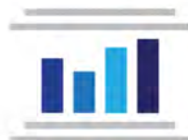
SHOULDER TO SHOULDER

Possibilities for Enhancing EMS Collaboration in Milwaukee County



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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 policymakers and citizens in Milwaukee County with information and analysis to help enlighten them on the roles played by different levels of government in the delivery of emergency medical services in Milwaukee County and to identify potential policy options to enhance intergovernmental collaboration and cooperation with regard to those services.

Report authors would like to thank the 12 municipal fire chiefs in Milwaukee County and officials from the Milwaukee County Office of Emergency Management for taking the time to meet with us, provide us with data, and patiently answer our questions. A special thanks goes to North Shore Fire Department Chief Robert Whitaker for providing information and answering questions related to our modeling of a hypothetical new EMS structure for that department. We also thank officials from Wake County, North Carolina for providing us with information and answering our questions related to our peer county analysis.

Finally, we thank Milwaukee County and its Office of Emergency Management for commissioning this research and for its financial contribution that helped make this report possible.

SHOULDER TO SHOULDER

Possibilities for Enhancing EMS Collaboration in Milwaukee County

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INTRODUCTION

Milwaukee County's Emergency Medical Services (EMS) system offers a unique example of intergovernmental cooperation, combining county-level oversight and coordination with municipal-level service provision. Created in the 1970s, the EMS system serves all 19 municipalities in Milwaukee County.

Milwaukee County's Office of Emergency Management (OEM) serves as system administrator while municipal fire departments contract with the county to provide both Advanced Life Support (ALS) and Basic Life Support (BLS) services. OEM's role is to provide – among other things – administration, medical direction, education, quality assurance, data collection, and medical communications for the municipal fire departments. Meanwhile, municipal fire department personnel provide both BLS services, which include CPR, defibrillation, and administration of medications; and ALS, which includes more advanced pre-hospital and inter-facility emergency care and patient transportation.

Despite the highly coordinated nature of the EMS system in Milwaukee County, OEM and fire department leaders have expressed interest in exploring enhanced collaboration between departments and even consolidation of certain service elements. This interest stems from a variety of factors, including both human resources and financial challenges as well as a sentiment that service levels might be improved and efficiencies gained by consolidating certain functions. It also aligns with the principles set forth in the EMS Agenda 2050: A People-Centered Vision for the Future of Emergency Medical Services, published in 2019.

In this report, we address that interest by analyzing a spectrum of options that exist with regard to further EMS service sharing among the individual departments and between them and OEM. We begin by looking at options on the relatively uncomplicated end of the spectrum, such as sharing ambulance maintenance and consolidating the procurement and management of supplies. We then move on to more extensive options like enhanced collaboration and consolidation with regard to mobile integrated healthcare (MIH) services.

The final section of the report discusses the experience of Wake County, North Carolina, where fire response and protection and EMS are conducted by separate agencies. Using that community as a potential model, we envision what such an approach might look like in Milwaukee County's North Shore, and also provide thoughts and insights on how such separation might work in other parts of the county or countywide.

Our programmatic and fiscal analysis has been aided by officials from OEM as well as the fire chiefs from the individual departments in the county, who helped identify options and provided both quantitative data and insights in a series of interviews. The study is designed not to point local officials to a specific course of action, but rather to provide sufficient analysis to allow them to consider potential improvements to an EMS system in Milwaukee County that already demonstrates a high degree of collaboration and effectiveness.

BACKGROUND

Milwaukee County is the most populous county in the state with 19 municipalities over 241 square miles. According to the U.S. Census Bureau, the county had 918,921 residents in 2022 and the population density is 3,802 residents per square mile. Within the county there are 12 municipal fire departments that respond to fire and emergency medical calls.

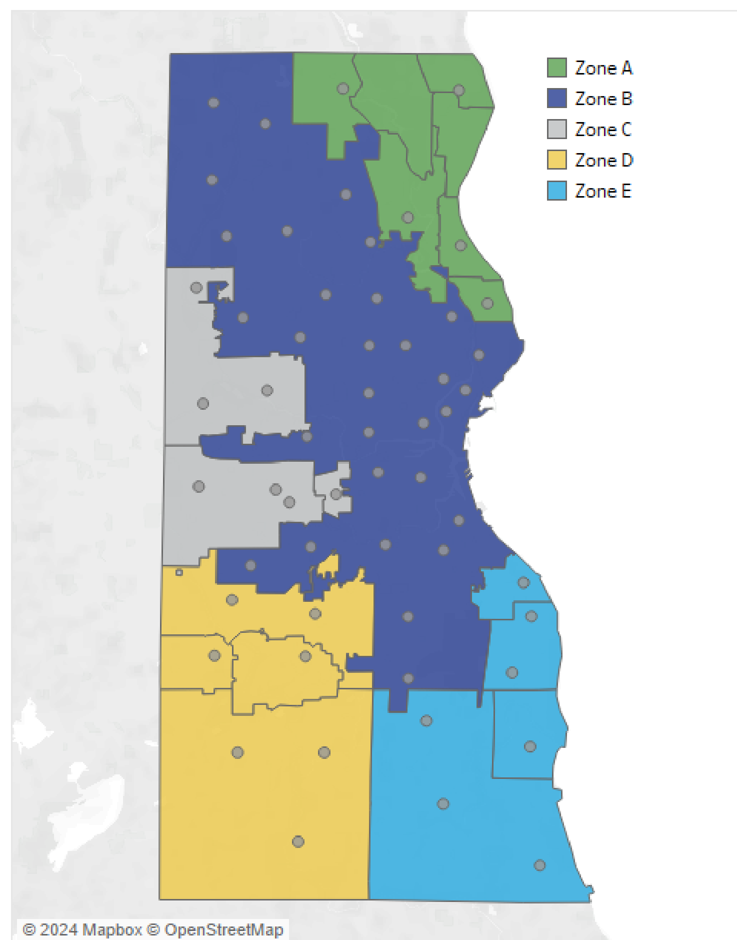
The county operates an international airport, which has its own fire department and EMS response team. Many of the county's hospitals are located in the center of the county with a few in the southern half. The Milwaukee Region Medical Center, located in Wauwatosa in the western section of the county, houses Froedtert Hospital, which is the only adult Level 1 trauma center in eastern Wisconsin.

The Milwaukee County Office of Emergency Management (OEM) is charged with preparing for and responding to disasters and emergencies in the county. One of OEM's primary functions is to coordinate and oversee EMS among the municipal fire departments in the county. It does so by, among other things, facilitating training and communication, establishing protocols for emergency medical care, collecting data, and providing medical direction.

OEM has undergone various operational changes over time. For instance, it had previously been part of larger county departments but now serves as a freestanding office within the county. There has been county involvement with local EMS since the county's first paramedic unit was put into service by the West Allis Fire Department in 1973. That involvement has essentially called for the county to manage (but not provide) Advanced Life Support (ALS) services in the county while allowing municipal fire departments to administer Basic Life Support (BLS) responses (the next section contains a more detailed description about ALS and BLS). A county-appointed EMS Council – also discussed in greater detail in a later section – has broad jurisdiction over countywide EMS policies and protocols.

Map 1: Milwaukee County Fire Stations

Fire Stations by Municipality and Emergency Management Zones



Sources: Fire Departments' Websites and Milwaukee County Office of Emergency Managem

For emergency preparedness purposes, the county's municipalities are organized into five Emergency Management Zones based on their geography (see **Map 1** on the previous page). **Table 1** shows the fire departments serving the municipalities in each zone.

Emergency Management Zone A

Zone A is comprised of the seven North Shore municipalities: the villages of Bayside, Brown Deer, Fox Point, River Hills, Shorewood, and Whitefish Bay, and the city of Glendale. They contain 7% of the county's population and 10% of its area. Although these seven communities are similar in their location and smaller populations relative to most other municipalities in the county, there is much variation among them. Shorewood and Whitefish Bay are the most densely populated while Glendale and Brown Deer have substantial commercial property that produces the need for higher levels of fire protection and EMS. Bayside, Fox Point, and River Hills have comparatively little commercial property and many large single-family residences.

Table 1: Milwaukee County Municipality Population and Square Mileage

Municipality	Served by	Population, 2022	Area (sq. mi.)
Zone A North			
Bayside	North Shore FD	4,506	2.39
Brown Deer	North Shore FD	12,609	4.4
Fox Point	North Shore FD	6,643	2.86
Glendale	North Shore FD	12,983	5.77
River Hills	North Shore FD	1,530	5.16
Shorewood	North Shore FD	13,526	1.59
Whitefish Bay	North Shore FD	14,631	2.12
Zone B Central			
Milwaukee	Milwaukee FD	563,305	96.18
Zone C West			
Wauwatosa	Wauwatosa FD	47,289	13.23
West Allis	West Allis FD	58,950	11.38
West Milwaukee	Milwaukee FD	4,096	1.12
Zone D Southwest			
Franklin	Franklin FD	36,066	34.58
Greendale	Greendale FD	14,540	5.57
Greenfield	Greenfield FD	37,071	11.53
Hales Corners	Hales Corners FD	7,562	3.19
Zone E South			
Cudahy	Cudahy FD	17,796	4.77
Oak Creek	Oak Creek FD	36,087	28.45
Saint Francis	Saint Francis FD	9,422	2.57
South Milwaukee	South Milwaukee FD	20,309	4.83

Source: 2022 Population Estimates from U.S. Census Bureau
* This table lists municipalities by region of county and then alphabetically.
** Bayside lies partially in Ozaukee County, so the sums of the municipalities will not be equal to the Milwaukee County totals.

Emergency Management Zone B

This zone is comprised entirely by the city of Milwaukee. It contains 61% of the county's population and 40% of its area. The city has a population density of about 5,800 residents per square mile, much higher than the county average of 3,800 residents per square mile. The city is a mix of commercial, residential, and manufacturing properties. It is the economic and entertainment hub of the southeast corner of Wisconsin; tens of thousands of workers commute into the city each day and millions are drawn from across the state to its sports and entertainment venues, requiring EMS service levels that go well beyond the needs of residents.

Emergency Management Zone C

To the west of the city of Milwaukee are West Allis and Wauwatosa, respectively the second and third most populous municipalities in the county. These two cities plus the village of West Milwaukee

comprise Zone C and contain 12% of the county's population and 11% of its area. The population density of West Allis is comparable to that of Milwaukee at about 5,200 residents per square mile whereas Wauwatosa and West Milwaukee are less populous and closer to the county average at about 3,600 residents per square mile.

West Allis hosts the annual Wisconsin State Fair for two weeks each summer, which greatly elevates its EMS needs during that time. Wauwatosa is the home of the Milwaukee Regional Medical Center, which not only contains a Level I Adult Trauma Center but also a Level 1 Pediatric Trauma Center as well as an academic medical center.

Emergency Management Zone D

The southwest section of the county contains the cities of Greenfield and Franklin and the villages of Greendale and Hales Corners. These four municipalities have 10% of the county's population and 23% of its area. Greenfield, the only municipality of these four to border the city of Milwaukee, has the highest population density of about 3,200 residents per square mile. Greendale and Hales Corners have lower densities at about 2,600 and 2,400 residents per square mile, respectively. Franklin, in the far southwest corner of the county, is the second largest municipality in the county by area, with more than 34 square miles. Its population density is only about 1,000 residents per square mile.

Emergency Management Zone E

Zone E is comprised of four cities: Cudahy, Oak Creek, South Milwaukee, and St. Francis. This region has 9% of the county's population and 17% of its area. All four of these cities have some shoreline on Lake Michigan. Although Mitchell International Airport is located in the city of Milwaukee, its influence is felt in this region due to its size and proximity. St. Francis, Cudahy, and Oak Creek all share a border with Milwaukee.

St. Francis is the smallest municipality in this region by population and area but its population density, 3,700 residents per square mile, is in line with the county average. Cudahy and South Milwaukee are each about twice the size of St. Francis in both population and square mileage. Oak Creek stands out from the other three cities in that its population and area are significantly higher but its population density is much lower at about 1,300 residents per square mile.

