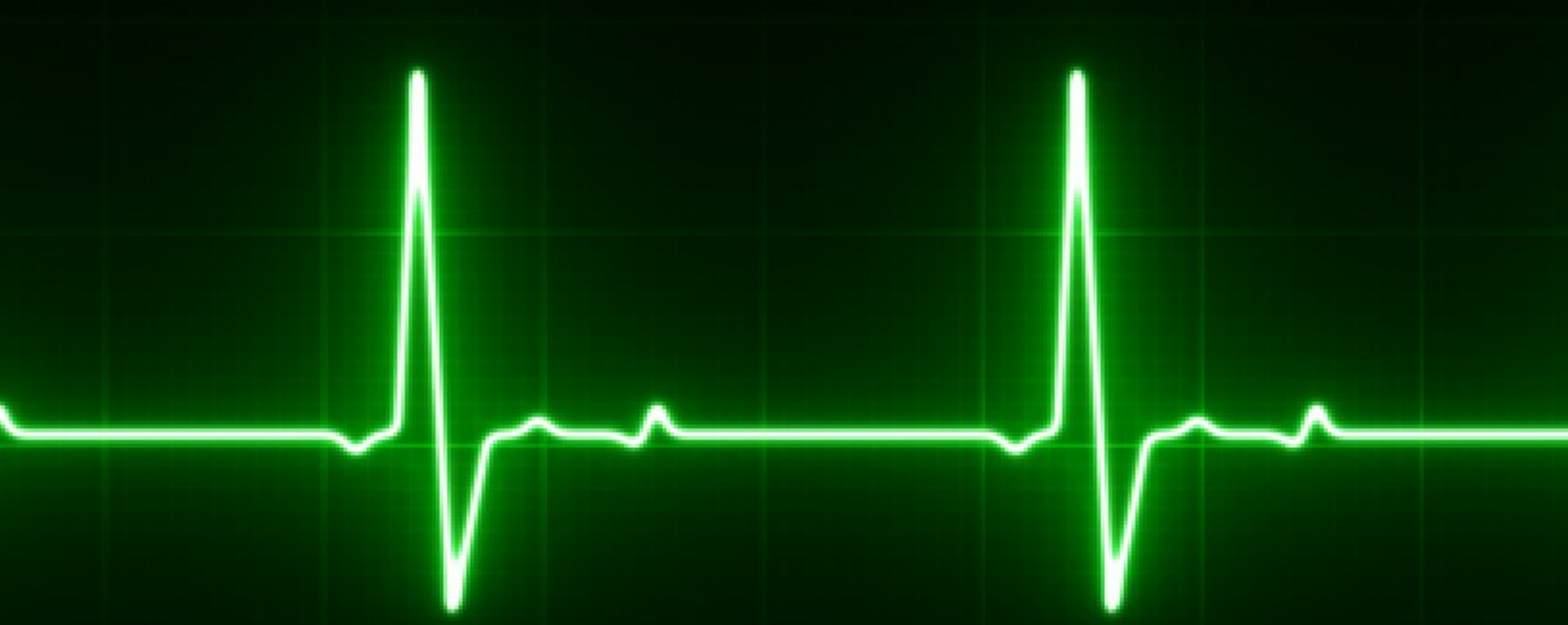
# TAKING THE PULSE

## *EMS Collaboration Opportunities in Jefferson County*



WISCONSIN POLICY FORUM

## ABOUT THE WISCONSIN POLICY FORUM

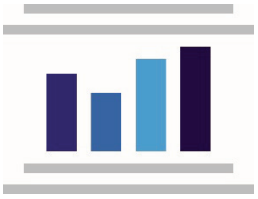
The Wisconsin Policy Forum was created on January 1, 2018, by the merger of the Milwaukee-based Public Policy Forum and the Madison-based Wisconsin Taxpayers Alliance. Throughout their lengthy histories, both organizations engaged in nonpartisan, independent research and civic education on fiscal and policy issues affecting state and local governments and school districts in Wisconsin. WPF is committed to those same activities and that spirit of nonpartisanship.

## PREFACE AND ACKNOWLEDGMENTS

This report was undertaken to provide citizens and policymakers in Jefferson County with information on the state of EMS service provision across the region and assessment of what lies ahead and how future challenges may be addressed. The intent was to lay out programmatic data and key challenges to allow policymakers to determine whether further action is warranted. The purpose was not to make recommendations on the future of those services for individual communities.

Report authors would like to thank Fire/EMS chiefs, EMS directors, the county dispatch office, medical directors, and administrators in Jefferson County for their assistance in providing information, and for patiently answering our questions.

In addition, we wish to acknowledge and thank Jefferson County, which provided partial underwriting for this research and hosted numerous meetings throughout the project.



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*EMS Collaboration Opportunities in Jefferson County*

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# INTRODUCTION

This study was launched in January 2020 to examine the state of Emergency Medical Services (EMS) in Jefferson County and possible options to enhance regional collaboration and service levels. The study was commissioned by Jefferson County as a follow-up to a similar research project in 2019 that explored the potential for service sharing among all of the major municipal functions in the county, based on functional areas identified by county and municipal administrators. That project resulted in the release of *Greater Than the Sum* in February 2020, a report that found particular opportunities in the area of fire and rescue services and that further supported the deeper dive into EMS that is undertaken in this report.

Consideration of shared or consolidated local government services has become commonplace in recent years across the state of Wisconsin. In light of strict property tax levy limits facing Wisconsin municipalities and increasing costs associated with new technologies and service expectations, many communities are facing difficult decisions regarding their ability to maintain their existing array of services. Consolidation or enhanced service sharing with neighboring municipalities may offer an opportunity to spread the cost of certain municipal services across multiple jurisdictions while increasing administrative efficiency and achieving even higher service levels.

EMS is a service area that is experiencing particular strain in light of growing calls for service, technological advances that may require increased investment, and the difficulty of attracting and retaining highly-trained personnel. Also, Jefferson County was particularly eager to consider its EMS delivery system in light of the elimination of a paramedic intercept program that was operated from 2000 to 2018 by Fort HealthCare. Under that program, the health system provided licensed paramedics to meet local rescue services on route to the hospital as a free service. The program was transitioned to the city of Jefferson in 2019 using a fee-for-service model. Its usage has diminished in 2020 due to funding constraints, generating new questions about how best to provide both basic and advanced life support services across the county going forward.

This report does not offer a single recommended solution to the various challenges identified. Rather, it lays out a range of options for decision makers to consider. The options included both changes that could be implemented relatively quickly and easily as well as long-term solutions that may require more comprehensive changes to existing operations and governance structures. We also offer some potential policy changes that could be pursued at the state level to further enhance EMS services in Jefferson County and other parts of the state.

## Data and Methodology

While we originally intended to include all 13 EMS service providers in Jefferson County, we were unable to gather adequate information from the Waterloo and Ixonia Fire/EMS departments. Thus, while they are included in some of the analysis where we were able to gather information online, those departments are largely omitted from tables that offer comparisons between departments.

The 11 participating EMS providers in the study were:

- City of Jefferson Fire/EMS
- Western Lakes Fire Department

- Whitewater Fire Department
- Ryan Brothers Ambulance
- Fort Atkinson Fire Department
- Watertown Fire Department
- Lake Mills EMS
- Lake Mills Fire Department
- Palmyra Fire and EMS
- Johnson Creek Fire Department
- Cambridge Area EMS

The data presented in this report are based primarily on information gathered from surveys, phone calls, and group meetings, as well as supporting documentation regarding budgets, apparatus, and call volumes. Where needed, individual phone calls and emails were used to gather missing pieces of information or to gain clarification. The Forum also conducted a series of group meetings to review data findings, identify and discuss key challenges, and solicit feedback on a draft report.

It should be noted that we were not always successful in receiving responses from the departments (or, in many cases, we may have received only partial information or information that was provided in inconsistent ways). The data we were able to collect allows us to paint an accurate and insightful picture of EMS service levels throughout the county, but we were unable to compile some useful comparative tables that we would typically include in this type of report. We certainly recognize that the departments had many higher priorities than responding to our information requests and we are grateful for the time and support given by the EMS directors, fire chiefs, and their staffs who participated, particularly after the onset of the COVID-19 pandemic.



