# MEDIC EMS of Scott County: A Transitional Document

## Scott County, Iowa

July 2023


PUBLIC CONSULTING GROUP

# SECTION 1: INTRODUCTION AND ACKNOWLEDGEMENTS

## 1.1: Introduction

Scott County (County) awarded a contract to Public Consulting Group LLC (PCG) on January 4, 2023, to conduct an "EMS Transition Study" (Study). The primary scope of work was divided into two specific phases, which culminated in this final report being provided to the County to help guide their future actions.

### 1.1.1: Scope of Work

The primary focus of this Study, and subsequent document, was to prepare the County for any issues that may be encountered during a transition of MEDIC EMS into a department of the County, while also providing the involved stakeholders with an in-depth review of the current operations of MEDIC EMS. While the primary topics reviewed were divided into two phases, information was obtained when available regardless of the phase, and updated as needed.

Phase 1 of the Study was primarily an operational analysis. The focus of Phase 1, which was presented to the County on March 30, 2023, included the following:

a. Call volume and response time assessment highlighting countywide system demands/needs.

b. Operational overview needs assessment for a 9-1-1/ambulance service response system, including organizational structure, station overview, and an apparatus needs evaluation.

c. Identifying potential impacts to 9-1-1 dispatching for emergency medical services throughout the County, such as call routing/PSAP transferring and/or processes for dispatching multiple units/agencies within the County.

d. Non-profit (MEDIC) to municipal/government-based (County) transition timeline development.

e. Modeling projections/processes should account for the entire county.

f. Engagement with relevant stakeholders.

g. A "Phase 1 Summary."

h. An in-person presentation to relevant stakeholders, coinciding with an on-site visit.

Phase 2 was officially initiated following the presentation of Phase 1 to the County and other relevant stakeholders. Primarily consisting of an administrative and financial analysis, the focus of Phase 2 included the following:

a. Community/municipality and identified stakeholder interviews.

b. MEDIC employee engagement survey.

c. Staffing needs assessment, including the evaluation of various possible models.

d. Comprehensive financial analysis, including Medicaid Ground Emergency Medical Transportation (GEMT) revenue projections.

e. Identification of potential administrative/regulatory impacts related to State, Federal, and County regulations and requirements.

f. Comparison of at least three similar agencies.

g. Final report after a review period with requested study team members.

Phase 2 was concluded with a final report that was the culmination of the information gathered and analyzed during both phases of the Study. The report was reviewed by the applicable stakeholders for accuracy before the final report was provided to the County.

### 1.1.2: Project Timeline

The County and multiple relevant stakeholders (transition team) had already been meeting on the topic of a potential transition of MEDIC into the County prior to PCG's engagement. Meeting minutes from the previous transition team meetings were reviewed by PCG prior to attending their first meeting on January 4, 2023. Weekly update meetings were held every Wednesday to keep information flowing and to keep the transition on track for a possible July 1, 2023, or January 1, 2024 "go-live" date. After the presentation of Phase 1, a January 1, 2024 "go-live" date was determined to be more feasible and became the target.

An on-site visit was completed during the week of March 27, 2023. During the visit, multiple meetings were held with the key stakeholders and the visit concluded with three presentations on the progress of the transition. Weekly meetings involving the entire transition team were continued through Phase 2.

On April 27, 2023, the Scott County Board of Supervisors unanimously approved an ordinance to create a Department for MEDIC EMS within the County. An EMS department was officially created within the County administrative structure and a search was initiated for an EMS Director for the County EMS department. Once the final report was completed, a presentation of the highlights discovered during the Study was provided for stakeholders identified by the County.

### 1.1.3: Limitations and Disclaimer

There were very few known limitations or disclaimers to present in the context of this Study. It is believed that the data and information in this study is as accurate as possible. This document represents the data and analysis available to the PCG team during the EMS Transition Study. A tentative timeline shows that this transition will likely occur several months following the completion of this document. This document should be seen as being representative of a point in time with future trends predicted as accurately as possible.