OVERVIEW OF FIRE DEPARTMENT EMS ACTIVITIES

As noted previously, while OEM provides administrative coordination and oversight for the EMS system in Milwaukee as a whole, local fire departments provide EMS responses. Twelve municipal fire departments provide EMS in the county as well as two non-municipal departments. The municipal departments include the consolidated North Shore Fire Department (NSFD), which serves the seven North Shore municipalities. Each of the other municipalities in the county houses its own fire department with the exception of West Milwaukee, which contracts for service from the Milwaukee Fire Department.

One of the non-municipal departments is the 128th Air National Guard Fire Department based at the county's General Mitchell International Airport (GMIA) and operated by the county. The other unit, Milwaukee County EMS Special Events, is based in OEM and responds to calls for public events held at venues owned by the Wisconsin Center District – like the UW-Milwaukee Panther Arena and Fiserv Forum – and at Milwaukee County-owned venues like the Milwaukee County Zoo. OEM also provides services for the department at GMIA. The GMIA department fielded 331 EMS calls in 2022 while the MCEMS special events unit responded to 206 EMS calls. Combined, these two units responded to fewer than 0.5% of the county's calls in 2022 and because of this low rate, they are not considered in this report.

Table 2 shows the 12 municipal fire departments in Milwaukee County, citing the populations they serve and the volume of EMS calls to which they responded in 2022 (this is the last year for which we have complete response data from each of the 12 departments). The Milwaukee Fire Department (MFD) responded to more than half of the total EMS calls in the county, while the West Allis Fire Department had the second highest total (despite serving fewer residents than NSFD, which was second in terms of population served). The Hales Corners Fire Department serves the fewest residents and responded to the fewest EMS calls (less than an average of three per day in 2022). A breakdown of EMS calls by municipality is shown in **Table 11** in the Appendix.

Table 2: Fire Department Populations Served and EMS Responses, 2022

Fire Department	Region of County	Population Served, 2022	EMS Responses, 2022
Milwaukee FD*	Central	567,401	67,324
North Shore FD	North	66,428	7,414
West Allis FD	West	58,950	8,568
Wauwatosa FD	West	47,289	5,730
Greenfield FD	Southwest	37,071	5,273
Oak Creek FD	South	36,087	4,221
Franklin FD	Southwest	36,066	4,005
South Milwaukee FD	South	20,309	2,715
Cudahy FD	South	17,796	1,782
Greendale FD	Southwest	14,540	1,828
Saint Francis FD	South	9,422	1,253
Hales Corners FD	Southwest	7,562	974

Source: 2022 Pop. from U.S. Census Bureau, Responses from County OEM Dashboard. * Includes GMIA and MCEMS Special Events.

Table 3 shows full-time equivalent (FTE) sworn staffing levels[1] for the 12 fire departments and their 2024 budgeted expenses.[2] Unlike some counties, which have separate county or municipal agencies that handle EMS calls while leaving fire responses to municipal fire departments, Milwaukee County's municipal fire departments are fully responsible for both fire and EMS response. Consequently, they do not generally have staff positions dedicated to one or the other type of response and their fire and EMS budgets are integrated.

Table 3: Fire Departments by Size

Fire Department	Staff Size (FTEs)	Budgeted Expenses, 2024
Milwaukee FD	752	$143.0 Million
West Allis FD	103	$16.1 Million
North Shore FD	101	$18.3 Million*
Wauwatosa FD	100	$16.3 Million
Oak Creek FD	58	$9.6 Million
Greenfield FD	53	$8.4 Million
Franklin FD	48	$8.0 Million
Cudahy FD	26	$4.0 Million
South Milwaukee FD	25	$3.8 Million
Greendale FD	20	$3.1 Million
Saint Francis FD	17	$2.9 Million
Hales Corners FD	14.8	$1.4 Million

Source: Fire Department Surveys. Listed in order of FTEs.
* As a freestanding consolidated department, NSFD has its own administrative infrastructure, the cost of which is included in its budget. Those costs may not be included in the budgets of other fire departments, as services like accounting and human resources may be provided by municipal staff outside of the department.

Again, MFD dwarfs the others with more than 700 FTEs and a 2024 budget that exceeds the combined budgets of the other 11 departments. The next three largest departments – North Shore, West Allis, and Wauwatosa – each have about 100 FTEs and budgeted expenses between $15 million and $20 million. The remaining eight, all in the south and southwest regions of the county, have fewer than 60 FTEs apiece.

Some important similarities exist among the 12 municipal fire departments of the county. Despite the wide range of department sizes, all of them have professional staff; none of them rely on volunteers. Also, the fire departments do not split firefighting and EMS duties among their staff; each employee is trained to be both a firefighter and (minimally) an emergency medical technician (EMT). Some EMTs receive additional training up to the level of paramedic. (See **textbox** for more information about licensing levels.)

EMS License levels

Emergency Medical Technician - in addition to basic, non-invasive first aid, EMTs are trained to perform more invasive medical skills such as tracheotomies, and in the use of tourniquets and cervical collars. They are able to administer oxygen and can provide some types of medications, including Narcan for opioid overdoses. EMTs are licensed as Basic or Intermediate, but that distinction does not affect this report.

Advanced EMT – these technicians have all of the skills of an EMT, and in addition they can start an IV and can administer a wider range of medications.

Paramedic – they have all of the skills of Advanced EMTs with the addition of invasive procedures such as using a needle for chest decompression and intubation. Paramedics are able to administer the widest variety of medications.

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[1] "Sworn staff" refers to trained and certified firefighters, EMTs, paramedics, and command staff employed by fire departments but not civilian administrative or case management positions. Departmental staffing numbers in this report refer to sworn staff unless otherwise noted.
[2] Based on responses from departments and our cursory review of their budgets, we were unable to determine for each department whether capital expenditures are included in budgeted expense figures or if they are limited only to operating expenses. While we acknowledge this shortcoming, it is important to note that these figures are intended only to provide high-level comparative insights on departmental spending among the departments.

Staff training levels help to determine how departments that provide EMS are licensed by the state, which in turn dictates the level of EMS they can provide. EMS responses are identified as either a basic life support (BLS) or advanced life support (ALS) level of service. (See the **textbox** for more information about service levels.)

Most fire departments in the county are licensed to provide ALS. For smaller departments, that may mean a higher percentage of their employees must be licensed as paramedics so they can meet minimum coverage standards to achieve that level of licensing. **Table 12** in the Appendix cites each department's paramedic licensing level.

EMS Service Levels

Basic Life Support (BLS) – a set of life-saving medical procedures performed in the early stages of an emergency until more advanced medical care can be provided. Examples of BLS are CPR and bleeding control. These techniques are generally performed by first responders.

Advanced Life Support (ALS) – a set of more sophisticated medical procedures to stabilize patients who may have suffered a life-threatening event like cardiac arrest, acute coronary syndrome or stroke before transport to a hospital. Examples of ALS are advanced airway management and IV access. These techniques are generally performed by paramedics.

Source: American Red Cross

In recent years, a growing component of EMS in Milwaukee County has been Mobile Integrated Healthcare (MIH). This is a program wherein EMS teams proactively work with high utilizers of EMS and/or residents with chronic conditions to prevent medical emergencies or other circumstances in which the individual may be inclined to call 911 for medical help. Countywide MIH availability is a goal of OEM so in our descriptions of the fire departments, we include the status of MIH in their communities.

Because EMS response in Milwaukee County is almost exclusively a function of municipal fire departments, each department must be staffed and equipped both to respond to relatively infrequent fire-related calls that may require several pieces of apparatus and multiple fire crews, as well as much more frequent EMS calls that typically require fewer responders and vehicles but a high level of emergency medical training. Below, we summarize how each individual municipal fire department is staffed, equipped, and budgeted to meet its EMS responsibilities.

Milwaukee Fire Department

Milwaukee Fire Department	
Population Served, 2022	567,401
EMS Responses, 2022	67,324
Budgeted Expenses, 2024	$143.0 Million
Budgeted FTEs, 2024	752
Fire Stations	29
Active Ambulances	14*
Mobile Integrated Healthcare	MIH Program in Fire Dept.
Service Level Provided	Advanced Life Support

* Includes one ambulance added in January 2025
Sources: U.S. Census Bureau, County OEM Dashboard, Survey Responses

The Milwaukee Fire Department serves the cities of Milwaukee and West Milwaukee, which according to the U.S. Census Bureau had a combined 567,401 residents in 2022. The MFD is by far the largest fire department in the county with a 2024 budget of $143.0 million and 67,000 EMS calls in 2022. The department's

sworn staff includes 752 full-time equivalent employees (FTEs), of whom 32% are paramedics, across 29 fire stations in the city.

MFD operates 14 active ambulances to respond to EMS calls that require an ALS level of service. The city is unique among the county's fire departments in contracting with private ambulance companies to respond to calls at the BLS level. MFD has an MIH program with six full-time staff members who coordinate a team of paramedics from within the department and civilians from other departments.

North Shore Fire Department

The North Shore Fire Department serves the seven North Shore municipalities with a combined total of 66,428 citizens in 2022. The department responded to 7,414 EMS calls in that year.

The department's 2024 budget was $18.3 million, and it budgeted for 101 sworn FTEs, of whom 58% are paramedics. In 2024, it operated five active ambulances from five stations at an ALS level of service. The department does not have a formal MIH program but collaborates with the North Shore Health Department on a shared case manager.

North Shore Fire Department	
Population Served, 2022	66,428
EMS Responses, 2022	7,414
Budgeted Expenses, 2024	$18.3 Million
Budgeted FTEs, 2024	101
Fire Stations	5
Active Ambulances	5
Mobile Integrated Healthcare	Partnership within municipality
Service Level Provided	Advanced Life Support

Sources: U.S. Census Bureau, County OEM Dashboard, Survey Responses

NSFD was created in 1995, when the seven departments of each municipality consolidated in an effort to enhance service levels and create administrative efficiencies (see *Come Together*, our 2015 report, for additional details about the consolidation and its results).

West Allis Fire Department

The West Allis Fire Department (WAFD) serves the city of West Allis, which had a population of 58,950 in 2022. The department had a budget of $16.1 million in 2024 and 103 sworn FTEs (68% are paramedics). The WAFD responded to 8,568 EMS calls in 2022. The department runs three ambulances from three stations and provides an ALS level of service.

West Allis Fire Department	
Population Served, 2022	58,950
EMS Responses, 2022	8,568
Budgeted Expenses, 2024	$16.1 Million
Budgeted FTEs, 2024	103
Fire Stations	3
Active Ambulances	3
Mobile Integrated Healthcare	MIH Program in Fire Dept.
Service Level Provided	Advanced Life Support

Sources: U.S. Census Bureau, County OEM Dashboard, Survey Responses

The department has a Mobile Integrated Healthcare bureau, which is run through its Division of Community Risk Reduction. The division seeks to prevent situations requiring EMS as well as fire-related calls.

Wauwatosa Fire Department

The Wauwatosa Fire Department serves the 47,289 residents of Wauwatosa. In 2022, it responded to 5,730 EMS calls from its three fire stations, which house the department's three active ambulances. The 2024 fire department budget was $16.3 million. The sworn staff members include 100 FTEs, 49 of whom are paramedics, and it provides an ALS level of service. The city has a social worker in the public health department dedicated to fire and police department referrals but the fire department does not have a formal MIH program.

Wauwatosa Fire Department	
Population Served, 2022	47,289
EMS Responses, 2022	5,730
Budgeted Expenses, 2024	$16.3 Million
Sworn Staff (FTEs)	100
Fire Stations	3
Active Ambulances	3
Mobile Integrated Healthcare	Partnership within municipality
Service Level Provided	Advanced Life Support

Sources: U.S. Census Bureau, County OEM Dashboard, Survey Responses

Greenfield Fire Department

The Greenfield Fire Department serves the citizens of Greenfield, who totaled 37,071 individuals in 2022. The department responded to 5,273 EMS calls in 2022. Its budget for 2024 was $8.4 million and it has 53 sworn FTEs, all of whom are paramedics. The department operates three active ambulances from two fire stations at an ALS level of service.