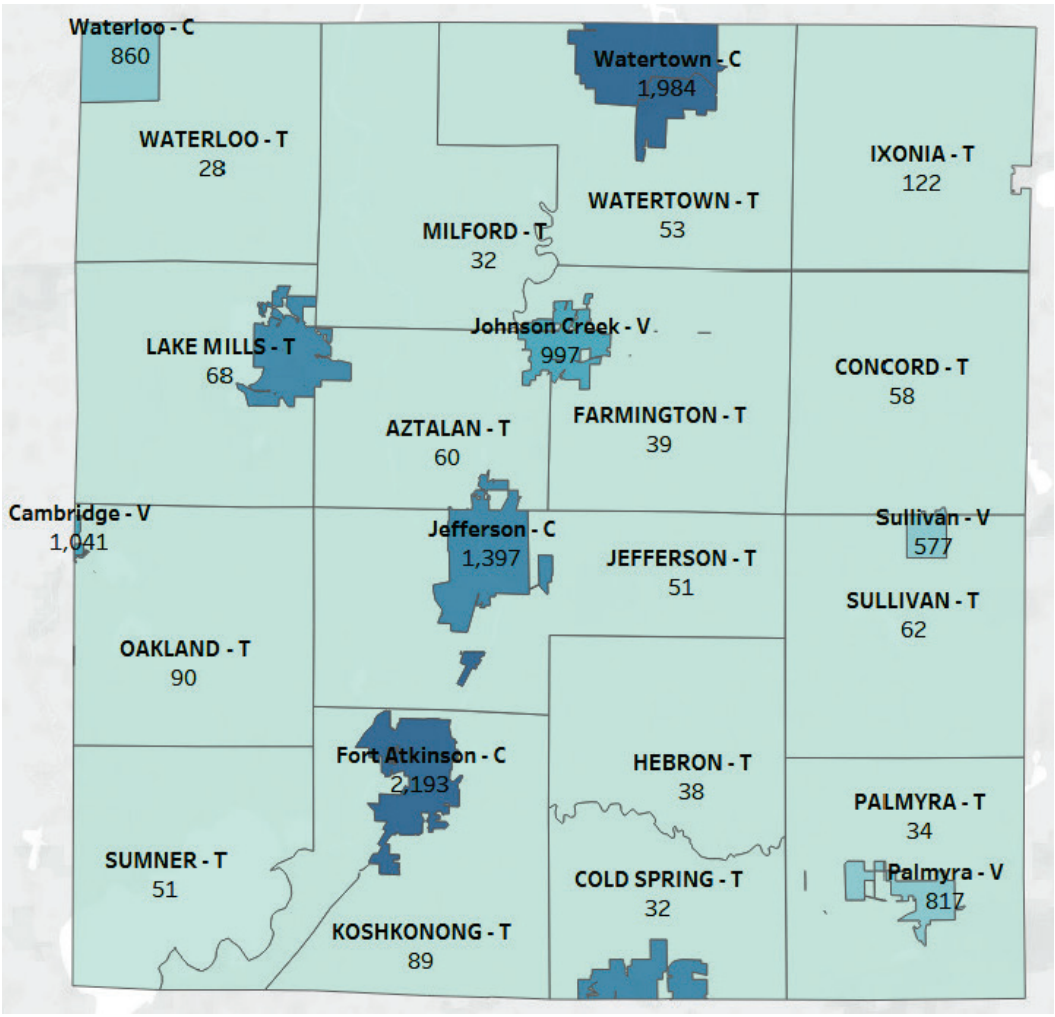
# BACKGROUND

To understand the challenges facing Jefferson County's EMS providers – as well as their strengths – it is important to have a basic understanding of various demographic and economic indicators that may be impacting service capacity and demands. This section discusses those factors and how they are projected to change in the future while also providing a broad description of the study participants and their service characteristics.

## Demographic and Economic Indicators

Sitting between Milwaukee and Madison, and spanning just over 500 square miles, Jefferson County is home to about 84,600 people. **Map 1** shows that the highest population density in the county is focused in Watertown, Johnson Creek, Lake Mills, Jefferson, Fort Atkinson, and Whitewater, which are situated along the North/South Highway 26 and East/West I-94 corridors,

**Map 1: Jefferson County population density per square mile (2019)**



The Wisconsin Department of Administration (DOA) projects that the county's population will grow by 10,180 by 2040. As shown in **Table 1**, the population changes are anticipated to largely occur in the more urban cities and villages, though outlying towns are projected to still see some growth in terms of overall percentage of the population. Johnson Creek and Ixonia are anticipated to experience the largest growth as a percentage of total population, at 47.5% and 46.1%, respectively.

Currently, people age 65 and older comprise about 15.4% of the county's population. This means the county has a somewhat younger population than the state as a whole, which has a senior population of about 17%. Notably, this same demographic is projected to grow by 7,130 individuals and would account for 70% of the county's population growth over the next 20 years. This is significant for EMS providers because senior citizens tend to be the heaviest users of EMS services.

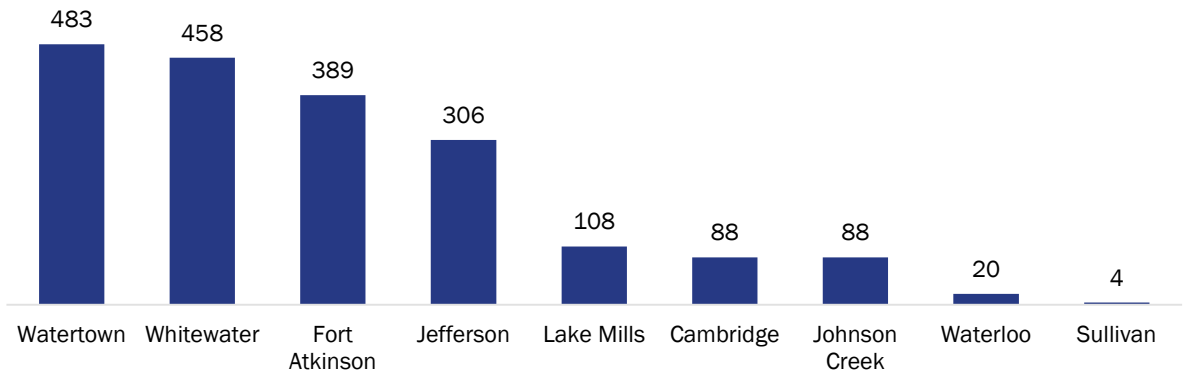
**Table 1: Population change projection 2019-2040**

| | 2019 | 2040 | % Change |
|---|---|---|---|
| South | | | |
| Fort Atkinson C | 12,437 | 14,020 | 12.7% |
| Whitewater C* | 14,923 | 19,250 | 29% |
| Palmyra V | 1,756 | 1,915 | 9.1% |
| Towns | 7,550 | 8,305 | 10.0% |
| Mid County | | | |
| Jefferson C | 7,989 | 9,080 | 13.7% |
| Lake Mills C | 6,022 | 7,380 | 22.6% |
| Johnson Creek V | 3,021 | 4,455 | 47.5% |
| Sullivan V | 658 | 740 | 12.5% |
| Towns | 14,572 | 15,970 | 9.6% |
| North | | | |
| Waterloo C | 3,363 | 3,685 | 9.6% |
| Watertown C* | 23,952 | 27,960 | 16.7% |
| Ixonia T | 4,891 | 7,145 | 46.1% |
| Other Towns | 4,025 | 4,385 | 8.9% |

Source: Wisconsin Department of Administration
*Watertown and Whitewater include the full population, and not just the population within Jefferson County borders, to provide a full sense of future EMS service needs.

Watertown, Whitewater, Fort Atkinson, and Jefferson may be particularly impacted by this change. With over 300 beds each, these cities are home to the greatest concentration of senior living facilities, as shown in **Chart 1.**

**Chart 1: Number of beds in nursing homes, residential care apartments, adult family homes, and community-based residential facilities***




*Only facilities with advanced age, memory, or brain trauma residents are included, as they are the most likely to need EMS support. Also, figures for Watertown, Whitewater, and Cambridge include all facilities within those jurisdictions (including those not located in in Jefferson County) to more fully reflect EMS service needs.

As shown in **Table 2**, total employment in Jefferson County in 2018 was 33,243. According to the Wisconsin Department of Workforce Development, 47% of employed residents commute out of Jefferson County for work, with the largest share going to Waukesha County. Employment has not grown markedly since 2013, at only 1.6%.

Manufacturing is the largest single employer (at 26.5%), with retail and health care a relatively distant second and third at 11.8% and 10.2%, respectively. Manufacturing is an industry with higher risk of serious injury that might require EMS services. Other high-risk industries like construction and transportation are less prevalent in the county, with each comprising about 4% of employment.

**Table 2: Jefferson County employment by industry (2018)**

| Industry | # Employed | % of Total |
|---|---|---|
| Manufacturing | 8,812 | 26.5% |
| Retail | 3,909 | 11.8% |
| Health Care | 3,397 | 10.2% |
| Accommodation/Food | 2,564 | 7.7% |
| Education | 1,959 | 5.9% |
| Wholesale Trade | 1,497 | 4.5% |
| Construction | 1,451 | 4.4% |
| Public Admin | 1,370 | 4.1% |
| Transportation/Warehousing | 1,306 | 3.9% |
| Arts/Entertainment/Recreation | 723 | 2.2% |
| Other Services | 672 | 2.0% |
| Fire | 638 | 1.9% |
| Professional, Scientific, Technical | 530 | 1.6% |
| Information | 476 | 1.4% |
| Other | 3,939 | 11.9% |
| **Total** | **33,243** | **100.00%** |

Source: Wisconsin Department of Workforce Development

## Overview of EMS Services in Jefferson County

Emergency medical services are provided at different levels and by different types of trained and licensed personnel. Some of the EMS providers in Jefferson County play the role of "first responders" to emergency medical incidents and possess staff only capable of providing **basic life support** (BLS), which typically consists of first aid services for

### TYPES OF EMS PERSONNEL

*Emergency Medical Responder (EMR):* An individual who is trained and licensed to provide immediate life-saving care to critical patients while awaiting the arrival of an ambulance and higher-level personnel. EMRs perform basic interventions with minimal equipment.

*Emergency Medical Technician-Basic (EMT-B):* An individual trained and licensed to provide basic emergency medical care and transportation of critical and emergent patients. Interventions are performed with basic equipment typically found on an ambulance.

*Advanced Emergency Medical Technician (AEMT):* An individual trained and licensed to provide basic and limited advanced emergency medical care and transportation of critical and emergent patients. Interventions are performed with basic and advanced equipment typically found on an ambulance under medical oversight.

*Paramedic:* An individual trained and licensed to provide advanced emergency medical care for critical and transportation emergent patients. Paramedics possess complex knowledge and skills necessary for advanced response and operate under medical oversight. Interventions are performed with basic and advanced equipment typically found on an ambulance.

