:** \*Otsego County community partially covered by out-of-county EMS agencies; \*\*Out-of-County community partially covered by Otsego County EMS agencies.

## Observations:

- Oneonta City, Oneonta Town, and Otsego Town are the top three municipalities with the highest workloads.
- **Oneonta City**
  - There were 1,606 runs. The daily average was 4.4 runs.
  - The total deployed time for the year was 1,040.3 hours or 12 percent of the total annual workload. The daily average was 171.0 minutes for all units combined.
- **Oneonta Town**
  - There were 1,251 runs. The daily average was 3.4 runs.
  - The total deployed time for the year was 975.0 hours or 12 percent of the total annual workload. The daily average was 160.3 minutes for all units combined.
- **Otsego Town**
  - There were 566 runs. The daily average was 1.6 runs.
  - The total deployed time for the year was 562.5 hours or seven percent of the total annual workload. The daily average was 92.5 minutes for all units combined.

# BUSIEST HOURS

In this analysis, we included all 6,843 calls that occurred inside Otsego County's EMS zones and were responded to by both Otsego County agencies and out-of-county EMS agencies (Table 3). 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 30 shows the number of hours in the year in which there were zero to five or more calls during the hour. Table 31 shows the 10 one-hour intervals which had the most calls during the year. Table 32 examines the number of times a call within a municipality overlapped with another call within the same area.

**TABLE 30: Number of Calls In An Hour**

Calls in an Hour	Frequency	Percentage
0	4,229	48.3
1	2,864	32.7
2	1,186	13.5
3	354	4.0
4	101	1.2
5+	26	0.3
<b>Total</b>	<b>8,760</b>	<b>100.0</b>

**TABLE 31: Top 10 Hours with the Most Calls Received**

Hour	Number of Calls	Number of Runs	Total Hours
1/3/2022 3:00 p.m. to 4:00 p.m.	7	10	4.7
5/4/2022 10:00 a.m. to 11:00 a.m.	7	9	8.7
9/9/2021 3:00 p.m. to 4:00 p.m.	6	9	8.4
11/19/2021 4:00 p.m. to 5:00 p.m.	6	9	5.7
9/19/2021 7:00 p.m. to 8:00 p.m.	6	8	12.3
10/25/2021 10:00 a.m. to 11:00 a.m.	6	8	7.8
7/1/2022 4:00 p.m. to 5:00 p.m.	6	8	7.7
10/2/2021 2:00 p.m. to 3:00 p.m.	6	7	13.5
10/2/2021 1:00 p.m. to 2:00 p.m.	6	7	8.2
3/9/2022 noon to 1:00 p.m.	5	8	7.8

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

**TABLE 32: Frequency of Overlapping Calls by Geography**

<b>Municipality</b>	<b>Scenario</b>	<b>Number of Calls</b>	<b>Percent of All Calls in the area</b>	<b>Total Hours</b>
Cooperstown Village	No overlapped call	272	96.8	242.5
	Overlapped with one call	9	3.2	4.2
Hartwick Town	No overlapped call	157	97.5	221.3
	Overlapped with one call	4	2.5	3.8
Middlefield Town	No overlapped call	187	97.9	224.5
	Overlapped with one call	4	2.1	2.7
Milford Town	No overlapped call	207	96.7	277.6
	Overlapped with one call	6	2.8	3.6
	Overlapped with two calls	1	0.5	0.4
Oneonta City	No overlapped call	1,338	89.2	895.5
	Overlapped with one call	148	9.7	55.5
	Overlapped with two calls	13	0.9	2.3
	Overlapped with three calls	1	0.1	0.2
Oneonta Town	No overlapped call	999	89.2	797.1
	Overlapped with one call	114	10.2	48.5
	Overlapped with two calls	7	0.6	2.2
Otego Town	No overlapped call	170	97.1	226.4
	Overlapped with one call	5	2.9	5.4
Otsego Town	No overlapped call	414	94.5	456.1
	Overlapped with one call	23	5.3	15.0
	Overlapped with two calls	1	0.2	0.2
Richfield Springs Village	No overlapped call	178	95.2	222.8
	Overlapped with one call	9	4.8	7.2
Unadilla Town	No overlapped call	294	93.3	404.1
	Overlapped with one call	21	6.7	13.7
Other	No overlapped call	2,236	98.9	1,580.1
	Overlapped with one call	24	1.1	14.2
	Overlapped with two calls	1	0.0	0.8
<b>Total</b>	<b>No overlapped call</b>	<b>6,452</b>	<b>94.3</b>	<b>5548.4</b>
	<b>Overlapped with one call</b>	<b>367</b>	<b>5.4</b>	<b>173.8</b>
	<b>Overlapped with two calls</b>	<b>23</b>	<b>0.3</b>	<b>5.9</b>
	<b>Overlapped with three calls</b>	<b>1</b>	<b>0.0</b>	<b>0.2</b>

**Note:** “Other” includes all areas that do not have overlapped calls or have less than five overlaps with one call.

## Observations:

- For 26 hours (0.3 percent of all hours), five or more calls occurred; in other words, five or more calls were responded to in an hour roughly once every 14 days.
- The highest number of calls to occur in an hour was 7, which happened twice.
- One hour with the most calls was 3:00 p.m. to 4:00 p.m. on January 3, 2022. The hour's 7 calls involved 10 individual dispatches resulting in 4.7 hours of deployed time. These 7 calls included two cardiac and stroke calls, two motor vehicle incident (MVA) calls, one breathing difficulty call, one fall and injury call, and one seizure and unconsciousness call.
- Another hour with the most calls was 10:00 a.m. to 11:00 a.m. on May 4, 2022. The hour's 7 calls involved 9 individual dispatches resulting in 8.7 hours of deployed time. These 7 calls included five illness and other calls, one breathing difficulty call, and one overdose and psychiatric call.
- The total number of overlapped calls within the same municipality during the year was 391 (six percent of total calls).
- Total overlapped hours during the year was 179.9 hours.

# AMBULANCE SERVICE AVAILABILITY

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In this section, we analyze Otsego County's ambulance service's availability to respond to calls.

In Otsego County, the boundaries of EMS service zones are not coincident with municipal boundaries. Some zones are fragmented within municipal boundaries and others extend into multiple municipalities. Therefore, some municipal areas may include segments of different EMS zones and their EMS service are provided by multiple ambulance agencies. In addition, when a local ambulance agency is not available, the equivalent services from the county ALS, neighboring communities, or out-of-county ambulance agencies may provide auto aid or mutual aid.

In this analysis, we included all 6,843 calls responded by both Otsego County and out-of-county EMS agencies (Table 3). At the same time, we focused on calls where at least one unit eventually arrived and ignores calls where no unit arrived. While there were 6,843 calls in both Otsego County and the two out-of-county areas covered by Otsego County EMS, there were 6,672 calls with at least one arriving unit, of which 6,488 calls were located inside the service zones of Otsego County EMS and 184 calls located inside the county but in the service zones primarily covered by out-of-county EMS agencies.

Since November 12, 2011, Otsego County has added two regularly scheduled ALS ambulances (**Noted as County ALS**) as a backup safety net for service throughout the county. To examine the impact of this new service on the ambulance service availability throughout the county, we categorized the 6,488 arriving calls into two groups: (1) 4,364 calls with arriving local / first due ambulance services and (2) 2,124 calls without an arriving local ambulance service but with another arriving ambulance or first responder.

Based on the 2,124 calls without an arriving local ambulance service, we examined the number of calls with various arriving nonlocal agencies for three periods without and with the service of the three County ALS ambulances, i.e., (1) between August 1, 2021, and November 11, 2021, without County EMS, (2) between November 12, 2021, and December 31, 2021, with County ALS, and (3) between January 1, 2022, and July 31, 2022, with County ALS.

Table 33 summarizes the analysis results and Tables 34 through 36 detail the number of calls by different arriving agencies in the primary response area of every Otsego County ambulance service.

Tables 33 through 41 summarize the overall impact of County ALS on service delivery for EMS calls in Otsego County. Tables 33 – 40 include the City and Town of Oneonta, which in together account for 39.3% of all EMS responses in Otsego County, and are responded to by Oneonta Fire Department, the other major career department in Otsego County.

Including the response volume for Oneonta City and Town slightly skews the data analysis for the county overall, so we completed a sub-analysis, excluding these jurisdictions, which are included in Tables 41(a) and 41(b).

**TABLE 33: Arriving Calls by Service Period and Agency**

Service Period	Arriving Calls	Local Agency Arrived	Nonlocal Agency Arrived Only					
			Total	First Response	County ALS	Nonlocal Otsego AMB	AMR	OOC
8/1/2021 to 11/11/2021 (Pre-County ALS Start-Up)	1,862	1,408	454	55	0	146	173	145
11/12/2021 to 12/31/2021 (County ALS Transition)	841	558	283	31	180	30	23	60
1/1/2022 to 7/31/2022 (6 months of County ALS Service)	3,785	2,398	1,387	139	1,072	65	92	183
<b>Total</b>	<b>6,488</b>	<b>4,364</b>	<b>2,124</b>	<b>225</b>	<b>1,252</b>	<b>241</b>	<b>288</b>	<b>388</b>

**Note:** For the period of November 12, 2021, through July 31, 2022, County ALS arrived at 75.0% of EMS responses in which they were the only arriving ambulance agency (1,252 out of 1,670 responses).

**TABLE 34: Calls by Local Ambulance Service Response Area and Arriving Agency, Between August 1, 2021, and November 11, 2021**

Local Ambulance Service	Calls in Service Zone	Calls Local Agency Arrived	Calls Nonlocal Agency Arrived Only					
			Total	First Response	County EMS	Nonlocal Otsego AMB	AMR	OOC
Cherry Valley	39	19	20	2	0	17	4	0
Cooperstown	241	179	62	6	0	42	22	0
County*	33	3	30	1	0	0	7	24
Edmeston	78	61	17	5	0	1	1	15
Fly Creek	38	31	7	0	0	6	1	0
Garrattsville	25	12	13	1	0	6	4	4
Gilbertsville	42	35	7	0	0	1	0	6
Hartwick	43	40	3	0	0	2	1	0
Laurens	44	28	16	0	0	4	12	0
Milford	89	57	32	0	0	14	18	0
Morris	38	21	17	1	0	5	6	7
Oneonta	752	745	7	2	0	3	2	0
Otego	61	19	42	1	0	8	27	10
Richfield Springs	145	86	59	7	0	16	6	36
Schenevus	50	17	33	10	0	11	22	0
Unadilla	83	10	73	10	0	6	29	43
Worcester	61	45	16	9	0	4	11	0
<b>Total</b>	<b>1,862</b>	<b>1,408</b>	<b>454</b>	<b>55</b>	<b>0</b>	<b>146</b>	<b>173</b>	<b>145</b>

**Note:** \*County represents the generic first due ambulance service. In each row of the table, the summation of Columns 5 to 9 may be greater than the total value given in Column 4. This is because, for some calls, there were multiple arriving agencies. For example, a Cooperstown ambulance and an AMR ambulance arrived at call 2021-046297 (one of the EMS calls in Zone CV2) that occurred in the response area of Cherry Valley ambulance service.

**TABLE 35: Calls by Local Ambulance Service Response Area and Arriving Agency, Between November 12, 2021, and December 31, 2021**

Local Ambulance Service	Calls in Service Zone	Calls Local Agency Arrived	Calls Nonlocal Agency Arrived Only					
			Total	First Response	County EMS	Nonlocal Otsego AMB	AMR	OOC
Cherry Valley	19	7	12	3	9	3	0	0
Cooperstown	96	41	55	5	46	3	4	0
County*	11	0	11	0	0	0	0	11
Edmeston	41	20	21	5	11	0	0	9
Fly Creek	23	13	10	0	7	3	0	0
Garrattsville	13	12	1	0	1	0	0	0
Gilbertsville	18	16	2	0	1	0	0	1
Hartwick	21	20	1	0	1	0	0	0
Laurens	24	8	16	0	16	1	0	0
Milford	33	20	13	0	13	0	0	0
Morris	20	17	3	0	3	0	0	0
Oneonta	336	328	8	0	5	2	1	0
Otego	24	6	18	0	12	1	5	1
Richfield Springs	47	13	34	0	27	6	0	2
Schenevus	24	7	17	5	5	7	6	0
Unadilla	59	6	53	11	17	3	5	36
Worcester	32	24	8	2	6	1	2	0
<b>Total</b>	<b>841</b>	<b>558</b>	<b>283</b>	<b>31</b>	<b>180</b>	<b>30</b>	<b>23</b>	<b>60</b>

**Note:** \*County represents the generic first due ambulance service.



**TABLE 36: Calls by Local Ambulance Service Response Area and Arriving Agency, Between January 1, 2022, and July 31, 2022**

Local Ambulance Service	Calls in Service Zone	Calls Local Agency Arrived	Calls Nonlocal Agency Arrived Only					
			Total	First Response	County EMS	Nonlocal Otsego AMB	AMR	OOC
Cherry Valley	78	25	53	12	50	4	0	1
Cooperstown	467	167	300	42	277	15	6	0
County*	78	5	73	0	26	0	7	45
Edmeston	138	64	74	13	59	1	0	14
Fly Creek	56	31	25	0	22	3	0	0
Garrattsville	54	31	23	0	20	1	0	2
Gilbertsville	69	53	16	0	11	1	0	6
Hartwick	94	63	31	1	28	5	0	0
Laurens	105	78	27	1	23	1	3	1
Milford	202	91	111	0	102	6	9	0
Morris	71	32	39	0	30	4	3	6
Oneonta	1,487	1,455	32	3	21	0	8	0
Otego	151	20	131	2	99	1	24	11
Richfield Springs	239	113	126	7	102	6	0	17
Schenevus	150	51	99	6	77	13	11	0
Unadilla	234	40	194	48	99	2	16	80
Worcester	112	79	33	4	26	2	5	0
<b>Total</b>	<b>3,785</b>	<b>2,398</b>	<b>1,387</b>	<b>139</b>	<b>1,072</b>	<b>65</b>	<b>92</b>	<b>183</b>

**Note:** \*County represents the generic first due ambulance service.

## Observations:

- For 6,488 calls that had at least one arriving unit, The local ambulance agencies arrived at 4,364 calls (67 percent of total calls). When separated by service period.
  - Before November 12, 2021, local ambulance agencies arrived at 76 percent of calls.
  - Between November 12, 2021, and December 31, 2021, local ambulance agencies arrived at 66 percent of calls.
  - After January 1, 2022, local ambulance agencies arrived at 63 percent of calls.
- Of the 2,124 calls where the local ambulance agency did not arrive, the first response service, other nonlocal Otsego County ambulance services, AMR, and out-of-county ambulance services arrived at 225 (11 percent), 241 (11 percent), 288 (14 percent), and 388 calls (18 percent), respectively.

**After November 12, 2021, there were 1,670 calls where the local ambulance agency did not arrive, of which the new service of county EMS ambulances arrived at 1,252 calls (75 percent).**

Table 37 summarizes the availability (percentage of arriving calls) of the Otsego County EMS system to arrive at calls broken down by periods without and with the service of the three County ALS ambulances. Tables 38 through 43 detail the same information for each period, broken down by local ambulance service response areas.

**TABLE 37: Otsego County EMS Service Availability by Service Period**

Service Period	Total Calls	Calls Arrived By Otsego EMS System			Percent of Calls Arrived by Otsego EMS System
		Local Agency	Nonlocal Agency	Total	
8/1/2021 to 11/11/2021 (Pre-County ALS Start-Up)	1,862	1,408	146	1,554	83.5
11/12/2021 to 12/31/2021 (County ALS Transition)	841	558	204	762	90.6
1/1/2022 to 7/31/2022 (6 months of County ALS Service)	3,785	2,398	1,119	3,517	92.9
<b>Total</b>	<b>6,488</b>	<b>4,364</b>	<b>1,469</b>	<b>5,833</b>	<b>89.9</b>

**Note:** Nonlocal Otsego ambulance service includes the two primary and one backup County ALS ambulance units 3991, 3992, and 3993.

**TABLE 38: Otsego County EMS Service Availability by Local Ambulance Service Response Area, Between August 1, 2021, and November 11, 2021**

Local Ambulance Service	Calls in Service Zone	Calls Arrived By Otsego EMS System			Percent of Calls Arrived by Otsego EMS System
		Local Agency	Nonlocal Agency	Total	
Cherry Valley	39	19	17	36	92.3
Cooperstown	241	179	42	221	91.7
County*	33	3	0	3	9.1
Edmeston	78	61	1	62	79.5
Fly Creek	38	31	6	37	97.4
Garrattsville	25	12	6	18	72.0
Gilbertsville	42	35	1	36	85.7
Hartwick	43	40	2	42	97.7
Laurens	44	28	4	32	72.7
Milford	89	57	14	71	79.8
Morris	38	21	5	26	68.4
Oneonta	752	745	3	748	99.5
Otego	61	19	8	27	44.3
Richfield Springs	145	86	16	102	70.3
Schenevus	50	17	11	28	56.0
Unadilla	83	10	6	16	19.3
Worcester	61	45	4	49	80.3
<b>Total</b>	<b>1,862</b>	<b>1,408</b>	<b>146</b>	<b>1,554</b>	<b>83.5</b>

**Note:** \*County represents the generic first due ambulance service; Nonlocal Otsego ambulance service includes the two primary and one backup County ALS ambulance units 3991, 3992, and 3993.

**TABLE 39: Otsego County EMS Service Availability by Local Ambulance Service Response Area, Between November 12, 2021, and December 31, 2021**

Local Ambulance Service	Calls in Service Zone	Calls Arrived By Otsego EMS System			Percent of Calls Arrived by Otsego EMS System
		Local Agency	Nonlocal Agency	Total	
Cherry Valley	19	7	11	18	94.7
Cooperstown	96	41	49	90	93.8
County*	11	0	0	0	0.0
Edmeston	41	20	11	31	75.6
Fly Creek	23	13	10	23	100.0
Garrattsville	13	12	1	13	100.0
Gilbertsville	18	16	1	17	94.4
Hartwick	21	20	1	21	100.0
Laurens	24	8	16	24	100.0
Milford	33	20	13	33	100.0
Morris	20	17	3	20	100.0
Oneonta	336	328	7	335	99.7
Otego	24	6	13	19	79.2
Richfield Springs	47	13	32	45	95.7
Schenevus	24	7	12	19	79.2
Unadilla	59	6	18	24	40.7
Worcester	32	24	6	30	93.8
<b>Total</b>	<b>841</b>	<b>558</b>	<b>204</b>	<b>762</b>	<b>90.6</b>

**Note:** \*County represents the generic first due ambulance service; Nonlocal Otsego ambulance service includes the two primary and one backup County ALS ambulance units 3991, 3992, and 3993.

**TABLE 40: Otsego County EMS Service Availability by Local Ambulance Service Response Area, Between January 1, 2022, and July 31, 2022**

Local Ambulance Service	Calls in Service Zone	Calls Arrived By Otsego EMS System			Percent of Calls Arrived by Otsego EMS System
		Local Agency	Nonlocal Agency	Total	
Cherry Valley	78	25	52	77	98.7
Cooperstown	467	167	287	454	97.2
County*	78	5	26	31	39.7
Edmeston	138	64	60	124	89.9
Fly Creek	56	31	25	56	100.0
Garrattsville	54	31	21	52	96.3
Gilbertsville	69	53	11	64	92.8
Hartwick	94	63	31	94	100.0
Laurens	105	78	24	102	97.1
Milford	202	91	105	196	97.0
Morris	71	32	33	65	91.5
Oneonta	1,487	1,455	21	1,476	99.3
Otego	151	20	99	119	78.8
Richfield Springs	239	113	108	221	92.5
Schenevus	150	51	88	139	92.7
Unadilla	234	40	101	141	60.3
Worcester	112	79	27	106	94.6
<b>Total</b>	<b>3,785</b>	<b>2,398</b>	<b>1,119</b>	<b>3,517</b>	<b>92.9</b>

**Note:** \*County represents the generic first due ambulance service; Nonlocal Otsego ambulance service includes the three County Ambulance units 3991, 3992, and 3993.

### Observations:

- Before the new County ALS ambulance service, for all calls that had at least one arriving unit, the Otsego County EMS system arrived at an average of 84 percent of calls that occurred in the county EMS zone.
- With the service of the County ALS, the Otsego County EMS system arrived at an average of 93 percent of calls that occurred in the county EMS zone. The availability to arrive at calls increased by nine percent.

**Table 41: Overall Impact of County ALS on EMS Arrival**

Service Period	Total Calls	Local EMS	Percent Local EMS	Otsego EMS	Percent Otsego EMS	Total EMS	Percent Total EMS
2021-07-01 to 2021-11-11 ( <i>Pre-County ALS Start-Up</i> )	1,898	1,408	74.2	1,554	81.9	1,891	99.6
2021-11-12 to 2021-12-31 ( <i>County ALS Transition</i> )	876	558	63.7	769	87.8	869	99.2
2022-01-01 to 2022-06-30 ( <i>6 months of County ALS Service</i> )	3,898	2,398	61.5	3,548	91.0	3,876	99.4
<b>Total</b>	<b>6,672</b>	<b>4,364</b>	<b>67.3</b>	<b>5,871</b>	<b>90.5</b>	<b>6,636</b>	<b>99.5</b>

### Observations:

- For all calls that had at least one arrival unit, the local ambulance services arrived at 67 percent of calls that occurred in their primary service areas.
- The Otsego EMS system arrived at 90 percent of calls within the county EMS zone.
- The Otsego EMS system and out-of-county EMS agencies arrived at 99 percent of calls that occurred inside Otsego County and two other EMS zones outside the county.
- For areas where the first responder is independent of the ambulance service, the local first responder arrived at seven percent of all arrived calls.
- The three county ambulances arrived at 26 percent of all arrived calls.
- The Otsego County agencies from neighboring communities provided auto aid in 374 or six percent of arrived calls.
- The out-of-county ambulance services provided mutual aid in 1,060 or 16 percent of arrived calls.
- With the service of County ALS, the local EMS agency's availability decreased 13 percent from 2021 to 2022 while the Otsego County EMS's availability in responding to calls increased nine percent from 2021 to 2022.