Greenfield Fire Department	
Population Served, 2022	37,071
EMS Responses, 2022	5,273
Budgeted Expenses, 2024	$8.4 Million
Budgeted FTEs, 2024	53
Fire Stations	2
Active Ambulances	3
Mobile Integrated Healthcare	MIH Program in Fire Dept.
Service Level Provided	Advanced Life Support

Sources: U.S. Census Bureau, County OEM Dashboard, Survey Responses

The Greenfield MIH team has 10 members, including a civilian case manager. The other nine are sworn staff members whose MIH tasks are in addition to their other firefighting and EMS duties. One of them is an assistant chief, and the other eight members, known as community paramedics, are distributed among the three daily shifts.

Oak Creek Fire Department

The Oak Creek Fire Department is the largest in the southern part of the county with a budget of $9.6 million and 58 sworn FTEs (83% are trained at the paramedic level). The department serves the 36,087 residents of Oak Creek and responded to 4,221 EMS calls in 2022. The department runs three ambulances from three stations at an ALS level of service. The department is developing an MIH program which was expected to be fully implemented by the end of 2024.

Oak Creek Fire Department	
Population Served, 2022	36,087
EMS Responses, 2022	4,221
Budgeted Expenses, 2024	$9.6 Million
Budgeted FTEs, 2024	58
Fire Stations	3
Active Ambulances	3
Mobile Integrated Healthcare	In Development
Service Level Provided	Advanced Life Support

Sources: U.S. Census Bureau, County OEM Dashboard, Survey Responses

Franklin Fire Department

The Franklin Fire Department (FFD) serves the 36,066 residents of Franklin. It responded to 4,005 EMS calls in 2022 and had a budget of $8.0 million for 2024. There are 48 sworn FTEs who are all trained as paramedics. The FFD has three fire stations and three active ambulances and operates at an ALS level of service. The fire department works closely with the Franklin Health Department regarding patient referrals and is currently developing an MIH program.

Franklin Fire Department	
Population Served, 2022	36,066
EMS Responses, 2022	4,005
Budgeted Expenses, 2024	$8.0 Million
Budgeted FTEs, 2024	48
Fire Stations	3
Active Ambulances	3
Mobile Integrated Healthcare	In Development
Service Level Provided	Advanced Life Support

Sources: U.S. Census Bureau, County OEM Dashboard, Survey Responses

South Milwaukee Fire Department

The South Milwaukee Fire Department serves the city of South Milwaukee, which had 20,309 citizens in 2022. The department's 2024 budget totaled $3.8 million. It employs 25 sworn FTEs, 48% of whom are paramedics, and they responded to 2,715 EMS calls in 2022. The department operates three active ambulances from one fire station and maintains an ALS level of service. The city does not have its own formal MIH program but officials cite a relationship that involves information sharing with the South Milwaukee Public Health Department.

South Milwaukee Fire Department	
Population Served, 2022	20,309
EMS Responses, 2022	2,715
Budgeted Expenses, 2024	$3.8 Million
Budgeted FTEs, 2024	25
Fire Stations	1
Active Ambulances	3
Mobile Integrated Healthcare	Partnership within municipality
Service Level Provided	Advanced Life Support

Sources: U.S. Census Bureau, County OEM Dashboard, Survey Responses

Cudahy Fire Department

The Cudahy Fire Department serves the 17,796 residents of Cudahy. In 2022, it responded to 1,782 EMS calls, and its 2024 budget was $4.0 million. The sworn staff of 26 FTEs (42% are paramedics) operates two active ambulances at an ALS level of service. The department is building a new fire station, projected to be completed in 2024, that will replace its two existing stations. The department does not have an MIH program.

Cudahy Fire Department	
Population Served, 2022	17,796
EMS Responses, 2022	1,782
Budgeted Expenses, 2024	$4.0 Million
Sworn Staff (FTEs)	26
Fire Stations	2
Active Ambulances	2
Mobile Integrated Healthcare	No
Service Level Provided	Advanced Life Support

Sources: U.S. Census Bureau, County OEM Dashboard, Survey Responses

Greendale Fire Department

Greendale Fire Department	
Population Served, 2022	14,540
EMS Responses, 2022	1,828
Budgeted Expenses, 2024	$3.1 Million
Budgeted FTEs, 2024	20
Fire Stations	1
Active Ambulances	2
Mobile Integrated Healthcare	No
Service Level Provided	Advanced Life Support

Sources: U.S. Census Bureau, County OEM Dashboard, Survey Responses

The Greendale Fire Department serves the 14,540 residents of Greendale. They are one of the smaller fire departments in the county with a 2024 budget of $3.1 million and a sworn staff of 20 FTEs (90% are trained paramedics). The department responded to 1,824 EMS calls in 2022. It has one fire station from which it operates two ambulances at an ALS level of service. The department does not have an MIH program.

Saint Francis Fire Department

Saint Francis Fire Department	
Population Served, 2022	9,422
EMS Responses, 2022	1,253
Budgeted Expenses, 2024	$2.9 Million
Sworn Staff (FTEs)	17
Fire Stations	1
Active Ambulances	2
Mobile Integrated Healthcare	No
Service Level Provided	Advanced Life Support

Sources: U.S. Census Bureau, County OEM Dashboard, Survey Responses

The Saint Francis Fire Department is another small department, and it serves the 9,422 residents of St. Francis. It responded to 1,253 EMS calls in 2022 and had a 2024 budget of $2.9 million. About 40% of the sworn staff of 17 FTEs are paramedics. The department has one fire station from which it operates two ambulances at an ALS level of service (achieved in 2022). It does not have an MIH program.

Hales Corners Fire Department

Hales Corners Fire Department	
Population Served, 2022	7,562
EMS Responses, 2022	974
Budgeted Expenses, 2024	$1.4 Million
Budgeted FTEs, 2024	14.8
Fire Stations	1
Active Ambulances	2
Mobile Integrated Healthcare	No
Service Level Provided	Basic Life Support

Sources: U.S. Census Bureau, County OEM Dashboard, Survey Responses

The Hales Corners Fire Department is the smallest department in the county, serving the 7,562 residents of Hales Corners with 14.8 FTEs and a $1.4 million budget in 2024. In 2022, the department responded to 974 EMS calls. It provides only a BLS level of service and relies on neighboring fire departments for its ALS response. However, the department is working towards providing ALS coverage and plans to do so in 2025. The department makes extensive use of part-time staff, as its roster includes only five full-time FTEs (26% of the roster are paramedics). It operates two ambulances from one fire station and does not have an MIH program.

EMS COORDINATION IN THE COUNTY

As we have discussed, EMS in Milwaukee County is mostly provided by the 12 municipal fire departments within the county. The municipal fire departments work closely with one another, relying in many cases on carefully planned mutual aid frameworks to respond to large fires and major medical emergencies, as well as other collaborative agreements to fill in for each other when resources of individual departments are stretched thin or even to borrow apparatus when engines or ambulances are out for repair.

Milwaukee County – through OEM – plays a prominent role in establishing countywide standards of care, ensuring that the 12 departments follow similar protocols, collecting data, and facilitating collaboration. This section gives an overview of OEM's role and specifically outlines the areas in which the fire departments operate individually and where they work together.

One of OEM's primary responsibilities is to ensure that the delivery of EMS across the county is effective and consistent. Its duties include the oversight of EMS delivery plans submitted by the county's municipalities, providing medical direction, setting standards for EMS responders, and ensuring that quality standards are met or improved through data collection and other means.

Communication within the EMS system is another duty of OEM. It handles the organization of the county's 911 system as well as the radio system that connects hospital personnel with the EMTs responding to emergencies. All of these are countywide tasks for which OEM is responsible so that a consistent, high level of emergency medical response and care is available across Milwaukee County.

OEM's EMS duties are overseen by the county's EMS Council, which was established by the Milwaukee County Board of Supervisors per Section 97.07 of the Milwaukee County Code of Ordinances. The council is made up of not more than 21 voting members and two ex-officio members who are appointed by the county executive and approved by the county board. The council's membership includes four municipal fire chiefs, two representatives from private EMS providers, a physician recommended by the Milwaukee County Medical Society, a representative from the Wisconsin Hospital Association, a county supervisor, and a representative from the Milwaukee Area Technical College (MATC), which provides the bulk of EMS training in the county.

The EMS Council acts as the county's approval and resource agency, and it assists and advises OEM in any matters relating to the countywide EMS plan. The council is also the venue for receiving public feedback concerning EMS and for reporting EMS activity to the county board.

Where Fire Departments Collaborate and Where They Do Not

The county-coordinated EMS system in Milwaukee County relies heavily on collaboration among the municipal fire departments. The most fundamental example – which pertains to both fire and EMS – is mutual aid. The departments have formally agreed to respond to calls in other communities when the local department cannot adequately respond. From 2019 through 2022, 4.5% of EMS calls in Milwaukee County received a response from a unit other than their local fire department. Mutual aid can be necessary not only when the nature of an emergency requires more resources than an individual department can muster, but also to respond to calls when the jurisdictional department's

capacity already is tapped from other simultaneous calls or when the local unit does not have the ALS level of response required for the medical need.

The rates of EMS mutual aid received in Milwaukee County from 2019 to 2022 by fire departments vary by location and available level of service (see **Table 4**). The departments that had the lowest rates of receiving mutual aid during this period were MFD and those in the farthest northern and southern parts of the county. The Franklin Fire Department, the Oak Creek Fire Department, the South Milwaukee Fire Department, and the North Shore Fire Department all received mutual aid for less than 3% of their EMS calls. The departments that had the highest rates of receiving mutual aid were those that did not provide an ALS level of service for some portion of the time period – i.e. the fire departments in Cudahy, Hales Corners, and St Francis, all of whom had mutual aid rates above 10%.

Table 4: Mutual Aid

Community	Fire Department	Calls within Community Handled by Local Fire Department, 2019-2022	Mutual Aid Required, 2019-2022
Cudahy	Cudahy FD	83.1%	16.9%
Franklin	Franklin FD	97.5%	2.5%
Greendale	Greendale FD	91.5%	8.5%
Greenfield	Greenfield FD	97.0%	3.0%
Hales Corners	Hales Corners FD	86.3%	13.7%
Milwaukee, West Milwaukee	Milwaukee FD, GMIA, MCEMS Special Events	97.0%	3.0%
Bayside, Brown Deer, Fox Point, Glendale, River Hills, Shorewood, Whitefish Bay	North Shore FD	97.1%	2.9%
Oak Creek	Oak Creek FD	98.0%	2.0%
Saint Francis	Saint Francis FD	84.4%	15.6%
South Milwaukee	South Milwaukee FD	97.4%	2.6%
Wauwatosa	Wauwatosa FD	95.7%	4.3%
West Allis	West Allis FD	95.4%	4.6%

Source: Milwaukee County OEM Dashboard

In addition to the formal mutual aid agreements between the departments, they also work together on some administrative tasks, albeit mostly informally. An example often cited by chiefs is how they helped each other with supplies during the early period of the COVID-19 pandemic when personal protective equipment (PPE) was in high demand and supplies were short. Departments have continued to keep in contact with each other concerning supply levels, as it may be more efficient to get necessary items in the short term from a neighbor than a vendor. Willingness to share supplies also extends to larger equipment such as ambulances. For example, departments with back-up ambulances have been willing to lend them to other departments when their regular vehicles have needed maintenance.

Another example of administrative cooperation involves human resources. The Wauwatosa, West Allis, St. Francis, and North Shore departments have a shared recruitment initiative, and they will launch a shared new hire training program with four additional departments in 2025.

Still, while the municipal fire departments are quick to aid each other, much of their work, especially pertaining to EMS administration, is conducted independently. Despite the human resources initiative noted above, most do not engage in shared recruitment activities and there is no sharing of front-line staff across municipalities. Similarly, the managing of supplies, equipment maintenance, and billing for medical transports are handled by departments individually, for the most part.

With regard to supplies, each department follows its own procedure for ordering supplies and monitoring inventories. These supplies include consumables, such as bandages and cold packs; PPE, such as masks and gloves; and medications. For larger equipment, such as cots and ambulances, each department also generally handles its own maintenance, although MFD recently began offering its fire apparatus and ambulance maintenance services to the other departments. Some, especially the larger departments, have in-house mechanics or front-line responders who are trained to maintain vehicles or specific equipment. Other departments use the mechanics who work for their municipalities, and still others have contracts with equipment manufacturers and local auto shops for upkeep.