The PCG team has confidence in the data collected, as well as the analysis completed, with the information currently known. Changes in the services provided by MEDIC, the services requested by the community, leadership within the organization, or other unforeseen circumstances could impact the future validity of any recommendations contained in this document.

# 1.2: Report Methodology and Structure

## 1.2.1: Methodology

The primary approach with this Study was to interview local stakeholders and to review the recent computer automated dispatch (CAD) data from the past several years. Other pertinent information, such as financial records, contracts, and previously conducted studies were also reviewed during this project. Utilizing the reviewed data, the PCG team was able to understand the context of the possible MEDIC EMS transition to a department of Scott County. In the scope of that context, an operational, administrative, and financial analysis was completed. The content of those analyses, and any recommendations requested by the Scott County transition team are the primary content of this report.

It should be noted that the transition of, or creation of, a county department is a very involved process that potentially influences every other department within the County. The primary focus of this document is the direct impact on MEDIC EMS and its ability to continue to provide services as a department of the County. An additional transition document was completed by the Scott County transition team that reviewed some of the secondary or tertiary effects of this transition. That document was reviewed as a part of the creation of this final study report. Once created, this report was reviewed by the PCG team and stakeholders identified by Scott County prior to finalizing.

## 1.2.2: Report Structure

This report has been divided into multiple sections for clarity and focused delivery of the information and associated analyses. The document starts with this introductory section, which introduces the reader to the overall context of the Study while introducing key terminology and the overall project team. **Section 2** contains the summary of the report as well as the key findings from this Study. From there, **Section 3** covers the applicable background on topics such as MEDIC EMS, the larger communities within Scott County, the pertinent rules, and regulations relating to EMS in Iowa, and other topics. **Section 4** details the operational analysis completed during the first phase of the Study. **Section 5** covers the administrative and financial issues involved with the transition. **Section 6** addresses the conclusions and some key findings. Multiple appendices are attached to the end of the report; these appendices are meant to provide additional reference materials and other assorted information that readers may need.

## 1.2.3: Key Terms

The field of EMS and medical first response is rife with acronyms and profession-specific terminology. To allow for ease of reading and clarity, a list of several of the possible terms, acronyms, and titles that will be used throughout this report has been included:

**ADM** – Alternative Delivery Model; a term used to describe the staffing model that provides primary response coverage to much of rural Scott County.

**ALS** – Advanced Life Support; commonly referring to an ambulance crew consisting of an EMT and a paramedic, a first response vehicle staffed solely by a paramedic, or patient care provided by a paramedic.

**Ambulance Service** – Referencing an EMS agency that functions as a 9-1-1 ambulance transport service provider.

**Apparatus** – Includes ambulances, administrative vehicles, quick response vehicles, or any other vehicle currently utilized by MEDIC EMS.

**Bettendorf** – Referencing the City of Bettendorf, in southeastern Scott County.

**BLS** – Basic Life Support; commonly referring to an ambulance crew consisting of two EMTs, or patient care provided by an EMT.

**County** – In appropriate context and when capitalized, this refers to Scott County as either the governing body or the municipal entity.

**Davenport** – Referencing the City of Davenport, located in Southern Scott County.

**EMS** – Emergency Medical Service; commonly referencing an ambulance transport agency with 9-1-1 dispatched emergency response responsibilities but may include other agencies like first responder (only) services.

**EMT** – Emergency Medical Technician.

**ESA** – Emergency Service Area. Areas of responsibility assigned to each Ambulance Service that functions in Scott County.

**FD** – Fire Department (or Fire District).

**MEDIC** – Referencing MEDIC EMS.

**PSAP** – Public Safety Answering Point; referencing either the primary or secondary source for receiving 9-1-1 calls and dispatching public safety resources (e.g., police, fire, ambulance).

**Report** – Referencing this document.

**Study** – Referencing this project, its Scope of Work/Services, and the consulting firm's research, findings, and recommendations; may also reference this document (in the appropriate context and as applicable).