**Table 42: Calls by Local Ambulance Service Response Area and Arriving Agency, Between August 1, 2021, and November 11, 2021 (excluding Oneonta City and Town)**

Local Ambulance Service	Calls in Service Zone	Calls Local Agency Arrived	% Local Agency Arrived	Total	% Other Agency Arrived
Cherry Valley	39	19	48.7%	20	51.3%
Cooperstown	241	179	74.3%	62	25.7%
County*	33	3	9.1%	30	90.9%
Edmeston	78	61	78.2%	17	21.8%
Fly Creek	38	31	81.6%	7	18.4%
Garrattsville	25	12	48.0%	13	52.0%
Gilbertsville	42	35	83.3%	7	16.7%
Hartwick	43	40	93.0%	3	7.0%
Laurens	44	28	63.6%	16	36.4%
Milford	89	57	64.0%	32	36.0%
Morris	38	21	55.3%	17	44.7%
Otego	61	19	31.1%	42	68.9%
Richfield Springs	145	86	59.3%	59	40.7%
Schenevus	50	17	34.0%	33	66.0%
Unadilla	83	10	12.0%	73	88.0%
Worcester	61	45	73.8%	16	26.2%
<b>Total</b>	<b>1,110</b>	<b>663</b>	<b>59.7%</b>	<b>447</b>	<b>40.3%</b>

**NOTE:** Prior to the County ALS service initiation, local EMS agencies arrived at 59.7% of their EMS responses.

**Table 43: Calls by Local Ambulance Service Response Area and Arriving Agency, Between January 1st, and July 31st, 2022 (excluding Oneonta City and Town)**

Local Ambulance Service	Calls in Service Zone	Calls Local Agency Arrived	% Local Agency Arrived	Total	% Other Agency Arrived	County ALS Arrived	% County ALS Arrived
Cherry Valley	78	25	32.1%	53	67.9%	50	64.1%
Cooperstown	467	167	35.8%	300	64.2%	277	59.3%
County*	78	5	6.4%	73	93.6%	26	33.3%
Edmeston	138	64	46.4%	74	53.6%	59	42.8%
Fly Creek	56	31	55.4%	25	44.6%	22	39.3%
Garrattsville	54	31	57.4%	23	42.6%	20	37.0%
Gilbertsville	69	53	76.8%	16	23.2%	11	15.9%
Hartwick	94	63	67.0%	31	33.0%	28	29.8%
Laurens	105	78	74.3%	27	25.7%	23	21.9%
Milford	202	91	45.0%	111	55.0%	102	50.5%
Morris	71	32	45.1%	39	54.9%	30	42.3%
Otego	151	20	13.2%	131	86.8%	99	65.6%
Richfield Springs	239	113	47.3%	126	52.7%	102	42.7%
Schenevus	150	51	34.0%	99	66.0%	77	51.3%
Unadilla	234	40	17.1%	194	82.9%	99	42.3%
Worcester	112	79	70.5%	33	29.5%	26	23.2%
<b>Total</b>	<b>2,298</b>	<b>943</b>	<b>41.0%</b>	<b>1,355</b>	<b>59.0%</b>	<b>1,051</b>	<b>45.7%</b>

# 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. **Processing time** is the difference between the time a call is received and the earliest dispatch time of an ambulance service or a transport-capable medical unit (i.e., ambulance). Processing time includes the time required to determine the nature of the emergency and the type of resources to dispatch.

**Activation time** is the difference between the earliest dispatch time and the earliest enroute time. **Travel time** is the difference between the earliest enroute time and the earliest on-scene time. **Response time** is the total time elapsed between receiving a call to arriving on scene.

In this analysis, we included all responding ambulances from both Otsego County EMS services and out-of-county EMS services. We also considered all EMS calls that occurred within Otsego County EMS service zones to which at least one non-administrative unit responded. All calls with A, B, C, D, or E EMD determinants were included as emergencies.

Based on the 6,843 calls responded to by both Otsego County and out-of-county EMS agencies, we excluded 212 fire standby calls, 153 non-emergency transfer calls, and 252 calls where one or more segments of the transport-capable unit's response time could not be calculated due to missing data. As a result, a total of 6,226 calls are included in our response time analysis, of which, the local EMS agency arrived first at 3,737 calls in its primary service zone.

## Response Time by Type of Call

Table 44 provides the average processing, activation, travel, and total response times for calls, broken out by call type. Table 44 gives the corresponding 90th percentile response times broken out in the same manner.

### 90<sup>th</sup> Percentile Definition:

A 90<sup>th</sup> percentile means that 90 percent of calls had response times at or less than that number. For example, Table 45 shows a 90th percentile response time of 30.4 minutes, which means that 90 percent of the time, a call had a response time of **less** than 30.4 minutes. Figure 12 illustrates the same information.

**Table 44: Average Response Time (Minutes) of First Arriving Unit, by Call Type**

Call Type	Processing	Activation	Travel	Total	Number of Calls
Breathing difficulty	2.5	4.8	10.3	17.7	729
Cardiac and stroke	2.9	4.7	8.9	16.5	853
Fall and injury	2.9	4.8	9.0	16.7	1,493
Illness and other	3.2	5.0	9.5	17.7	2,131
MVA	3.7	5.0	8.8	17.6	327
Overdose and psychiatric	4.1	3.2	6.9	14.2	180
Seizure and unconsciousness	2.7	4.6	8.7	16.1	513
<b>Total</b>	<b>3.0</b>	<b>4.8</b>	<b>9.2</b>	<b>17.0</b>	<b>6,226</b>

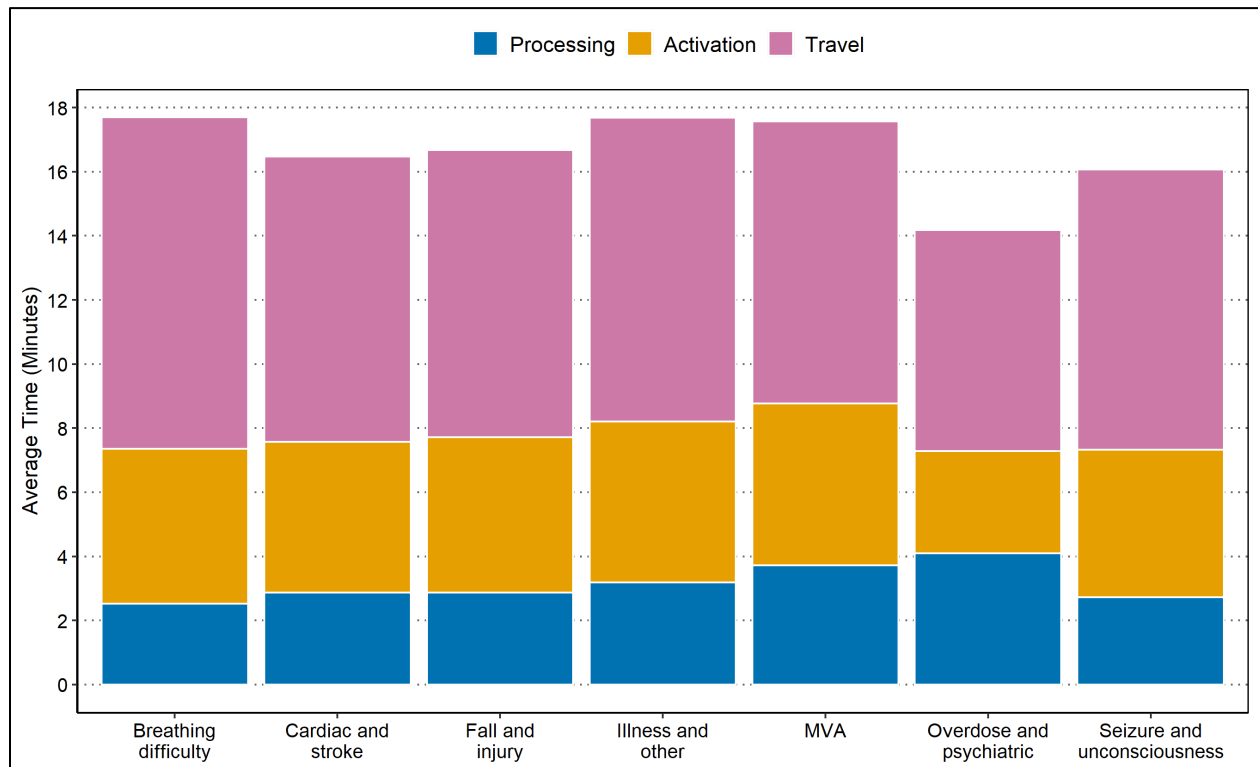


**TABLE 43: 90th Percentile Response Time (Minutes) of First Arriving Unit, by Call Type**

Call Type	Processing	Activation	Travel	Total	Number of Calls
Breathing difficulty	3.7	10.9	21.1	31.4	729
Cardiac and stroke	4.3	10.4	19.8	29.4	853
Fall and injury	4.0	10.5	19.9	29.2	1,493
Illness and other	4.4	11.1	20.9	32.4	2,131
MVA	6.3	11.4	17.4	28.7	327
Overdose and psychiatric	6.4	6.1	15.5	25.3	180
Seizure and unconsciousness	4.1	10.2	19.8	29.8	513
<b>Total</b>	<b>4.3</b>	<b>10.7</b>	<b>20.2</b>	<b>30.4</b>	<b>6,226</b>

A 90<sup>th</sup> percentile means that 90 percent of calls had response times at or less than that number. For example, Table 45 shows a 90th percentile response time of 30.4 minutes, which means that 90 percent of the time, a call had a response time of **less** than 30.4 minutes. Figure 12 illustrates the same information.

**Figure 12: Average Response Time of First Arriving Unit, by Call Type**



To examine the impact of County ALS service on response time, we compared the response times for three periods with and without the County ALS:

- (1) **Prior to County ALS Service Initiation** - between July 1, 2021, and November 11, 2021
- (2) **During the initial start-up of the County ALS service** - between November 12, 2021 and
- (3) **After full initiation of County ALS Service** - between January 1, 2022, and June 30, 2022

The comparison for the impact on County-Wide response times is presented in Table 44.

**TABLE 44: Impact of County ALS on Overall County-Wide Response Times (Minutes)**

Service Period	Average Response Time				90th Percentile Response Time				Calls
	Process	Activate	Travel	Total	Process	Activate	Travel	Total	
2021-07-01 to 2021-11-11 ( <b>Pre-County ALS Start-Up</b> )	3.0	6.5	8.4	17.8	4.4	13.8	18.4	32.4	1,767
2021-11-12 to 2021-12-31 ( <b>County ALS Transition</b> )	3.3	4.8	9.7	17.8	4.6	10.4	20.1	31.0	821
2022-01-01 to 2022-06-30 ( <b>6 months of County ALS Service</b> )	2.9	4.0	9.5	16.5	4.2	9.5	21.0	29.5	3,638
<b>Total</b>	<b>3.0</b>	<b>4.8</b>	<b>9.2</b>	<b>17.0</b>	<b>4.3</b>	<b>10.7</b>	<b>20.2</b>	<b>30.4</b>	<b>6,226</b>

### Observations:

- The average processing time was 3.0 minutes.
- The average activation time was 4.8 minutes.
- The average travel time was 9.2 minutes.
- The average total response time was 17.0 minutes.
- The 90th percentile processing time was 4.3 minutes.
- The 90th percentile activation time was 10.7 minutes.
- The 90th percentile travel time was 20.2 minutes.
- The 90th percentile total response time was 30.4 minutes.
- The County ALS service decreased the average county-wide response time by seven percent, from 17.8 minutes in 2021 to 16.5 minutes in 2022 and decreased the 90th percentile county-wide response time by nine percent, from 32.4 minutes in 2021 to 29.5 minutes in 2022.

Oneonta City and Town are serviced by Oneonta Fire Department, a career service that has been relatively non-effected by the County ALS system. Since these two jurisdictions represent a significant portion of the EMS response in Otsego County, to represent a more accurate impact of the County ALS service on the areas of Otsego County that are not part of the jurisdictions covered by Oneonta Fire, we analyzed response time data for areas of the County outside of the City and Town of Oneonta. Table 45 depicts this impact.

**TABLE 45: Impact of County ALS on County-Wide Average Response Times Outside of Oneonta Fire Service Areas (Minutes)**

Service Period	Process	Activate	Travel	Total	Calls
2021-08-01 to 2021-11-11 (Pre-County ALS Start-Up)	3.2	9.0	11.0	23.2	1,060
2021-11-12 to 2021-12-31 (County ALS Transition)	3.6	6.3	12.9	22.8	498
2022-01-01 to 2022-07-31 (6 months of County ALS Service)	3.1	5.0	12.6	20.7	2,210
<b>Total</b>	<b>3.2</b>	<b>6.3</b>	<b>12.2</b>	<b>21.7</b>	<b>3,768</b>

**TABLE 46: Impact of County ALS on County-Wide 90<sup>th</sup> Percentile Response Times Outside of Oneonta Fire Service Areas (Minutes)**

Service Period	Process	Activate	Travel	Total	Calls
2021-08-01 to 2021-11-11 (Pre-County ALS Start-Up)	4.7	17.2	21.7	36.8	1,060
2021-11-12 to 2021-12-31 (County ALS Transition)	5.0	12.4	23.8	36.1	498
2022-01-01 to 2022-07-31 (6 months of County ALS Service)	4.4	10.9	23.8	33.0	2,210
<b>Total</b>	<b>4.6</b>	<b>12.9</b>	<b>23.2</b>	<b>34.5</b>	<b>3,768</b>

### Observations:

- The County ALS service decreased the average response time to areas not serviced by Oneonta Fire Department by 10.8 percent, from 23.2 minutes prior to the start of the service to 20.7 minutes between January 1<sup>st</sup> and July 31<sup>st</sup>, 2022.
- The County ALS service decreased the 90<sup>th</sup> percentile response time to areas not serviced by Oneonta Fire Department by 10.3 percent, from 36.8 minutes prior to the start of the service to 33.0 minutes between January 1<sup>st</sup> and July 31<sup>st</sup>, 2022.

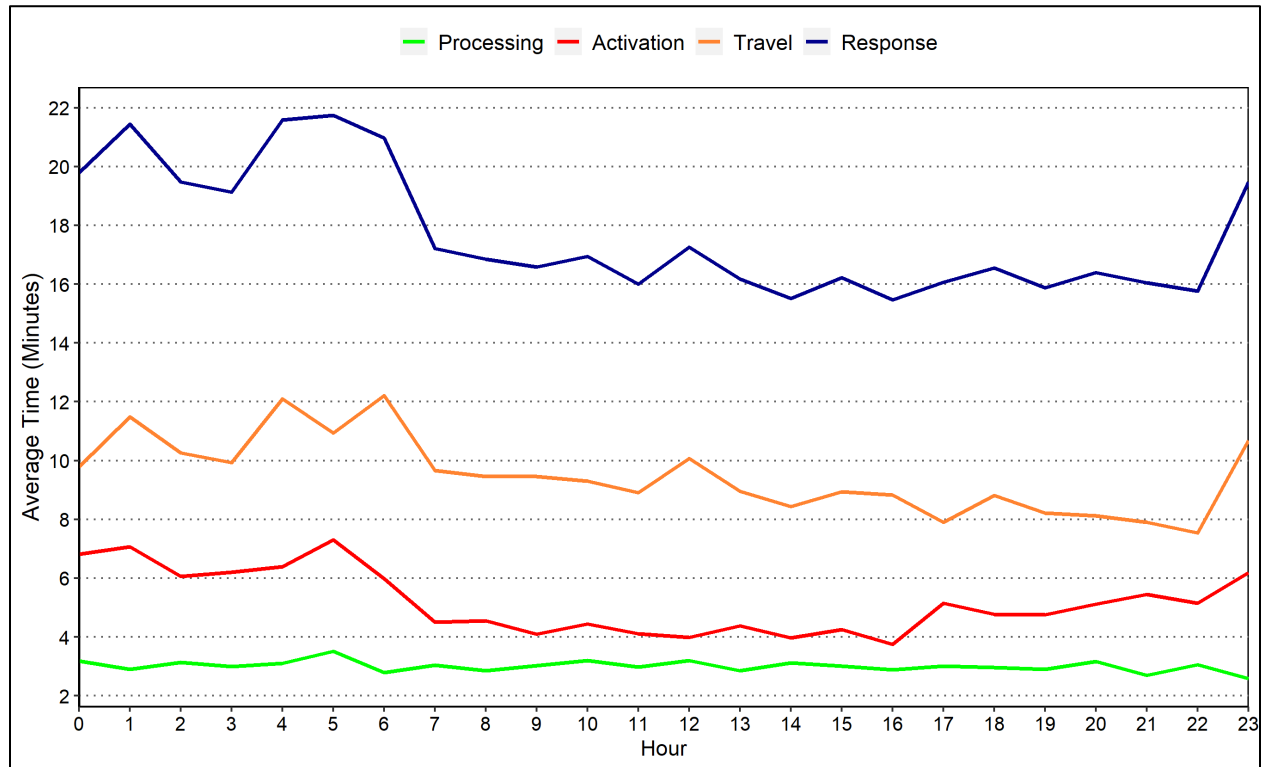
## RESPONSE TIME BY HOUR

Average processing, activation, travel, and total response time by hour for calls are shown in Table 47 and Figure 13. Table 48 also shows the 90th percentile response times.

**TABLE 47: Average and 90th Percentile Response Time (Minutes) of First Arriving Unit, by Hour of Day**

Hour	Processing	Activation	Travel	Response Time	90th Percentile Response Time	Number of Calls
0	3.2	6.8	9.8	19.8	39.9	159
1	2.9	7.1	11.5	21.4	39.9	136
2	3.1	6.1	10.3	19.5	34.9	112
3	3.0	6.2	9.9	19.1	34.4	124
4	3.1	6.4	12.1	21.6	38.4	105
5	3.5	7.3	10.9	21.7	38.0	123
6	2.8	6.0	12.2	21.0	35.7	179
7	3.0	4.5	9.7	17.2	30.3	226
8	2.9	4.6	9.5	16.9	29.8	274
9	3.0	4.1	9.5	16.6	29.4	357
10	3.2	4.4	9.3	16.9	30.1	434
11	3.0	4.1	8.9	16.0	29.8	382
12	3.2	4.0	10.1	17.3	28.2	333
13	2.8	4.4	9.0	16.2	28.7	377
14	3.1	4.0	8.4	15.5	27.7	345
15	3.0	4.3	8.9	16.2	28.4	358
16	2.9	3.7	8.8	15.5	27.7	357
17	3.0	5.1	7.9	16.1	28.0	338
18	3.0	4.8	8.8	16.6	28.6	322
19	2.9	4.8	8.2	15.9	29.8	281
20	3.2	5.1	8.1	16.4	28.2	289
21	2.7	5.5	7.9	16.1	27.4	241
22	3.1	5.2	7.5	15.8	30.2	200
23	2.6	6.2	10.7	19.5	41.0	174
<b>Total</b>	<b>3.0</b>	<b>4.8</b>	<b>9.2</b>	<b>17.0</b>	<b>30.4</b>	<b>6,226</b>

**Figure 13: Average Response Time of First Arriving Unit, by Hour of Day**



### Observations:

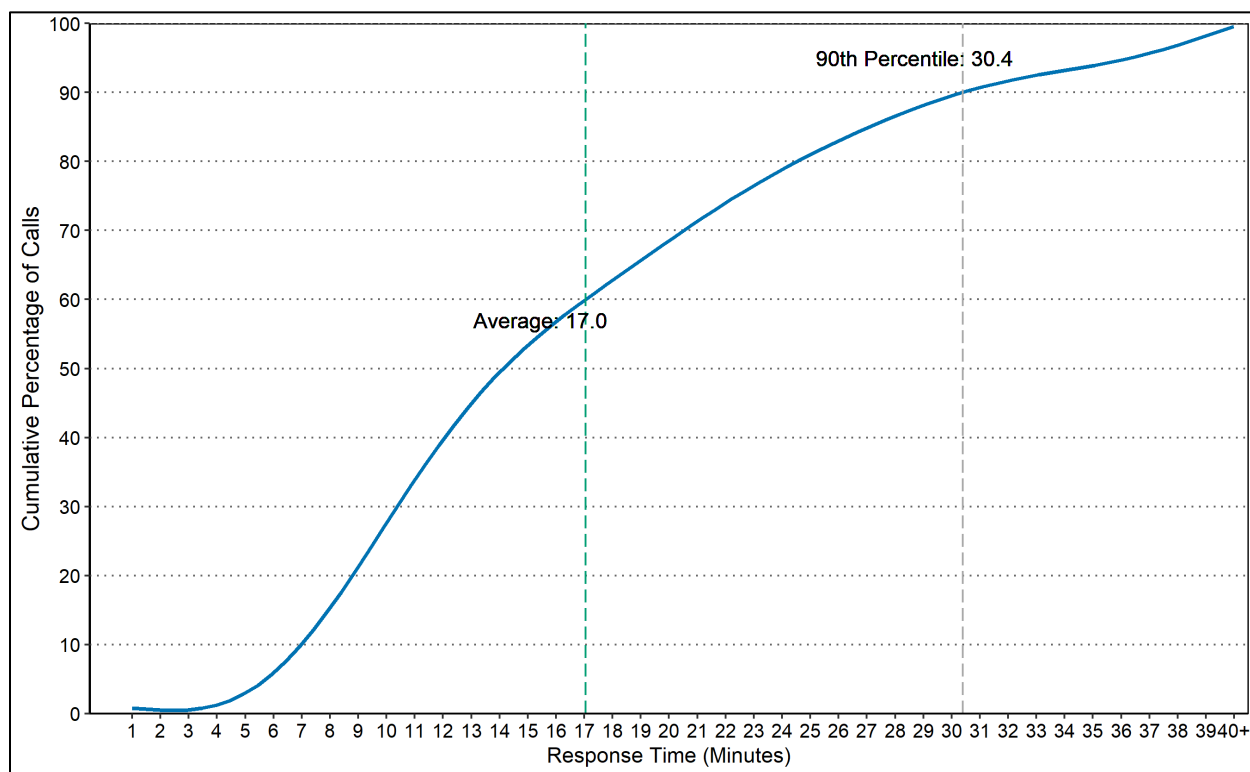
- The average processing time was between 2.6 minutes (11:00 p.m. to midnight) and 3.5 minutes (5:00 a.m. to 6:00 a.m.).
- The average activation time was between 3.7 minutes (4:00 p.m. to 5:00 p.m.) and 7.3 minutes (5:00 a.m. to 6:00 a.m.).
- The average travel time was between 7.5 minutes (10:00 p.m. to 11:00 p.m.) and 12.2 minutes (6:00 a.m. to 7:00 a.m.).
- The average response time was between 15.5 minutes (4:00 p.m. to 5:00 p.m.) and 21.7 minutes (5:00 a.m. to 6:00 a.m.).
- The 90th percentile response time was between 27.4 minutes (9:00 p.m. to 10:00 p.m.) and 41.0 minutes (11:00 p.m. to midnight).