The billing of patients for ambulance transports is also conducted separately by each department, even though all outsource this task to a third-party vendor and many use the same vendor. Each department sets its own billing fees based on the policies set by its elected officials.

Dispatch is another large component of emergency management that operates at the municipal level and therefore differs between communities in Milwaukee County. Several public safety dispatch centers are located throughout the county, handling calls for fire, EMS, and police (this includes a consolidated North Shore dispatch center and a couple of other dispatch centers that handle calls under contract for an adjacent municipality). Some departments now use Emergency Medical Dispatch (EMD), a more sophisticated system of eliciting medical information from 911 callers that may result in more appropriate responses and therefore better outcomes. EMD requires dispatchers with more extensive training than a typical dispatch employee.

Finally, when departments initiate new programs or procedures, they often do so independently, even when others are attempting similar initiatives. For example, there are several fire departments with MIH programs at various stages of development. Some have fully functioning teams and bureaus within their departments, some are in the process of launching programs, and others just have informal referral programs within their municipalities.

Milwaukee County Office of Emergency Management

OEM typically takes the lead when formal collaboration is deemed necessary or advisable to address countywide EMS concerns or to improve EMS capabilities to reflect national advancements in research and standard setting. A prime example is in the area of opioid abuse -- OEM has led efforts to establish countywide strategies to help EMS responders treat medical emergencies linked to use of opioids and to prevent them, and it has successfully sought grant dollars to implement some of those strategies. Also, as this report was nearing publication, OEM announced an initiative to work with fire departments to enable them to carry blood on ambulances for transfusions if necessary.

In addition to medical direction and administrative oversight, OEM also sets a vision for the conduct and quality of emergency medicine in Milwaukee County, and it establishes common standards and protocols to create more uniform service across the county regardless of which department responds to an EMS call. Sometimes the standards are enforced through directives, while at other times they are encouraged by providing resources that move the departments towards adherence.

OEM also provides some services on a countywide basis, which frees up departments from having to pursue them on their own and advances the goal of countywide quality and consistency. For example, ongoing professional development for EMT recertification is facilitated by OEM after initial training is obtained by staff members through accredited schools. OEM also provides the radio system that allows responders at the scene of an incident or on ambulances to communicate with hospital personnel as patients are transported. This communication can allow the field team to get additional guidance on how to treat the patient while also allowing the hospital team to be better prepared for the incoming patient.

Summary

The history of EMS collaboration in Milwaukee County provides some important building blocks to further improve service and make it more efficient. A look at where municipal fire departments have already collaborated and where they remain independent, as well as where OEM has provided countywide support deemed beneficial by fire chiefs, also provides hints as to areas in which new collaborative strategies could be advantageous. In the next section, we describe several areas of EMS in which we see potential for greater collaboration between the county and the municipal fire departments. The one area mentioned above that we do not analyze is public safety dispatch – the Forum explored possibilities for enhanced sharing or consolidation of dispatch services in a 2016 report and that topic is beyond the scope of this analysis.

OPPORTUNITIES FOR ADMINISTRATIVE COLLABORATION

The ability of municipal fire departments and OEM to conduct administrative tasks that support EMS operations in the field has an indirect but substantive impact on the quality of service that EMS teams can provide. Tasks such as managing medical and supply inventories, appropriately maintaining heavy equipment and ambulances, and billing patients all take time and attention. To the extent that these duties must be performed by responders, they can reduce departments' capacity to meet their overall mission of providing fast and effective emergency medical care to the community.

Consequently, there is merit in considering strategies that may produce efficiencies in administrative support tasks through collaboration or consolidation. In this section, we consider a handful of administrative tasks identified through our interviews and meetings with chiefs and OEM that may lend themselves to new collaborative strategies. First, we look at three types of equipment – medical supplies, special medical equipment, and ambulances – and then we consider billing processes.

Medical Supplies

The term "medical supplies" covers a wide range of items that EMS teams use. It includes disposable products such as bandages and gauze, PPE such as facemasks and gloves, and medications and consumables including oxygen and blood.

All fire departments in Milwaukee County manage their medical supply inventories independently. Most use electronic systems to track their medical supplies across multiple stations and ambulances with dedicated staff members monitoring stock levels in their local units. Some of the smaller departments do not use inventory software; they still rely on manual counts and visual confirmation to determine when items should be reordered.

There is one exception to the departments' individual approach to medical supply management: narcotics. The supply of narcotic medications at individual departments is monitored countywide by OEM, which uses inventory software called Operative IQ. This system tracks quantities of narcotics as they are used and replenished and as they transfer between persons during shift changes. Additionally, many of the fire departments currently use Operative IQ for their entire inventories.

Several years ago, the county coordinated the purchasing of all medical supplies. Orders went through the county staff who then made deliveries to the fire departments. We found no record of when and why supply management was relinquished by the county, although some of our interviewees suggested that some departments preferred having control of their own medical supply deliveries and that the need for the county to hire and pay the salaries of delivery staff was deemed inefficient.

The fire departments saw some of the advantages that unified supply management might provide during the early days of the COVID-19 pandemic, when they collaborated on supply management due to supply chain issues and evolving supply needs. That spirit of collaboration persisted – as we noted

previously – even as supply difficulties abated. Some chiefs from small departments also acknowledged that they would potentially pay less per item for some of their purchases if they ordered in higher volumes, which they could only achieve by collaborating on purchases.

In addition to monitoring supply inventories, each fire department currently needs to devote staff time to purchasing supplies, receiving those orders, and effectuating storage on their premises until their ambulances need to be replenished. These additional staff resources that fire departments use for processing their supplies could be greatly reduced if OEM again became the medical supply purchaser, holder, and distributor for some or all fire departments in the county.

Collaboration Opportunities

There are several steps that OEM and the fire departments could take to move toward a unified approach to supply management. However, complete unification does not have to be the ultimate goal. Any of these steps could be done singularly and could result in some benefit for departments.

First, OEM and the fire departments could establish a standard set of medical supply products that they agree to use. With such standardization, they might then turn to OEM to negotiate bulk purchases from vendors, which may result in better prices. OEM would not necessarily have to control and manage the inventories under such an approach, but could simply base its orders on requests from individual departments.

In addition to producing possible cost savings, standardization of medical supplies could also directly impact service provision. EMTs would not have to acclimate to new gear or products if they use other departments' ambulances during mutual aid instances, or when a department's ambulance is out of service and it borrows a backup ambulance from a neighboring department. Also, if the same products are found on every ambulance in the county, then they could have similar layouts and specifications, again reducing the time to acclimate when there is crossover of staff between departments. The time spent becoming familiar with new products can have important repercussions in an industry in which seconds count.

Second, the departments could consider adopting and sharing a single electronic inventory management system. Because OEM currently uses Operative IQ to monitor narcotics, and several departments use it to track other supplies, that might be an obvious choice for a single, countywide system. Even if the 12 departments do not manage their inventories collectively, there may be cost savings if they can negotiate a group subscription rate for the inventory software. Obviously, this would only be a savings for those departments that currently use Operative IQ. Also, those without a fully-adopted electronic inventory system would incur start-up costs (both financial and human resources) to be included in the new system.

If the fire departments all manage their medical supplies through one unified system, then it would be even more logical for OEM to take over the actual purchasing of supplies. When the county previously handled purchasing, its staff delivered supplies to the fire stations, which may have been inefficient. However, that approach, and the notion of having each fire station store its own supplies, would not necessarily need to be recreated. Because EMS units are mobile, they could pick up supplies at distribution centers when they need to restock. Distribution centers could be strategically

placed at dispersed geographic locations around the county or perhaps even at certain hospitals, which EMS personnel must frequent anyway when they transport patients.

Centralizing supply management within OEM would require the office to hire staff to coordinate ordering from the fire departments and distribution to their stations. While this would be an added cost for the county, personnel at the local departments would be freed from most supply ordering and inventory management, thus allowing them to focus on other tasks. Departments would still need to do some supply monitoring and management and work with the county buyer, though that should require less time than managing relationships with multiple vendors, as they currently do.

Special Medical Equipment

Large, technically-advanced medical equipment, such as ambulance cots and chest compression machines, are important tools for EMS. However, they are expensive and require specialized maintenance.

The county's fire departments generally approach the maintenance of their special medical equipment in two ways: either by using in-house personnel who are trained to maintain the machines, or entering into maintenance agreements with the manufacturers. Both approaches have trade-offs. Using specially-trained fire department personnel pulls those staff members from their other patient-facing tasks. However, outsourcing the repairs may take more time, which could be critical for an EMS team that does not have back-up machines to cover for a piece of equipment while it is maintained or repaired.

The fire departments in Milwaukee County generally buy their equipment from the same manufacturers; Stryker, Lucas, and Zoll are each listed by several. For the departments that do not service their equipment in-house, they either have warranties with the manufacturers or go to a third-party vendor. EMSAR is the most common third-party vendor identified by the county's fire departments.

Special medical equipment is an essential part of every EMS team, and each fire department dedicates considerable staff resources to maintaining it. Because the equipment is similar across fire departments but is handled individually, this could be a potential area for beneficial collaboration.

Collaboration Opportunities

Most of the fire departments service their specialty equipment through the manufacturers' warranties or third-party vendors. Only the largest departments – Milwaukee, West Allis, and Wauwatosa – maintain this equipment with their own staff, and officials from the West Allis Fire Department have expressed interest in outsourcing this work due to its high level of sophistication.

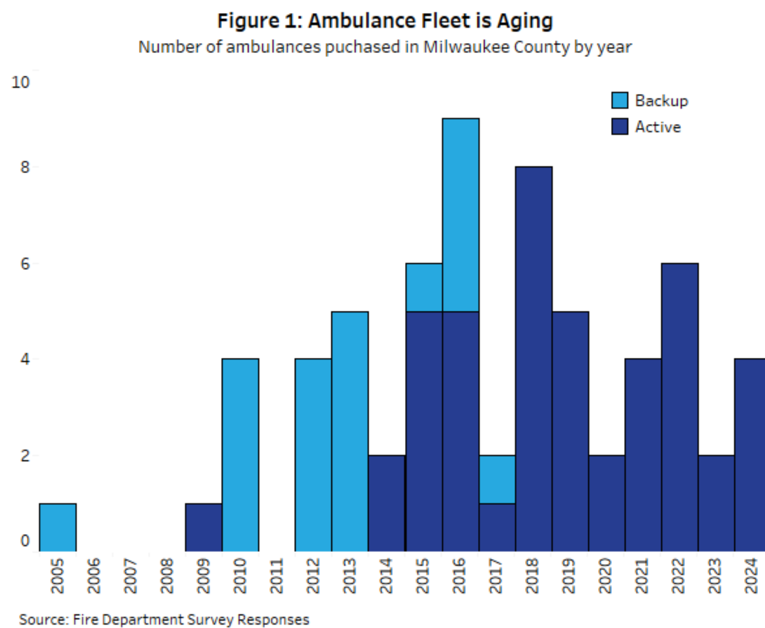
The fire departments describe specialty equipment maintenance as a high-cost necessity of their work with little opportunity for service improvement. However, collaboration could produce some beneficial outcomes in terms of reduced time and effort and better maintenance. For example, the departments could elect to use a single contract with an outside vendor to maintain their collective equipment, with the contract managed by OEM. This may result in some cost savings due to the

larger contract and it may increase some efficiency in the departments by reducing the number of individuals managing separate agreements with several vendors.

Alternatively, smaller departments could seek to contract for maintenance of specialty equipment with one of the three large departments that currently conduct maintenance in-house. This could produce a new revenue source for those large departments while also allowing the smaller departments to focus on other priorities while ostensibly paying a similar or perhaps even lower contractual cost. The smaller departments also might benefit from having their needs serviced by personnel who have expertise in fire department specialized equipment, as opposed to the general mechanics they typically use.

Ambulance Maintenance and Back-Ups

Among the 12 municipal fire departments in Milwaukee County, there are 45 active ambulances in use. The smallest departments – in Cudahy, Greendale, Hales Corners, and St. Francis – each have two ambulances. The largest department, MFD, has 14 active ambulances in its fleet, and that number is reduced by the city's contract with private ambulance companies who handle the calls that only require a BLS response.