**Transfers** – Used to represent all scheduled and unscheduled transports that MEDIC EMS completes which are not due to a 9-1-1 activation.

**Unit** – Referencing (used synonymously with) a staffed ambulance or an ambulance vehicle.

# 1.3: Acknowledgements

## 1.3.1: Project Team

The success of this Study and the subsequent transition should be credited to the efforts of the work group created to evaluate the feasibility of a possible transition of MEDIC EMS into a department of the County. Including multiple disciplines and always looking for possible barriers that may arise, the perspectives and insights provided by the transition team members were invaluable to the success of this Study. The PCG project team members worked in collaboration with and as a part of the overall transition team.

A specific note of appreciation is expressed to **Scott County Director of Budget and Administrative Services David Farmer** and **MEDIC EMS Executive Director Linda Frederiksen**. The guidance, input, and history that they provided regarding the Study were instrumental in its success.

The members of the Scott County Transition Team are listed below:

Mahesh Sharma, County Administrator

David Farmer, Director of Budget and Administrative Services

Vanessa Wierman, Director of Human Resources

Mary Thee (retired), Director of Human Resources/Assistant County Administrator

Amy Thoreson, Director of Health

Tammy Speidel, Director of Facilities and Support Services

Matt Hirst, Director of Information Technology

Dave Donovan, Director of Scott Emergency Communication Center

Tracy Screechfield, Deputy Director of Scott Emergency Communication Center

Amanda Orr, ERP & Budget Analyst

Rob Cusack, Attorney

Linda Frederiksen, MEDIC EMS Executive Director

Paul Andorf, MEDIC EMS Information Systems Manager

Cristina Kuhn, Dorsey, and Whitney Attorney

## 1.3.2: Other Acknowledgements

This final document has been the result of significant stakeholder engagement. Representatives from the following agencies, in no specific order, are thanked for providing their insight into a possible transition:

Scott County

MEDIC EMS

The City of Davenport

The City of Bettendorf

Iowa's Bureau of Emergency and Trauma Services

Iowa Office of Department of Health and Human Services

Scott Emergency Communications Center

Genesis Ambulance Service

Genesis Health System (MercyOne)

Iowa Board of Pharmacy

The Iowa Public Safety Dispatcher Union

Heninger and Heninger, P.C.

Scott County EMS Association

Scott County Fire Chief's Association

Wheatland Emergency Medical Services

Durant Ambulance Service

Bennett Ambulance Service

## 1.4: PCG Project Team

This list is not all-inclusive of the PCG members who assisted in the creation and subsequent review of this report. The following PCG members were significant contributors to the overall product:

**Chief Jason Fuller** brings over 15 years of fire and EMS experience to this project as a **Senior Project Specialist** and serves as a fire/EMS subject matter expert with PCG**.** Serving as the **Lead Subject Matter Expert,** Jason is the primary researcher and author of this project. Jason brings an operational background within the fire and EMS industries, along with a strong background in training, crew resource management, and incident management. Previously serving as the Battalion Chief responsible for the department logistics and EMS operations of a municipal fire department in Southeastern North Carolina, Jason has progressive experience in multiple aspects of fire and EMS operations and administration. Jason has also advanced his education, being awarded a Master of Public Administration degree, further enhancing his understanding of the public, and administrative, areas that the fire and EMS industries function within.

**Chief Ken Riddle** brings over 40 years of emergency service industry knowledge and experience to this project as its **Project Advisor** and as a **Subject Matter Expert** within the EMS industry. Ken holds multiple fire service credentials, has prior clinical and administrative experience in EMS system delivery, and is also credentialed as an Executive Fire Officer (EFO). His background includes extensive executive chief officer experience within the fire service overseeing all levels of operations within a large, metropolitan fire/EMS system. In addition to this experience, Ken has been providing fire and EMS consulting services for over 30 years.