## RESPONSE TIME DISTRIBUTION

Here, we present a more detailed look at how the response times to calls are distributed. The cumulative distribution of total response time for the first arriving ambulance is shown in Figure 14 and Table 48. Figure 15 shows response times for the first arriving ambulance as a frequency distribution in whole-minute increments.

The cumulative percentages here are read in the same way as a percentile. In Figure 14, the 90th percentile of 30.4 minutes means that 90 percent of calls had a response time of 30.4 minutes or less. In Table 49, the cumulative percentage of 15.2, for example, means that 15.2 percent of calls had a response time under 8 minutes.

**Figure 14: Cumulative Distribution of Response Time**



**TABLE 48: Cumulative Distribution of Response Time**

Response Time (minute)	Frequency	Cumulative Percentage
2	23	0.9
4	42	1.7
6	156	5.2
8	364	15.2
10	394	27.9
12	352	39.7
14	269	49.5
16	208	56.6
18	200	62.9
20	161	68.4
22	155	73.9
24	150	78.8
26	111	83.1
28	88	86.3
30	76	89.4
32	58	91.5
34	53	93.6
36	39	94.9
38	31	96.1
40+	214	100.0

**Note:** In Oneonta City, for 47 percent of calls, the response time of the first arriving unit was less than 8 minutes

### Observations:

- For 15 percent of calls, the response time of the first arriving unit was less than 8 minutes.

## RESPONSE TIMES BY GEOGRAPHY

The geographical distribution of the average and 90th percentile response times are summarized in Table 49 and detailed in Tables 50 to 53 for the city, villages, hamlets, and towns, respectively. Figures 15 and 16 illustrate similar information.

**TABLE 49: Summary of Average and 90th Percentile Response Time (Minutes) of First Arriving Unit, by Geography**

Service Area	Average Response Time				90th Percentile Response Time				Calls
	Process	Activate	Travel	Total	Process	Activate	Travel	Total	
Cities	2.6	2.6	3.7	8.8	3.8	3.9	6.6	12.6	1,404
Hamlets	2.8	5.8	13.0	21.6	3.9	11.6	26.2	33.4	194
Towns	3.1	5.2	11.0	19.3	4.5	11.4	21.8	32.4	3,834
Villages	3.1	6.8	9.6	19.5	4.4	13.3	21.1	32.3	794
<b>Total</b>	<b>3.0</b>	<b>4.8</b>	<b>9.2</b>	<b>17.0</b>	<b>4.3</b>	<b>10.7</b>	<b>20.2</b>	<b>30.4</b>	<b>6,226</b>

**TABLE 50: Average and 90th Percentile Response Time (Minutes) of First Arriving Unit, by City**

City	Average Response Time				90th Percentile Response Time				Calls
	Process	Activate	Travel	Total	Process	Activate	Travel	Total	
Oneonta	2.6	2.6	3.7	8.8	3.8	3.9	6.6	12.6	1,404

**TABLE 51: Average and 90th Percentile Response Time (Minutes) of First Arriving Unit, by Village**

Village	Average Response Time				90th Percentile Response Time				Calls
	Process	Activate	Travel	Total	Process	Activate	Travel	Total	
Cherry Valley	4.1	5.0	18.1	27.2	5.8	10.7	26.4	37.5	32
Cooperstown	2.7	8.5	5.1	16.3	4.1	14.3	11.9	24.4	226
Gilbertsville	2.9	5.3	10.8	19.1	4.3	9.8	23.1	28.9	47
Laurens	4.3	6.3	6.9	17.5	4.8	11.1	15.2	28.9	25
Milford	2.5	6.9	6.8	16.1	3.6	13.1	14.8	27.4	60
Morris	4.3	4.1	11.7	20.1	5.6	9.1	23.8	33.0	43
Otego	3.8	4.1	12.8	20.8	4.1	9.0	23.8	34.5	63
Richfield Springs	3.1	8.2	11.7	23.0	4.6	18.7	22.4	38.4	172
Unadilla	3.1	4.9	11.8	19.8	4.8	9.0	19.9	28.8	126
<b>Total</b>	<b>3.1</b>	<b>6.8</b>	<b>9.6</b>	<b>19.5</b>	<b>4.4</b>	<b>13.3</b>	<b>21.1</b>	<b>32.3</b>	<b>794</b>



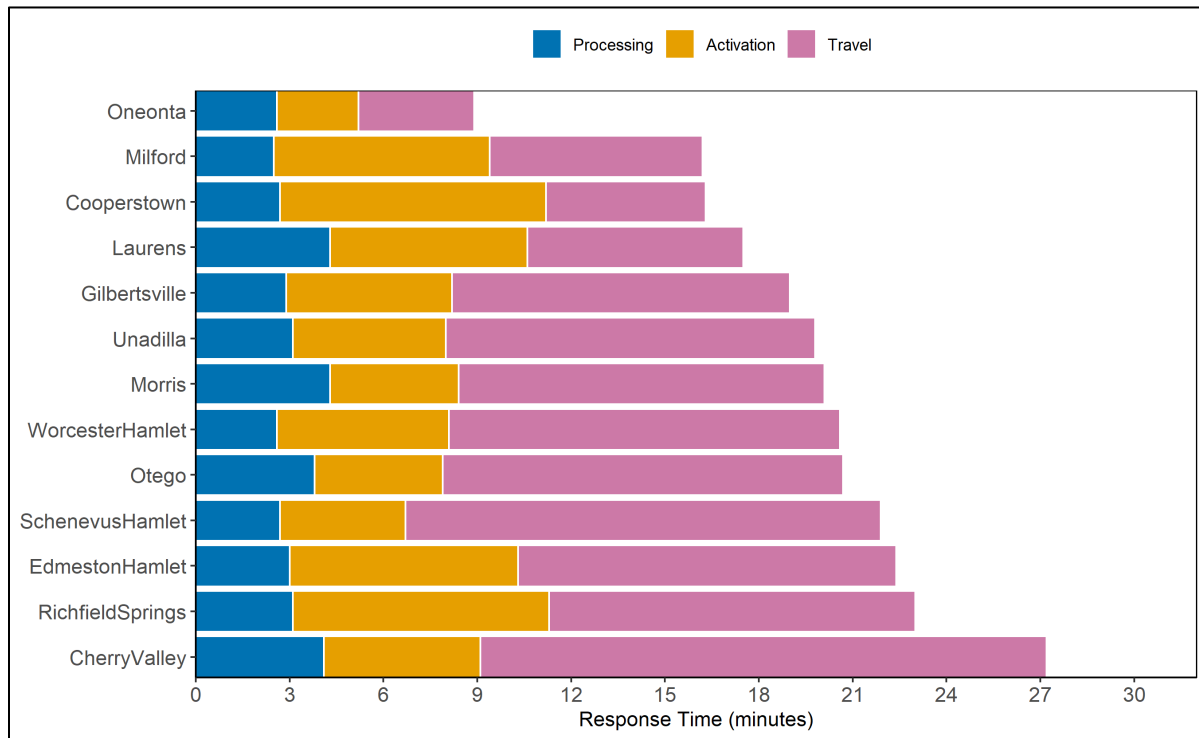
**TABLE 52: Average and 90th Percentile Response Time (Minutes) of First Arriving Unit, by Hamlet**

Hamlet	Average Response Time				90th Percentile Response Time				Calls
	Process	Activate	Travel	Total	Process	Activate	Travel	Total	
Edmeston	3.0	7.3	12.1	22.4	4.3	15.2	22.9	35.0	69
Schenevus	2.7	4.0	15.2	21.9	4.3	10.1	23.5	29.3	47
Worcester	2.6	5.5	12.5	20.6	3.8	11.6	28.7	34.5	78
<b>Total</b>	<b>2.8</b>	<b>5.8</b>	<b>13.0</b>	<b>21.6</b>	<b>3.9</b>	<b>11.6</b>	<b>26.2</b>	<b>33.4</b>	<b>194</b>

**TABLE 53: Average and 90th Percentile Response Time (Minutes) of First Arriving Unit, by Town**

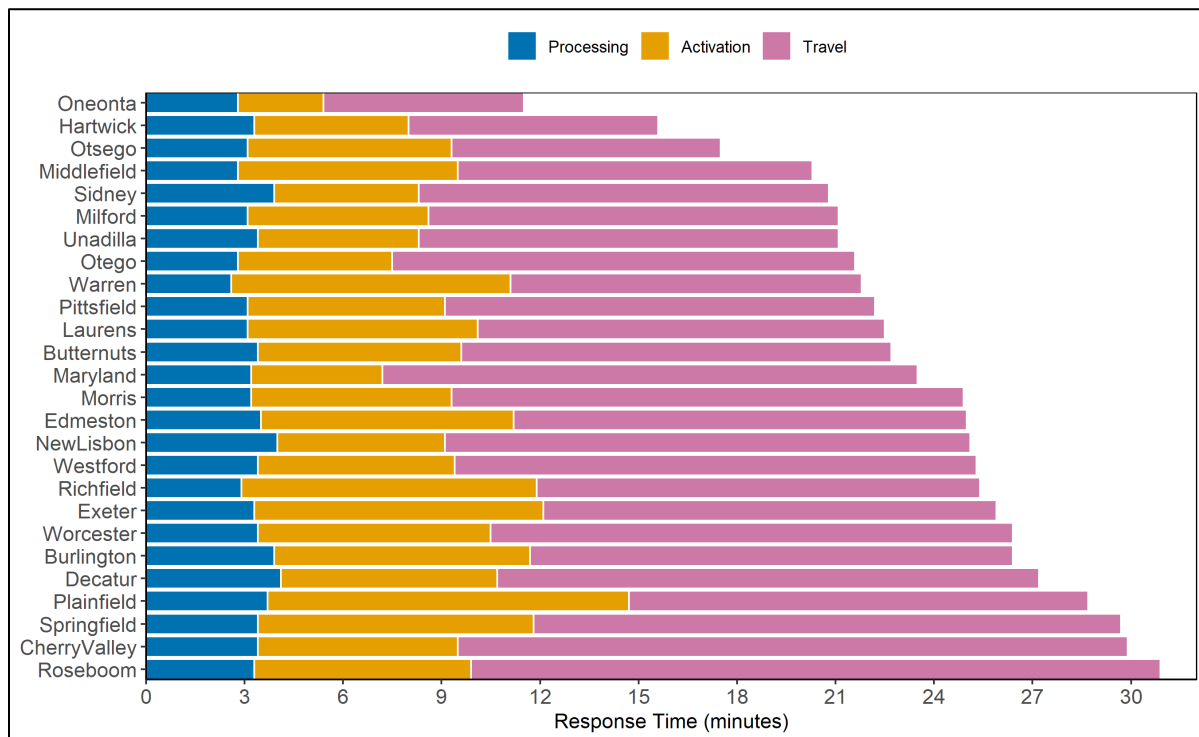
Town	Average Response Time				90th Percentile Response Time				Calls
	Process	Activate	Travel	Total	Process	Activate	Travel	Total	
Burlington	3.9	7.8	14.7	26.4	6.7	18.8	26.6	37.6	58
Butternuts	3.4	6.2	13.1	22.7	5.0	12.8	22.1	32.0	74
Cherry Valley	3.4	6.1	20.4	29.9	5.2	13.0	28.4	38.8	37
Decatur	4.1	6.6	16.5	27.1	5.8	11.5	31.0	36.6	30
Edmeston	3.5	7.7	13.8	25.0	4.1	15.2	24.4	36.0	115
Exeter	3.3	8.8	13.8	25.9	5.4	17.9	22.5	42.9	59
Hartwick	3.3	4.7	7.6	15.6	4.2	8.7	13.0	23.5	147
Laurens	3.1	7.0	12.4	22.5	4.4	13.4	22.6	34.5	138
Maryland	3.2	4.0	16.3	23.5	4.0	8.4	23.4	32.1	142
Middlefield	2.8	6.7	10.8	20.4	4.3	14.4	19.9	30.0	125
Milford	3.1	5.5	12.5	21.0	4.3	10.9	20.6	32.1	189
Morris	3.2	6.1	15.6	24.8	4.5	13.0	26.9	36.2	90
New Lisbon	4.0	5.1	16.0	25.1	5.8	10.4	29.3	36.8	86
Oneonta	2.8	2.6	6.1	11.5	3.9	3.8	9.1	15.2	1,054
Otego	2.8	4.7	14.1	21.6	3.9	9.8	23.4	33.9	163
Otsego	3.1	6.2	8.2	17.5	4.2	13.7	16.2	30.0	417
Pittsfield	3.1	6.0	13.1	22.2	5.1	9.8	28.9	38.3	105
Plainfield	3.7	11.0	14.0	28.6	4.4	15.8	26.0	43.4	68
Richfield	2.9	9.0	13.5	25.4	4.2	20.2	24.6	37.7	105
Roseboom	3.3	6.6	21.0	30.8	5.2	17.9	29.7	42.4	37
Sidney	3.9	4.4	12.5	20.8	6.8	6.7	21.8	29.4	47
Springfield	3.4	8.4	17.9	29.8	5.1	16.7	25.6	39.1	85
Unadilla	3.4	4.9	12.8	21.1	5.5	9.2	22.5	31.2	298
Warren	2.6	8.5	10.7	21.7	4.8	14.4	23.1	33.8	43
Westford	3.4	6.0	15.9	25.3	5.0	10.1	26.0	33.4	35
Worcester	3.4	7.1	15.9	26.4	4.6	13.9	28.7	39.0	87
<b>Total</b>	<b>3.1</b>	<b>5.2</b>	<b>11.0</b>	<b>19.3</b>	<b>4.5</b>	<b>11.4</b>	<b>21.8</b>	<b>32.4</b>	<b>3,834</b>

**Figure 15: Average Response Time of First Arriving Unit, by City, Hamlet, and Village**



**Note:** Oneonta is a city; Edmeston, Schenevus, and Worcester are hamlets, and the remaining municipalities are villages.

**Figure 16: Average Response Time of First Arriving Unit, by Town**



## RESPONSE TIMES BY AGENCY

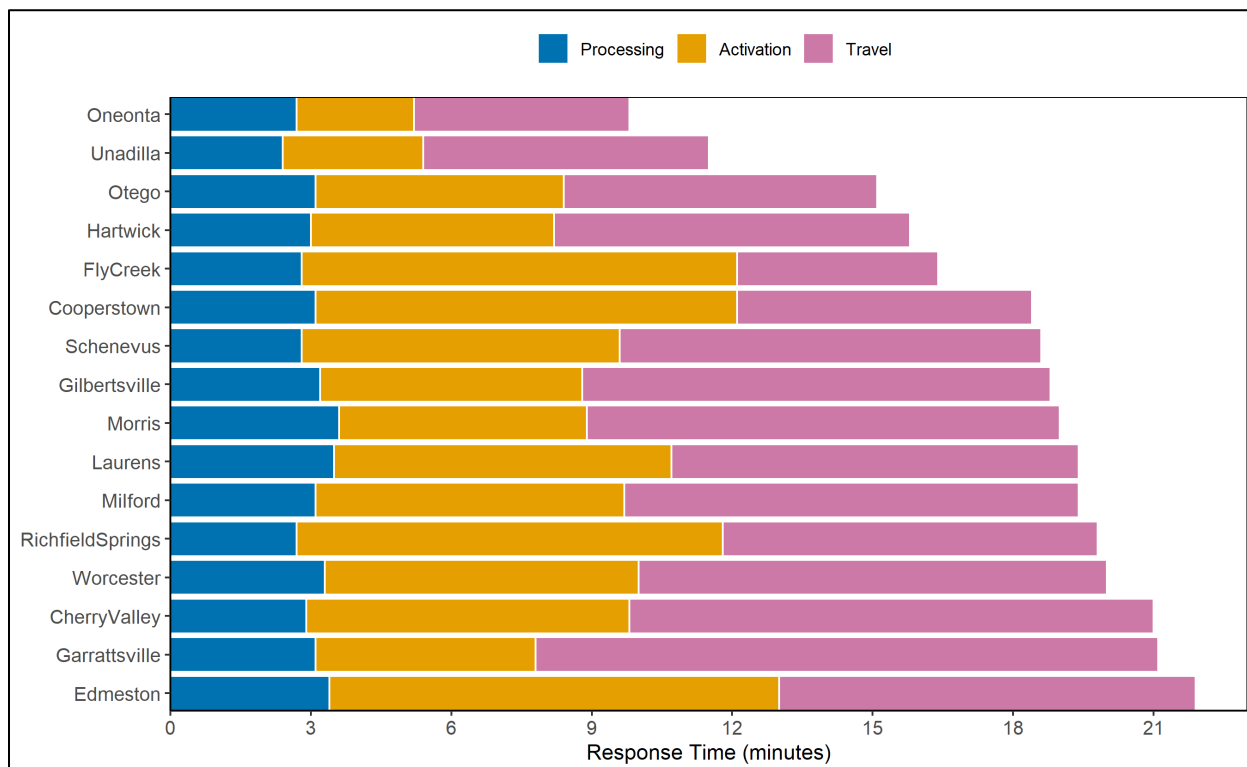
The average and 90th percentile response times broken down by ambulance service are summarized in Table 54. Figure 17 illustrates the components of average response time for each ambulance service. This analysis is conducted based on 3,737 calls where the local ambulance services arrived first.

**TABLE 54: Average and 90th Percentile Response Time (Minutes) of Primary Ambulance Service**

Ambulance Service	Average Response Time				90th Percentile Response Time				Calls
	Process	Activate	Travel	Total	Process	Activate	Travel	Total	
Oneonta*	2.7	2.5	4.6	9.9	3.9	3.8	8.0	13.8	2,424
Cherry Valley	2.9	6.9	11.2	21.0	5.0	13.0	22.6	31.6	28
Cooperstown	3.1	9.0	6.3	18.4	4.4	15.6	15.4	29.6	265
Edmeston	3.4	9.6	8.9	21.9	4.2	16.6	17.9	31.1	103
Fly Creek	2.8	9.3	4.3	16.4	3.9	15.3	10.1	24.9	58
Garrattsville	3.1	4.7	13.3	21.1	4.4	9.4	20.0	29.4	34
Gilbertsville	3.2	5.6	10.0	18.8	4.5	11.9	17.1	26.3	93
Hartwick	3.0	5.2	7.6	15.8	4.1	9.1	14.3	24.1	98
Laurens	3.5	7.2	8.7	19.3	4.4	11.8	16.0	26.8	92
Milford	3.1	6.6	9.7	19.4	4.3	13.0	18.0	29.5	112
Morris	3.6	5.3	10.1	19.1	5.1	11.7	16.1	29.3	51
Otego	3.1	5.3	6.7	15.2	5.0	10.4	13.8	21.6	17
Richfield Springs	2.7	9.1	8.0	19.8	4.2	17.5	15.6	32.6	179
Schenevus	2.8	6.8	9.0	18.7	5.4	19.9	19.1	28.0	26
Unadilla	2.4	3.0	6.1	11.5	5.4	6.3	11.9	20.5	25
Worcester	3.3	6.7	10.0	19.9	4.7	12.8	18.9	30.8	132
<b>Total</b>	<b>2.8</b>	<b>4.3</b>	<b>5.9</b>	<b>13.1</b>	<b>4.1</b>	<b>9.9</b>	<b>12.0</b>	<b>22.6</b>	<b>3,737</b>

**Note:** \*Oneonta Ambulance Service is a career agency. The rest of the ambulance services are volunteer agencies. **County ALS acted as a backup and served the entire county EMS zones. It is not included in this analysis.**

**Figure 17: Average Response Time by Local Ambulance Service**



**Note:** Oneonta Ambulance Service is a career agency. The rest ambulance services are volunteer agencies.

## Observations:

### ■ By Geography

- Oneonta City had the shortest response time. The average and the 90th percentile response time was 8.8 and 12.6 minutes, respectively.
- Oneonta Town had the second shortest response time. The average and the 90th percentile response time was 11.5 and 15.2 minutes, respectively.
- Hartwick Town had the third shortest response time. The average and the 90th percentile response time was 15.6 and 23.5 minutes, respectively

### ■ By Agency

- Oneonta (career EMS) had the shortest response time. The average and the 90th percentile response time was 9.9 and 13.8 minutes, respectively.
- Unadilla (Volunteer EMS) had the second shortest response time. The average and the 90th percentile response time was 11.5 and 20.5 minutes, respectively.
- Otego (Volunteer EMS) had the third shortest response time. The average and the 90th percentile response time was 15.2 and 21.6 minutes, respectively.