Additionally, the 12 fire departments collectively have 20 ambulances that they use as back-up vehicles when an active ambulance is out of service for maintenance or repairs. Collaboration among the fire departments already exists with regard to back-up ambulances, with an informal agreement in place to share back-up vehicles if a department needs one and does not have one available. Chiefs we interviewed say the agreement is valuable and might lend itself to further formalization and collaboration.

The 65 total ambulances among the fire departments range in age, with the oldest active ambulances purchased in 2009 (see **Figure 1**). Almost half of the county's ambulances (32 out of 65) were purchased before 2017. Many of these vehicles are likely being considered for replacement in the near future.

The 12 departments vary in their approach to vehicle maintenance and repair. **Table 5** shows that larger departments tend to use municipal staff – either employed by the department itself or the municipality's larger fleet maintenance division – while smaller departments use either a combination of in-house mechanics and outside vendors or rely entirely on contracted mechanics.

Ambulances are similar to specialty equipment in that they are critical parts of an EMS response and are very expensive to purchase and maintain. Collaboration among the fire departments regarding ambulances has already started but there may be additional ways for them to work together.

Collaboration Opportunities

As noted above, the 12 fire departments already share back-up vehicles, which reduces strain on the ambulance fleets and improves collegiality among the departments. To improve that experience, the fire departments could consider agreeing on common ambulance specifications and layouts so that they are all driving the same ambulances with the same equipment. This could help improve on-the-scene efficiency when EMTs use vehicles from other departments, as the common equipment and layout would be familiar to all responders in the county.

Table 5: Fire Departments by Ambulance Maintenance

Fire Department	Active & Backup Ambulances	Ambulance Maintenance
Cudahy FD	3	Combination: In-house & Vendor
Franklin FD	4	Combination: In-house & Vendor
Greendale FD	2	Vendor
Greenfield FD	4	Combination: In-house & Vendor
Hales Corners FD	2	Combination: In-house & Vendor
Milwaukee FD	23	In-house mechanic
North Shore FD	7	In-house mechanic
Oak Creek FD	4	Combination: In-house & Vendor
Saint Francis FD	3	Vendor
South Milwaukee FD	3	In-house mechanic
Wauwatosa FD	4	In-house mechanic
West Allis FD	5	In-house mechanic

Source: Survey Responses

The standardization of ambulances could save money as well. If the fire departments all order the same ambulances, then they may be able to make joint purchases and negotiate for better prices. Also, mechanics would be able to gain greater expertise by virtue of their experience with a specific make and model used countywide.

Finally, the departments could consider service sharing for maintenance and repairs. Such sharing could take various forms, including having small departments contract with larger departments to handle their maintenance and repair needs as an alternative to using private sector vendors (as mentioned earlier, MFD has recently begun offering fire apparatus and ambulance maintenance and repair services to other departments); sharing one or more specialized ambulance mechanic positions among several departments; or even creating and jointly paying for a special ambulance maintenance and repair unit that could be housed within OEM.

The potential advantage for each of these options would not only be possible cost savings and greater efficiency, but also better service by ensuring the availability of mechanics who specialize in ambulance repairs. Such expertise may not exist for those departments that rely on general fleet mechanics within their governments or even in the private sector. Also, if standardization of

ambulance fleets were to occur, then the move to shared maintenance and repair services would become even more logical and made even easier.

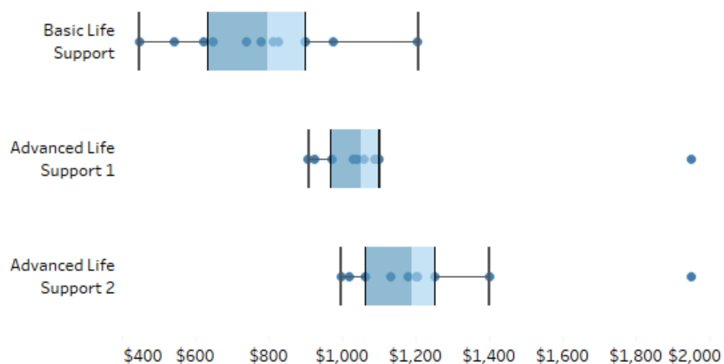
Billing

The fire departments in Milwaukee County are able to receive partial reimbursement for the emergency medical services they provide via their ability to bill private insurance companies, Medicare, or Medicaid for some or all of those services. Ambulance transports are particularly reimbursable and are an important source of revenue for these departments.

While OEM's predecessor department in county government once handled billing for each of the departments through a single contracted billing agency, that arrangement was terminated more than a decade ago. Today, each department in the county contracts individually with a third-party vendor to bill patients and collect payments, although patient data is collected in a common data system, the electronic patient care report (ePCR), which is then used by the billing services. The vendors charge the fire departments for their services based on billing volume. Most say they pay 5-7% of collected funds to the billing vendors.

The departments employ varied fee-setting and collections approaches. Some communities are more aggressive than others in terms of fee amounts and collections in an effort to cover as much of their EMS costs as possible. Meanwhile, other communities view EMS as a service that should be substantially supported by general tax revenue and are therefore less aggressive in their prices and collection policies, or they only aggressively pursue payments from patients who live outside of their jurisdictions.

Figure 2: EMS Fee Levels Differ among Mke. County Fire Departments
Published base cost for EMS with transport for residents by level



Source: Fire Department Survey Responses and Websites

The 12 fire departments have different fee schedules with a range of prices for the various services they provide. Only one department, Hales Corners, charges a flat fee regardless of the services used. The others charge different fees based on residency, level of service, and whether a transport to a hospital was needed. Some departments have further itemization of what supplies were used. In addition, different departments establish different mileage charges when transportation costs are incurred. **Figure 2**[3] shows the range of base charges that a resident in Milwaukee County could be charged for transport at the BLS or ALS level depending on which fire department conducted the transport. Note that these numbers do not include additional charges for mileage and itemized use of supplies.

[3] Wauwatosa is the outlier in the figure, as it charges ALS fees of $1,950 for ambulance transports.

Different fire departments use different methodologies to set EMS rates. Some departmental fees are determined based on previous years' costs with the intent to recoup the anticipated cost of EMS in the following year, while some are based on what is deemed to be an acceptable gap between the cost of service and the amount expected to be reimbursed by insurers and patients. All of our fire chief interviewees said they also consider the payer mix (i.e. private versus public insurance) of their patient population when determining their fee schedules.

Another distinction between departments is how aggressively they pursue collections from individual patients for the balance of the charges that insurers do not cover. This has affected the range of published EMS costs because those fire departments that aggressively pursue balance payments from their patients are more likely to have lower billing rates.

The fire departments of Milwaukee County all use third party vendors to bill EMS patients. Still, there are administrative and contract management tasks associated with billing and billing contracts that all departments incur and that may benefit from collaboration.

Collaboration Opportunities

Because all the fire departments in the county contract for services individually, consideration could be given to having the departments jointly solicit a single vendor in an effort to receive a better price for billing services from the much higher volume. If they decided to pursue this approach, then it may also make sense to have OEM again take on this task of selecting and administering the billing vendor and contract. Consolidating all 12 agreements under one contract should improve their rate, especially for the smaller departments. Also, having the county manage both the request for proposal process and the billing contract would reduce staff time for each department.

It is also worth pointing out that in 2022, several EMS billing vendors consolidated into a single company, EMS/MC. Consequently, most of the fire departments are now using the same vendor, which may be more reason for them to all operate under one negotiated contract.

Finally, the establishment of a single billing contract would logically dictate that countywide fee schedules be established. While some municipal leaders may not wish to relinquish their ability to establish their own fees, and while a new countywide schedule might yield revenue reductions for some departments, there would arguably be a benefit to county residents to know that the fees associated with an ambulance transport or other emergency medical services are uniform regardless of where in the county the emergency occurs and which department responds. Setting fees also can be politically difficult for elected officials, and banding together to create a single fee structure under the auspices of OEM could alleviate that difficulty.

MOBILE INTEGRATED HEALTHCARE

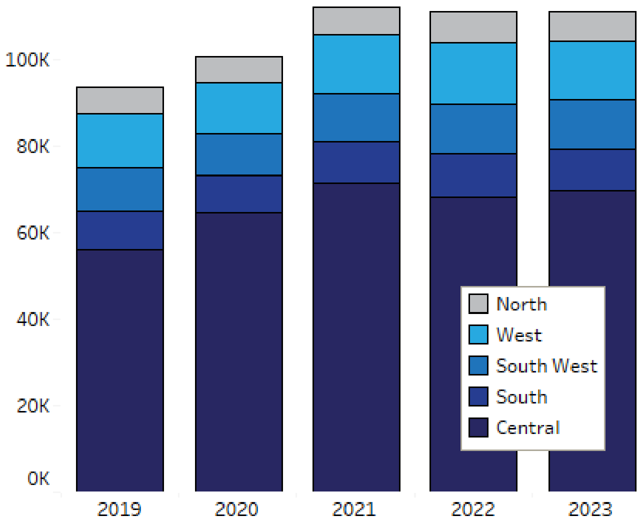
Greater collaboration in Milwaukee County on the direct provision of emergency medical services in the field likely would entail consolidation of services among one or more departments (a possibility we will discuss later in this report). Yet there is one important and growing service element that could very well lend itself to service sharing opportunities among the 12 existing fire departments and OEM. This element is Mobile Integrated Healthcare (MIH), which is defined as follows by the National Institutes of Health:

Mobile Integrated Healthcare (MIH) offers an innovative approach to keep patients from falling through the cracks created by fragmented and disjointed care…MIH offers patient-centered acute care, chronic care, and preventive services delivered in the home or mobile environment by synchronizing clinicians, infrastructure, and resources in a cost-effective manner. It is specifically designed to improve health outcomes, patient experience, and integration between systems of care while reducing health care costs for a defined population.

MIH is a variation of a practice known as community paramedicine, which involves using paramedics to proactively identify and seek individuals in need of health care services and having them provide such services or guidance in the individual's home.[4] Often, MIH or community paramedicine specifically targets individuals with chronic conditions who may be frequent callers to 911. One of its primary goals is to proactively engage with such individuals to address their medical concerns before they need emergency care.

Not all fire departments in Milwaukee County have formal MIH programs involving paramedics, but some do and others refer individuals to case managers employed by their municipality's health department (or by the fire department) to provide similar proactive interventions.

Figure 3: County EMS Activity Increases Over Time.
EMS calls by region and year



Source: Milwaukee County Office of Emergency Management

In recent years, Milwaukee County has seen an increased volume of EMS calls throughout the county (see **Figure 3**). All of the chiefs we interviewed – whether they maintain formal MIH or case management programs or not – agreed on the value of such interventions as a means of helping to reduce emergency call volumes. Successful MIH or case management programs also provide improved medical services to the community, as preventive

[4] While MIH services can and often are provided by paramedics, they also may involve other health care personnel like nurse practitioners and registered nurses.

care through an MIH program typically is preferable to the emergency medical care that often results from a 911 call.

Three Milwaukee County fire departments – in Milwaukee, West Allis, and Greenfield – have formal MIH units within their departments that are staffed by their own personnel. While all MIH programs seek to reduce calls to 911, some fire departments also use their MIH units to address specific medical issues such as the long-term effects of strokes or substance abuse. Two departments, in Franklin and Oak Creek, are each launching MIH programs in 2024 (see **Table 6**).

Table 6: Fire Departments by EMS Responses

Fire Department	Responses, 2022	MIH Status
Milwaukee FD	67,324*	MIH Program in fire dept.
West Allis FD	8,568	MIH Program in fire dept.
North Shore FD	7,414	Partnership within the municipality
Wauwatosa FD	5,730	Partnership within the municipality
Greenfield FD	5,273	MIH Program in fire dept.
Oak Creek FD	4,221	In Development
Franklin FD	4,005	In Development
South Milwaukee FD	2,715	Partnership within the municipality
Greendale FD	1,828	None
Cudahy FD	1,782	None
Saint Francis FD	1,253	None
Hales Corners FD	974	None

Source: 2022 Pop. from U.S. Census Bureau, Responses from County OEM Dashboard
* Includes GMIA and MCEMS Special Events.