*Critical Care Paramedic:* An individual trained and licensed to perform all the duties of a paramedic plus an expanded scope of practice which includes the ability to administer more medications than a paramedic. Critical care paramedics also provide inter-facility transports.

individuals with relatively minor needs (like broken limbs). These staff – typically trained at the Emergency Medical Responder (EMR) or Emergency Medical Technician–Basic (EMT-B) levels – are not allowed to give injections, administer medications, or engage in other advanced procedures. If more serious immediate attention is needed, BLS responders may need to await the arrival of more highly trained personnel (though in many cases both are dispatched simultaneously).

Other EMS providers in the county – both public and private – have staff who are trained and licensed to provide **advanced life support** (ALS) services. Such services – which can include various forms of urgent treatment for cardiac conditions like heart attacks and strokes – are provided by advanced EMTs (AEMTs) and paramedics (see text box for description of EMS personnel).

In addition to differing in terms of the level of care they are licensed to provide, Jefferson County EMS providers also use a variety of staffing models. Some of the larger departments employ mostly full-time, career staff who are available on shifts 24 hours a day. This is the optimal model because staff are ready to respond from their base at a moment's notice and because career positions with salaries, benefits, and promotional opportunities tend to produce higher employee retention. It is also the most expensive, however, and may not be appropriate for many municipalities because of low call volumes.

Other departments rely mostly on part-time staff (though their directors and other senior staff may be full-time). These staff can be paid-on-premises (POP) employees who work part-time but are assigned to regular shifts (meaning they, too, work out of stations and can respond to calls immediately); or they may be paid-on-call (POC) employees who are called in to respond to emergencies when they arise but are not stationed at fire houses or ambulance bases.

POP and POC employees typically receive hourly compensation or stipends, do not receive benefits, and must be available to work at odd hours and comply with extensive requirements to maintain their license levels. Consequently, EMS service providers using these models can have a difficult time recruiting and retaining staff. On the positive side, this model has a lower budget impact than that of a full-time career department.

**Table 4: EMS department staffing and operating models**

| Community | Staffing | Type |
|---|---|---|
| Jefferson Fire/EMS | Combination, mostly POP | EMS |
| Western Lakes FD | Combination full-time, part-time, POP and POC | Combined Fire/EMS |
| Lake Mills EMS | POC | EMS |
| Watertown FD | Career | Combined Fire/EMS |
| Palmyra PSD | Combination, mostly full-time | Combined Fire/EMS/law enforcement |
| Waterloo FD | POC | Combined Fire/EMS |
| Johnson Creek Fire/EMS | Combination, mostly POP | Combined Fire/EMS |
| Whitewater FD | Combination, mostly POP and POC | Combined, EMS operates separately |
| Ryan Brothers Ambulance | Career | EMS |
| Cambridge Area EMS | Combination, mostly full-time | EMS |
| Ixonia Fire/EMS | POC | Combined Fire/EMS |

**Table 4** shows the different service and/or organizational models used by the 11 EMS agencies in Jefferson County. Five of the EMS providers are combined fire department/EMS agencies (and one is a combined police/fire/EMS agency). These departments include both "career" departments such as

the Watertown and Western Lakes fire departments as well as several departments that rely primarily on POC or POP staff.

Several other EMS providers in Jefferson County focus exclusively on EMS response. Their corresponding fire departments are generally trained for emergency response and support EMS providers with lift assists and other assistance if needed (these include the Fort Atkinson and Lake Mills fire departments). Several Jefferson County communities also contract for EMS with Ryan Brothers, a for-profit ambulance provider.

## Calls for Service

As shown in **Table 5**, call volumes can average from several per day for some of the larger municipalities to only three or four per week for some of the smaller communities. Notably, calls increased for nearly all EMS providers between 2016 and 2019, with most growing by more than 10%.[1] For those areas projected to see population growth, increases in call volumes likely will continue, particularly since 70% of the growth is projected to be comprised of older residents who are more likely to use EMS services.

**Table 5: Calls for service, 2016 to 2019**

| Community | Calls for Service (2019) | % Change in Calls 2016-19 | Calls per 1,000 population | Average No. Calls per Day |
|---|---|---|---|---|
| Jefferson | 1,236 | 9% | 117 | 3.4 |
| Whitewater* | 1,701 | 12% | 90 | 4.7 |
| Watertown* | 2,092 | 26% | 80 | 5.7 |
| Lake Mills EMS | 655 | 5% | 71 | 1.8 |
| Johnson Creek | 414 | 1% | 71 | 1.1 |
| Palmyra | 203 | 42% | 69 | 0.6 |
| RBA | 1,246 | 17% | 68 | 3.4 |
| Western Lakes* | 245 | 22% | 58 | 0.2 |
| Cambridge EMS | 170 | -17% | 33 | 0.5 |

*Whitewater and Watertown include calls for their full service areas, and not just those within Jefferson County.

[1] The call volumes reflected in the chart do not include paramedic intercept calls fielded by the Jefferson Fire Department. There were 461 calls for the intercept service in 2018 and 473 calls for service in 2019.



# A MORE DETAILED LOOK AT EMS OPERATIONS IN JEFFERSON CO

This section is designed to provide a more descriptive overview of EMS operations across Jefferson County. As will be discussed, there are important differences in service capacity and operational models across the various EMS providers in the county. While there is some cooperation among adjacent communities, the individual providers function as such and not as part of a county-wide "system."

## Licensing and Staffing Models

**Map 2** displays EMS provider locations along with their license levels and shift staffing practices. Provider locations are fairly well dispersed across the major population centers and travel corridors in the county. Notably, nearly all providers are licensed for responses at either the AEMT or paramedic levels. The exceptions are Palmyra (EMT-Basic license) and the Lake Mills and Fort Atkinson fire departments, both of which provide first response but rely on other agencies to arrive on the scene when an ALS response is needed. Occasionally, the ALS response is provided through paramedic intercept (i.e. a paramedic meets up with a BLS ambulance and gets on the ambulance to care for the patient until they arrive at the hospital).

Most of the providers have full-time shifts of staff housed at their station locations, with between two and three staff on a given shift. The exceptions are Lake Mills EMS, Waterloo, and Ixonia, which use a POC model. Watertown is the only full-time career department in the region and averages six individuals on duty per shift to serve a considerably higher call volume than most of the other providers.

Those that use a POP or POC model vary widely in hourly wages. For instance, Jefferson Fire/EMS pays its POP staff $17 per hour, while Palmyra pays between $9 and $12 per hour, and Waterloo pays $14 per call. Hourly wages for POC staff range from $7.25 to $9 per hour spent responding to a call, and a couple of providers pay an additional $3 per hour to POC personnel for being available to respond to a call.

Map 2: EMS provider locations, license levels, and shift staffing practices


* Western Lakes also uses a 2-person "chase vehicle" to supplement station staff in responding to calls

# EMS Provider Profiles

Each EMS provider has a different operating model. Below we provide snapshots of each provider, focusing on their staffing, license levels, and 2020 expenditure budgets. Following the provider profiles are high-level descriptions of how those departments operate in other key operating areas, including apparatus, medical direction, dispatch, and response times.

## Watertown Fire Department

The Watertown Fire Department is the only career department in Jefferson County. First response and paramedic-level ALS services are provided to the city of Watertown and four surrounding townships. The department employs 26.9 FTEs, with six staff on duty at all times. The department is heavily relied on for mutual aid services in surrounding areas. It responded to 120 EMS calls for mutual aid in 2019.

| Type | Combined Fire/EMS |
|---|---|
| Staffing Model | Full-time, career |
| License Level | Paramedic |
| Total FTE (including hourly) | 26.9 |
| Total Budget | $2.9 million<br>(combined Fire/EMS budget) |
| Cost/capita (EMS only)* | $74 |

The combined Fire/EMS cost per capita is $98.

## Western Lakes Fire Department

Western Lakes Fire Department (WLFD) is a joint fire district serving 11 municipalities in Waukesha, Dodge, and Jefferson counties. Across its six stations, 20 FTEs, six ambulances, and four chase vehicles are available district-wide at all times. A chase vehicle with two staff members is dispatched along with an ambulance for every call. The district owns 10 ambulances.

| Type | Combined Fire/EMS |
|---|---|
| Staffing Model | Combination of career full-time along with POP and POC staff |
| License Level | Critical Care Paramedic |
| Total FTE (including hourly) | 67.5 |
| Total Budget*<br>(Combined Fire/EMS budget) | $5.5 million |
| Cost/capita** | $116 |

*The budget includes costs such as rent, utilities, and depreciation, which are typically not shown in municipal fire/EMS department budgets.
**The cost/capita for only the service population within Jefferson County is $29.22, per contract agreements.

In Jefferson County, WLFD has an EMS station in the village of Sullivan that houses two staff at all times and provides ALS-level paramedic services to approximately 4,250 people living in the village of Sullivan, town of Sullivan, and town of Concord. Nearby WLFD stations from outside of Jefferson County also respond when needed. As the only ALS resource in the eastern part of Jefferson County, WLFD provides paramedic intercept and paramedic mutual aid to Ixonia and Palmyra.

## Whitewater Fire Department

The Whitewater Fire Department is a nonprofit, primarily part-time department that provides fire and EMS services by contract to the city of Whitewater, the University of Wisconsin-Whitewater, and six surrounding townships. EMS services are scheduled and managed separately from fire services, although some fire department personnel are cross-trained with EMS staff. The department is licensed at an Advanced EMT level and staffs four 12-hour shifts on weekends. On weekdays, the department uses a POC model. ALS response is handled by either Ryan Brothers Ambulance or the Janesville Fire Department.

| Type | EMS |
|---|---|
| Staffing Model | POP on weekends; POC on weekdays |
| License Level | Advanced EMT |
| Total FTE (including hourly) | 4.47 |
| Total Budget (Combined Fire/EMS budget) | $1.0 million |
| Cost/capita* | $50 |

*Reflects the total city of Whitewater population, plus service areas that include parts of Koshkonong and Cold Spring and towns in Walworth and Rock counties.