# 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.

The Otsego County's EMS system and out-of-county ambulance services were involved in 4,203 and 666 transport calls, respectively. To examine the overall transport within Otsego County's EMS service zones, we included all 6,843 calls responded by both Otsego County and out-of-county EMS agencies. In addition, we identify transport calls by requiring that at least one responding ambulance record both a "beginning to transport" time and an "arriving at the hospital" time.

## TRANSPORT CALLS BY TYPE

Table 55 shows the number of calls by call type broken out by transport and non-transport calls.

**TABLE 55: Calls by Call Type and Transport**

Call Type	Number of Calls			Conversion Rate
	Non-Transport	Transport	Total	
Breathing difficulty	100	634	734	86.4
Cardiac and stroke	201	663	864	76.7
Fall and injury	505	1,032	1,537	67.1
Fire standby	197	15	212	7.1
Illness and other	564	1,686	2,250	74.9
MVA	265	124	389	31.9
Non-emergency transfer	10	143	153	93.5
Overdose and psychiatric	57	126	183	68.9
Seizure and unconsciousness	122	399	521	76.6
<b>Total</b>	<b>2,021</b>	<b>4,822</b>	<b>6,843</b>	<b>70.5</b>

### Observations:

- Overall, 70 percent of EMS transfer calls involved transporting one or more patients.
- On average, there were approximately 13.2 EMS 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 56 and detailed in Tables 57 to 60 for all hamlets, villages, cities, and towns, respectively. A call was labeled “ALS” if at least one ALS unit responded to it, labeled “BLS” if the responding units were only BLS, and labeled “first response” if all the responding units were the non-medical units from first responders. Here the conversion rate measures the percent of calls that transported one or more patients.

**TABLE 56: Summary of Calls by Geography and Transport**

Service Area	Non-Transport Calls				Transport Calls			Total	Conversion Rate
	ALS	BLS	First Response	Total	ALS	BLS	Total		
City	398	0	31	429	1,071	0	1,071	1,500	71.4
Hamlet	51	0	4	55	157	1	158	213	74.2
Town	1,176	22	42	1,240	2,948	31	2,979	4,219	70.6
Villages	281	13	3	297	604	10	614	911	67.4
<b>Total</b>	<b>1,906</b>	<b>35</b>	<b>80</b>	<b>2,021</b>	<b>4,780</b>	<b>42</b>	<b>4,822</b>	<b>6,843</b>	<b>70.5</b>

**Note:** The conversion rate is measured by dividing the number of transports by the number of total calls. For example, for all service areas, there were 4,822 transports out of 6,843 calls. This gives a conversion rate of  $4,822 / 6,843 = 0.705$ , or 70.5 percent.

**TABLE 57: Calls by Hamlet and Transport**

Hamlet	Non-Transport Calls			Transport Calls		Total	Conversion Rate
	ALS	BLS	First Response	ALS	BLS		
Edmeston	19	0	1	56	0	76	73.7
Schenevus	14	0	0	34	1	49	71.4
Worcester	18	0	3	67	0	88	76.1
<b>Total</b>	<b>51</b>	<b>0</b>	<b>4</b>	<b>157</b>	<b>1</b>	<b>213</b>	<b>74.2</b>

**TABLE 58: Calls by Village and Transport**

Village	Non-Transport Calls			Transport Calls		Total	Conversion Rate
	ALS	BLS	First Response	ALS	BLS		
Cherry Valley	11	2	0	21	2	36	63.9
Cooperstown	64	0	1	215	1	281	76.9
Gilbertsville	18	4	1	26	2	51	54.9
Laurens	11	0	0	19	0	30	63.3
Milford	20	0	0	44	0	64	68.8
Morris	14	2	0	28	4	48	66.7
Otego	25	4	0	44	0	73	60.3
Richfield Springs	56	0	0	131	0	187	70.1
Unadilla	62	1	1	76	1	141	54.6
<b>Total</b>	<b>281</b>	<b>13</b>	<b>3</b>	<b>604</b>	<b>10</b>	<b>911</b>	<b>67.4</b>

**TABLE 59: Calls by City and Transport**

City	Non-Transport Calls			Transport Calls		Total	Conversion Rate
	ALS	BLS	First Response	ALS	BLS		
Oneonta	398	0	31	1,071	0	1,500	71.4

**TABLE 60: Calls by Town and Transport**

Town	Non-Transport Calls			Transport Calls		Total	Conversion Rate
	ALS	BLS	First Response	ALS	BLS		
Burlington	13	0	0	49	0	62	79.0
Butternuts*	11	5	0	51	9	76	78.9
Cherry Valley	22	4	1	23	1	51	47.1
Decatur	6	0	0	25	0	31	80.6
Edmeston	34	0	1	86	0	121	71.1
Exeter	21	0	4	46	0	71	64.8
Hartwick	45	0	0	116	0	161	72.0
Laurens	49	0	2	97	0	148	65.5
Maryland	42	3	1	105	2	153	69.9
Middlefield	45	0	4	142	0	191	74.3
Milford	60	1	0	153	0	214	71.5
Morris*	35	4	3	55	6	103	59.2
New Lisbon	34	0	0	59	0	93	63.4
Oneonta	262	0	5	853	0	1,120	76.2
Otego	47	3	1	121	3	175	70.9
Otsego	91	0	1	346	0	438	79.0
Pittsfield*	38	0	1	76	0	115	66.1
Plainfield*	29	0	2	43	0	74	58.1
Richfield	27	0	4	83	0	114	72.8
Roseboom	11	1	0	29	3	44	72.7
Sidney**	21	0	3	33	0	57	57.9
Springfield	47	0	2	59	1	109	55.0
Unadilla	115	0	2	193	5	315	62.9
Warren**	21	0	3	26	0	50	52.0
Westford	14	0	1	23	1	39	61.5
Worcester	36	1	1	56	0	94	59.6
<b>Total</b>	<b>1,176</b>	<b>22</b>	<b>42</b>	<b>2,948</b>	<b>31</b>	<b>4,219</b>	<b>70.6</b>

**Note:** \*Otsego County community partially covered by out-of-county EMS agencies; \*\*Out-of-County community partially covered by Otsego County EMS agencies.

## Observations:

- Overall, ALS capability was included in 99 percent of transport calls.
- The top three areas with the highest percentage of total transport calls were Detacur Town (81 percent), Burlington Town (79 percent), and Butternuts Town (79 percent).



## AVERAGE TRANSPORT CALLS PER HOUR

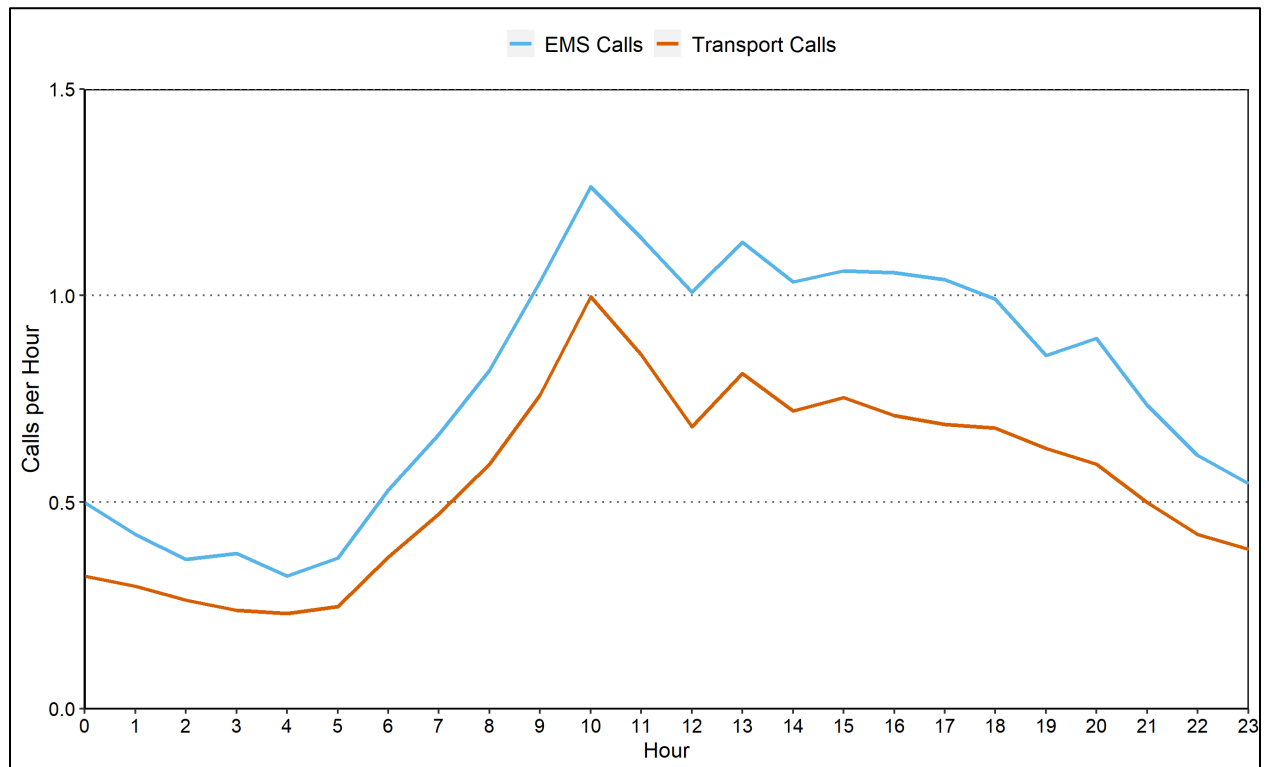
Table 61 and Figure 18 show the average number of transport calls received each hour of the day for the year and the average number of transport calls.

**TABLE 61: EMS Transport Calls by Hour**

Hour	Total Calls		Calls per Day		Conversion Rate
	EMS	Transport	EMS	Transport	
0	182	117	0.5	0.3	64.3
1	154	108	0.4	0.3	70.1
2	132	96	0.4	0.3	72.7
3	137	87	0.4	0.2	63.5
4	117	84	0.3	0.2	71.8
5	133	90	0.4	0.2	67.7
6	193	134	0.5	0.4	69.4
7	242	172	0.7	0.5	71.1
8	299	216	0.8	0.6	72.2
9	377	277	1.0	0.8	73.5
10	461	364	1.3	1.0	79.0
11	416	313	1.1	0.9	75.2
12	368	249	1.0	0.7	67.7
13	412	296	1.1	0.8	71.8
14	377	263	1.0	0.7	69.8
15	387	275	1.1	0.8	71.1
16	385	259	1.1	0.7	67.3
17	379	251	1.0	0.7	66.2
18	362	248	1.0	0.7	68.5
19	312	230	0.9	0.6	73.7
20	327	216	0.9	0.6	66.1
21	268	182	0.7	0.5	67.9
22	224	154	0.6	0.4	68.8
23	199	141	0.5	0.4	70.9
<b>Total</b>	<b>6,843</b>	<b>4,822</b>	<b>18.7</b>	<b>13.2</b>	<b>70.5</b>

**Note:** The conversion rate is measured by dividing the number of transports by the number of total calls. For example, between midnight and 1:00 a.m., there were 117 transports out of 182 calls. This gives a conversion rate of  $117 / 182 = 0.643$ , or 64.3 percent.

**Figure 18: Average EMS Transport Calls per Day by Hour**



### Observations:

- EMS calls per hour were highest during the day from 9:00 a.m. to 7:00 p.m., averaging 1.1 calls per hour.
- EMS calls per hour peaked between 10:00 a.m. and 11:00 a.m., averaging 1.3 calls per hour.
- EMS calls per hour were lowest between 4:00 a.m. and 5:00 a.m., averaging 0.3 calls per hour.
- Hourly transport calls were highest during the day from 9:00 a.m. to 7:00 p.m., averaging 0.8 calls per hour.
- Hourly transport calls peaked between 10:00 a.m. and 11:00 a.m., averaging one call per hour.
- Hourly transport calls were lowest between 4:00 a.m. and 5:00 a.m., averaging 0.2 calls per hour.
- The hourly transport conversion rate peaked between 10:00 a.m. and 11:00 at 79 percent.
- The hourly transport conversion rate was lowest between 3:00 a.m. and 4:00 a.m. at 64 percent.

## TRANSPORT CALLS BY TYPE AND DURATION

Table 63 shows the average duration of transport calls by call type. The geographical difference of the average transport duration time is summarized in Table 64 and detailed in Tables 65 to 68 for the city, hamlets, villages, and towns, respectively.

**TABLE 43: Transport Call Duration by Call Type**

Call Type	Non-transport		Transport	
	Average Duration (minutes)	Number of Calls	Average Duration (minutes)	Number of Calls
Breathing difficulty	44.5	100	86.7	634
Cardiac and stroke	46.5	201	82.0	663
Fall and injury	29.2	505	74.3	1,032
Fire Standby	92.2	197	207.3	15
Illness and other	32.5	564	75.2	1,686
MVA	60.2	265	98.7	124
Non-emergency transfer	33.3	10	72.3	143
Overdose and psychiatric	30.3	57	61.6	126
Seizure and unconsciousness	34.4	122	77.9	399
<b>Total</b>	<b>43.2</b>	<b>2,021</b>	<b>78.2</b>	<b>4,822</b>

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

**TABLE 44: Summary of Transport Call Duration by Geography**

Service Area	Non-transport		Transport	
	Average Duration (minutes)	Number of Calls	Average Duration (minutes)	Number of Calls
Cities	27.5	429	45.8	1,071
Hamlets	53.8	55	108.0	158
Towns	48.6	1,240	86.3	2,979
Villages	41.1	297	88.1	614
<b>Total</b>	<b>43.2</b>	<b>2,021</b>	<b>78.2</b>	<b>4,822</b>

**TABLE 45: Transport Call Duration by City**

City	Non-transport		Transport	
	Average Duration (minutes)	Number of Calls	Average Duration (minutes)	Number of Calls
Oneonta	27.5	429	45.8	1,071

**TABLE 46: Transport Call Duration by Hamlet**

Hamlet	Non-transport		Transport	
	Average Duration (minutes)	Number of Calls	Average Duration (minutes)	Number of Calls
Edmeston	50.9	20	105.5	56
Schenevus	33.9	14	102.7	35
Worcester	69.8	21	112.8	67
<b>Total</b>	<b>53.8</b>	<b>55</b>	<b>108.0</b>	<b>158</b>

**TABLE 47: Transport Call Duration by Village**

Village	Non-transport		Transport	
	Average Duration (minutes)	Number of Calls	Average Duration (minutes)	Number of Calls
Cherry Valley	90.9	13	97.4	23
Cooperstown	34.4	65	59.4	216
Gilbertsville	59.6	23	120.9	28
Laurens	35.4	11	93.1	19
Milford	30.2	20	83.3	44
Morris	70.0	16	152.1	32
Otego	31.7	29	91.9	44
Richfield Springs	33.6	56	94.3	131
Unadilla	39.0	64	115.9	77
<b>Total</b>	<b>41.1</b>	<b>297</b>	<b>88.1</b>	<b>614</b>

**TABLE 48: Transport Call Duration by Town**

Town	Non-transport		Transport	
	Average Duration (minutes)	Number of Calls	Average Duration (minutes)	Number of Calls
Burlington	90.2	13	111.2	49
Butternuts*	45.8	16	123.0	60
Cherry Valley	52.0	27	135.9	24
Decatur	84.7	6	128.3	25
Edmeston	74.8	35	117.2	86
Exeter	72.1	25	104.6	46
Hartwick	56.5	45	96.5	116
Laurens	43.0	51	97.9	97
Maryland	54.9	46	101.9	107
Middlefield	56.8	49	77.6	142
Milford	51.0	61	91.8	153
Morris*	59.7	42	116.9	61
New Lisbon	76.4	34	114.4	59
Oneonta	29.8	267	54.0	853
Otego	45.0	51	96.3	124
Otsego	47.5	92	71.7	346
Pittsfield*	65.6	39	126.1	76
Plainfield*	76.9	31	120.4	43
Richfield	41.7	31	104.8	83
Roseboom	49.6	12	118.2	32
Sidney**	33.4	24	108.4	33
Springfield	45.0	49	92.5	60
Unadilla	45.3	117	104.0	198
Warren**	71.5	24	108.0	26
Westford	51.9	15	104.6	24
Worcester	40.1	38	128.3	56
<b>Total</b>	<b>48.6</b>	<b>1,240</b>	<b>86.3</b>	<b>2,979</b>

**Note:** Otsego County community partially covered by out-of-county EMS agencies; \*\*Out-of-County community partially covered by Otsego County EMS agencies

### Observations:

- The average duration was 43.2 minutes for non-transport EMS calls.
- The average duration was 78.2 minutes for transport EMS calls.
- The transport duration was the shortest in Oneonta City, which was 45.8 minutes on average.
- The transport duration was the longest in Morris Village, which was 152.1 minutes on average.

## TRANSPORT TIME COMPONENTS

Table 69 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 69 analyzes times by run. Normally, the number of runs exceeds the number of calls as a call may have multiple runs. In addition, average times may differ slightly from similar averages measured per call.

**TABLE 49: 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	18.0	18.8	37.5	85.0	666
Cardiac and stroke	16.9	18.1	35.9	80.1	702
Fall and injury	16.0	16.0	32.3	73.5	1,057
Fire Standby	22.5	25.2	26.1	80.5	17
Illness and other	15.4	16.4	32.3	73.5	1,726
MVA	16.1	20.2	43.4	89.4	142
Overdose and psychiatric	20.0	10.6	35.6	71.8	144
Non-emergency transfer	13.4	13.1	27.8	60.9	129
Seizure and unconsciousness	17.2	16.2	34.4	76.7	426
<b>Total</b>	<b>16.4</b>	<b>16.7</b>	<b>34.0</b>	<b>76.3</b>	<b>5,009</b>

**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 EMS call was 16.3 minutes.
- The average travel time from the scene of the EMS call to the hospital was 16.7 minutes.
- The average deployed time spent on transport EMS calls was 76.3 minutes.
- The average deployed time at the hospital was 34.0 minutes, which accounts for approximately 45 percent of the average total deployed time for a transport EMS call.

Table 70 summarizes the geographical difference of average deployed time for an ambulance on a transport call. Tables 71 to 74 detail the components of the deployed time in ambulance transport for the city, villages, hamlets, and towns, respectively.

**TABLE 50: Summary of Time Component for Ambulance Transport by Geography**

Service Area	Average Time Spent per Run				Number of Runs
	On Scene	Traveling to Hospital	At Hospital	Deployed	
Cities	12.0	7.3	22.5	45.7	1,075
Hamlets	19.2	29.8	44.0	104.9	161
Towns	17.4	19.0	36.5	83.7	3,128
Villages	18.0	18.2	38.4	84.3	645
<b>Total</b>	<b>16.4</b>	<b>16.7</b>	<b>34.0</b>	<b>76.3</b>	<b>5,009</b>

**TABLE 51: Time Component for Ambulance Transport by City**

City	Average Time Spent per Run				Number of Runs
	On Scene	Traveling to Hospital	At Hospital	Deployed	
Oneonta	12.0	7.3	22.5	45.7	1,075

**TABLE 52: Time Component for Ambulance Transport by Village**

Village	Average Time Spent per Run				Number of Runs
	On Scene	Traveling to Hospital	At Hospital	Deployed	
Cherry Valley	17.9	20.9	32.7	90.9	25
Cooperstown	18.9	5.6	28.7	58.5	220
Gilbertsville	21.8	38.4	45.4	117.4	30
Laurens	20.5	24.4	37.1	89.8	21
Milford	19.2	15.5	38.7	81.4	49
Morris	16.5	32.0	54.6	115.6	33
Otego	22.1	17.6	36.5	90.7	45
Richfield Springs	13.5	24.7	40.2	90.5	144
Unadilla	19.0	27.9	55.8	114.5	78
<b>Total</b>	<b>18.0</b>	<b>18.2</b>	<b>38.4</b>	<b>84.3</b>	<b>645</b>

**TABLE 53: Time Component for Ambulance Transport by Hamlet**

Hamlet	Average Time Spent per Run				Number of Runs
	On Scene	Traveling to Hospital	At Hospital	Deployed	
Edmeston	17.2	27.8	47.7	102.9	57
Schenevus	19.5	28.0	37.1	99.8	36
Worcester	20.7	32.3	44.6	109.3	68
<b>Total</b>	<b>19.2</b>	<b>29.8</b>	<b>44.0</b>	<b>104.9</b>	<b>161</b>

**TABLE 54: Time Component for Ambulance Transport by Town**

Town	Average Time Spent per Run				Number of Runs
	On Scene	Traveling to Hospital	At Hospital	Deployed	
Burlington	23.1	23.7	42.7	104.9	50
Butternuts	20.0	33.5	47.3	115.3	67
Cherry Valley	21.7	36.6	43.9	123.5	24
Decatur	22.4	37.5	47.0	122.4	28
Edmeston	16.0	32.0	50.8	111.4	93
Exeter	16.9	22.2	46.7	100.4	51
Hartwick	16.5	14.3	50.1	88.2	133
Laurens	17.2	24.9	39.7	93.8	103
Maryland	21.1	25.1	37.3	99.8	109
Middlefield	20.9	9.0	36.3	75.7	150
Milford	18.0	20.2	37.3	87.9	185
Morris	18.6	32.0	48.3	113.9	72
New Lisbon	18.4	29.5	46.1	108.8	63
Oneonta	12.7	10.1	23.6	52.5	856
Otego	21.0	22.7	34.6	94.1	127
Otsego	19.9	9.6	32.9	70.4	351
Pittsfield	15.7	36.0	57.0	122.0	76
Plainfield	18.4	34.3	52.5	118.2	43
Richfield	17.7	26.1	43.1	100.3	91
Roseboom	21.6	25.1	47.2	114.1	32
Sidney	19.0	25.8	48.1	106.2	34
Springfield	16.4	20.2	32.9	88.5	64
Unadilla	21.0	26.7	39.7	101.0	204
Warren	13.8	28.5	51.2	104.2	28
Westford	17.5	21.4	42.9	98.8	28
Worcester	22.1	33.5	48.6	120.0	66
<b>Total</b>	<b>17.4</b>	<b>19.0</b>	<b>36.5</b>	<b>83.7</b>	<b>3,128</b>



## AMBULANCE TRANSPORT RUNS BY AGENCY

Table 75 shows the number of non-transport and transport runs made by each agency, broken out by the type of EMS unit including BLS and ALS ambulances.