**Ms. Lauren Cantley** is an **Operations Analyst** with PCG and serves as **Project Manager** for this project. She brings two years of experience working with clients managing projects, operations assistance, School Based Services (SBS) for five states (AZ, CO, GA, KS, and WI), and overall quality control. Lauren specializes in Excel-based reports and visual aids utilizing Excel pivot and query, Power BI data analysis, and provides copy editing assistance for all enlisted projects.

**Ms. Nora Culeton** is a **Healthcare Consultant** with PCG and helps dozens of Fire and EMS providers around the country achieve an increase in department revenues through the completion of Medicaid cost reports. Additionally, she assists in PCG's Public Safety Consulting work by conducting research and supporting client projects. Nora also supports PCG's Medicare Ground Ambulance Data Collection services and is a dedicated program specialist who educates providers on the details of the initiative.

***Public Consulting Group LLC (PCG)*** *is a leading national fire and EMS consulting firm with experience in providing feasibility studies, data analysis, strategic and master planning, operational assessments, cost reporting analysis, ambulance supplemental payment program design, and professional recommendations for public safety agencies.*

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# SECTION 2: EXECUTIVE SUMMARY AND KEY FINDINGS

## 2.1: Executive Summary

MEDIC EMS is a 501(c)(3) based in Scott County, IA. A highly versatile emergency medical services (EMS) agency, they have provided high quality services to much of Scott County, and the surrounding area for more than 40 years. Originating as a hospital-based EMS service primarily serving the Davenport area, MEDIC EMS now provides primary response coverage for all of Scott County, Iowa, responding to 90 or more calls a day on average, with responses provided in the city of Clinton, Iowa (in Clinton County) and mutual aid/transportation support into the neighboring counties in Illinois. The agency has been described as a "model agency" by state EMS officials, EMS agencies across Iowa, and has participated in nation-wide presentations that detail their successes, as well as how they have navigated challenges, across the years.

Scott County, the third most populous county in Iowa, is a growing county situated at a bend in the Mississippi. Best known as being home to one of the "Quad Cities", Scott County's 170,000+ population spans from the populated South/South-Eastern municipalities, where roughly 80% of the County's population resides, to the additional 377 square miles where the remaining population is spread out across multiple smaller communities. A vigorous chain of hospital networks, and a large number of first response agencies, assist MEDIC EMS with providing high quality care to the area.

As times changed, and funding models developed, MEDIC EMS and Scott County began discussions of a possible transition of MEDIC EMS into the County as a department. After preliminary discussions and feasibility assessments were completed, it was determined that an external consultant could benefit the transition evaluation process. Scott County (County) awarded a contract to Public Consulting Group LLC (PCG) on January 4, 2023, to conduct an "EMS Transition Study" (Study). The primary scope of work was divided into two specific phases, which culminated in this final report being provided to the County to help guide their future actions.

The first phase of the Study was to primarily evaluate the operational capabilities of MEDIC EMS while identifying the any possible impacts to EMS services across the County. Phase 2 was officially kicked off following the presentation of the information collected in Phase 1. Phase 2 was primarily meant to evaluate the administrative and financial findings associated with MEDIC EMS considering the operational findings. Information was reviewed, and data analyzed, as it was obtained.

Key stakeholders, identified by both the County and MEDIC EMS, from across the area were interviewed to gain as much background on the transition as possible. General trends from the interview were as follows:

- Population growth is expected to continue in the area, at a relatively stable/slow pace. More impactful will be how the population shifts across different areas within the County.
- The rural areas of Scott County generally expect slower response times than the more urban areas.
- The relationships that MEDIC EMS has with external agencies are important to the continuity of EMS services within the County. It is important to continue to foster these relationships, regardless of the future transition.

The analysis of the data received during the study, in collaboration with the interviews of involved parties, revealed that MEDIC EMS, in its current organizational and operational form, would meet an acceptable standard as a department of Scott County. With the creation of a new department comes the opportunity to improve upon some of the processes involved in the operation of MEDIC EMS. This Study has outlined 42 specific findings based upon the assessment areas of operations, administration, finance, and an employee survey that was completed. These findings are meant to serve as a guide, or benchmark, for some of the areas the new County department and leadership can focus future efforts.