## Ryan Brothers Ambulance

Ryan Brothers Ambulance (RBA) is a private, for-profit company that provides paramedic-level ALS response to the city of Fort Atkinson, the town of Koshkonong, and portions of four other towns in Jefferson County. In total, RBA has 140 staff that may be assigned to shifts at any of seven locations spanning parts of Dane, Rock, and Jefferson counties. Ryan Brothers staffs two ambulances at all times, one of which is dedicated to 911 calls. The second ambulance provides backup to the 911 service but spends the vast majority of its time on inter-facility transports.

| Type | EMS |
|---|---|
| Staffing Model | Paid-on-premise |
| License Level | Paramedic |
| Total FTE (including hourly) | 6 |
| Total Budget | $580,257** |
| Cost/capita* | $31 |

*Includes the city of Fort Atkinson, plus parts of towns of Oakland, Sumner, Koshkonong, Hebron, and Jefferson.
**The budget includes costs such as rent, taxes, and depreciation, which are typically not shown in municipal fire/EMS department budgets.

The Fort Atkinson Fire Department (FAFD) is licensed at the EMT-B level and provides backup EMS services to RBA for instances when RBA is unable to respond to a call. The two service providers have a unique cooperation arrangement which allows for joint credentialing of paramedics, shared training, and joint medical direction. The four FAFD paramedics are also employed by RBA and are required to work a minimum number of shifts a month. The two service providers are dispatched simultaneously for motor vehicle accidents or high acuity calls such as heart attacks.

## Cambridge Area EMS

Cambridge Area EMS (CAEMS) is a joint municipal agency serving five municipalities in Dane and Jefferson counties. The agency is governed by a commission with representatives from the five jurisdictions. Its service population in Jefferson County is approximately 7,000 people living in the villages of Cambridge and Rockdale and three adjacent townships plus the town of Christiana and villages of Rockdale in Dane County. Although licensed at the AEMT level, CAEMS can provide ALS-level paramedic service per recent state legislation.

| Type | EMS |
|---|---|
| Staffing Model | Combination of career full-time along with POP and POC |
| License Level | Advanced EMT |
| Total FTE (including hourly) | 10.94 |
| Total Budget | $480,405 |
| Cost/capita | $84 |

## Johnson Creek Fire/EMS Department

Johnson Creek Fire/EMS Department is a municipal department that provides both fire and paramedic-level ALS services to residents and businesses in Johnson Creek and portions of four surrounding towns. EMS has a separate command structure and the majority of EMS personnel are not firefighters.

| Type | Combined Fire/EMS |
|---|---|
| Staffing Model | A combination department that is staffed with some full-time members but also includes POC/POP staff |
| License Level | Paramedic |
| Total FTE (including hourly) | 8.84 |
| Total Budget | $395,651* |
| Cost/capita | $67 |

*This budget includes EMS plus half of the administrative budget reflected within the Fire-EMS department

## Lake Mills EMS

Lake Mills EMS is a private, non-profit EMS provider under contract to Lake Mills that also serves portions of four surrounding townships. The agency is licensed at the AEMT level and ambulance crews generally consist of a combination of POP staff from the station and POC staff who can respond from their homes or offices within

| Type | EMS |
|---|---|
| Staffing Model | Combination of POP and POC |
| License Level | AEMT |
| Total FTE (including hourly) | 11.5 |
| Total Budget | $418,378** |
| Cost/Capita | $44 |

*The population served includes the city of Lake Mills, and parts of the towns of Waterloo, Lake Mills, Milford, and Aztalan.
**Unlike municipal department budgets, the Lake Mills EMS budget includes items like asset depreciation.

four minutes. Backup EMS response is provided by the Lake Mills Fire Department (which has EMR but no transport capabilities) or another department, such as Jefferson Fire/EMS or Johnson Creek Fire/EMS. The Lake Mills Fire Department may be dispatched simultaneously with Lake Mills EMS to a variety of incidents, such as motor vehicle accidents on the highway.

## Jefferson Fire Department

The city of Jefferson funds a stand-alone EMS Department with a service population of approximately 10,400 residents in Jefferson and four surrounding townships. Jefferson EMS staffs four people per shift and offers ALS service at the paramedic level. Jefferson also operates a paramedic intercept program on an as-needed basis; there were 473 calls for the intercept service in 2019. Fire protection in the city of Jefferson is provided by a separate municipal department, staffed primarily through part-time staff. Some members of the fire department are also trained as EMTs or paramedics.

| Type | EMS |
|---|---|
| Staffing Model | A combination department that is staffed with some full-time members but also includes POC/POP staff |
| EMT License Level | Paramedic |
| Total FTE (including hourly) | 16.6 |
| Total Budget | $808,400 |
| Cost/capita | $77 |

*The population includes the city of Jefferson and parts of the towns of Jefferson, Hebron, Farmington, and Oakland.

## Palmyra Public Safety Department

Since 2017, the village of Palmyra has operated a public safety department. Under this somewhat unique operational model, six full-time public safety officers (PSOs) are cross-trained as police officers, firefighters, and EMTs. The department has between two and four officers on duty at any time. In addition to the PSOs, the department has POP employees who are assigned to shifts for 24 hours per week. There is an additional roster of POC members, some of whom can also work shifts.

| Type | Combined Fire/EMS/Police |
|---|---|
| Staffing Model | A combination department that is staffed with some full-time members but also includes POC/POP staff |
| License Level | EMT-B |
| Total FTE (including hourly) | 6.97 |
| Total Budget | $360,407** |
| Cost/capita* | $125 |

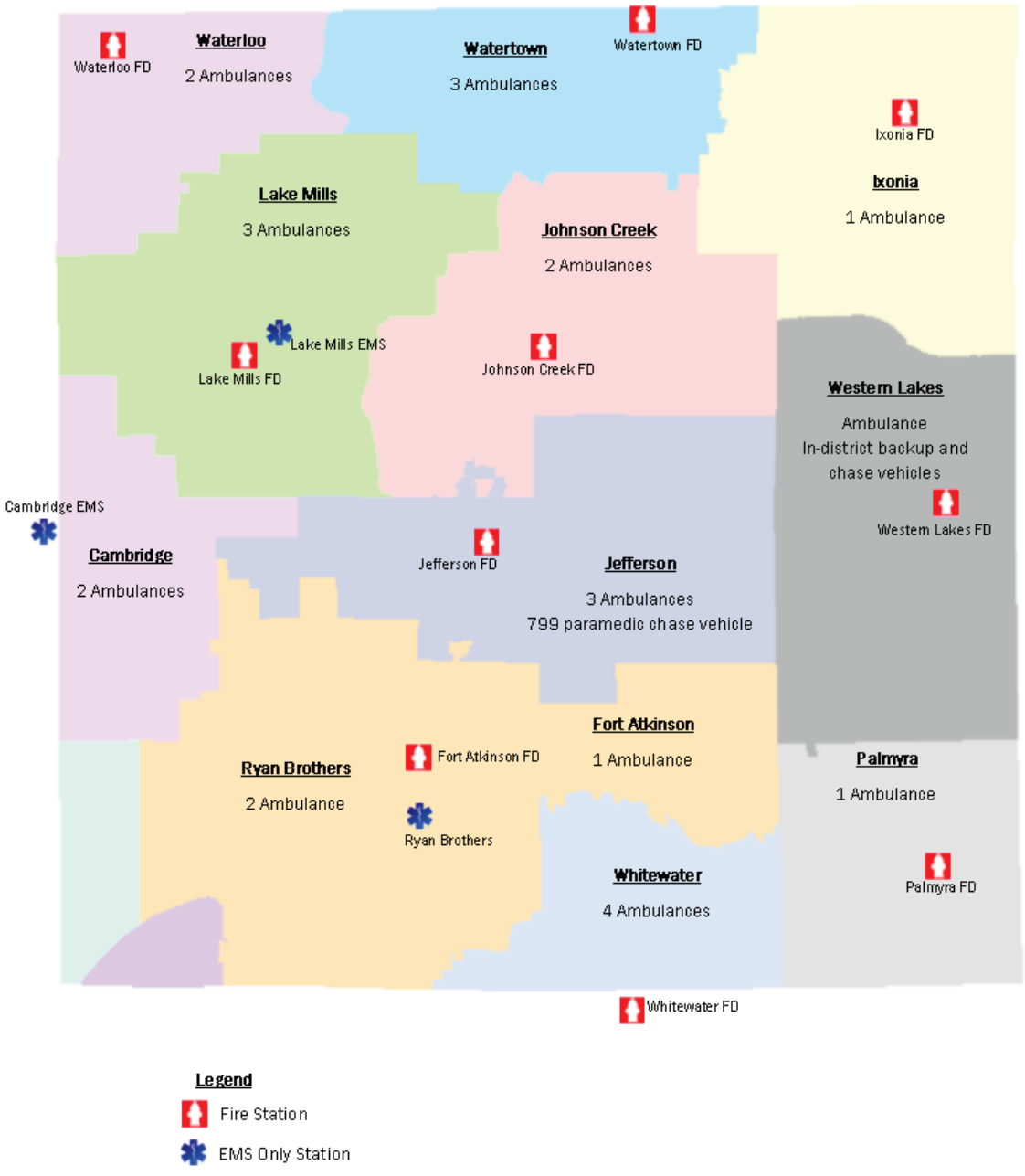
*The population includes the Village of Palmyra and Town of Palmyra.
**This table reflects only fire/EMS costs as described in the budget, though overall public safety expenditures per capita are likely lower than other communities due to the village's combined police/fire/EMS public safety model.