**TABLE 55: Transport Runs by ALS and BLS Ambulance Services**

Unit Type	Agency	Non-Transport	Transport	PCT Transport
Otsego County ALS	Cooperstown	150	323	6.4
	County	911	1,193	23.8
	Edmeston	69	85	1.7
	Fly Creek	49	70	1.4
	Garrattsville	42	17	0.3
	Hartwick	55	142	2.8
	Laurens	70	79	1.6
	Milford	83	115	2.3
	Oneonta	727	1,912	38.2
	Richfield Springs	95	132	2.6
	Unadilla	37	12	0.2
	Worcester	67	121	2.4
	<b>Subtotal</b>	<b>2,355</b>	<b>4,201</b>	<b>83.9</b>
Otsego BLS	Cherry Valley	32	15	0.3
	Gilbertsville	64	54	1.1
	Morris	50	34	0.7
	Otego	16	13	0.3
	Schenevus	38	17	0.3
	<b>Subtotal</b>	<b>200</b>	<b>133</b>	<b>2.7</b>
Out-of-County ALS	AMR	381	253	5.1
	Bridgewater	22	29	0.6
	Lifenet (helicopter)	34	12	0.2
	New Berlin	119	125	2.5
	Sidney	166	190	3.8
	West Winfield	37	58	1.2
	<b>Subtotal</b>	<b>759</b>	<b>667</b>	<b>13.3</b>
Out-of-County BLS	Franklin	3	5	0.1
	South New Berlin	3	3	0.1
	<b>Subtotal</b>	<b>6</b>	<b>8</b>	<b>0.2</b>
<b>Total</b>		<b>3,320</b>	<b>5,009</b>	<b>100.0</b>

### Observations:

- Oneonta, County, and Cooperstown ambulances made the top three EMS transport runs. They made 38, 24, and six percent of the total transport runs, respectively.
- Out-of-county ambulances made 13 percent of the total transport runs, respectively.
- ALS transport totaled 4,868 or 97 percent of transport runs.

## MUTUAL AID IN TRANSPORT

The Otsego County and out-of-county ambulances made 5,009 transports for 4,822 calls where one or more patients were transported. A mutual aid transport occurs when a local agency's ambulance is unavailable, and another agency helped transport the patient instead. We identified a mutual aid call by noting at least one ambulance from a nonlocal agency arriving on scene and recording a pair of transport time stamps. As there were situations where both a local agency arrived AND yet a nonlocal 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.

The distribution of transport mutual aid calls by geography is summarized in Table 76 and detailed in Tables 77 to 80 for all cities, villages, hamlets, and towns, respectively. Table 81 shows the number of transport runs made by each agency, including the runs to the agency's local service area and the aid-given runs to the agency's nonlocal service area.

**TABLE 56: Summary of Transport Calls by Geography and Mutual Aid Received**

Service Area	No Aid Call	Aid-Received Call		Total Transport Calls	Percent Aid Received
		Local AMB Arrived	Local AMB Did Not Arrive		
City	1,056	1	14	1,071	1.4
Hamlets	71	4	83	158	55.1
Towns	1,509	125	1,345	2,979	49.3
Villages	210	30	374	614	65.8
<b>Total</b>	<b>2,846</b>	<b>160</b>	<b>1,816</b>	<b>4,822</b>	<b>41.0</b>

**TABLE 57: Transport Calls by City and Mutual Aid Received**

City	No Aid Call	Aid-Received Call		Total Transport Calls	Percent Aid Received
		Local AMB Arrived	Local AMB Did Not Arrive		
Oneonta	1,056	1	14	1,071	1.4

**TABLE 58: Transport Calls by Village and Mutual Aid Received**

Village	No Aid Call	Aid-Received Call		Total Transport Calls	Percent Aid Received
		Local AMB Arrived	Local AMB Did Not Arrive		
Cherry Valley	3	0	20	23	87.0
Cooperstown	123	3	90	216	43.1
Gilbertsville	9	3	16	28	67.9
Laurens	10	2	7	19	47.4
Milford	12	6	26	44	72.7
Morris	8	3	21	32	75.0
Otego	1	1	42	44	97.7
Richfield Springs	41	11	79	131	68.7
Unadilla	3	1	73	77	96.1
<b>Total</b>	<b>210</b>	<b>30</b>	<b>374</b>	<b>614</b>	<b>65.8</b>

**TABLE 59: Transport Calls by Hamlet and Mutual Aid Received**

Hamlet	No Aid Call	Aid-Received Call		Total Transport Calls	Percent Aid Received
		Local AMB Arrived	Local AMB Did Not Arrive		
Edmeston	27	1	28	56	51.8
Schenevus	4	1	30	35	88.6
Worcester	40	2	25	67	40.3
<b>Total</b>	<b>71</b>	<b>4</b>	<b>83</b>	<b>158</b>	<b>55.1</b>

**TABLE 60: Transport Calls by Town and Mutual Aid Received**

Town	No Aid Call	Aid-Received Call		Total Transport Calls	Percent Aid Received
		Local AMB Arrived	Local AMB Did Not Arrive		
Burlington	12	1	36	49	75.5
Butternuts*	25	8	27	60	58.3
Cherry Valley	3	0	21	24	87.5
Decatur	18	3	4	25	28.0
Edmeston	38	6	42	86	55.8
Exeter	8	6	32	46	82.6
Hartwick	70	16	30	116	39.7
Laurens	48	6	43	97	50.5
Maryland	6	0	101	107	94.4
Middlefield	76	6	60	142	46.5
Milford	37	29	87	153	75.8
Morris*	12	10	39	61	80.3
New Lisbon	12	4	43	59	79.7
Oneonta	835	2	16	853	2.1
Otego	8	1	115	124	93.5
Otsego	93	6	247	346	73.1
Pittsfield*	59	0	17	76	22.4
Plainfield*	17	0	26	43	60.5
Richfield	27	8	48	83	67.5
Roseboom	4	1	27	32	87.5
Sidney**	3	0	30	33	90.9
Springfield	24	1	35	60	60.0
Unadilla	18	1	179	198	90.9
Warren**	22	2	2	26	15.4
Westford	4	1	19	24	83.3
Worcester	29	7	20	56	48.2
<b>Total</b>	<b>1,508</b>	<b>125</b>	<b>1,346</b>	<b>2,979</b>	<b>49.4</b>

**Note:** \*Otsego County community partially covered by out-of-county EMS agencies; \*\*Out-of-County community partially covered by Otsego County EMS agencies.

**TABLE 61: Transport Runs by Agency and Mutual Aid Given**

Ambulance Service	Local AMB Transport Run	Aid-Given Transport Run		Total Run	Pct. Aid Given
		Local AMB Arrived	Local AMB Did Not Arrive		
Oneonta	1,899	4	9	1,912	0.7
County ALS	0	84	1,109	1,193	100.0
<b>Career AMB Total</b>	<b>1,899</b>	<b>88</b>	<b>1,118</b>	<b>3,105</b>	<b>38.8</b>
Cherry Valley	12	0	3	15	20.0
Cooperstown	278	6	39	323	13.9
Edmeston	85	0	0	85	0.0
Fly Creek	40	5	25	70	42.9
Garrattsville	16	0	1	17	5.9
Gilbertsville	46	0	8	54	14.8
Hartwick	86	6	50	142	39.4
Laurens	66	2	11	79	16.5
Milford	99	1	15	115	13.9
Morris	30	0	4	34	11.8
Otego	11	0	2	13	15.4
Richfield Springs	125	0	7	132	5.3
Schenevus	11	1	5	17	35.3
Unadilla	10	0	2	12	16.7
Worcester	100	0	21	121	17.4
<b>Volunteer AMB Total</b>	<b>1,015</b>	<b>21</b>	<b>193</b>	<b>1,229</b>	<b>17.4</b>
<b>Otsego County AMB Total</b>	<b>2,914</b>	<b>109</b>	<b>1,311</b>	<b>4,334</b>	<b>32.8</b>
AMR	NA	22	231	253	100.0
Bridgewater	NA	0	29	29	100.0
Franklin	NA	0	5	5	100.0
Lifenet (helicopter)	NA	1	11	12	100.0
New Berlin	59	3	63	125	52.8
Sidney	NA	6	184	190	100.0
South New Berlin	2	0	1	3	33.3
West Winfield	17	2	39	58	70.7
<b>Out-of-County AMB Total</b>	<b>78</b>	<b>34</b>	<b>563</b>	<b>675</b>	<b>88.4</b>
<b>Total</b>	<b>2,992</b>	<b>143</b>	<b>1,874</b>	<b>5,009</b>	<b>40.3</b>

**Observations:**

- 40 percent of transport runs made by ambulance services were aid-given.
- For three percent of transport calls, a non-primary agency unit assisted with transport although a primary agency unit arrived.
- For 37 percent of transport calls, a non-primary agency transported a patient and no primary agency unit arrived.

## TRANSPORT DESTINATION

Table 82 shows the number of transports (runs) that the Otsego County and out-of-county ambulances made, broken out by destination.

**TABLE 62: Otsego and OOC Ambulance Transport Runs by Destination**

Destination Hospital	Otsego EMS Runs	Out-of-county EMS Runs	Total Runs	Runs per Day	Percent
A.O. Fox Memorial Hospital	2,210	318	2,438	6.7	48.7
Bassett Medical Center	2,001	228	2,319	6.4	46.3
Tri-town Regional Hospital	30	39	69	0.2	1.4
Chenango Memorial Hospital	19	24	43	0.1	0.9
Wilson Memorial Hospital	10	18	28	0.1	0.6
Faxton-St Luke's Healthcare	8	13	21	0.1	0.4
Cobleskill Regional Hospital	16	4	20	0.1	0.4
St Elizabeth Medical Center	8	12	20	0.1	0.4
Albany Medical Center	6	6	12	0.0	0.2
FoxCare Center	11	1	12	0.0	0.2
Hamilton Community Memorial Hospital	2	4	6	0.0	0.1
Binghamton General Hospital	3	2	5	0.0	0.1
Little Falls Hospital	3	0	3	0.0	0.1
Upstate University Hospital	0	3	3	0.0	0.1
Rome	1	1	2	0.0	0.0
Lourdes Hospital in Binghamton	0	1	1	0.0	0.0
St Peters	1	0	1	0.0	0.0
Utica Hospital	0	1	1	0.0	0.0
Rehabilitation & Nursing Center	5	0	5	0.0	0.1
<b>Total</b>	<b>4,334</b>	<b>675</b>	<b>5,009</b>	<b>13.7</b>	<b>100.0</b>

# FUTURE EMS NEEDS

Identification of options for the sustainability of the County ALS service requires an analysis of anticipated service needs, costs of providing resources to meet those needs, as well as potential revenue and funding sources.

## EMS Response Volume

In determining future EMS response volume, we analyzed the current county-wide response volume using a response rate per capita in Otsego County. For 2021, the most relevant year for this analysis, the EMS response rate was 0.1184, or 118.39 EMS responses for every 1,000 population in Otsego County. This was derived by dividing the 2021 countywide EMS response volume (6,843) by the 2021 U.S. Census bureau population data for the County (58,150)<sup>3</sup>.

Not unlike other rural counties in upstate New York, Otsego's population has been experiencing a negative population growth over the past decade. In 2010, the population of Otsego County, according to the Census Bureau, was 62,259. This represents a decrease of 6.59% over the 10-year period. The two most recent years, the county's population decrease 0.63% and 0.64% respectively. For our response volume projections, we used a population growth rate of -0.64%.

As referenced earlier in this report, there are more EMS runs than responses, due to more than one ambulance responding to some EMS responses. We also used the current transport ratios within Otsego County to factor the number of EMS responses that will result in a patient being transported to a receiving hospital. This is an important consideration when determining future EMS needs, since task times for a patient transport from an EMS request is longer than a response that does not result in a patient transport.

Using this data analysis, we can project the anticipated countywide EMS response and transport volume in Table 63:

**Table 63: Projected EMS Response, Run and Transport Volume 2022 – 2026**

	2022*	2023	2024	2025	2026
County Population Served	57,776	57,429	57,085	56,742	56,402
EMS Responses - <b>County-Wide</b>	6,843	6,802	6,761	6,721	6,680
Daily EMS Responses - <b>County-Wide</b>	19	19	19	18	18
EMS Responses Responded to by Agencies within the County	6,238	6,054	5,544	5,376	5,211
% EMS Responses Responded to by Agencies within the County	91.2%	89.0%	82.0%	80.0%	78.0%
Daily EMS Responses Responded to by Agencies within the County	17	17	15	15	14
EMS Runs - County-Wide	10,167	8,994	8,237	7,988	7,742
EMS Transports - <b>All County Agencies</b>	4,822	4,266	3,907	3,789	3,672
Daily EMS Transports - <b>All County Agencies</b>	13	12	11	10	10
County-Wide Transport %	70.5%	70.5%	70.5%	70.5%	70.5%

<sup>3</sup> <https://worldpopulationreview.com/us-counties/ny/otsego-county-population>

This analysis predicts a general decrease in percentage of EMS calls answered by volunteer agencies within Otsego County. This is based on data over the past year in Otsego County, as well as the national challenge with volunteer EMS agencies as noted earlier in this report. It is important to note that this analysis considers that the EMS response demand in the City and Town of Oneonta will likely remain managed by the Oneonta Fire Department, without significant reliance on the County ALS service. As shown earlier in this report, that EMS volume accounts for approximately 39% of the overall EMS response volume in the County.

Using this data projection, we can project the number of EMS responses through 2026 that will likely need to be handled by the County ALS agency in Table 64.

**Table 64: Projected EMS Response, Run and Transport Volume for County ALS agency**

	2022*	2023	2024	2025	2026
County Population Served	57,776	57,429	57,085	56,742	56,402
<b><u>Otsego County ALS Service</u></b>					
EMS Responses	3,249	3,358	3,687	3,650	3,650
EMS Responses per Day	8.9	9.2	10.1	10	10
EMS Transports	2,158	2,231	2,449	2,425	2,425
Daily EMS Transports	9	6	7	7	7
EMS Transport %	66.4%	66.4%	66.4%	66.4%	66.4%
% of County Responses by Otsego County ALS	47.5%	49.4%	54.5%	54.5%	54.5%

Note that we account for the increase in service demand for County ALS by increasing the percentage of EMS responses in the county that result in a completed response by the county's ALS agency. Even when accounting for this increasing percentage of the county EMS response volume resulting in a completed response by County ALS, the general decrease in response volume resulting from a gradual decrease in population, County ALS response volume remains stable at an estimated 10 responses and 7 transports per day.

## County ALS Agency Workload and Staffing

One method for measuring workload is Unit Hour Utilization (UHU). UHU is a measure of activity, essentially measuring the amount of on-duty time that an ambulance assigned to a response.

A Unit Hour is defined as one unit, fully staffed, equipped and available for a response. For example, one unit on-duty, 24 hours per day, 365 days per year equates to 8,760-unit hours (1 x 24 x 365). The UHU is then derived by dividing the number of responses by the total number of unit hours.

For the period of the analysis, County ALS staffed 2 primary ambulance units 24 hours per day, 7 days per week. This staffing resulted in 17,520 staffed ambulance unit hours annually. On occasion, County ALS places an additional ambulance in service, to handle exceptional response volume, staffed with County administrative personnel, who are also certified to staff ambulances.

Dividing the number of runs into the number of Unit Hours, we derive a response UHU of 0.185. This essentially means that a County ALS ambulance is on an EMS response 18.5% of the time they are on-duty.

Industry best practice is a UHU of 0.300 for **urban** agencies that use a 24 hour on-duty shift pattern. However, rural communities have unique challenges with distance and task times and industry best practice is that for rural EMS agencies, a UHU 0.175 provides an adequate balance of workload and response time reliability. Using a desired UHU of 0.175 for County ALS derives the staffing recommendations illustrated in Table 65.

**Table 65: Recommended County ALS Staffing**

	2022	2023	2024	2025	2026
<u>Otsego County ALS Service</u>					
EMS Responses	3,249	3,358	3,687	3,650	3,650
EMS Responses per Day	8.9	9.2	10.1	10	10
EMS Transports	2,158	2,231	2,449	2,425	2,425
Daily EMS Transports	9	6	7	7	7
EMS Transport %	66.4%	66.4%	66.4%	66.4%	66.4%
% of County Responses by Otsego County ALS	47.5%	49.4%	54.5%	54.5%	54.5%
Current Unit Hours Staffed - Otsego County Run Ambulances	17,520				
Ambulance Response UHU	0.185	0.185	0.185	0.185	0.185
Recommended Rural Ambulance UHU	0.175	0.175	0.175	0.175	0.175
Non-Transport Task Time	0:48:37	0:48:37	0:48:37	0:48:37	0:48:37
Transport Task Time	1:18:42	1:18:42	1:18:42	1:18:42	1:18:42
<b>Ambulance Unit Hours Needed Per Year</b>	<b>18,563</b>	<b>19,189</b>	<b>21,066</b>	<b>20,857</b>	<b>20,857</b>
Ambulances	2.12	2.19	2.40	2.38	2.38
Ambulance Personnel (@6.15 FTEs/Ambulance)	13	13	15	15	15

Note that based on anticipated response volume growth, starting in 2024, an additional 2,503 ambulance unit hours are recommended. As noted in Table 15 and Figure 9, EMS response volume follows a relatively specific pattern, with higher response volume during the day vs. night. It would be reasonable that as the additional 2,503-unit hours be scheduled to work between the hours of 10a and 10p, based on Otsego County EMS response volume patterns.



## Cost of Service Delivery

Officials from Otsego County, and their 911 division, provided raw data regarding personnel and other expenses related to ambulance service delivery. While the data was helpful, it appears that a unique cost center for the County ALS service has not yet been established. To facilitate future tracking and reporting of ambulance service delivery expenses, the County should establish a specific cost center for the County ALS department. This will assist the county with not only expenditure sharing in the future, but also aid in doing periodic cost reports as may be required for other sources of revenue, to be discussed later in this report.

**Recommendation:** The County should establish a distinct accounting division for County ALS with all revenues and expenses related to ambulance service delivery accounted for within this division.

Personnel is the greatest expense for County ALS. A review of the detailed expenses for the personnel assigned to County ALS is shown in Table 66.

**Table 66: Personnel Expense Estimate for Year 2022**

<u>Ambulance Personnel</u>	<b>Rate</b>	<b>#</b>	<b>Reg. Hours</b>	<b>Regular Wages</b>	<b>Overtime Rate</b>	<b>Unsch. Overtime</b>	<b>Training Hours</b>	<b>Overtime Wages</b>	<b>Total Wages</b>	<b>Benefit %</b>	<b>Benefit Expense</b>	<b>Total Expense</b>
A-Shift Ambulance 1 EMT (24/48 Shift)	\$19.38	1	2,912	\$56,435	\$29.07	100	10	\$3,198	\$59,632	45%	\$26,835	\$86,467
B-Shift Ambulance 1 EMT (24/48 Shift)	\$19.38	1	2,912	\$56,435	\$29.07	100	10	\$3,198	\$59,632	45%	\$26,835	\$86,467
C-Shift Ambulance 1 EMT (24/48 Shift)	\$19.38	1	2,912	\$56,435	\$29.07	100	10	\$3,198	\$59,632	45%	\$26,835	\$86,467
A-Shift Ambulance 1 Paramedic (24/48 Shift)	\$26.81	1	2,912	\$78,071	\$40.22	100	20	\$4,826	\$82,897	45%	\$37,303	\$120,200
B-Shift Ambulance 1 Paramedic (24/48 Shift)	\$26.81	1	2,912	\$78,071	\$40.22	100	20	\$4,826	\$82,897	45%	\$37,303	\$120,200
C-Shift Ambulance 1 Paramedic (24/48 Shift)	\$26.81	1	2,912	\$78,071	\$40.22	100	20	\$4,826	\$82,897	45%	\$37,303	\$120,200
Ambulance Supervisor/Coordinator (P/T)	\$40.00	1	1,040	\$41,600					\$41,600	16%	\$6,656	\$48,256
<b>Total Personnel Expense</b>												<b>\$668,256</b>

Capital expenses represent a significant expense to service delivery. Although Otsego County utilized ARPA funding for initial startup of the County ALS service, capital assets purchased for the service will need to be replaced once the useful life of the asset. To account for the costs of replacing capital equipment, we used a depreciation schedule based on the anticipated replacement cost of the asset, factored by its useful life. An estimation of this annual depreciation expense is summarized in Table 67.

**Table 67: Capital Equipment Depreciation Expense Calculation**

Item	Capital Expense	Number Needed	Capital Outlay	Useful Life (Years)	Annual Expense
Ambulance	\$ 310,000	4	\$ 1,240,000	5	\$ 248,000
Cardiac Monitor	\$ 45,000	4	\$ 180,000	7	\$ 25,714
Auto-Load/Power Cot	\$ 35,000	4	\$ 140,000	7	\$ 20,000
Vehicle & Portable Radios	\$ 1,500	12	\$ 18,000	4	\$ 4,500
Mobile Computers	\$ 1,750	4	\$ 7,000	3	\$ 2,333
<b>Annual Depreciation Expense</b>			<b>\$ 1,585,000</b>		<b>\$ 300,548</b>

Daily operational expenses for the County's ALS service are depicted below. Again, these are estimates, based on the raw data supplied by the County for the ALS ambulance service.