Other fire departments have less advanced programs that use a case management approach. Instead of having programs staffed by fire department paramedics or EMTs, they refer cases to social workers who are either employed by them or their health department and who may also receive referrals from the police department. These social workers can provide guidance and advice on health-related issues and also help manage non-medical issues related to substance use or aging concerns.

Fire departments following this structure can have the same goal of proactively preventing emergency medical calls, but they are not considered to be true MIH programs because they are not staffed by paramedics, EMTs, or other medical personnel. For example, the Wauwatosa Fire Department shares a social worker with other city agencies. That employee is housed in the police department and receives referrals and is funded by multiple city agencies.

Chiefs we interviewed who do not have MIH or similar programs still see a need for case management, and some cited informal relationships with social workers or nurses in their health departments to whom they occasionally make referrals. They note, however, that given the low volume of such cases and their other resource challenges, it is not feasible to ask their elected leaders for funding to initiate a more formal MIH or case management program.

In order to make the case for MIH or case management, fire department officials would benefit from an ability to share outcomes data that provide evidence of the value of such programming. However, it is difficult to measure impacts, as counting the number of prevented medical emergencies or 911 calls that were not made is not possible. Additionally, the cost savings are difficult to calculate accurately given the complicated web of medical services that may be initiated from a single 911 call. It is worth noting, however, that the MIH unit of the Milwaukee Fire Department attempts to

measure its success by keeping track of its frequent EMS callers to determine if their calling pattern changed after their initial contact with MIH.

Collaboration Opportunities

Regionalization of MIH

With increasing EMS call volumes, fire departments are looking to reduce those that are of such low acuity that they may not necessitate an emergency response. MIH and case management programs have been found to have a positive impact, but not all municipalities in Milwaukee County have enough calls to necessitate a comprehensive program, and not all fire departments have the resources to run a program individually. This may be a good opportunity, therefore, for municipal fire departments to collaborate.

For example, while none of the three South Shore communities -- St Francis, Cudahy, and South Milwaukee – might be able to justify a full-fledged MIH program on their own, their combined call volumes might justify a joint program. Combined, these three fire departments have about the same EMS activity as the Greenfield Fire Department, which has its own MIH program. The Greenfield MIH program includes nine EMTs, one of whom is an assistant chief, plus a civilian case manager. A hypothetical joint MIH program could be a similar size. The three participating departments could each contribute three EMTs to the team. They could also jointly pay for a case manager who could be housed in one of the departments. Both the case manager and the nine team members would work on cases across all three departments.

Greendale and Hales Corners are both small enough communities that even if combined, their call volume may not be sufficient for an MIH program. However, given that the Greenfield Fire Department, which is adjacent to both communities, already has an established program, a contractual opportunity could be explored. When combined, the calls from these two communities are less than half of the calls generated in Greenfield. The Greenfield MIH program likely would need to add a staff position or two to handle the additional work, but that additional cost could be split between the two or even the three communities if the staff additions were perceived to benefit Greenfield's existing program, as well.

A countywide approach

A more comprehensive option would be to have OEM play a greater role in providing countywide MIH services. Communities could opt into a county MIH service either to supplement or eliminate their own MIH or case management programs or to add programming in the case of those that do not currently employ such services. OEM would employ the MIH team members, and participating communities might provide financial support and support of their own EMTs and paramedics based on their current involvement in each community.

OEM recently received grant funding to begin the development of a countywide MIH program. As part of the national opioid settlement agreement, OEM has been awarded a $2.4 million grant that, according to a project summary, will aim to fill "gaps" that exist within the county in MIH care, with a particular focus on patients affected by Opioid Use Disorder (OUD). OEM officials say the program will seek to leverage the opioid funding to expand MIH opportunities in Milwaukee County. One

possibility would be the establishment of a team, consisting of four part-time paramedics and a supervisor, that would work closely with the municipal fire departments to expand countywide MIH coverage, including in those communities that do not already have MIH programs through their fire departments.

The opioid grant will only provide funding through 2026, at which time the countywide program will need to find other sources of revenue if it is to continue or expand. If there are beneficial results, then OEM likely would seek funding not only from the county budget, but also from the state or federal governments, philanthropic sources, and the municipalities and medical providers benefiting from the decreased use of the medical system.

It is unclear whether municipalities with active MIH programs would be willing to chip in for a supplemental program managed by OEM. A key question would be whether the existence of the OEM program could reduce MIH staffing needs within municipal fire departments, thus allowing them to shift some of their own expenditures to the OEM program. It is also uncertain whether municipalities that currently do not deem MIH to be necessary or affordable would be willing to devote resources to a countywide MIH program.

Fortunately, the opioid settlement grant gives OEM the opportunity to pilot the program and evaluate its effectiveness in reaching and producing positive outcomes for individuals who might not otherwise be served by municipal fire departments. The pilot also may allow fire department officials to assess the value of having county-employed paramedics work with their EMS personnel in the field and having OEM manage a countywide MIH program. Ultimately, many may determine that participating in and helping to pay for a single OEM program that is offered throughout the county is a more effective and cost efficient approach than maintaining their own individual MIH programs.

SEPARATING EMS FROM FIRE

For the final section of our analysis we consider the separation of EMS from fire service in Milwaukee County. Under the most comprehensive iteration of this option, fire service and first response would be provided by municipal fire departments throughout the county, while ALS would be provided solely by the county's OEM (which also would continue its existing responsibilities). Under such an approach, fire department personnel would still respond to medical calls and would be trained to provide a BLS level of care. However, OEM also would respond based on the level of acuity determined by dispatchers. It is also possible that OEM personnel would be automatically dispatched to all medical calls.

While both the fire chiefs and OEM agree that such a complete separation likely would not be politically feasible at this time, they did agree there would be merit in illustrating such a scenario as a means of exploring the pros and cons.

To tackle this question, we consider an example from another large urban county in which such separation has occurred, and then we model what separation would look like in the region of Milwaukee County that has already consolidated its fire departments. We conclude with some general observations and insights.

Considerations for a Separated Approach

In the current system, municipal fire departments balance the objectives of both fire protection/response and EMS, which sometimes align but often do not. Fire responses typically require much higher levels of staff and apparatus than EMS responses, but they occur far less frequently. The two types of responses obviously also require different forms of training and preparedness.

Separation may produce efficiencies

Today, municipal fire departments schedule and prepare their staffs to respond to both fire and medical emergencies. In a separated system, municipal fire departments and OEM would be able to focus on their own respective areas. There would be changes in the training and credentials of the separated staff, how staff would be deployed throughout the day, and in the ownership and maintenance of equipment and vehicles.

OEM's EMS staffing schedules, for example, likely would be based on the frequency of calls during certain parts of the day, as fewer paramedics and ambulance crews might be needed during overnight hours when call volumes decline. Under the current combined approach, despite the fact that EMS calls typically account for up to 80% of fire department call volumes, reducing staff during overnight hours when those calls decrease in frequency may not be possible in light of the need to maintain minimum staffing levels for fire apparatus.

The deployment of ALS responders also likely would be adjusted under a separated approach. For example, today most fire stations in the county need to house an ambulance and an ambulance crew on a 24/7 basis to provide sufficient coverage within narrow municipal boundaries. Conversely, if OEM was the countywide EMS provider, its managers likely would reduce the number of ambulances and crews countywide, as ambulances would be strategically deployed across the county to respond within a larger radius without regard for municipal boundaries.

There also could be benefits on the human resources front. Currently in Milwaukee County, every fire department employee is expected to have fire and emergency medical skills. However, there are many individuals who want to be a firefighter or a paramedic, but not both.

With the separation of the two services, employees could be trained in the specific skills required for the service in which they are employed, which could reduce time spent on education and training while also allowing for greater focus on the specific skills that are needed for each service. Such a paradigm may enhance recruitment efforts, as individuals could gravitate to the organizations that align with their interests and skill sets.

Financial considerations

There are financial considerations, however, that may argue against a separated approach. Arguably, one of the key advantages to the combined nature of fire and EMS is the opportunity to maximize the time of front-line staff. Fire calls can be relatively infrequent, but municipal departments must staff shifts in a robust manner that ensures there are sufficient personnel to respond when a fire call does come in. Having firefighters who are also trained as paramedics or EMTs allows them to respond to more frequent EMS calls (often with only two on an ambulance) without necessarily detracting from the level of fire responsiveness needed.

If the two services were separated, then fire departments likely could see some reduction in staff, although the reduction almost certainly would not be equivalent to the number of paramedic responders that OEM would need to hire. That is because fire department staffing levels still would need to reflect the comparatively large number of firefighters needed to respond to fire calls, while also ensuring sufficient staffing to provide first response for medical calls. We will illustrate this point in our modeling later in this section.

There also would be important ramifications on the revenue side, as EMS reimbursement from individuals and insurers is a primary source of revenue for fire departments. In a separated system, all of the ALS billing revenue – including revenue from medical transports – would potentially go to the county, although a revenue sharing plan also could be developed. Also, the county currently provides a $3 million subsidy that is split among the municipal fire departments to support their participation in the countywide EMS program, and that subsidy presumably would be eliminated if OEM provided all but first response services. With the loss of these revenues, the fire departments would then predominantly rely on their own municipal property tax levy to cover their costs.

A Look at a Peer County

To gain further insight into the pros and cons of fire and EMS separation, we looked to Wake County, North Carolina, where the county government is responsible for EMS, and the county's municipalities are responsible for fire services. As **Table 7** shows, Milwaukee and Wake counties have similar populations and comparable EMS call volumes.

Table 7: Comparison of County Characteristics

	Wake County	Milwaukee County
County Pop., 2020	1,129,410	939,489
Major City	Raleigh	Milwaukee
City Population, 2020	467,665	577,222
Area (sq. mi.)	835	241
Countywide Fire Departments		
Fire Departments	22	12
Fire Stations	109	54
Firefighters EMTs	1,833 471	1,337
EMS call 3-year average, 2021-2023	122,000	112,000

Sources: U.S. Census Bureau, Interviews

It is important to note that Wake County is significantly larger geographically than Milwaukee County, however, which helps explain its much larger numbers of stations and responders. Wake County, whose largest city is Raleigh, has 22 municipal fire departments spread across 835 square miles. This is almost double the 12 fire departments in Milwaukee County, which has 241 square miles.

The Wake County fire departments are administered by municipal governments while its EMS program is run by a single agency that is part of county government. The fire departments in Wake County do provide first response, which means they are deployed to emergency medical calls and are closely followed by the county's EMS units if an ALS level of care or ambulance transport is needed. This ensures quicker initial responses because the firefighters have greater coverage across the county. The paramedics on the ambulances have more extensive medical training but generally take longer to reach medical emergencies because there are fewer EMS response teams in the county.

Across its large geographical area, there are 109 fire stations in Wake County from which the first responders are deployed. The number of active EMS teams, however fluctuates based on the time of day. At times of peak call volumes in the afternoon, there are 51 EMS teams ready to respond to calls throughout the county. During the slowest part of a 24-hour period, after midnight, the number of active EMS teams drops to as few as 45. Administrators note that the differential still does not match the EMS call distribution and they are currently analyzing a reorganization under which they would have 60 teams at peak and 35 teams when calls are at their lowest level. This schedule may be a better match for the distribution of calls but is difficult to organize logistically given the personal needs of the employees and overtime limitations.

In comparison, the fire departments of Milwaukee County have about 48 active ambulances that can be deployed at all times of the day (although it should be noted that MFD's use of private ambulances for BLS contributes to that lower number). They are staffed by firefighters/EMTs, most of whom are also trained as paramedics and who can offer an ALS level of service. Additionally, fire departments can use their fire apparatus to respond to EMS calls if needed, which is how some first response is handled. Therefore, Milwaukee County has 48 ambulance crews, but its EMS response capacity is greater than that.