Police services are limited to the village itself, but fire/EMS services are provided to both the village and township of Palmyra. The department is licensed at the EMT-Basic level. Western Lakes Fire Department provides ALS service to Palmyra when requested. Depending on incident location and hospital destination, Palmyra may also use Mukwonago for ALS support.

## Apparatus

Most EMS providers in the region have two or three ambulances. For those with three, the third tends to serve a backup role should another ambulance go out of service, or be on hand at large events. Jefferson Fire/EMS is the sole provider within the county that operates a paramedic intercept chase vehicle, though others exist across county borders and are often called upon due to their proximity to an incident. **Map 3** shows the number of ambulances within each EMS jurisdiction.

**Map 3: Number of ambulances within each EMS jurisdiction**



## Medical Direction

Medical direction is the oversight of EMS operations, procedures, and medical protocols by a physician at a hospital. Medical directors may be involved in transportation and destination patient care decisions, creating patient treatment guidelines, giving verbal medical treatment orders, ensuring procedural competency of EMS personnel, approving individuals for inclusion on an EMS team, and leading medical care quality management activities.

In Jefferson County, medical direction is fragmented across the county (**Table 7**), with six different medical directors providing oversight. This may pose some challenges with regard to service sharing opportunities like joint trainings or cross-credentialing of staff across departments that have different medical directors and protocols, as will be discussed later in this report.

**Table 7: Medical direction providers for Jefferson County EMS agencies**

| | Medical Direction |
|---|---|
| City of Jefferson EMS | Mercy Hospital, Janesville |
| Western Lakes FD | ProHealth Care |
| Lake Mills EMS | Aurora Summit |
| Watertown FD | Watertown Regional Medical Center |
| Palmyra PSD | Aurora Summit |
| Waterloo FD | Aurora Summit |
| Johnson Creek Fire/EMS | Aurora Summit |
| Whitewater FD | Aurora Health, Elkhorn |
| Ryan Bros | In-house Doctor |
| Cambridge Area EMS | Mercy Hospital, Janesville |
| Ixonia Fire/EMS | Aurora Summit |

## Dispatch

Similar to medical direction, dispatch is an essential component of EMS responses. When a municipal or county communications center receives a 911 emergency call, trained dispatchers dispatch responders from the appropriate EMS department or departments.

Dispatch centers vary in the services they are able to provide. For instance, some track the availability of ambulances across a jurisdiction and dispatch the nearest available provider to an incident, while others lack that capability and dispatch according to approved procedures and protocols. Dispatch centers also collect data that are central to EMS operations, including number of calls and calls by type, location, and time of day. Data collection practices may vary between dispatch centers.

**Table 8: Dispatch communication centers for EMS agencies in Jefferson County**

| | Dispatch |
|---|---|
| City of Jefferson EMS | Jefferson County |
| Western Lakes FD | Jefferson County; Waukesha County is primary PSAP and tracks response |
| Lake Mills EMS | Jefferson County |
| Watertown FD | Watertown City |
| Palmyra PSD | Jefferson County |
| Waterloo FD | Jefferson County |
| Johnson Creek Fire/EMS | Jefferson County |
| Whitewater FD | Whitewater City |
| Ryan Bros | City of Fort Atkinson |
| Cambridge Area EMS | Dane County |
| Ixonia Fire/EMS | Jefferson County |

In Jefferson County, the county communications department provides dispatch services for most EMS providers, but not all. As shown in **Table 8,** Watertown, Fort Atkinson, and Whitewater provide their own EMS dispatch. Cambridge EMS and Western Lakes Fire Department cross county borders and receive primary dispatch service from the other county they cover, though both work with the Jefferson County communications center. For both of these service providers, Jefferson County represents less than one-third of their service areas.

The Jefferson County dispatch center does not track nearest available resources to a 911 incident at any given time. Consequently, while the county dispatch provides service to most EMS providers in the area, it does not oversee dispatches for mutual aid. Instead, once a local jurisdiction determines it cannot respond to a call, it tells the dispatch center which EMS provider to dispatch for mutual aid. This practice can take up valuable time if the first mutual aid request is not answered and a department must look elsewhere. It also means that the nearest available provider is not always called.

## Response Times

Response times are a useful metric for measuring EMS performance. While there are not federal standards for EMS response times, a common guide for municipal and career fire departments comes from the National Fire Protection Association (NFPA).

**Table 9: Average response times for EMS agencies in Jefferson County**

| | Time from Dispatch to Turnout | Travel Time from Station to Incident | Total Time from Dispatch to Incident |
|---|---|---|---|
| Shift Staffing | | | |
| Watertown | 1 min | 3.6 min | 4.6 min |
| Whitewater | N/A | N/A | 6 min |
| RBA | 1.4 min | 5 min | 6.4 min |
| Jefferson | 2 min | 4 min | 6 min |
| Johnson Creek | 3.5 min | 8-11 min | 11.5-14.5 min |
| Cambridge EMS | 2.7-3 min | 0-10 min | 58% are 2.7-8 min |
| Western Lakes | 1.4 min | 4.6 min | 6 min |
| Palmyra | 2 min | 3 min | 5 min |
| Fort Atkinson FD | 3 min | 7 min | 10 min |
| Paid on Call | | | |
| Lake Mills EMS* | 4.7 min | 6 min | 10.7 min |
| Ixonia* | 7.5 min | 4 min | 11.5 min |
| Waterloo* | 5.6 min | 3 min | 8.6 min |

*Ixonia, Waterloo, and Lake Mills EMS data were provided by the county dispatch office and reflect average response times for 2020. All other response times listed are for 2019.

According to the EMS World website, NFPA suggests that for all EMS calls involving career fire departments, turnout time (i.e. the time between receipt of a call from dispatch and departure of the responders from the station) should be within one minute. Four minutes or less should then elapse for the arrival of a unit with first responder (or higher) capability at the scene of the emergency medical incident. For a department that provides ALS services, the arrival time should be within eight minutes. For both, this objective should be met 90% of the time.[2]

[2] Information retrieved on July 29, 2020, from https://www.emsworld.com/article/10324786/ems-response-time-standards.

For further context, the Wisconsin Department of Health Services produced a report showing total and average response times for EMS agencies across the state in 2015. That report indicates that the average EMS response time across all agencies for 2016 (measured as the time from dispatch to arrival on the scene) was 8 minutes and 6 seconds.[3]

Also, in 2017, the American Medical Association compiled EMS response times for 485 agencies across the U.S. (totaling 1.8 million 911 transport calls). It found that suburban areas with populations of 2,500 to 50,000 average 7.7 minutes from dispatch to arrival on scene. Rural areas with populations of less than 2,500 average 14.5 minutes. These same rural areas had response times within 26 minutes for 90% of calls.[4]

For rural areas with longer driving times, it is commonly accepted that optimal response time standards can be lengthened. Also, it is acknowledged that stations that have shift staffing will be able to achieve faster response times than those relying on POC staff, as EMS responders do not have to be called in from home or work.

As shown in **Table 9**, Jefferson County EMS responders that operate on a shift staffing model reported that the average time between dispatch and turnout is generally within 3 minutes. The agencies that use POC models – Lake Mills, Ixonia, and Waterloo – reported average turnout times ranging from 5.6 to 7.7 minutes. Average travel times from stations to the scene varied between three and seven minutes for most providers.

While our survey requested average drive times from a station to an incident, it must be noted that averages encompass both the faster and slower sides of the response spectrum. Average responses also hide the fact that benchmarks for response times set by the NFPA are for 80% to 90% of responses. The average response times shown in **Table 9** suggest that there is a relatively wide variation in response times across the county and that in some regions, improvement may be merited – particularly for those whose average times indicate that they do not fall within the NFPA 8-minute response time benchmark for 90% of calls. Indeed, expressions by stakeholders indicating concern with high ambulance response times in some parts of the county was an impetus for this study.

## Summary

For the most part, EMS providers in Jefferson County operate independently and without county-wide consistency, employing staffing and operational models that meet their perceived needs and objectives. They also receive medical direction from different sources, do not use a common dispatch center, and have varying response times that do not always fall within NFPA recommendations for 90% of calls. A key question is whether municipal leaders are satisfied with this approach going forward and, if so, what it will take to sustain it in the face of staffing and operational challenges; or whether, instead, there is a desire for more countywide coordination and uniformity.

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[3] 2015 Fractile Response Report, Wisconsin Department of Health Services

[4] Mel, Howard, et al (2017). EMS Response Times in Rural, Suburban, and Urban Areas. *JAMA Surgery, 152*(10), 983-984. Accessed August 12, 2020 from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5831456/#:~:text=Zip%20Code%20Classification-,Discussion,the%20arrival%20of%20EMS%20personnel.

A recent development that may signal movement toward the latter scenario is an EMS and fire service sharing agreement that was recently discussed between the fire departments in Watertown, Johnson Creek, and Lake Mills. Under the proposed agreement, the three communities would implement an enhanced level of mutual aid and service sharing. Examples include joint responses to structure fires, coordinated responses to certain EMS calls, greater use of back-up by neighboring departments during times of high call volumes, and enhanced equipment sharing.

The agreement has not yet been implemented, however, as it has not been approved by elected officials from each of the communities. Also, it does not currently include the private Lake Mills EMS department. Nevertheless, this form of proposed sub-regional collaboration could be a model for broader collaboration across the county or for sub-regions as we will discuss later in this report.

Specific findings from our collection and analysis of service models and operational data from the various providers include the following:

- Most providers operate using shift staffing, though some rely on a POC model and almost all make some use of POC or POP staff who are paid an hourly wage. Wages vary widely across providers and several report challenges recruiting and retaining POC and POP staff.