**Table 68: Operational Expenses**

<b>Annual Responses</b>	3,358				
<b>Annual Transports</b>	2,231				
<b>Category</b>	<b>Annual Miles</b>	<b>Miles Per Gallon</b>	<b>Gallons</b>	<b>Price</b>	<b>Total</b>
Fuel	134,320	5	26,864	\$ 3.40	\$ 91,338
	<b>Annual Miles</b>	<b>Cost per Mile</b>			<b>Total</b>
Maintenance/Tires	134,320	\$ 0.41			\$ 55,071
	<b>Per Response</b>	<b>Responses</b>	<b>Total</b>		
Medical Supplies	\$ 21.00	3,358	\$ 70,518		
Equipment Maintenance	\$ 3.50	3,358	\$ 11,753		
<b>Total Annual Operations Expense</b>	<b>\$ 228,680</b>				

An additional expense to the County for ALS service is the cost for the billing contractor. While this will be explained further later in this report, billing agencies are generally paid based on a percentage of the fees collected. Current industry estimates of billing fees is 4.5% of collected agency fee for service revenue. While it would be permissible to account for this cost as a reduction in revenue collected, it is more transparent to show this expense as a cost-of-service delivery. An estimate of the likely billing fees is depicted below in Table 69.

**Table 69: Billing Fees Expense**

Expense	2022	2023	2024	2025
Billing Fees @ 4.5% collected Revenue	\$27,804	\$28,905	\$33,095	\$34,198

Using the personnel, vehicles and equipment, operations and billing fee expenses depicted above, including the estimated escalation of expenses based on the Consumer Price Index, we can estimate the County ALS delivery expenses in Table 70.

**Table 70: Estimated County ALS Service Expenses 2022 through 2025**

Expense	2022	2023	2024	2025
Personnel	\$668,256	\$701,669	\$736,752	\$773,590
Vehicles/Equipment	\$300,548	\$315,575	\$331,354	\$347,921
Operations	\$228,680	\$244,687	\$261,816	\$280,143
<b>Sub-Total</b>	<b>\$1,197,484</b>	<b>\$1,261,931</b>	<b>\$1,329,922</b>	<b>\$1,401,654</b>
Billing Fees @ 4.5% collected Revenue	\$27,804	\$28,905	\$33,095	\$34,198
<b>Total Expenses</b>	<b>\$1,225,287</b>	<b>\$1,290,836</b>	<b>\$1,363,017</b>	<b>\$1,435,852</b>

Using the total expenses estimated above, we can derive the expense per unit hour, expense per response, and expense per transport for the County's ALS service in Table 71.

**Table 71: Cost Allocation for County ALS Service**

	2022	2023	2024	2025
Expense per Unit Hour	\$69.94	\$73.68	\$77.80	\$81.96
Expense per Response	\$377.19	\$384.41	\$369.73	\$393.38
Expense per Transport	\$567.79	\$578.66	\$556.57	\$592.17

In table 72, we use the population data from the U.S. Census Bureau to derive the expense per capita for the cost of the County ALS service. For illustration purposes, we break this down for the county population in total and for the county population without the population attributable to the City and Town of Oneonta, since these jurisdictions already fund EMS delivery through the use of the Oneonta Fire Department.

**Table 72: Per Capita Cost Allocation for County ALS Services**

	2022	2023	2024	2025
County Population	57,776	57,429	57,085	56,742
Cost Per Capita	\$21.21	\$22.48	\$23.88	\$25.30
County Population (Excluding Oneonta City and Town)	40,242	39,895	39,551	39,208
Cost Per Capita	\$30.45	\$32.36	\$34.46	\$36.62

## Service Delivery Revenue

Revenue Cycle Management for ambulance service delivery is complex. Revenue from ambulance service is generally based on four factors: ambulance fee schedule, payer mix, transport volume, service mix (ALS/BLS, emergency/non-emergency).

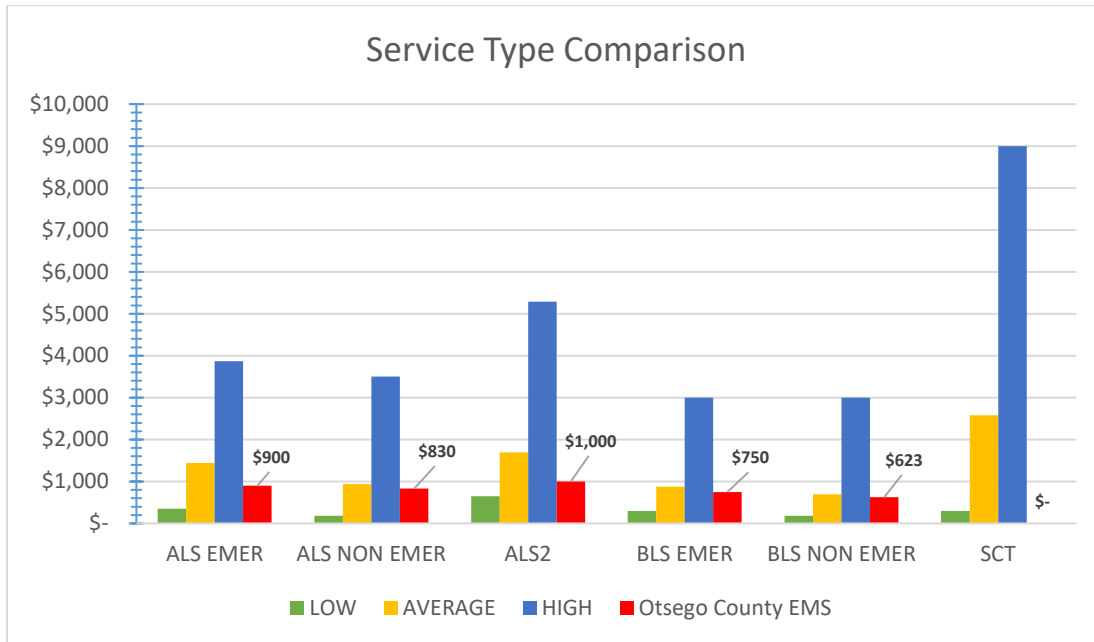
### Ambulance Fee Analysis

For our analysis, we used the prevailing ambulance fee schedule published by Otsego County for 2022.

Service	HCPC	Rate
ALS 1 Emergency	A0427	\$900
ALS 1 Non-Emergency	A0426	\$830
ALS Mileage	A0425	\$21
ALS2/Paramedic Intercept 2	A0433	\$1,000
BLS Emergency	A0429	\$750
BLS Non-Emergency	A0428	\$623
BLS Mileage	A0425	\$21
Treatment No Transport (TNT)	A0998	\$623
Deceased on Arrival (DOA)	A0429	\$750
Paramedic Intercept	A0432	\$850

Some of these fees are not consistent with the 2022 average ambulance fees for the surrounding region, as provided by County's billing agency, Quick Med Claims, LLC. Comparisons are shown in Figure 18 and Table 73.

**Figure 19: County ALS Fee Schedule Regional Comparison**



**Table 73: County ALS Fee Schedule Regional Differences**

2022 Fees:	County	Region	\$ Variance	% Variance
ALS -E	\$900	\$1,445	-\$545	-60.6%
BLS - E	\$750	\$874	-\$124	-16.5%
ALS -2	\$1,000	\$1,694	-\$694	-69.4%
ALS - Non-Emergency	\$830	\$941	-\$111	-13.4%
BLS - Non-Emergency	\$750	\$696	\$54	7.2%
Mileage	\$21	\$22	-\$1	-4.8%

Ambulance fees can have an impact on revenue collected per transport. Generally, the higher the fee, the higher the net revenue collected from services provided. Some communities become concerned about the financial impact to local residents, but the reality of ambulance fee schedules is that they have very little impact on the majority of patients serviced by the EMS system, as will be explained more fully in the Payer Mix section of this report.

**Recommendation:** Otsego County should adjust its ambulance fee schedule to be at least the same as the regional average fee schedule for similar services.

Medicaid is a state government payer that also reimburses ambulance providers based on a state fee schedule. Like Medicare, Medicaid patients cannot be 'balance billed' for amounts different than the Medicaid fee schedule.

Patients without insurance coverage generally do not pay their ambulance bill. This is reflected in the average \$22.02 payment reflected in the County's revenue reports from Quick Med Claims.

### **Payer Mix**

**Payer mix** is defined as the percentage of patients who are covered by major payer categories. Medicare pays a fixed amount, based on the 'allowable' fee determined regionally by the Centers for Medicare and Medicaid Services (CMS). The allowable amounts are revised annually in January. As a condition of receiving Medicare payments, providers are prohibited from 'balance billing' patients for the difference between the provider's published fee, and the 'Medicare Allowable' fee, with the exception of any deductibles or co-insurance, but only up to the actual regional allowable Medicare fee. Therefore, patients covered by Medicare have little to no out of pocket expense for ambulance service. Unfortunately, the Medicare allowed amount is generally less than the cost of providing the service, and that is the case in Otsego County. The average Medicare reimbursement for an ambulance transport, including mileage reimbursement is \$441.21, while the county's cost per transport is \$567.79. Historically, Medicare increases their ambulance reimbursement amount by 1% - 2%, depending on inflation and other medical market factors. In 2022, Medicare increased allowable payments to ambulance agencies by 5.6%, which is a large increase in terms of historical increases, however, with current consumer price indexes climbing at rates of 6% - 7%, the net impact on ambulance rates is negative.

Medicaid also pays a fixed amount based on rates determined by the State Medicaid office. Agencies cannot generally balance bill Medicaid patients the difference between the Medicaid rate and the agency's fee. The Medicaid allowed amount is also generally much less than the cost of providing the service, as is that is the case in Otsego County. The average Medicaid reimbursement for an ambulance transport, including mileage reimbursement is \$150.27, while again, the county's cost per transport is \$567.79

Commercial insurers generally pay a percentage of what's referred to as the "Usual and Customary Rate", or UCR for services provided in regional geographic areas. The challenge with commercial insurance reimbursement is that the insurance companies often make their own determination of what they consider to be the UCR, which often is based on the regional Medicare, or even the Medicaid rate. When insurers under-pay an ambulance claim, the ambulance provider, like other healthcare professionals, are able to balance bill the patient, up to the provider's billed fee. Unfortunately, then often places the patient in the middle of a dispute between the provider and the payer, with the payer claiming the provider's fees are too high, and the provider contending that the insurance reimbursement is too low. This has led to federal legislation that creates a special committee to evaluate reimbursement models for ground ambulance services. This Congressionally established committee is due to have it's first meeting in January 2023, with recommendations due to Congress within 120 days. The recommendations of this committee, and the subsequent Congressional action, could have a significant impact on ambulance commercial insurance reimbursement.

Further, commercial insurers often provide reimbursement for ambulance services to the patient, despite the patient signing a directive to the insurer to pay the provider directly. Insurers often ignore these directives and pay the patient directly, which then makes the patient responsible for paying for the ambulance service. It is often difficult to collect.

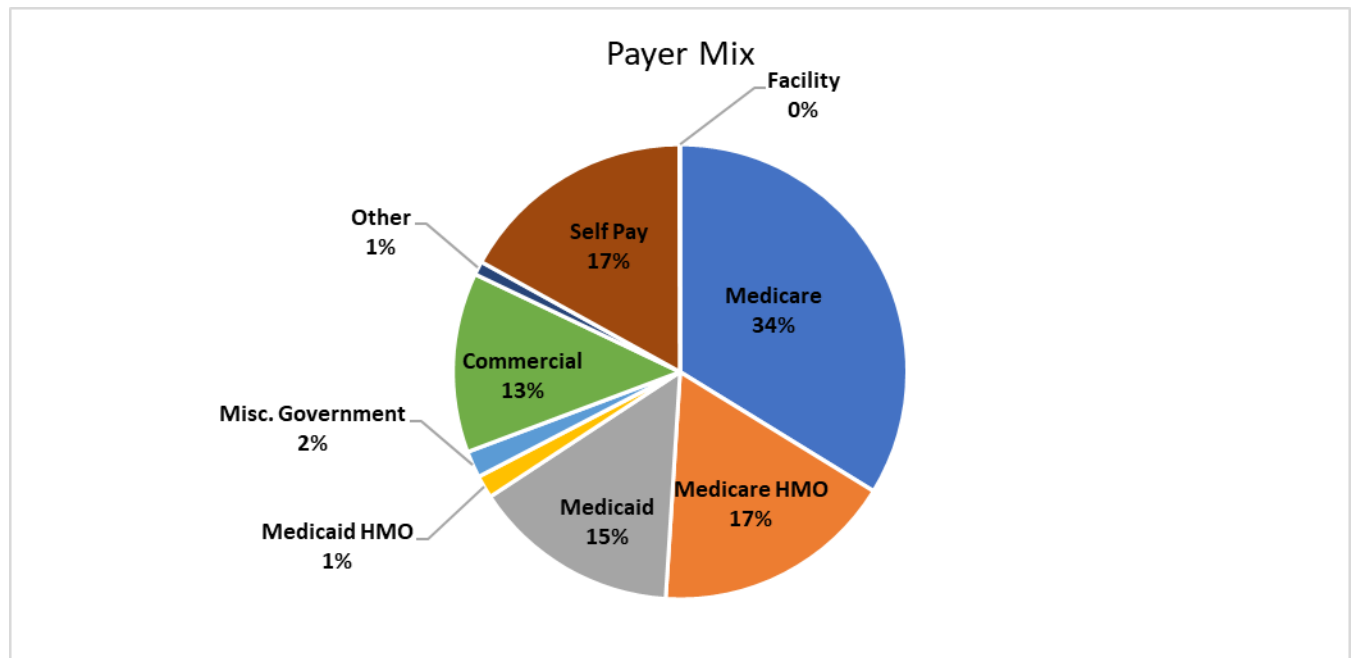
For patients without insurance coverage, many do not pay for the services provided. You can see this reflected in the average payments received by Quick Med Claims for County ALS services.

Overall, County ALS has a fairly typical payer mix for New York ambulance providers. A summary of the first year's payer mix, with average payment per service for each type of payer is provided in Table 74 and Figure 20.

**Table 74: Ambulance Payer Mix for Otsego County**

Payer	Trips	%	Average Payment per Trip
Medicare	729	33.8%	\$395.95
Medicare HMO	372	17.2%	\$331.23
Medicaid	318	14.7%	\$150.27
Medicaid HMO	35	1.6%	\$14.24
Misc. Government	41	1.9%	\$308.68
Commercial	276	12.8%	\$307.96
Other	21	1.0%	\$145.81
Self-Pay	365	16.9%	\$22.02
Facility	1	0.0%	\$0.00
<b>Overall</b>	<b>2,158</b>	<b>100.0%</b>	<b>\$331.23</b>

**Figure 20: Payer Mix for Otsego County**



Otsego County has a high prevalence of Medicare and Medicaid patients (51% and 16.3% respectively), meaning that 67.3% of the patient reimbursements would be expected to reimburse less than the cost of providing the service. As mentioned earlier in this section, Self-Pay patients (uninsured) represent 16.9% of the patients served by the County's ALS service. As shown in the chart, the average reimbursement from this payer classification is \$22.02.

Commercially insured patients represent 12.8% of the patients served, but the average reimbursement from this payer classification is less than the Medicare reimbursement. This is different from the national trend of commercially insured patients having the highest reimbursement, not atypically two to three times what Medicare reimburses. In discussions with Quick Med Claims, they cite the common practice of commercial insurers underpaying the claim based on their determination of "UCR", and the high prevalence of insurers paying the patients directly.

Changing Medicaid fees, as well as enforcing commercial insurers to make reasonable payments to providers generally requires a legislative solution. EMS systems in New York will continue to face reimbursement challenges due to the low Medicaid fee schedule, and allowance for insurers to underpay. Some states such as Michigan<sup>4</sup> and Maine, have recently passed laws to increase Medicaid reimbursement for ambulance service to at least the local Medicare Allowable rate, and Colorado<sup>5</sup> recently passed laws requiring commercial insurers to pay at least 275% of the Medicare allowable fee.

**Recommendation:** Otsego County should work with other counties to pursue legislative solutions to the low Medicaid fee schedule and commercial insurer practices.

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<sup>4</sup> [https://www.michigan.gov/-/media/Project/Websites/mdhhs/Folder50/Folder4/Public\\_Note\\_-\\_Ambulance\\_Rate\\_Adjustment\\_12-22-2021.pdf?rev=be64872632cf41b495f01ba850df2a7d#:~:text=Medicaid%20Ambulance%20Rate%20Adjustment&text=In%20response%20to%20Section%201788,or%20after%20November%201%2C%202021](https://www.michigan.gov/-/media/Project/Websites/mdhhs/Folder50/Folder4/Public_Note_-_Ambulance_Rate_Adjustment_12-22-2021.pdf?rev=be64872632cf41b495f01ba850df2a7d#:~:text=Medicaid%20Ambulance%20Rate%20Adjustment&text=In%20response%20to%20Section%201788,or%20after%20November%201%2C%202021)

<sup>5</sup> <https://casetext.com/regulation/colorado-administrative-code/departments-700-department-of-regulatory-agencies/division-702-division-of-insurance/rule-3-ccr-702-4-life-accident-and-health/section-3-ccr-702-4-2-life-accident-and-health-series-4-2-accident-and-health-general/regulation-3-ccr-702-4-19-e-06-concerning-the-payment-methodology-for-non-contracted-service-agencies-that-provide-emergency-ambulance-services/section-3-ccr-702-4-19-e-06-5-payment-methodology-rules>



## Revenue Analysis

Table 75 below represents a detailed revenue analysis for Otsego County for the first full year of service.

**Table 75: Payer Analysis – First Full Year**

Payor	Trip Volume	Average Patient Charge	Payments	Cash Collected per Trip	Gross Collection %
Aetna	3	\$1,116.00	\$1,351.63	\$450.54	50.6%
Blue Cross	30	\$1,274.38	\$4,357.21	\$145.24	12.1%
Cigna	11	\$931.53	\$2,463.11	\$223.92	27.8%
Other Commercial	186	\$1,048.14	\$77,516.99	\$416.76	44.5%
United Healthcare	46	\$1,038.63	\$13,952.77	\$303.32	30.4%
Facility	1	\$623.00	\$0.00	\$0.00	0.0%
Medicaid	318	\$1,110.96	\$47,785.52	\$150.27	24.6%
Medicaid HMO	35	\$1,073.16	\$498.25	\$14.24	1.4%
Medicare	729	\$1,034.74	\$288,644.57	\$395.95	68.8%
Medicare HMO	372	\$1,091.47	\$123,218.97	\$331.23	56.1%
Tricare	12	\$1,077.31	\$2,207.10	\$183.93	20.4%
Veterans Administration	29	\$1,121.69	\$12,569.87	\$433.44	39.1%
Auto	20	\$850.15	\$5,832.30	\$291.62	38.5%
Workers Compensation	1	\$1,128.00	\$0.00	\$0.00	0.0%
Self-Pay Uninsured	365	\$1,812.80	\$8,038.32	\$22.02	1.2%
<b>Total</b>	<b>2,158</b>	<b>\$1,191.68</b>	<b>\$588,436.61</b>	<b>\$272.68</b>	<b>31.7%</b>

Using this analysis, along with the projected transport volumes, we can estimate projected revenues for the years of 2023 – 2025:

**Table 76: Revenue Projections 2023**

Payor	Unit Volume	Billed Revenue	Cash per Service Unit	Cash Collected	Gross Collection %
Aetna	3	\$3,460.85	\$450.54	\$1,397	40.4%
Blue Cross	31	\$39,520.00	\$145.24	\$4,504	11.4%
Cigna	11	\$10,592.20	\$223.92	\$2,546	24.0%
Other Commercial	192	\$201,526.41	\$416.76	\$80,130	39.8%
United Healthcare	48	\$49,387.56	\$303.32	\$14,423	29.2%
Facility	1	\$644.00	\$0.00	\$0	0.0%
Medicaid	329	\$365,192.55	\$150.27	\$49,396	13.5%
Medicaid HMO	36	\$38,826.69	\$14.24	\$515	1.3%
Medicare (1)	754	\$779,753.75	\$427.62	\$322,244	41.3%
Medicare HMO (1)	385	\$419,713.92	\$357.73	\$137,562	32.8%
Tricare	12	\$13,363.47	\$183.93	\$2,281	17.1%
Veterans Administration	30	\$33,625.48	\$433.44	\$12,994	38.6%
Auto	21	\$17,576.13	\$291.62	\$6,029	34.3%
Workers Compensation	1	\$1,166.02	\$0.00	\$0	0.0%
Self-Pay Uninsured	377	\$683,976.48	\$22.02	\$8,309	1.2%
<b>Total</b>	<b>2,231</b>	<b>\$2,658,325.53</b>	<b>\$287.95</b>	<b>\$642,331</b>	<b>24.2%</b>

**Table 77: Revenue Projections 2024**

Payor Category	Unit Volume	Billed Revenue	Cash per Service Unit	Cash Collected	Gross Collection %
Aetna	3	\$3,799.42	\$450.54	\$1,534	40.4%
Blue Cross	34	\$43,386.08	\$145.24	\$4,945	11.4%
Cigna	12	\$11,628.39	\$223.92	\$2,795	24.0%
Other Commercial	211	\$221,240.95	\$416.76	\$87,969	39.8%
United Healthcare	52	\$54,218.96	\$303.32	\$15,834	29.2%
Facility	1	\$707.00	\$0.00	\$0	0.0%
Medicaid	361	\$400,917.91	\$150.27	\$54,229	13.5%
Medicaid HMO	40	\$42,624.95	\$14.24	\$565	1.3%
Medicare	827	\$856,034.01	\$453.28	\$374,994	43.8%
Medicare HMO	422	\$460,772.89	\$379.20	\$160,081	34.7%
Tricare	14	\$14,670.76	\$183.93	\$2,505	17.1%
Veterans Administration	33	\$36,914.93	\$433.44	\$14,265	38.6%
Auto	23	\$19,295.54	\$291.62	\$6,619	34.3%
Workers Compensation	1	\$1,280.09	\$0.00	\$0	0.0%
Self-Pay Uninsured	414	\$750,887.22	\$22.02	\$9,122	1.2%
<b>Total</b>	<b>2,449</b>	<b>\$2,918,379.11</b>	<b>\$300.31</b>	<b>\$735,455</b>	<b>25.2%</b>

**Table 78: Revenue Projections 2025**

Payor Category	Unit Volume	Billed Revenue	Cash per Service Unit	Cash Collected	Gross Collection %
Aetna	3	\$3,761.80	\$450.54	\$1,519	40.4%
Blue Cross	34	\$42,956.52	\$145.24	\$4,896	11.4%
Cigna	12	\$11,513.26	\$223.92	\$2,768	24.0%
Other Commercial	209	\$219,050.45	\$416.76	\$87,098	39.8%
United Healthcare	52	\$53,682.13	\$303.32	\$15,677	29.2%
Facility	1	\$700.00	\$0.00	\$0	0.0%
Medicaid	357	\$396,948.43	\$150.27	\$53,692	13.5%
Medicaid HMO	39	\$42,202.92	\$14.24	\$560	1.3%
Medicare	819	\$847,558.43	\$480.48	\$393,558	46.4%
Medicare HMO	418	\$456,210.79	\$401.95	\$168,005	36.8%
Tricare	13	\$14,525.51	\$183.93	\$2,480	17.1%
Veterans Administration	33	\$36,549.44	\$433.44	\$14,123	38.6%
Auto	22	\$19,104.49	\$291.62	\$6,553	34.3%
Workers Compensation	1	\$1,267.42	\$0.00	\$0	0.0%
Self-Pay Uninsured	410	\$743,452.70	\$22.02	\$9,032	1.2%
<b>Total</b>	<b>2,425</b>	<b>\$2,889,484.27</b>	<b>\$313.42</b>	<b>\$759,960</b>	<b>26.3%</b>

New York State Medicaid has an ambulance supplemental payment program for governmental ambulance services. The 2015-16 enacted New York State budget requires the Department of Health to make annual supplemental payments on a quarterly basis to ambulance providers who received a reimbursement for emergency transportation from the Medicaid Program during each quarter of each State Fiscal Year (SFY)<sup>6</sup>. The supplemental payment is based upon a total appropriation of \$6,000,000, of which 25% (\$1,500,000) is distributed to providers within New York City and 75% (\$4,500,000) is distributed to providers outside New York City over the four quarters of each SFY. The Department has categorized each ambulance agency that receives reimbursement from Medicaid during the applicable timeframe into two categories: (1) "New York City Providers" for those agencies based within the five city boroughs, and (2) "All Other Providers" for those agencies not based within New York City.