EMS has always been separated from fire services in Wake County, although there have been periods in which some individual fire departments have handled both functions. Officials we interviewed cited several advantages to having EMS provided regionally while relying on municipalities to handle fire and first response services:

- Operational efficiency. Leaders say that having all aspects of EMS in one organization allows them to approach issues related to EMS quality and responsiveness on a broad, system-wide basis that ensures an identical level of care and responsiveness across the county. Also, their strategic approach to EMS management and deployment does not have to take into account how EMS service changes might impact fire responsiveness.

- Economies of scale. Having EMS housed in a single, large agency not only has benefits in terms of increasing purchasing power for larger supply orders, but also in ensuring countywide uniformity of shared equipment and procedures. For example, all of the ambulances have the same layouts and equipment, and all of the medical transports follow the same billing procedures.

- **Enhanced training.** From a service perspective, Wake County EMS officials say their staff can develop a higher level of expertise because their focus is solely on EMS and there are fewer of them in the rotation to respond to medical calls. For example, responders are able to gain experience from responding to a higher frequency of high acuity medical responses than if the EMS calls were distributed among a larger pool of responders.

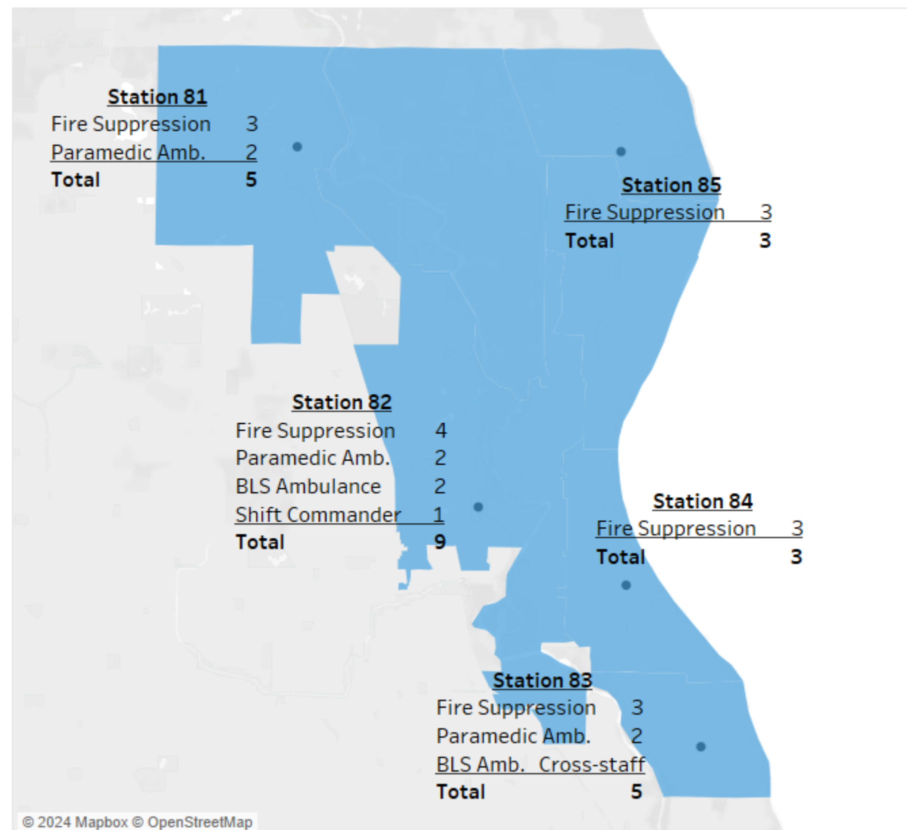
The benefits of a separated system in Wake County likely come at a high financial cost, however, for both municipal fire departments and the county. Because of separation, there are significantly more individuals in Wake County responding to 911 medical calls than in Milwaukee County. While that may bring benefits on the service side, those additional employees cost more for the local taxpayers.

Separation of Fire and EMS – North Shore Communities

Modeling the separation of EMS from fire services in all of Milwaukee County would be an extensive exercise that logically also should consider fire department consolidation within the county. Given the complex and potentially controversial nature of such a scenario, we instead decided to model what a separation would look like in Milwaukee County's North Shore – the one region of the county where fire department consolidation already has occurred. A drawback to this approach, however, is that because the North Shore Fire Department (NSFD) already has achieved certain efficiencies by virtue of consolidation, some of the efficiency advantages that might otherwise have resulted from separating fire and EMS might not be as readily apparent.

Map 2: North Shore Fire Department Stations

Fire Station Staffing by Apparatus Assignment



Source: North Shore Fire Department

The current state

NSFD currently staffs and operates four ambulances from its five fire stations (see **Map 2**), though it has a fifth ambulance ready to run if the need arises. During a single shift, the five stations typically are staffed with a total of 24 responders and one shift commander. Three of the five stations have enough responders assigned to each shift so that they could send out an ambulance and fire apparatus at any given time (Station 82 in

Glendale has sufficient staff to send out two ambulances and an engine). Stations 84 and 85 in Bayside and Whitefish Bay do not have ambulances.

Each shift is assigned additional FTEs to account for employees who are off for sickness, vacation, professional leave, etc. The scheduled rotation has three shifts. The shift coverage plus command staff totals 101 full-time FTEs for NSFD, with 59% licensed at the paramedic level. It also should be noted that NSFD has one captain position assigned specifically to oversee EMS for the department (this position was formerly a battalion chief until a change on January 1, 2025).

A separation model

Under a hypothetical separation model, NSFD would continue to be responsible for fire and first response to medical emergencies, while the county's OEM would take responsibility for ALS and ambulance transports. We assume, however, that OEM would continue to run its ambulances out of existing NSFD stations, and that NSFD and Milwaukee County would negotiate a plan to transfer ownership of at least some of NSFD's current stock of active ambulances and associated equipment to OEM. Because of the uncertain nature of such negotiations and precisely how many ambulances would be involved, we do not account for the fiscal impacts of any ambulance ownership transfers in our modeling, nor do we include possible sales proceeds that would be realized by NSFD from selling its reserve ambulance (which likely would not be needed by OEM) or any possible financial transaction related to OEM's use of NSFD's stations.

The North Shore communities have seen increased call volumes since 2019, but recently those volumes have leveled off at 7,000 to 7,500 EMS calls annually. Based on this level and in accordance with common standards used by fire and EMS personnel, we believe that three ambulance teams could reasonably meet this demand at peak times if the county were to assume responsibility for EMS. Then, when call volumes drop significantly between midnight and 8 a.m., two active ambulances would be sufficient.

Table 8: North Shore Ambulance Utilization

North Shore Fire Dept., 2022	Location	Unit Hour Utilization
Paramedic Ambulance, *Med 81*	Brown Deer	0.24
Paramedic Ambulance, *Med 82*	Glendale	0.24
Paramedic Ambulance, *Med 83*	Shorewood	0.18
Ambulance 84	Whitefish Bay	- -
Ambulance 85	Bayside	0.10*
Proposed System		
Paramedic Ambulance 1		0.24
Paramedic Ambulance 2		0.24
Paramedic Ambulance 3		0.28

*2022 rate not reported, used 2021
Sources: NSFD 2024 Budget

To test that hypothesis, we also examined how much time the ambulances spent responding to calls during the past few years. Industry standards suggest that ambulance utilization rates for combined fire and EMS agencies, i.e., the proportion of time that the vehicle is responding to calls, should not exceed 30%.[5] As shown in **Table 8**, the current five ambulances were below the recommended maximum in 2022. Ambulance 84 is used so infrequently that its rate is not reported. If the region had used three

[5] Officials we spoke to say that agencies with ambulances that are not responsible for fire will commonly see utilization rates of up to 50%.

ambulances during that same period, the theoretical rate of the combined vehicles would still be lower than the industry standard.

To effectuate the transfer of ALS and ambulance transports to the county, OEM would need to add paramedics while NSFD would be able to shed some of its responder positions. This would not be a one-to-one transfer, however, because NSFD's responders have intertwined firefighting and EMS duties and minimum staffing levels for fire apparatus would require the retention of many of those responders.

We estimate that OEM would need to add 32 staff positions to take over ALS for the North Shore at a personnel-related cost of a little under $4.2 million, as shown in **Table 9**.[6] Twelve paramedic responders would be needed to cover three ambulance crews for 16 hours per day (two 8-hour shifts) while four would be needed to staff two ambulance crews for an 8-hour nighttime shift each day. In addition, using a multiplier of 1.5 for the number of FTE responders needed to cover for one position due to vacation, sick leave, etc. brings us to a total of 24 paramedics. We then estimate a need for six command staff positions (four shift commanders, a deputy chief, and a chief) as well as two administrative positions.

Table 9: Estimated Personnel Costs for OEM

Staff	FTEs	Cost (Salary Plus 60% for Benefits)
Paramedics Daytime (3 ambulances * 2 paramedics *2 8-hr shifts)	12	$1,478,400
Paramedics Nighttime (2 ambulances * 2 paramedics * 1 8-hr shift)	4	$492,800
Shift Commander (one per each 8-hour shift)	3	$451,200
Chief	1	$224,000
Deputy Chief	1	$192,000
Finance/HR Director	1	$128,000
Admin Asst	1	$80,000
Additional FTEs for Coverage		
Paramedics	8	$985,600
Shift Commander	1	$150,400
Total	**32**	**$4,182,400**

Source: WPF calculations

Meanwhile, we estimate that the NSFD would be able to reduce its staff only from 101 to 86 FTEs to accommodate fire response/protection and first response. Although the fire department would no longer operate ambulances, each of its five stations would still require four staff members to run the fire apparatus for a fire call.[7] The four individuals at the five stations plus a shift command position would be a total of 21 individuals for each shift, as compared to the current 24. A reduction of three individuals from each of three shifts – plus another five based on no

Table 10: Estimated Changes in Personnel

	OEM	NSFD
Paramedics	24	(14)
Command Staff	6	(1)
Administrative	2	0
TOTAL	**32**	**(15)**
TOTAL PERSONNEL COST/(SAVINGS)	**$4,182,400**	**($1,875,200)**

Source: WPF calculations

[6] See **Appendix I** for salary and benefit costs used in our calculations for each position.

[7] A minimum of four firefighters per fire engine is the standard protocol for fire departments nationally. NSFD currently does not typically meet that standard on fire apparatus (instead using three firefighters) because two vehicles typically respond, but under a scenario in which ambulance crews are not part of NSFD's typical response, the standard of four would be desired.

longer needing vacation and sick leave coverage for those nine individuals – would produce an ability to reduce front line staffing by 14 positions. The ability to also eliminate the captain position dedicated to EMS results in a total reduction of 15 FTEs for NSFD at a savings of about $1.9 million, as shown in **Table 10** on the previous page.

Consequently, using this basic calculation, we would expect OEM to increase its expenditures by about $4.2 million, while NSFD could reduce its expenditures by about $1.9 million, for a net added expenditure of about $2.3 million.

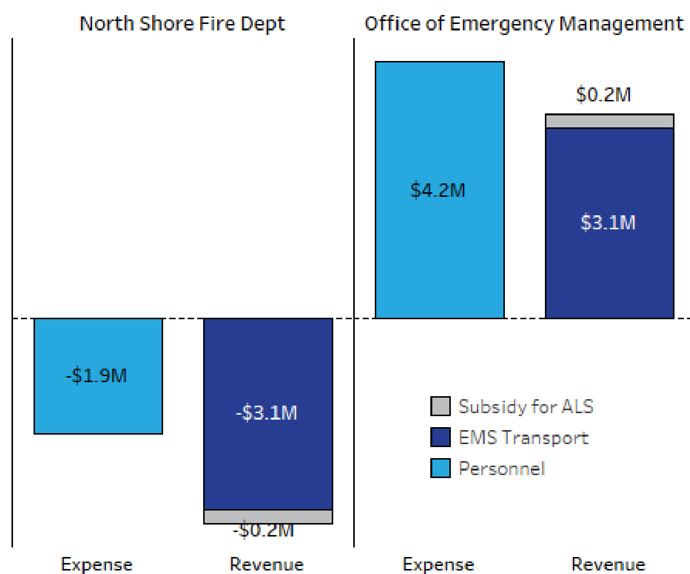
The collection and retention of ambulance transport revenue would be another important financial element of any consideration of separating EMS from fire services in the North Shore. Currently, the NSFD collects approximately $3.1 million in reimbursement revenue annually from individuals and insurers for its provision of ambulance transports and other EMS activities. Presumably, all of that total would shift to OEM under our separation model.