- EMS provider locations are dispersed fairly evenly across the county, with many licensed to provide ALS-level service. Nevertheless, there are differences in ALS capacity and responsiveness in different parts of the county.

- Medical direction is provided by six different medical directors, which may result in inconsistent protocols and standards of care and which may impede efforts to cross-credential personnel to work in different departments if such a strategy is desired.

- Because EMS dispatch is fragmented across the county, mutual aid efforts may not be as effective as they could be and data collection is not standardized.

- Average response times reported from individual providers vary, which is understandable given the different operational and service models employed. Nevertheless, it appears that strategies to improve response times in some areas of the county may be merited. That impression is fortified by the comments of some municipal administrators we interviewed who expressed a pressing need to improve both response times and staffing capacity.

The next section will draw upon these findings to identify the key EMS challenges facing the region, which may merit enhanced attention from policymakers in light of growing populations and call volumes.

# FUTURE CHALLENGES

The picture of EMS services in Jefferson County that we glean from our data collection and key informant interviews does not raise immediate, glaring red flags. Departments have been able to reasonably accommodate growing call volumes thus far. Station locations are distributed evenly across the region and most are able to provide an ALS response at either the AEMT or paramedic license level.

There is also some emerging cooperation between a few departments on the operating side. And, while response coordination could be improved, current support through mutual aid is working relatively well.

However, some challenges and opportunities for improvement have surfaced in the areas of staffing, consistency in service provision across the region, fragmented dispatch and medical direction, and the cooperative spirit across departments. While these challenges are not severe at this time, they may intensify in the future and they may limit the ability of the county's providers to keep pace with the expectations of citizens and to improve overall service for the region as a whole. This section summarizes those challenges and will be followed by an analysis of options to address them.

*Staffing*

While the POC and POP models have accommodated the ability of individual agencies to attract, recruit, and retain staff at adequate levels for decades, this ability has been dwindling in recent years. In fact, some of our interviewees expressed concern that with the loss of even one or two additional POC or POP staff they may be unable to respond to calls at certain times of day.

Inadequate pay is a primary reported weakness for POC and POP providers. Differences in hourly wages have created circumstances where volunteers leave departments for slightly higher pay at other EMS agencies. A larger concern is that – prior to the pandemic – the low wages and high training costs were not competitive with other employers in the area that offer higher-wage jobs, normal work hours, require less training, and have fewer skill maintenance requirements. There is strong incentive for people in the workforce to not consider EMS as a profession, or to leave the profession for jobs that support a higher standard of living and less stress.

*Consistency in quality of care*

The residents of Jefferson County likely would expect that a 911 call in any part of the county would produce the same, high-quality EMS response regardless of where in the county the call may originate. We find, however, that there is a lack of consistency on a number of fronts. For example, response times differ in different parts of the county and may not be satisfactory in all communities. Also, while there have been improvements in recent months in light of enhanced coordination between some medical directors, the fact that medical direction is provided by physicians from six different entities means there may be inconsistencies in training expectations and protocols.

Finally, we note that there are inconsistencies across the board regarding skill maintenance. While EMT and paramedic licensing requirements set a foundation, a combination of consistent training and use of EMS skills is needed to keep skills fresh. Some EMS providers may have paramedic personnel who rarely respond to calls that require paramedic-level expertise, thus threatening the

deterioration of those skills. Similarly, without consistent training standards for skill maintenance and updates, all levels of EMS personnel are at risk of becoming "rusty" or not having the ability to keep up with advancing protocols.[5]

*Coverage during busy times & for higher call volumes in the future*

As mentioned above, some departments have shrinking rosters of volunteers, to the point that it may be difficult to staff more than one vehicle during busy call times. For instance, while most departments have two or three ambulances, they may not be able to send out the second or third when multiple calls arrive at the same time. Consequently, mutual aid may at times be called upon when it would not be needed under better staffing circumstances. In turn, any department providing mutual aid that is similarly short-staffed is at risk of not being able to respond to calls from its own jurisdiction. For this reason, departments may sometimes need to turn down mutual aid requests, which prolongs response times while a different department with the capacity to respond is identified.

Call volumes are also anticipated to increase in the coming years, particularly for senior populations who tend to be the most frequent users of EMS services. Dwindling department rosters may create a scenario in which departments cannot provide adequate services for growing call volumes or in some cases may not be able to respond at all.

*Fragmented dispatch*

As previously mentioned, the county communications center handles dispatch for five of the EMS providers in the study, while Fort Atkinson, Watertown, and Whitewater use their own dispatch centers. Cambridge EMS relies on the Dodge County communications center while Western Lakes primarily uses Waukesha County's dispatch center but switches to Jefferson County for calls within that county. This fragmentation may pose an obstacle to enhanced service sharing efforts involving "closest unit responds" or joint response frameworks and also prevents uniform data collection and analysis that could be used by decision-makers to monitor response times and other performance elements. It can also lend itself to slowed response times in regular mutual aid scenarios.

*Mutual aid*

Our analysis of mutual aid – both through survey and in-person responses – found that while the provision of such aid often functions cohesively, there are times when a department seeking mutual aid may not reach out to the closest available neighboring provider. Instead, calls for mutual aid may be based on the strength of relationships between various providers or communities as opposed to geographical proximity. To the extent this may be occurring, it obviously is not a sound approach.

[5]A couple of medical directors are collaborating to make skill maintenance trainings available to any EMS provider interested in joining (such as changes in hyperthermia treatment or intubation standards). The involvement of EMS volunteers with rustier skill sets is not guaranteed and not all departments have shown interest in sending their staff to the trainings.

Finally, we would note that some EMS providers appear reluctant to pursue collaborative strategies to address common challenges – not because they lack a cooperative spirit, but because they believe their challenges are manageable and that, consequently, there is no need to seek greater partnership with their neighbors. While we are in no position to dispute that assessment based on current circumstances, we would suggest that growing EMS call volumes, intensifying staffing and financial challenges, and quality of care concerns may soon be cause for reconsideration. We also note that municipal administrators in the county appear eager to pursue a range of service sharing opportunities and could play a leading role with regard to future EMS collaboration.

Also, collaboration can take several different forms and some may be more appropriate at the sub-regional rather than the county level. However, given the interest of leaders from Jefferson County government in considering where the county might play a larger role in elevating EMS service levels, a real opportunity exists for the county to take the lead in strengthening relationships among the individual EMS providers and instituting collective strategies to ensure that desired service levels are maintained across the county.

In the following sections, we outline several areas where enhanced collaboration might make a difference in improving EMS quality and responsiveness and standardizing the quality of care across all of Jefferson County.



# OPTIONS FOR GREATER COLLABORATION

EMS providers in Jefferson County could consider various forms of enhanced collaboration to help address key service provision challenges. These options range from small-scale activities that could be implemented relatively easily on a consensus basis to larger service sharing arrangements that may require intergovernmental agreements among individual municipalities and/or the county. None are mutually exclusive, though they also could be pursued as a progression from smaller-scale initiatives designed to create a stronger framework for collaboration to more in-depth service sharing initiatives that could be pursued over the longer term should the initial initiatives begin to produce favorable outcomes.

## Small-Scale Collaboration

While comprehensive solutions may be required to fully address some of the challenges laid out in the previous section, others could benefit from some relatively simple actions. Such small-scale options may be a preferred approach if policymakers are concerned about possible costs associated with larger options or if they do not feel that the severity of the challenges merits significant additional expenditures.

The following are some examples of small-scale collaboration that EMS providers in Jefferson County could immediately seek to implement:

- **Regular countywide meetings of EMS providers.** The EMS administrators and medical directors could strengthen efforts to meet regularly to discuss common challenges (involving areas like staff recruitment and retention, compliance with new state or federal guidelines, advances in practice, etc.) and opportunities for collaboration. An informal body incorporated as a nonprofit – the Jefferson County EMS Association – already exists and meets every four months but would benefit from enhancements. According to key informants, meeting attendees typically include hospital representatives, county emergency management and dispatch officials, and some EMS providers. Meetings are not designed to create or tackle overriding goals, but rather to keep everyone on the same page for activities taking place, such as changes at hospitals or upcoming classes.

- **Joint training.** The conduct of joint training sessions involving multiple departments could be an important step toward the implementation of consistent quality of care protocols across the county. Over the longer term, they also could make it easier for agencies to consider sharing staff. Joint training sessions planned by a single training administrator also could relieve the administrative burden on individual departments for planning and implementing training sessions.

  The individual taking on this responsibility could be rotated among participating departments or medical directors; or, conversely, a permanent countywide EMS training administrator could be selected from existing staff by the participating agencies (in which case there may be justification for some form of financial reimbursement for the selected agency). The participants also could

elect to hire a new individual for that task who could be housed in one of the municipal agencies (with the cost shared by all), or the position could be housed at the county with possible county financial support or cost sharing.

- **Joint legislative advocacy.** In conjunction with pursuing service sharing activities, EMS providers may find value in jointly advocating for changes in state laws and policies that would address some of their mutual challenges. The most prominent such change would be an increase in reimbursement for EMS responses to patients who are enrolled in Medicaid. According to the Wisconsin EMS Association,[6] Medicaid reimbursement for ambulance services falls well below the actual cost and the state has not increased its reimbursement rate in more than a decade.[7]

  Other potential issues that could involve joint advocacy include:

  - Seeking changes in Medicaid, Medicare, and private insurance reimbursement policies to specifically allow payment for community paramedicine activities, which reduce strain on the EMS system caused by non-emergency, non-transport 911 calls (see further discussion of community paramedicine below). Related to such an effort could be advocacy to enhance the ability of EMS providers to receive reimbursement for no-transport EMS responses as well as transport to more appropriate patient care facilities than hospital emergency rooms, such as primary care, urgent care, or mental health and substance abuse treatment centers.[8]

  - Defining EMS as an essential municipal service in State statutes, similar to that same designation for police and fire services. This definition would not guarantee more state funding, but could help EMS providers make the case for it at the local level.