The overall revenue supplement for Otsego County through this program has been very small, totaling \$3,080 annually.

There is an initiative underway in New York to provide a mechanism for additional Medicaid supplemental payments through a Ground Emergency Medical Transport (GEMT) program, however the details for that program are too early in the process to include in this analysis.

**Recommendation:** Otsego County should assist with the passage and implementation of a GEMT program to supplement ambulance service revenue shortfalls resulting from low Medicaid reimbursement.

## Billing Agency Performance

Otsego County contracts with Quick Med Claims, LLC (QMC) to bill for services provided. QMC is a well-respected agency with a strong reputation for managing accounts receivable processes. We found the staff from QMC responsive and transparent during this project.

The processes being used by QMC for ambulance billing for Otsego County generally follow most best practices in the industry, and the outcomes from the billing process are not unreasonable. The average revenue collected per transport, by payer, is generally consistent with other systems in the northeast.

While QMC does routinely provide County ALS with monthly billing reports, QMC should work with County ALS leadership to establish specific key performance indicators (KPIs) and dashboards that will give the County a better understanding of the current revenue from ambulance service. It is recommended that these dashboards be accessible by County ALS leadership on-line, on-demand.

**Recommendation:** Quick Med Claims and County ALS should establish monthly and on-demand dashboard reports to more clearly monitor the revenue cycle for ambulance billing.

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<sup>6</sup> [https://www.health.ny.gov/health\\_care/medicaid/ambulance\\_providers/index.htm](https://www.health.ny.gov/health_care/medicaid/ambulance_providers/index.htm)

To enhance understanding of the revenue cycle, and any issues related to the billing process, the County and QMC should establish regular meetings to review current billing challenges, or opportunities for improvement. Many systems use this process to help keep focus on the management of the revenue cycle.

**Recommendation:** Quick Med Claims and County ALS should establish regularly scheduled meetings to review revenue cycle management performance.

Otsego County currently has a 'no-collections' policy, meaning that if an ambulance bill remains unpaid, the county simply writes off the amount as uncollectable bad debt. This may be negatively impacting fee for service revenue and placing increased pressure on alternate funding from public sources. Placing unpaid medical bills through a collections process is not unusual, and is used by most healthcare providers, including ambulance agencies. Many ambulance agencies use 'soft' collections, meaning unpaid accounts are placed with a collections agency, but the collection efforts do not include options such as liens placed on real property. Many patients will pay their ambulance claim if there is a possibility of the unpaid claim being placed with a collection agency.

**Recommendation:** The County should establish a process for unpaid ambulance claims to be placed in a collection agency to enhance revenue generation and reduce taxpayer burden for bad debt.

## Overall Financial Snapshot for Otsego County ALS Service

Now that we have an analysis of estimated revenue and expenses, we can project the following overall financial roll-up for the County's ALS department as below in Table 79.

**Table 79: Otsego County ALS Economic Analysis**

<u>Expense</u>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>
Personnel	\$668,256	\$701,669	\$736,752	\$773,590
Vehicles/Equipment	\$300,548	\$315,575	\$331,354	\$347,921
Operations	\$228,680	\$244,687	\$261,816	\$280,143
<b>Sub-Total</b>	<b>\$1,197,484</b>	<b>\$1,261,931</b>	<b>\$1,329,922</b>	<b>\$1,401,654</b>
Billing Fees @ 4.5% collected Revenue	\$27,804	\$28,905	\$33,095	\$34,198
<b>Total Expenses</b>	<b>\$1,225,287</b>	<b>\$1,290,836</b>	<b>\$1,363,017</b>	<b>\$1,435,852</b>
<u>Revenue</u>				
Service Fees	\$617,858	\$642,331	\$735,455	\$759,960
NYS Supplemental Medicaid Payments	\$3,080	\$3,080	\$3,080	\$3,080
PEMT Revenue				
<b>Retained Earnings (loss) From Operations</b>	<b>(\$607,429)</b>	<b>(\$648,505)</b>	<b>(\$627,562)</b>	<b>(\$675,892)</b>

CPSM projects that the County's ALS ambulance division will run an average deficit of \$639,847 annually over the next 4 years.

# Sustainability options

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## County ALS Impact on EMS Delivery in Otsego County

Due to the increasing challenge of EMS delivery in communities such as Otsego County, the County was prudent in using ARPA funds to initiate a safety-net ambulance response system.

The value of this system can be illustrated in two key metrics, response times and ambulance arrival percentage.

**Ambulance Arrival Impact** – For the period of the analysis, the County's ALS service has arrived at 45.7% of EMS calls occurring in the county response areas that are not covered by the other career EMS agency, Oneonta Fire Department.

**Response Time Impact** - The County ALS system has led to a reduction in average response times of 10.8 percent, from 23.2 minutes prior to the start of the service to 20.7 minutes between January 1st and July 31st, 2022, and a reduction of the 90th percentile response time to areas not serviced by Oneonta Fire Department by 10.3 percent, from 36.8 minutes prior to the start of the service to 33.0 minutes between January 1st and July 31st, 2022.

Although this impact is impressive, the true determination of the value of this service must be derived by the local stakeholders. The demonstration of that value is in the determination of funding for the anticipated gap between the cost of providing the County ALS service and the projected fee for service revenue generated. This gap is estimated to be \$640,000 annually over the next five years.

There are several options help assure financial sustainability of the County ALS system.

## Option 1: County General Revenue Funding

The County could subsidize the estimated revenue shortfall. Due to the tax cap imposed on the county, it is unlikely that they would be able to alter the tax millage rate to increase revenues, without a special election of the residents to fund the County ALS service. If the county were to simply fund the ALS service without additional tax revenue increases, it would likely mean re-allocating funds from other funding projects. If the county were to pursue a voter approved tax levy increase, they could provide significant education to the county residents to prove the value of a safety net ambulance system in order to help success of the voter initiative. Local EMS agencies may oppose this initiative, citing that if local tax funding were to be generated, it might be best used to fund the local EMS agency. The reality, however, is that larger, regional services are generally more cost efficient to deliver, and funding a county-wide agency would make more economic sense than allocating the revenue to local EMS providers.

## Option 2: Create a County-Wide Public Ambulance Authority and Special Taxing District

The state of New York allows counties to establish special districts to fund essential services. Subdivision 16 of section 102 of the Real Property Tax Law (RPTL) defines that "a town or county improvement district, district corporation or another district established for the purpose of carrying on, performing, or financing one or more improvements or services intended to benefit the health, welfare, safety, or convenience of the inhabitants of such. district, and in which real property is subject to special ad valorem levies or special assessments for the purposes for which such district was established." The types of districts included in the definition are school districts, fire districts, fire alarm districts, fire protection districts, joint fire districts, town improvement districts, county districts, business improvement districts, and districts created by Special Act of the State Legislature, including special district public libraries.<sup>7</sup>

A framework for creating a special district could be through the formation of an "Otsego County Ambulance Authority", similar to a Public Utility Model (PUM) EMS system. Under this model, the county could establish a public authority and *special taxing district* to not only fund the County ALS service, but also provide financial support for local ambulance agencies. The Authority could be governed by an independent board, with members of the board appointed by the participating jurisdictions on a per capita basis. The Authority Board would adopt a budget based on costs of service delivery for desired service level, including approved financial support to local ambulance agencies, and the anticipated revenue generated through the combination of fee for service and ad valorem revenue.

For example, if the Board determined that the cost of ambulance delivery by the County ALS service is \$1.4 million, and the revenue generated by the system is \$780,000, the deficit balance of \$620,000 would be assessed to the 25,329 county tax parcels resulting in a \$24.48 special district tax levy per parcel. If the District Board additionally approved \$500,000 in financial support to local ambulance agencies, their tax levy would increase to \$1,120,000, or \$44.22 annually per tax parcel.

If the county and its jurisdictions were to pursue this option, it would likely make sense to include the city and town of Oneonta, as well as other local ambulance agencies, into the county Authority. Unifying ambulance coverage into a seamless delivery model, incorporating the concepts of closest unit response, and consolidating fee for service revenue, would augment service delivery in the county. For example, Oneonta Fire Department's ambulance service would become an integral part of the Authority and be funded by the Authority. The fee for service revenue generated from Oneonta Fire Department ambulance would contribute to the revenue of the District, thereby potentially reducing the amount of funding necessary from ad valorem sources.

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<sup>7</sup> <https://www.assembly.state.ny.us/comm/StateLocal/20070823/specialdist.pdf>

**Table 80: Example Ambulance Authority Budget**

<b>Otsego County Ambulance Authority</b>	
<i>Example Budget</i>	
	<b>2023</b>
	<b>County-Wide</b>
Responses	6,802
Transports	4,266
Revenue per Transport	\$313.42
Revenue	\$1,337,005
Staffed Unit Hours Required	36,767
Oneonta Fire	14,707
County ALS	14,707
Other	7,353
Cost per Unit Hour	\$73.68
Total Expenses	\$2,708,932.99
Agency Funding	
Oneonta Fire	\$1,083,573
County ALS	\$1,083,573
Other	\$541,787
Operating Margin	(\$1,371,928)
Tax Parcels	25,329
Tax Levy Per Parcel	(\$54.16)
Population	57,429
Tax Levy Per Capita	(\$23.89)

### Option 3: Community Assessment Model

Under this option, the county could use a community assessment model, much like the State of New York allows for a shared workers compensation pool arrangement. The County would audit the County ALS revenue, expenses and operating margin annually, and either assess a fee to each jurisdiction based on their per capita contribution to the loss or distribute the excess revenues for ambulance service delivery.

In many respects, this would financially function similarly to the PUM/Authority model, however, there would likely not be a shared governance and global budgeting component. The County would govern the operations of the service, with a mutual agreement of how financial losses or excess revenue is distributed.

Since Oneonta City and Town are already funding ambulance services for their communities, the population and tax parcels within those communities are excluded from this analysis.

An example of the financial model for this option is shown below in Table 81.

**Table 81: Community Assessment Model**

2023	Community Assessment Model
	<u>County ALS</u>
Responses	3,358
Transports	2,449
Revenue per Transport	\$313.42
Revenue	\$767,560
Staffed Unit Hours Required	19,189
County ALS	19,189
Cost per Unit Hour	\$73.68
Total Expenses	\$1,413,773
Operating Margin	(\$646,213)
Tax Parcels (@ 60% of Total)	17,730
Tax Levy Per Parcel	(\$36.45)
Population (@ 60% of Total)	40,201
Tax Levy Per Capita	(\$16.07)



## Option 4: Community Partnership Model

As mentioned earlier in this report, Inter-Facility Transports (IFT) are a crucial part of ambulance service delivery, especially for communities that may lack local tertiary care resources for acute cardiac, stroke and trauma services.

To assure the availability of timely ambulance service for patients coming from Bassett Medical Center, Bassett Health System contracts with AMR to provide a dedicated ambulance at Bassett Medical Center. During conversations with Bassett leadership, they indicate that the reliability of this resource has been recently challenging. They indicate that the fee paid to AMR is \$50,000 a month, or \$600,000 annually.

Bassett indicates that they may be willing to entertain contracting with the County for the dedicated ambulances to serve both Bassett and A.O. Fox hospitals, especially if the dedicated ambulances could be stationed at the respective emergency departments to help augment hospital emergency department staffing.

To assist the hospital with timely ambulance transports for patients being discharged or requiring ambulance transfer to other hospitals for tertiary care, the County and Bassett Health System could engage in a unique community partnership whereby Bassett transitions their AMR contract to the County, including both Bassett Medical Center and A.O. Fox Hospital.

Assuming the contract fee remains the same, Otsego County could provide primary services for the two facilities and station an ambulance at each hospital. The ambulances stationed at the hospitals could assist the staff in the ER to the limits of their scope of practice. As revealed earlier on this report, ambulance response volume varies based on time of day. There would likely be enough ambulance availability capacity on the overnight hours to only need the county to staff an additional 24-hour ambulance, and an additional unit during peak response volume times of 10a to 10p.

Considering the current \$600,000 per year AMR agreement for the one facility of Bassett Medical Center, if Bassett desires a dedicated ambulance for both Bassett Medical Center and A.O. Fox, it's likely a \$750,000 agreement would provide the County with enough revenue to staff the additional 24-hour unit, plus one peak unit to provide reliable services, including supplemental ER staffing, to both hospitals. The additional revenue would also offset some of the losses for emergency ambulance services in Otsego County.

As an additional community partnership, Otsego County should offer to co-brand one or more ambulances with the Bassett Health System logo indicating the ambulance service is being provided as a community partnership.

An example of the impact of this partnership is depicted in Table 82.

**Table 82: Example Bassett Health Partnership Model**

2023	Bassett Health Model
	<u>County ALS</u>
Responses	6,358
Transports	5,449
Revenue per Transport	\$300.00*
Fee for Service Revenue	\$1,634,690
Bassett Health Agreement	\$750,000
Total Revenue	\$2,384,690
Staffed Unit Hours Required	32,329
County ALS	32,329
Cost per Unit Hour	\$73.68
Total Expenses	\$2,381,932
Operating Margin	\$2,758

**\*Note:** The average collected per transport is lowered slightly since the transfer volume from Bassett will likely be billed at a lower service mix (i.e.: more BLS non-emergency transports, which is reimbursed at a lower level than ALS-Emergency transports).

# ATTACHMENT I: DEMOGRAPHICS BRIEF

**Table 83: 2021 Demographic Data of the Otsego County Communities**

<b>Municipality</b>	<b>Population</b>	<b>Land Area</b>
Burlington Town	1,059	45.01
Butternuts Town	1,899	53.83
Cherry Valley Town	1,218	40.1
Cherry Valley Village	518	0.51
Cooperstown Village	1,752	1.63
Decatur Town	370	20.76
Edmeston Town	1,918	44.38
Edmeston Hamlet	692	4.34
Exeter Town	974	32.08
Gilbertsville Village	426	1.00
Hartwick Hamlet	596	3.46
Hartwick Town	2,021	40.42
Laurens Town	2,308	42.60
Laurens Village	238	0.13
Maryland Town	1,790	52.41
Middlefield Town	2,000	63.33
Milford Town	2,997	46.12
Milford Village	390	0.42
Morris Town	1,812	39.07
Morris Village	563	0.75
New Lisbon Town	1,187	44.36
Oneonta Town	5,026	32.91
Oneonta City	13,370	4.36
Otego Town	3,032	45.63
Otego Village	940	1.16
Otsego Town	3,838	53.89
Pittsfield Town	1,374	37.98
Plainfield Town	926	29.51
Richfield Town	2,355	30.86
Richfield Springs Village	1,174	1.01
Roseboom Town	744	33.41
Schenevus Hamlet	514	1.03
Springfield Town	1,328	42.89
Unadilla Town	4,197	46.27
Unadilla Village	1,015	1.04
Westford Town	942	33.85
Worcester Town	2,181	46.71
Worcester Hamlet	995	8.56

**Note:** As of July 1, 2021. Reference: <https://newyork.hometownlocator.com/ny/otsego/>.

# ATTACHMENT II: AGENCY'S SERVICE ZONES

**Table 84: EMS Zones and Local Service Agency**

Zone	Ambulance Services	First Response
COOP, COOP1, COOP2, COOP3, COOP4, COOP5	Cooperstown	NONE
COUNTY	County	NONE
CV, CV1, CV2, CV3	Cherry Valley	NONE
ED1, ED2, ED3, ED4, EDME	Edmeston	West Edmeston
EW, EW1, EW2	Worcester	East Worcester
FC, FC1, FC2	Fly Creek	NONE
GARR, GARR1, GARR2, GARR3, GARR4	Garrattsville	NONE
GILB, GILB1, GILB2, GILB3, GILB4, GILB5, GILB6	Gilbertsville	NONE
HART, HART1, HART2, HART3, HART4	Hartwick	NONE
HERK	Richfield Springs	NONE
HS, HS1, HS2	Hartwick	Hartwick Seminary
LAUR, LAUR1	Laurens	NONE
LEON, LEON1	West Winfield (OOC)	Leonardsville (OOC)
MIDD, MIDD1, MIDD2	Cooperstown	Middlefield
MILF, MILF1, MILF2, MILF3, MILF4, MILF5	Milford	NONE
MORR, MORR1, MORR2, MORR3	Morris	NONE
MU1, MU2	AMR/Otsego	Mt Upton (OOC)
MV1	Laurens	NONE
ONEO, ONEO1, ONEO2	Oneonta	NONE
OTEG, OTEG1	Otego	NONE
PITT, PITT1, PITT2, PITT3	New Berlin (OOC)	Pittsfield
RICH, RICH1, RICH2	Richfield Springs	NONE
SCHE, SCHE1, SCHE2	Schenevus	NONE
SIDN, SIDN1	County	County
SL, SL1, SL2	Richfield Springs	Schuyler Lake
SNB, SNBB, SNBM	S New Berlin (OOC)	NONE
SPRI, SPRI1, SPRI2, SPRI3	Cooperstown	Springfield
UF, UF1	West Winfield (OOC)	Unadilla Forks
UNAD, UNAD1, UNAD2, UNAD3, UNAD4	Unadilla	NONE
WB, WB1, WB2	Unadilla	Wells Bridge
WED, WED1, WED2	Edmeston	West Edmeston
WEST1, WEST2, WEST3, WEST4	Schenevus	Westford
WEX, WEX1	Richfield Springs	West Exeter
WL, WL1	Laurens	West Laurens
WO, WO1	Oneonta	West Oneonta
WORC, WORC1, WORC2	Worcester	NONE

**Note:** \*OOC = Out of County.

# ATTACHMENT III: ADDITIONAL PERSONNEL

Table 8 and 86 shows the workload of administrative units for the ambulance and first response services, respectively.

**Table 85: Workload of Administrative EMS Units**

Unit ID	Unit Type	Annual Hours	Annual Runs
01EMS	EMS officer	9.3	17
02EMS	EMS officer	15.0	26
03EMS	EMS officer	0.0	1
04EMS	EMS officer	1.6	1
05EMS	EMS officer	0.4	1
06EMS	EMS officer	2.9	6
07EMS	EMS officer	8.1	16
09EMS	EMS officer	0.4	1
10EMS	EMS officer	11.4	22
11EMS	EMS officer	5.7	10
12ALS	EMS officer	0.6	1
12EMS	EMS officer	2.7	5
13EMS	EMS officer	2.6	3
15EMS	EMS officer	0.3	2
17ALS	EMS officer	1.5	2
17EMS	EMS officer	45.0	89
18EMS	EMS officer	5.3	1
21EMS	EMS officer	0.2	2
23EMS	EMS officer	1.7	4
24EMS	EMS officer	0.3	1
25EMS	EMS officer	3.8	2
27EMS	EMS officer	2.9	6
28EMS	EMS officer	1.5	5
29EMS	EMS officer	1.0	2
30EMS	EMS officer	15.6	21
OC3	911/EMS director	18.0	24
OC5	Deputy 911/EMS director	0.8	2
<b>Total</b>		<b>158.6</b>	<b>273</b>

**Table 86: Workload of Administrative Fire Units**

Unit ID	Unit Type	Annual Hours	Annual Runs
01FIR	Fire officer	16.6	29
02FIR	Fire officer	23.6	32
03FIR	Fire officer	1.7	3
04FIR	Fire officer	40.7	25
05FIR	Fire officer	27.9	26
06FIR	Fire officer	2.5	3
07FIR	Fire officer	10.9	7
08FIR	Fire officer	3.3	6
09FIR	Fire officer	7.8	9
10FIR	Fire officer	8.7	5
11FIR	Fire officer	4.4	8
12FIR	Fire officer	16.2	29
13FIR	Fire officer	25.6	18
15FIR	Fire officer	11.0	12
17FIR	Fire officer	36.6	47
18FIR	Fire officer	13.3	16
19FIR	Fire officer	6.4	11
20FIR	Fire officer	10.5	12
21FIR	Fire officer	19.3	22
22FIR	Fire officer	0.5	1
23FIR	Fire officer	7.9	12
24FIR	Fire officer	16.1	19
25FIR	Fire officer	2.5	2
27FIR	Fire officer	5.5	8
28FIR	Fire officer	6.9	18
29FIR	Fire officer	3.5	7
30FIR	Fire officer	21.7	19
1652	Chief's vehicle	64.8	73
<b>Total</b>		<b>416.4</b>	<b>479</b>

# ATTACHMENT IV: OTSEGO COUNTY EMS RESPONSE TO OUT-OF-COUNTY LOCATIONS

During the year studied, Otsego County EMS provided mutual aid to calls that occurred outside the boundaries of both the county and its EMS service zones. Tables 87 and 88 summarize the call types and the corresponding workload, broken down by out-of-county locations.