Also, the NSFD currently receives a $230,000 annual payment from Milwaukee County as part of the county's $3 million contribution to EMS providers countywide, which is distributed on a formula basis. That payment would likely be shifted to OEM.

As shown in **Figure 4**, when we add these revenue considerations to the personnel-related expenses and savings outlined earlier, we find that NSFD would experience personnel savings of about $1.9 million annually but would lose about $3.3 million in revenue, for a net added cost of about $1.4 million. Meanwhile, OEM would incur additional personnel-related costs of about $4.2 million annually but would obtain $3.3 million in new revenue for a hypothetical net annual cost of $900,000.

Figure 4: Separating EMS Would Create Budget Shortfalls

Estimated changes in expenses and revenue



Sources: North Shore Fire Department, Office of Emergency Management

This calculation obviously is rudimentary and does not take into account several factors that also would enter into a financial analysis of our new model. For example:

- The proportion of staff members trained as paramedics would likely decrease for NSFD given that it would no longer be an ALS provider, which would modestly reduce its average salary costs for responders.
- NSFD would experience savings in uniforms, equipment, and ambulance acquisition and maintenance, while OEM would need to add those costs. Also, as noted above, our analysis does not include any payments from OEM to NSFD related to the transfer of ambulances or the use of its stations, nor do we account for any sales proceeds for surplus ambulances.

- NSFD's administrative responsibilities would be reduced in light of the reduction in staff, although we do not believe that reduction would be sufficient to allow the department to eliminate one of its current administrative positions.
- Overtime costs potentially would be reduced modestly for NSFD because of its reduced staffing requirements, while some amount of overtime would need to be budgeted by OEM.

We are unable to estimate the financial impacts of these factors, but we believe they would not change the bottom line conclusion reached by our analysis, which is that **separating EMS from fire service in the North Shore would produce an added cost for both the North Shore Fire Department and Milwaukee County that may be in the range of $1 million annually for both entities.** However, any added cost would need to be balanced by the following potential benefits for North Shore residents:

- The potential for improved quality of ALS responses given the higher level of specialization and training of OEM responders.
- The potential for improved strategic management of EMS resources given the EMS-only focus at OEM, which could lead to enhanced data collection and analysis and more opportunity to implement cutting edge practices and protocols.
- Improved ability of both NSFD and OEM to recruit and retain high-quality staff due to the separation of services.

Separation of Fire and EMS - Milwaukee County

As noted earlier, modeling the separation of fire services and EMS in the North Shore does not produce some of the benefits that would result from separation in other regions of Milwaukee County, where an even more pronounced reduction of ambulances and ambulance crews and better strategic coordination of EMS potentially could be achieved. However, we did not attempt to model other regional separation scenarios or a countywide separation given political realities and the complexity that would be involved in doing so.

Still, we felt it would be worthwhile to cite some additional considerations that are pertinent to exploration of regional or countywide separation of EMS and fire services in Milwaukee County.

- **The number of active ambulances could decrease.** Under a countywide separation scenario, we expect that the number of ambulances would decrease substantially relative to the number of active vehicles currently used by the fire departments. In the current system, each fire department equips itself to reduce the need to call for mutual aid when it receives overlapping EMS calls. This is demonstrated by small departments with more than one ambulance and mid-sized departments that house ambulances at each of their stations. In a regional EMS program, the ambulances would not be assigned to municipalities and could respond to multiple calls in a single municipality when needed. For example, EMS Zone E in the southeastern part of the county contains the four municipalities along Lake Michigan and has four fire departments. Each of the departments staffs two ambulances, which is reasonable due to the possibility of receiving two EMS calls simultaneously. However, this means that the region has a total of eight active ambulances, whereas the typical annual combined call volume of 10,000 EMS calls in that region suggests that it might reasonably need four active ambulances.

- **Personnel savings throughout the county could proportionally exceed those shown for NSFD.** In the North Shore model, we estimated an approximate 15% reduction in fire department staffing if EMS was transferred to OEM. The proportional decrease in firefighters would not be uniform across the county, however, because not all fire departments staff their stations in the same manner as NSFD. Some, like NSFD, cross-staff some of their fire and EMS vehicles so that the stationed firefighters may respond to a call on either type of vehicle. Other departments assign their staff to specific vehicles during a shift. These fire departments would be able to lose a larger proportion of FTEs per shift than NSFD with the elimination of their ambulances, which would result in greater savings in their personnel budgets.

- **EMS teams could be deployed from new and flexible locations.** By definition, a regional approach to EMS would remove municipal borders as a factor in the placement of EMS teams. Currently, ambulances are based at fire stations, which are located with the intention of minimizing the response times within municipalities. However, a countywide system would no longer have to consider municipal borders and could instead position ambulance crews in optimal locations across the county based on call volumes.

- **A larger system could have more administrative efficiencies.** As we discussed earlier, efficiencies from a countywide or regional separation could be produced by the unified ordering and management of medical supplies, the consolidation and standardization of billing, the implementation of regional or countywide MIH teams, and the sharing of expensive, sophisticated medical equipment. Also, it would be more logical and potentially more effective for OEM to develop and implement a countywide MIH program if it took on the role of primary EMS provider in the county.

Summary

Our discussion in this section points to several possible advantages that may be associated with a transfer of responsibility for the provision of ALS from fire departments in Milwaukee County to the county's Office of Emergency Management. Those include the possible ability to achieve a higher level of staff training and expertise, increased ability to attract and retain both EMS and fire department staff, enhanced strategic management, more efficient deployment of ambulances and paramedics, and more efficient purchasing of supplies and equipment.

On the other hand, we have shown by our modeling of such a separation in Milwaukee County's North Shore that it would require an increase in overall combined fire and EMS staffing that would produce a substantial increase in EMS costs countywide. Also, a change in the collection of ambulance transport revenue would create a further disadvantage for municipal governments, who would lose a critical revenue offset that helps pay for both fire protection and EMS.

It is certainly possible that some of these financial considerations could be addressed in ways that would reduce their impacts and that local officials could determine that any added cost resulting from a separation of fire and EMS is justified by the added benefits. However, much deeper analysis would be required – including consideration of fire department consolidation within the county – to arrive at an answer to that question.

CONCLUSION

Our effort to identify and analyze opportunities for enhanced EMS service sharing among the 12 municipal fire departments and Office of Emergency Management in Milwaukee County was challenged by the amount of service sharing that already exists. It is well known that the departments already maintain a robust system of mutual aid and regularly provide resources to back up one another when call volumes are high, but there is also considerable collaboration in less public-facing areas, such as the sharing of backup ambulances.

In accordance with its role of overseeing, guiding, and coordinating EMS in the county, OEM also promotes collaboration and efficiency in several different ways. Those include the monitoring and distribution of narcotics to departments across the county and data collection and sharing. Also, as this study was being conducted, OEM added an important new form of collaboration when it secured a grant that will allow it to pilot countywide mobile integrated healthcare services that can fill gaps in fire department MIH activities and specifically focus on individuals with opioid use disorder.

Still, despite the high level of cooperation and collaboration that already exists, we identified several areas where service sharing might be enhanced. Those include collaborating on administrative tasks like supply management, equipment maintenance, and billing, or working out an arrangement with OEM to administer those services. While pursuit of those options would be unlikely to generate significant financial savings for municipal departments, they could ease the administrative burden faced by many and free up resources for activities more directly related to EMS response and quality care.

Reconsidering the provision of MIH and the potential benefits of transforming it into a countywide service offered by OEM could have more substantive financial benefit (particularly for municipalities) and, more importantly, could produce an enhanced level of specialization and effectiveness. Given that the Milwaukee Fire Department already has invested considerable time and resources on its own MIH program, it may be most logical to have OEM offer this service only to the suburban departments. In fact, an opt in or opt out approach might be most sensible for all departments, both for MIH and the administrative options we discuss.

Finally, while we do not consider the complete separation of EMS from fire response services to be politically viable and affordable at this time, there may be value in contemplating such an approach as the municipal fire departments and OEM become more interconnected in both their administration and provision of emergency medical services. We have shown how separation may produce added costs, but further analysis of added benefits may be in order, particularly as municipal fire departments face growing paramedic recruitment and retention challenges and as OEM experiments with its own increased employment of paramedics to launch its MIH pilot.

As time goes on, and the departments and OEM broaden their collaboration and mutual trust even further, the notion of turning over all EMS except first response to the county may become easier to effectuate and may gain traction among local leaders despite the potential added cost. Indeed, fire department leaders may ultimately appreciate a potential opportunity to focus exclusively on fire response and protection and conclude that a county agency with deeper medical and strategic

capacity would be better able to concentrate on staffing and providing cutting-edge emergency medical care for county residents.

On the other hand, leaders may determine that it would make little sense to radically change a combined fire and EMS approach that is meeting the community's needs. Instead, they may wish to continue their focus on identifying opportunities for enhanced efficiency, effectiveness, and coordination within the current framework.

Overall, we hope this report provides valuable insights to fire and EMS leaders in Milwaukee County, policymakers, and the public. The coordinated approach to EMS in Milwaukee County has worked very well over the years, earning national acclaim for its effectiveness and representing an important example of municipal-county cooperation that ideally would be replicated in other areas. Fire and EMS leaders deserve credit for not resting on these accomplishments and considering new ways to build upon that success.

APPENDIX

Table 11: Municipality EMS Call Volume

Municipality	Served by	EMS Calls, 2022	Calls per 100 Residents
Zone A			
Bayside	North Shore FD	400	8.9
Brown Deer	North Shore FD	1,778	14.1
Fox Point	North Shore FD	458	6.9
Glendale	North Shore FD	2,842	21.9
River Hills	North Shore FD	134	8.8
Shorewood	North Shore FD	1,160	8.6
Whitefish Bay	North Shore FD	485	3.3
North Shore Total	North Shore FD	7,257	10.9
Zone B			
Milwaukee	Milwaukee FD	67,347	12.0
Zone C			
Wauwatosa	Wauwatosa FD	5,387	11.4
West Allis	West Allis FD	8,673	14.7
West Milwaukee	Milwaukee FD	951	23.2
Zone D			
Franklin	Franklin FD	4,024	11.2
Greendale	Greendale FD	1,683	11.6
Greenfield	Greenfield FD	4,818	13.0
Hales Corners	Hales Corners FD	1,019	13.5
Zone E			
Cudahy	Cudahy FD	1,984	11.1
Oak Creek	Oak Creek FD	4,095	11.3
Saint Francis	St Francis FD	1,316	14.0
South Milwaukee	South Milwaukee FD	2,533	12.5
County		111,087	12.1

Source: 2022 Population from U.S. Census Bureau, Calls from County OEM Dashboard
* This table lists municipalities by region of county and then alphabetically.

Table 12: Fire Department Service Level

Fire Department	Region	Paramedic Level	Stations	Active Ambulances	Paramedics
Cudahy FD	South	ALS	2	2	42%
Franklin FD	Southwest	ALS	3	3	100%
Greendale FD	Southwest	ALS	1	2	90%
Greenfield FD	Southwest	ALS	2	3	100%
Hales Corners FD	Southwest	BLS	1	2	26%
Milwaukee FD	Central	ALS	29	14	32%
North Shore FD	North	ALS	5	5	58%
Oak Creek FD	South	ALS	3	3	83%
Saint Francis FD	South	ALS	1	2	41%
South Milwaukee FD	South	ALS	1	3	48%
Wauwatosa FD	West	ALS	3	3	49%
West Allis FD	West	ALS	3	3	68%

Source: Fire Department Surveys.

Table 13: Salary & Benefit Costs Estimates for Modeling

Actual	Salary	Benefits (60% of salary)	Total Cost per FTE
Paramedic	$77,000	$46,200	$123,200
Shift Commander	$94,000	$56,400	$150,400
Chief	$140,000	$84,000	$224,000
Deputy Chief	$120,000	$72,000	$192,000
Finance/HR Director	$80,000	$48,000	$128,000
Admin Asst	$50,000	$30,000	$80,000