- **Consolidated dispatch.** Consolidating all EMS dispatching for Jefferson County-based providers at the Jefferson County communications center arguably would not be a small-scale endeavor, as it likely would entail the need for negotiation and formal agreement between the county and those providers that currently dispatch themselves or rely on another entity besides the county. Also, whether to seek to include EMS providers who are based in other counties but provide services in Jefferson County would need to be determined, and cost sharing for additional dispatch staff would need to be considered.

  Nevertheless, while involving more time, effort, and possibly expense than other small-scale options, such a move should be considered in light of the improvements it could generate in terms of mutual aid responses and data collection. Also, if there is interest in such an approach, then technological upgrades for the Jefferson County communications center also could be contemplated, including implementation of computer automated dispatch (CAD) technologies that could provide for automatic EMS vehicle location by dispatchers as well as the ability for

[6] The WEMSA promotes education, shares information, and facilitates legislative action on behalf of its members.
[7] More information can be found in a 2020 Medicaid Reimbursement issue brief by the Wisconsin EMS Association.
[8] The federal Centers for Medicare and Medicaid Services (CMS) recently initiated a five-year "ET-3" pilot program (Emergency Triage, Treat, and Transport). Beginning in the fall of 2020, CMS will allow for reimbursement to EMS providers who "1) transport an individual to a hospital emergency department (ED) or other destination covered under the regulations, 2) transport to an alternative destination partner (such as a primary care doctor's office or an urgent care clinic), or 3) provide treatment in place with a qualified health care partner, either on the scene or connected using telehealth." First round applications are closed but EMS providers in Jefferson County may wish to determine if and how they may be eligible to apply, and subsequently advocating to their state and federal legislators to open another application period for the program.

local departments to view response time and other data available to the center. Such upgrades also could pave the way for consideration of enhanced mutual aid or automatic aid agreements between groups of municipalities or across the entire county. Upgrades of this nature would need to account for the cost to the county to add the capabilities, local costs in upgrading the communication equipment on their ambulances to match the county's, one-time licensing fees, and increased annual maintenance costs.

- **Joint quality and/or case management**. While maintaining their independence, the EMS providers could collaborate to hire one or more staff to collect various forms of operational performance data that would be shared with each of them. This effort also could involve data analysis and regular reports that could be used to maintain and enhance quality management and control.

  Similarly, the municipalities and county could consider jointly using such staff – or jointly hiring separate staff – to conduct "community paramedicine" services that involve using EMS staff to proactively serve heavy users of 911 services and hospital emergency rooms. Community paramedics perform a range of services outside of emergency care, such as providing or connecting patients to primary care services, completing post-hospital follow-up care, providing health education programs, and helping patients integrate with local health care systems and providers. An EMS position stationed at dispatch centers also could support paramedicine activities by acting as medical triage for low-acuity 911 calls.

  The city of Greenfield in Milwaukee County is an example of a combined fire/EMS department that has hired a case management officer to conduct such follow-up to reduce service calls among heavy users, as well as to conduct educational activities aimed at promoting health and safety and discouraging 911 calls for non-emergency medical issues. An EMS case manager or case managers also could work more closely with senior facilities to reduce usage by those facilities. Similar to the training officer, quality and/or case management staff could be housed in one of the participating agencies with the cost shared by all, or potentially housed at the county (with potential county cost sharing).

## Sub-Regional Collaboration

As noted in an earlier section, Watertown, Lake Mills, and Johnson Creek discussed a potential agreement in early 2020 to initiate a formal fire and EMS service sharing framework. While the agreement has not been ratified by the three municipalities and does not include the private Lake Mills EMS agency, it could serve as a model for municipalities in other parts of the county to engage in sub-regional collaboration.

On the EMS side, the proposed agreement stipulates the following cooperative activities between the Watertown, Johnson Creek, and Lake Mills fire departments:

- Creating standard operating procedures that allow paramedics from one department to use medical equipment and supplies of another department.

- Allowing for patient transport services from another department if the department where the incident occurs is stretched too thin.

- Allowing for operations under the direction of an already-on-scene paramedic from another department.

- Allowing a department to request that equipment and personnel from a neighboring department be temporarily transferred to its station in cases where the department has depleted its resources or is otherwise temporarily unable to respond to emergency incidents.

The agreement also calls on the departments "to work together to facilitate other forms of providing shared services, including joint staffing, shared equipment, community risk analysis, creation of standard operating procedures, and joint training, administration, fire prevention and education."

Other Jefferson County departments and jurisdictions could consider similar service sharing agreements with neighboring communities that mirror the proposed contract between these municipalities, or that incorporate at least some of the items from the bulleted list above. There may also be opportunities for private EMS providers to be part of such agreements, or for others to join an agreement between Johnson Creek, Watertown, and Lake Mills if it is effectuated.

While some of the service sharing stipulations in the agreement already are taking place on an informal basis in other parts of the county, there could be great value in formalizing such arrangements to ensure that there is clear understanding of the role that neighboring communities can and will play in providing back-up and mutual aid. Also, the proposed Watertown-Lake Mills-Johnson Creek agreement clearly takes steps beyond the informal agreements currently in place elsewhere in the county with regard to items like "change of quarters" requests to neighboring departments during times of depleted resources, as well as shared patient transport.

Communities also could seek to build upon the vague commitment in the proposed agreement to work together on creation of joint training and staffing, standard operating procedures, shared equipment, etc. For example, the following features could be included in any new sub-regional service sharing agreements:

- Cross-credentialing of AEMT and paramedic level personnel across departments, which would make more people available to staff shifts and to respond during times of high call volumes. This would also help ensure that the skills of individuals trained to those levels in smaller communities do not become rusty through lack of consistent use.[9]

- Consolidating administrative and leadership functions across several departments, which would provide uniformity in operational activities as well as possible budget savings. Often,

[9] Cross-credentialed staff may also resolve concerns regarding the administrative and financial burden of getting an AEMT licensed department up to the paramedic license level, as paramedics may be able to operate under the highest medical license among the providers for which they are on the department roster.

retirements of people in leadership positions provide a window for such consolidated administration or leadership.

- Consolidating dispatch at the county level as described above and creating dispatch protocols that would ensure responses from the closest and most appropriate agency regardless of municipal boundaries. If consolidation is accompanied by investment in enhanced dispatch technology, then automatic aid agreements also could be considered, under which multiple agencies would be dispatched simultaneously to respond to certain EMS incidents.

- Leveling POC and POP pay across departments, and at a rate more competitive with other regional employers.

- Moving toward shared full-time and part-time staff in areas experiencing particular recruitment challenges.

## County-Supported System

The most extensive set of options for addressing the challenges facing Jefferson County EMS providers would involve the creation of a coordinating and oversight role within county government that could also extend to administrative and financial roles. While such a concept was by no means an impetus for this study, it would be logical to consider such an approach if there is a desire among policymakers to ensure consistency in EMS service quality and responsiveness across the county.

County government also may be better resourced or better able to generate resources than individual municipalities; it could be instrumental, therefore, in helping municipalities achieve desired and consistent levels of service and appropriately compensate their part-time staff.

Carving out a greater role for Jefferson County could involve some of the smaller-scale options cited above – like housing quality management, case management, or training administrator positions within county government and consolidating EMS dispatch within the county communications center. The county also could play a lead role in establishing countywide standards and protocols and could assume responsibility for data collection and monitoring to ensure standards are being met.

More comprehensive options to enhance the county role even further would be creation of a countywide EMS director and/or other administrative staff within county government and/or having the county hire and pay for a single medical director to be used by all municipal and private providers in the county. Some Wisconsin counties also function as actual EMS providers, though that is less common and we do not detect interest in such an arrangement in Jefferson County.

This range of activities is not uncommon for county governments in other parts of the state, and we describe a few examples in **Appendix A.** Some of the specific forms of support that might be offered by Jefferson County include:

- Hiring an **EMS Coordinator** who would work with the municipal and private providers to establish regional standards for first response and ALS response times, quality of care,



staffing and training requirements, etc. The position also could coordinate and oversee training and continuing education and could be the direct report for a countywide EMS medical director hired or contracted by the county. Depending on the coordinator's precise responsibilities, support staff (both administrative and data/IT) may be required, as well.

- Coordinating and staffing an **EMS Council** with representation from municipalities, private ambulance companies, and hospitals, as well as county supervisors and citizens. Such a council could broadly monitor and enforce compliance with countywide protocols and response time standards, receive reports on and respond to data trends, and provide guidance and input to municipal and county elected officials to ensure there is sufficient funding to support the level of services desired in the county. The council also could play a role in strategic planning and in monitoring municipal or sub-regional contracts with private providers.

- Providing **supplemental financial support** to municipal EMS providers within the county that would be designed to ensure that each maintains a level and quality of service that is mutually determined by the county and its municipalities. Such support could be in the form of an annual stipend that is allocated to individual providers based on a mutually agreed-upon formula (that is the approach used by Milwaukee County) or it could consist of direct county investment in countywide services or capital needs. The range of uses for such support could include assistance to implement more competitive pay scales for part-time EMS personnel; investments in new technology (including for dispatch), equipment, or apparatus; or direct payment for medical direction, training, dispatching, and other joint services.

  The county may be especially well-positioned to provide financial support given that there is an exemption in state property tax levy limits for EMS that would allow for the enactment of a new property tax levy add-on at the county level to finance such improvements.[10] Municipalities also could avail themselves of this option but would possibly run into challenges with statutory expenditure restraint provisions if trying to generate the extra funds themselves or if they received and spent direct support from the county.