**Table 87: Calls Responded By Otsego County EMS by Type and Location**

OOCC Community	BD	Cardiac and Stroke	Fall and Injury	Illness and Other	MVA	NE Transfer	OD	Seizure and UNC	Fire	Total
Brookfield Town	0	0	0	0	3	0	0	0	0	3
Columbia Town	0	0	0	1	2	0	0	0	1	4
Columbus Town	0	0	1	1	0	0	0	0	0	2
Davenport Town	2	4	3	8	4	0	0	0	3	24
Franklin Village	0	3	2	1	0	0	0	0	1	7
Guilford Town	0	0	1	0	0	0	0	0	0	1
Harpersfield Town	0	0	0	0	0	0	0	0	1	1
Meredith Town	1	0	0	1	0	0	0	0	0	2
New Berlin Town	0	0	0	0	0	0	0	0	1	1
Richmondville Town	0	0	0	1	0	0	0	0	0	1
Seward Town	0	0	0	1	0	0	0	0	0	1
Stamford Town	0	0	1	0	0	0	0	0	0	1
<b>Total</b>	<b>3</b>	<b>7</b>	<b>8</b>	<b>14</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>48</b>

**Note:** BD=Breathing Difficulty; OD=Overdose and Psychiatric; UNC=Unconsciousness; NE=Non-Emergency.

**Table 88: Otsego County EMS's Annual Workload by OOC Location**

Town	Annual Runs	Runs Per Day	Minutes Per Run	Annual Hours	Minutes Per Day	Percent of Work
Brookfield Town	6	0.0	70.9	7.1	1.2	6.9
Columbia Town	21	0.1	144.2	50.5	8.3	49.0
Columbus Town	2	0.0	58.2	1.9	0.3	1.8
Davenport Town	27	0.1	60.2	27.1	4.4	26.3
Franklin Village	8	0.0	49.7	6.6	1.1	6.4
Guilford Town	1	0.0	26.7	0.4	0.1	0.4
Harpersfield Town	1	0.0	70.6	1.2	0.2	1.2
Meredith Town	2	0.0	60.9	2.0	0.3	1.9
New Berlin Town	2	0.0	135.1	4.5	0.7	4.4
Richmondville Town	1	0.0	1.0	0.0	0.0	0.0
Seward Town	1	0.0	36.3	0.6	0.1	0.6
Stamford Town	1	0.0	59.7	1.0	0.2	1.0
<b>Total</b>	<b>73</b>	<b>0.2</b>	<b>84.6</b>	<b>103.0</b>	<b>16.9</b>	<b>100.0</b>

# ATTACHMENT V: OUT-OF-COUNTY EMS AGENCY'S RESPONSE AND WORKLOAD

Out-of-county (OOC) ambulance agencies responded to 1,292 calls, of which, 605 calls were responded to by OOC agencies independently and 687 calls were responded to jointly by both OOC and Otsego County agencies. Table 89 shows 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 90 summarizes the total workload of the OOC EMS agencies.

**Table 89: Calls Responded by OOC Agencies, by Type**

Call Type	Number of Calls	Calls per Day	Call Percentage
Breathing difficulty	189	0.5	14.6
Cardiac and stroke	198	0.5	15.3
Fall and injury	246	0.7	19.0
Illness and other	417	1.1	32.3
MVA	104	0.3	8.0
Non-emergency transfer	2	0.0	0.2
Overdose and psychiatric	23	0.1	1.8
Seizure and unconsciousness	84	0.2	6.5
<b>EMS Total</b>	<b>1,263</b>	<b>3.5</b>	<b>97.8</b>
<b>Fire Total</b>	<b>29</b>	<b>0.1</b>	<b>2.2</b>
<b>Total</b>	<b>1,292</b>	<b>3.5</b>	<b>100.0</b>

**Table 90: Summary of the Total Annual Workload by OOC Agency**

Agency Type	Annual Runs	Runs per Day	Minutes per Run	Annual Hours	Minutes per Day	Percent of Hours
AMR	634	1.7	57.7	609.2	100.1	36.5
Bridgewater	51	0.1	81.7	69.4	11.4	4.2
Franklin	8	0.0	93.2	12.4	2.0	0.7
Lifenet (air methods)	46	0.1	41.4	31.7	5.2	1.9
New Berlin	244	0.7	84.5	343.6	56.5	20.6
South New Berlin	6	0.0	61.9	6.2	1.0	0.4
Sidney	356	1.0	75.2	446.1	73.3	26.8
West Winfield	95	0.3	93.8	148.6	24.4	8.9
<b>Total</b>	<b>1,440</b>	<b>3.9</b>	<b>69.5</b>	<b>1,667.2</b>	<b>274.1</b>	<b>100.0</b>

## Observations:

- The out-of-county EMS agencies responded to 1,292 calls, an average of 3.5 calls per day.
- There were 1,440 runs for the year. The daily average was 3.9 runs.
- Total deployed time for the year was 1,667.2 hours. The daily average deployed time was 4.6 hours for all units combined.



# ATTACHMENT VI: CALL TYPE IDENTIFICATION

When available, EMD codes serve as our primary source for assigning call categories. For 5,567 of the 6,843 total calls, EMD codes were used to identify call types. For 1,276 calls that do not have specific EMD codes, we instead used the call type description from the computer-aided dispatch (CAD) data to assign a call category. Table 91 illustrates the method used to identify the category of EMS calls. The Otsego County and out-of-county EMS agencies also arrived at fire calls for medical assists (fire standby). Table 92 shows the method to identify the fire standby calls included in this work.

**Table 91: EMS Call Type by EMD Code and CAD Descriptions**

Call Type	EMD Code	Call Type Description	Calls
Breathing Difficulty	06	BREAT-BREATHING PROBLEM	659
	11	CHOKI-CHOKING	29
	NA	BREAT-BREATHING PROBLEM	42
		CHOKI-CHOKING	4
Cardiac and Stroke	09	CARDI-CARDIAC/RESP ARREST/DEATH	45
	10	CHEST-CHEST PAIN	339
	19	HEART-HEART PROBLEMS/AICD	179
	28	STROK-STROKE (CVA)	156
	90	CARDI-CARDIAC/RESP ARREST/DEATH	63
	NA	CARDI-CARDIAC/RESP ARREST/DEATH	48
		CHEST-CHEST PAIN	20
		HEART-HEART PROBLEMS/AICD	8
		STROK-STROKE (CVA)	6
Fall and Injury	04	ASSAU-ASSAULT/SEXUAL ASSAULT	7
	07	BURNS-BURNS/EXPLOSION	3
	15	ELECT-ELECTROCUTION/LIGHTNING	1
	17	FALLS-FALLS	1,028
	21	HEMOR-HEMORRHAGE/LACERATION	223
	22	RESCU-RESCUE	1
	27	STAB-STAB/GUNSHOT/PEN. TRAUMA	3
	30	TRAUM-TRAUMATIC INJURIES	131
	NA	ASSAU-ASSAULT/SEXUAL ASSAULT	4
		BURNS-BURNS/EXPLOSION	1
		DROW-DROWNING/DIVING/SCUBA ACCIDENT	1
		FALLS-FALLS	46
		HEMOR-HEMORRHAGE/LACERATION	24
		LIFTA-LIFT ASSISTANCE	5
		STAB-STAB/GUNSHOT/PEN. TRAUMA	4
		TRAUM-TRAUMATIC INJURIES	55

Call Type	EMD Code	Call Type Description	Calls
Illness and Other	01	ABDOM-ABDOMINAL PAIN	162
	02	ALLER-ALLERGIES/ENVENOMATIONS	39
	03	ANIMB-ANIMAL BITES/ATTACKS	5
	05	BACK-BACK PAIN	77
	13	DIABE-DIABETIC PROBLEM	116
	16	EYE-EYE PROBLEMS/INJURIES	3
	18	HEAD-HEADACHES	32
	20	HEAT-HEAT/COLD EXPOSURE	7
	24	PREGN-PREGNANCY/CHILDBIRTH/MISCARRIA	23
	26	SICK-SICK PERSON	1,226
	32	UNKNO-UNKNOWN PROBLEM (MAN DOWN)	177
	36	FLU-PANDEMIC FLU	18
	NA	UNKNO-UNKNOWN PROBLEM (MAN DOWN)	1
		ABDOM-ABDOMINAL PAIN	10
		AIRPL-AIRCRAFT EMERGENCY	1
		ANIMB-ANIMAL BITES/ATTACKS	1
		BACK-BACK PAIN	5
		CARBO-CARBON MONOXIDE/INH/HAZ	21
		CORON-CORONER NOTIFICATION	1
		DIABE-DIABETIC PROBLEM	6
		EMA-MUTUAL AID EMS	7
		EMSSB-EMS - STANDBY	98
		EYE-EYE PROBLEMS/INJURIES	1
		FLU-PANDEMIC FLU	2
		HEAD-HEADACHES	3
		HEAT-HEAT/COLD EXPOSURE	5
		SICK-SICK PERSON	118
		STND-STANDBY FOR SPEC DET	6
		UNKNO-UNKNOWN PROBLEM (MAN DOWN)	79
Motor Vehicle Accident	29	MVAI-TRAFFIC/TRANSPORTATION ACCIDEN	116
	77	MVAI-TRAFFIC/TRANSPORTATION ACCIDEN	3
	NA	MVAI-TRAFFIC/TRANSPORTATION ACCIDEN	198
		MVAP-MVA PD	16
		MVAU-MVA- UNKNOWN	40
		TC-TRAFFIC CONTROL	16
Non-Emergency Transfer	33	TRAN-TRANSFER/INTERFACILITY/PALLIAT	2
	NA	TRAN-TRANSFER/INTERFACILITY/PALLIAT	151
Overdose and Psychiatric	23	OVERD-OVERDOSE/ POISONING (INGESTION	93
	25	PSYCH-PSYCH/ABNORM BEHAV/SUICIDE ATT	20
	NA	MHTP-MENTAL HEALTH TRANSPORT	16
		OVERD-OVERDOSE/ POISONING (INGESTION	39
		PSYCH-PSYCH/ABNORM BEHAV/SUICIDE ATT	15

Call Type	EMD Code	Call Type Description	Calls
Seizure and Unconsciousness	12	CONVU-CONVULSIONS/SEIZURES	188
	31	UNCON-UNCONCIOUS/FAINTING	305
	NA	CONVU-CONVULSIONS/SEIZURES	6
		UNCON-UNCONCIOUS/FAINTING	22
Total			6,631

**Table 92: Fire Standby Calls by EMD Code and CAD Descriptions**

Call Type	EMD Code	Call Type Description	Calls
Fire Standby	52	FA-ALARMS FIRE/CO/MEDICAL	20
	53	RESCU-RESCUE	1
	55	WIRE-WIRES DOWN	2
	56	ELES-ELEVATOR/ESCALATOR RESCUE	1
	60	GASLE-GAS LEAK/GAS ODOR (NATURAL AND LP)	3
	61	ODOR-ODOR STRANGE/UNKN/ INVEST	1
	67	FIREO-FIRE-OTHER	6
	69	STRUR-FIRE-STRUCTURE	44
	71	VEH-FIRE-VEHICLE	5
	72	WRES-WATER/ICE RESCUE	1
	73	WCRT-WATERCRAFT IN DISTRESS	2
	78	RESCU-RESCUE	1
	82	BRUSH-BRUSH FIRE	1
	NA	BRUSH-BRUSH FIRE	8
		CHECK-CHECK WELFARE	2
		CHIMN-FIRE-CHIMNEY	4
		CTRL-CONTROLLED BURN	8
		ELECT-ELECTROCUTION/LIGHTNING	1
		ELHZ-ELECTRICAL HAZARD	1
		FA-ALARMS FIRE/CO/MEDICAL	6
		FIREO-FIRE-OTHER	7
		GASLE-GAS LEAK/GAS ODOR (NATURAL AND LP)	2
		GASOL-FUEL SPILL	1
		GF-FIRE-TREES/BRUSH/GRASS	1
		MA-MUTUAL AID FIRE ASST OTHR A	3
		OTH-OTHER	1
		PUBLI-PUBLIC ASSISTANCE	3
		RESCU-RESCUE	5
		SEARC-SEARCH	1
		SERV-SERVICE CALL/ASSIST CITIZEN	1
		SMKI-SMOKE INVESTIGATION	3
		STND-STANDBY FOR SPEC DET	27

Call Type	EMD Code	Call Type Description	Calls
		STRUR-FIRE-STRUCTURE	28
		TREE-TREES DOWN	2
		VEH-FIRE-VEHICLE	3
		WIRE-WIRES DOWN	4
		WRES-WATER/ICE RESCUE	2
Total			212

# APPENDIX 1: EXAMPLE MEDIA ACCOUNTS OF RURAL EMS CHALLENGES

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## 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 Maershbecker, 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.

## Emergency meeting called over ambulances

Benjamin Joe | , Lockport Union-Sun & Journal, N.Y.

December 16, 2022

<https://finance.yahoo.com/news/emergency-meeting-called-over-ambulances-132000038.html?guccounter=1>

Dec. 16—On mid-morning Thursday, 10 calls from Lockport were dispatched to volunteer fire companies around the area requesting assistance in the city. Three of those calls, according to South Lockport Fire Chief Chris McClune, were within an hour of each other and all of them left their companies' traditional territory wide open.

This was not a new occurrence. In front of the Lockport Common Council Wednesday, McClune had summed up the situation, backed by at least 80 first-responders in a tumultuous meeting.

"The volunteer agencies that surround the city cannot continue to be used as a primary answer to the city's EMS ambulance issues," McClune said. "As I have said before, the volunteer staffing locally, as well as regionally, and even nationally are at an all-time low."

The room-filling issue had been boiling for months and came to a head when Twin City Ambulance said they would no longer make calls from the City of Lockport a priority after Jan. 31 unless the city outfitted their ambulances and got them back into "the ambulance business."

Common Council President Paul Beakman, upon hearing of the situation on the roads — which included freezing rain and a thin coat of ice on the ground — decided that what an Emergency Common Council meeting was warranted.

"Half of Niagara County was left vulnerable," Beakman said. "Because of a problem created by the City of Lockport and it needs to be fixed by the City of Lockport."

The Emergency Common Council meeting is set for 6:30 p.m. Monday.

The meeting had previously been scheduled as a special workshop to discuss the Freed Maxick analysis. The report shows figures on the fiscal feasibility of the fire department transporting individuals to hospitals.

However, now the meeting has turned into more than a discussion and action is expected. Whether the city will contract with a commercial company, or put its own ambulances on the road, after Monday the landscape of the city's services will be changed.

5th Ward Alderwoman Kristin Barnard said she knew that a meeting was coming, but hadn't expected it to be so soon. On Wednesday she had asked for more discussion between all stakeholders, including the fire union. On Thursday, Beakman said he would invite a representative of the union to the personnel and workshop before voting in the emergency meeting. If it passes, his resolution will bring ambulance service back to the fire department.

"I do want to sit down with all parties," Barnard said Wednesday night. "I want chief there, I want Common Council there, I want all the experts and anyone who has to do with this decision to sit down and have a conversation."

Barnard said on Thursday evening that she was on the verge of pushing ambulance service forward, but wanted the agreement ironclad, in writing and to last at least two years.

"There's just a couple of things I want to clarify, because I've been doing my homework," she said.

Barnard has presented a second resolution which would have the city contract with a commercial ambulance company, but if everything is going well, she'll withdraw that resolution, she said. Otherwise it was however the council members voted.

Lockport Fire Chief Luca Quagliano said that while a weather event doesn't always occur and drive up calls, he also doesn't want to say that it was unheard of.

"It doesn't happen every day where there's three-calls at the same time," Quagliano said. "But it happens enough."

Quagliano said he was in favor of the resolution put forth by Beakman to put the two ambulances owned by fire department back into action, however, that two ambulances were not enough. He recommended a third resolution to have the LFD run ambulances and to contract for another basic life support ambulance from a commercial ambulance company, which his paramedics would ride on when needed.

As the Common Council is comprised of five Republican officials and himself, a Democratic official, Beakman said he feared that a block of Republican council members will outvote his convictions.

"This is an emergency and I am begging everyone to support this urgent resolution," Beakman said.

# Rural ambulance agencies also dealing with longer wait times at hospitals

by Steve Maugeri

September 29th, 2021



<https://cbs6albany.com/news/local/rural-ambulance-agencies-also-dealing-with-longer-wait-times-at-hospitals>

CAPITAL REGION (WRGB) — Albany County Sheriff Craig Apple says that wait times are increasing due to short staffing at hospitals, and rural county ambulances are having that same problem, since they have a longer trip to a larger hospital like Albany Med. Sheriff Apple was not available for an interview Wednesday night. CBS 6 did speak to the emergency management director, Steve Santa Maria.

He says that his EMS agencies are already dealing with their own staffing shortages. He says that their hospital is also seeing some staffing shortages, which causes longer drop off times. He says the vaccine mandates at hospitals likely play a factor in this, since employees are getting suspended for not getting the shot. But he says the problems can compound when his ambulances have to take someone to a hospital out of the area. Wait times only go up, which can lead to longer response times.

Santa Maria says that one call can leave an ambulance unavailable for hours.

*"Typically, a couple hour trip on average has turned into closer to three now and that's being a little generous. Those trips have been extended. The longer wait times are not just for our ambulances but they're for most of the agencies you talk to,"* Santa Maria said.

We've previously reported on how the city of Troy is seeing wait times increase which keeps their fire department ambulances held up. And we've reported how smaller municipalities like Poestenkill have to rely on private companies for EMS service since they don't have their own.

Santa Maria says that the city of Johnstown in Fulton county is about to get another ambulance, which can help respond to new calls, But won't affect wait times at the hospital.

# Report: Rural areas wait longer for ambulances

September 25, 2021



The latest census report finds that 60 million Americans live in rural areas. The Centers for Disease Control and Prevention reports that they tend to be older, sicker and poorer than the average American.

According to a study by the Rural Policy Institute, there are not enough ambulances to help in an emergency.

Note: No written transcript is available for this TV news report, however, the 5 minute video is compelling and can be viewed [here](#).

In the report, Alan Morgan, the director of the National Rural Health Association, states that the failing rural ambulance system may be contributing to the falling life expectancy in rural communities.

A graphic with a blue-tinted circular image of an ambulance interior on the left. The main text is on a light gray background. The title "RURAL AMBULANCE AGENCY CHALLENGES" is underlined. Below it is a bulleted list of three challenges. To the right of the list is a vertical line of dots with a circle at the top. At the bottom right is a source attribution box. The CBS Saturday Morning logo is in the bottom left corner.

**RURAL AMBULANCE AGENCY CHALLENGES**

- **LONG DISTANCES AND CHALLENGING TERRAIN**
- **LACK OF MONEY**
- **LACK OF COORDINATED SERVICE**

SOURCE: RURAL POLICY RESEARCH INSTITUTE

**CBS SATURDAY MORNING**

# 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."

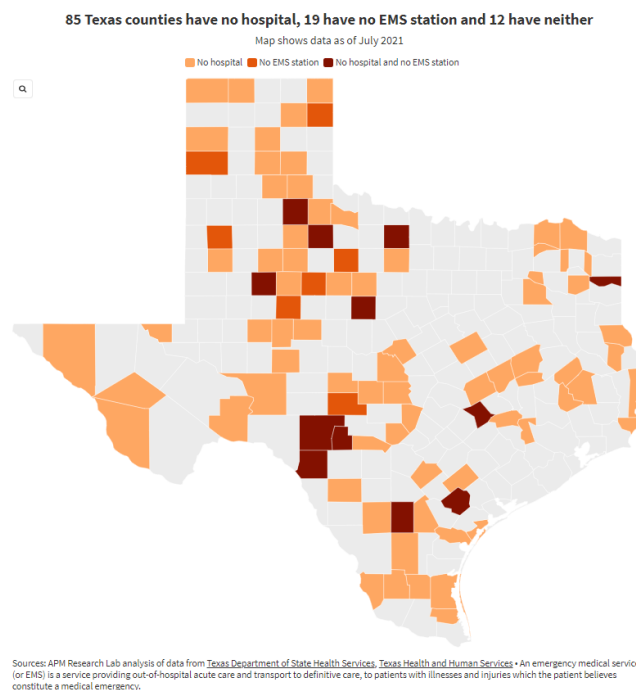
"What's more important — the budget, or our citizens?" Jamerson asked. "My wife and I have already had the serious conversation of [whether or not] we can feel safe living in a community that doesn't have EMS."

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.



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

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

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