  Also, implementing such a tax at the county level could be a means of ensuring equity across all cities, villages, and towns in supporting EMS. Some municipal officials have expressed concern that currently, contractual arrangements between towns and larger municipalities for EMS may not be providing reimbursement for the full cost of the services received. Of course, county policymakers would need to approve such a tax and would need to gauge public support for such an approach.

As mentioned above, some counties have become the providers of EMS themselves, employing their own EMTs and paramedics and purchasing and housing their own ambulances. This model typically relies on the support of POC responders living throughout the county who arrive at a scene and begin

[10] Per Wisconsin Statute 66.0602(3)(e)6, counties may use a levy limit exemption to raise levy in support of EMS services. However, legal counsel would be required to determine the specific nature of how this exemption could be utilized by Jefferson County and whether expenditure restraint provisions of state law might impact the practicality of using this exemption if direct payments are made by the county to municipalities.

care prior to the arrival of an ambulance. This approach could be used solely for ALS or for all emergency medical responses, thus eliminating the role of municipal EMS agencies entirely.

Such a scenario would be the most comprehensive approach for addressing the challenges faced by municipal providers and ensuring a level of consistency across the county, though policymakers may not be ready to embrace it given the pride taken by municipalities in their first response capabilities and the approaches they have developed for providing or contracting for paramedic-level services. It should also be noted that county-run models that make use of local POC personnel also struggle with dwindling rosters. Thus, moving toward career models – an action most plausibly supported by county financing – may be a necessary step to maintain and improve quality of care in the long term.

## Summary

Each of the collaboration options discussed in this section would help Jefferson County communities respond to the challenges facing their EMS departments and further efforts to produce consistent and higher quality service. While some could be added at no cost or with minimal expense, however, others would require considerable new investment.

In fact, some of the enhancements that could be implemented at the county level – including the hiring of staff like a new coordinator and case manager(s), investment in new dispatch equipment and technology, and direct county fiscal support to enhance staff salaries and capacity – could run into the hundreds of thousands of dollars or more. Consequently, elected leaders could opt to start small – perhaps with a mix of small-scale and sub-regional collaborations. Conversely, given the importance of EMS to the region's well-being, they may see the value of immediately moving toward countywide enhancement and consistency and waste no time in launching discussions at the county level.

# CONCLUSION

Our examination of EMS capabilities and challenges in Jefferson County finds that greater collaboration among existing providers – and potential involvement by county government – could be useful mechanisms for addressing common challenges and preparing for the future. While county residents, for the most part, should not be highly alarmed about the quality and availability of current emergency medical services, evidence of strain has surfaced in some communities. In addition, fragmentation of service delivery, dispatch, and medical direction means that there is some inconsistency in service levels across the county's cities, villages, and towns.

On the positive side, we find that Jefferson County municipalities have identified approaches to both first response and advanced life support services that they believe meet their individual needs. Most also appear largely satisfied with current response times and service quality. Indeed, the question of whether change and increased investment are necessary may be predicated on each community's own service expectations and its individual judgement as to whether those expectations are currently being met.

Efforts to answer that question, however, should not just consider current conditions, but also must take into account what the future may bring. While acceptable levels of service may be the norm today, growing call volumes and concerns about the ability of agencies to recruit and retain part-time staff may necessitate new service models. At the very least, those factors are likely to require a far greater degree of mutual aid and cooperation among neighboring jurisdictions, as evidenced by an intergovernmental agreement that was recently discussed by fire departments in Watertown, Johnson Creek, and Lake Mills.

As municipal and county leaders in Jefferson County consider the steps needed to provide high-quality EMS in the future, we would urge them to contemplate the possible benefits that could emerge from the range of new service sharing possibilities we present in this report:

1. Each of the EMS agencies could benefit from certain "small-scale" service sharing steps, including joint training, quality management, case management, dispatch, and advocacy. Some of these steps could be initiated simply through establishment of regular joint meetings among the county's EMS leaders and enhancement of recent efforts to promote greater coordination among its medical directors. Fully and optimally implementing them, however, likely would require the hiring of a limited number of new staff who could be housed in municipal agencies or perhaps in county government.

2. A higher level of collaboration would involve the spread and expansion of formal service sharing agreements among groups of neighboring jurisdictions similar to the one discussed for Watertown, Johnson Creek, and Lake Mills. The development and ratification of such agreements would be an improvement over current informal mutual aid agreements by laying out specific commitments and forms of cooperation, including guidelines for how multiple communities would respond to calls and provide various forms of back-up. Just as important, such formal agreements would take political considerations out of mutual aid decisions and standardize operational protocols among different agencies when jointly responding to medical emergencies. Such enhanced sub-regional collaboration does not

need to preclude the small-scale options cited above but would actually be made easier because of them.

3. The most ambitious approach would be to consolidate some administrative control for EMS at the county level. A model in which Jefferson County coordinated countywide EMS standards and protocols, training, medical direction, and dispatching – while also providing financial support to raise the pay of part-time staff and otherwise support enhanced staff capacity – would constitute a comprehensive strategy for addressing the challenges identified in this report. Of course, this also would be the most expensive approach and would necessitate a willingness among the individual agencies to relinquish some of their own administrative control, although the latter issue could be addressed somewhat via the creation of a countywide EMS Council with appropriate municipal representation.

We hope this analysis sheds further light on the current state and future challenges associated with EMS in Jefferson County. Going forward, we would be pleased to provide technical support for any efforts to implement the policy options cited in this report or otherwise assist the county and its public and private EMS providers in pursuing greater service sharing and collaboration.

# APPENDIX A

## Examples of Wisconsin Counties with a Role in EMS

### Milwaukee County

Milwaukee County provides administrative oversight and coordination for EMS while leaving service provision to municipal fire departments and ambulance providers. The county's role includes providing for the continuing education of paramedics and EMS technicians, administering protocols and standards of care delivered by paramedics, securing and paying for medical direction, conducting quality management and control, maintaining a data repository of patient care records, and coordinating an EMS Council consisting of county, municipal, medical, and citizen representatives. The county also distributes funds to the various municipal departments per a formula approved by them to supplement local budgets. In 2020, the budgeted distribution was $1.5 million.

### Portage County

Portage County's model involves local and county EMS response, an EMS Coordinator housed at the county, region-wide medical direction and dispatch coordination, and grant funding for local departments.

Three fire departments provide paramedic-level care and transports. These departments are supported by EMR volunteers across the county, who are dispatched from their communities when an ambulance is called and usually arrive on scene and start administering care before the ambulance arrives. The county itself operates an EMS service that serves large events, special events, and provides assistance when local fire department resources are overwhelmed.

The county also plays a role in region-wide coordination; a medical director provides direction for the entire region and all emergency calls are dispatched from the county's communications center. Finally, an EMS Coordinator housed at the county supports EMS providers in achieving performance benchmarks such as response time reliability, operational safety, and an organizational culture of cooperation and mutual support. The county offers grants to support local departments in achieving the quality initiatives driven by the EMS Coordinator.

### Waushera County

Waushera County EMS (WCEMS) operates a fleet of six ambulances and one quick response vehicle. Ambulances are based in four stations licensed at the critical care paramedic level. They are staffed by a mix of full- and part-time personnel with licensure levels ranging from EMT to Critical Care Paramedic.

The county ambulance service is also supported by first responders in eight local fire departments that operate using first response groups comprised of volunteers; some have true "volunteers" who receive no wages for responding to a call, while others compensate on a per call basis. The county supports these groups by providing EMS supplies, and all of the groups share the same medical

director with the county. This means that while the county has no direct control over the operations of the fire department EMS responders, they can effectively rely on shared protocols through the medical director.

The county's model is enhanced through the existence of these volunteers, who may or may not arrive on scene and begin giving care prior to the county ambulance or paramedic fly vehicle. However, similar to Jefferson County, volunteer numbers have been dwindling. Fortunately, the county model is designed such that the EMS volunteers enhance their services but are not relied on to operate.

WCEMS operates under a five-member public safety committee, which meets monthly. The members are County Board supervisors. The EMS answers to the county Administrator and the committee plays an advisory role.

### Door County

Door County is one of two counties in Wisconsin that offers a countywide paramedic service. A mix of full- and part-time paramedics and EMTs are used to provide primary ambulance staffing. Eleven EMR groups with more than 170 emergency medical responders support the ambulance service. These responders are not county employees, but rather employees of the local fire department or municipality who are paid per call. These responders are heavily relied on by the county, typically arriving at a scene and beginning care prior to the arrival of an ambulance, often within five minutes of being dispatched. The county supports the existence of these responders by reimbursing each municipality $150 per licensed EMR annually, as well as covering state-mandated refresher trainings, protocols, and the cost of a county-wide medical director. The county also provides county-wide dispatch services. Door County EMS operations are overseen by the county's public safety committee, which is comprised of seven county board supervisors.

### Fond du Lac County

Fond du Lac County primarily contributes to the EMS system by providing broad oversight and funding. There are five ambulance districts in Fond du Lac County. The different ambulance companies, some of which are municipal and some independent, serve all or part of a district. The county allocates about $330,000 that is distributed across the EMS providers depending on what percentage of each district they serve and the size of their service population. The subsidy typically increases by 2 or 3% annually.

For oversight, the county uses an advisory committee comprised of 10 members appointed by the county executive, including six from the six communities conducting an ambulance program, two providers of ambulance service (one privately-operated and one volunteer system), and two citizens. The committee meets once per year and primarily discusses jurisdictional changes. The county also has contracts with each provider which define the level of services and require an annual equipment check. The county communications center provides EMS dispatch service for the entire county, with the exception of the city of Ripon.