Operational flexibility has been a hallmark of MEDIC EMS. Shifting the business lines to include non-9-1-1 transfers provided a significant amount of capacity and funding to the organization. The transfer need generated by local healthcare facilities requires additional ambulances and staff, but because these ambulances are not actively transferring patients 100% of the time, it allows for ambulances to be available for 9-1-1 responses that otherwise would not be present. Without the transfers completed by MEDIC EMS, the staffing and ambulance needs would likely be halved, but the organization would lack the financial resources to provide EMS services at a comparable level to what has historically been provided.

The push for financial efficiency may have resulted in an operation that functions much leaner than Scott County will require, making operations more challenging than necessary. Some of these efficiencies have included volunteer EMS agencies providing primary response to the Northwestern corner of Scott County, supervisors operating from transport ambulances where they are unable to flexibly supervise their employees, and administrative on-call shifts that are taxing on managers, yet more efficient than staffing additional ambulances. The Northwestern portion of Scott County currently is not receiving the same standard of response and care as the other taxpayers in the County. That can be addressed via changing response policies, staffing an ambulance in the area, or by other means, but it should be addressed.

There were multiple administrative findings, and most of them involved the shifts currently operated by MEDIC EMS employees. The workload associated with the responses handled by MEDIC EMS suggests that 24-hour shifts may present a safety risk for providers unless they are prevented from responding to a call volume like the 12-hour employees. Diverting calls from the 24-hour crews could prove to be operationally challenging. Another finding was that the dynamic shift start times MEDIC EMS utilizes may not provide any significant benefit to the employees or organization.

While most of the ambulances report to one or two central hubs, there was no obvious reason noted to spread those times across several hours. Instead, fewer shift start times would make replacing personnel who are unable to work a shift easier and could provide more chances to disseminate information directly to personnel. Other administrative findings included the lack of sustainability of the alternative delivery model (ADM) volunteer staffing model and the potential for a basic life support transport unit, to decrease the costs associated with future increases in staffing. While transitioning to different models of service may reside outside of the scope of this transitional study, the cost savings of implementing multiple BLS transport units versus additional ALS transport units would potentially be significant.

The most substantial improvement for MEDIC EMS will be the financial security offered by transitioning to a department of the County. In addition to having access to the tax dollars collected by the County, MEDIC EMS will have access to other funding models available to the public entities of Iowa. These funding sources include access to the 422D tax levy, the Iowa offset program, and most importantly, the Iowa ground emergency medical transport (GEMT) program. Access to the Iowa GEMT program should provide more than $1,000,000 of funding to the County annually, at no additional cost to the County taxpayers. Improvements related to the findings from the employee survey were generally related to the workload experienced by providers, burnout, and lack of external agency understanding of how MEDIC EMS operates. The workload could be decreased by rotating the employees between “busier” and “slower” stations. This option was rated favorably by employees on the survey. MEDIC employees generally responded to the survey as very proud of the services that their organization provides.

The transition of MEDIC EMS to a department of Scott County is going to be highly beneficial to both the continuity of EMS services within the County and the communities the County serves. Scott County should strive to keep as much of the “legacy” MEDIC EMS intact, while working to improve the organizational, administrative, and financial processes, where possible or appropriate. MEDIC EMS has provided a high level of care to the community over the past few decades and this transition will only serve to strengthen those services while providing community leaders with the ability to continue to influence the future of EMS in Scott County.

## 2.2: Key Findings

During the study, there were several findings that were noted to be key, or otherwise substantial, findings. The findings listed below should help guide the County as the transition progresses and will serve as important benchmarks for the future EMS Director to review. Some of these findings may lead to future discussions about the service lines offered by MEDIC EMS of Scott County, which may lead to future changes. The findings are listed below, where they are categorized by type.

### 2.2.1: Operational Findings

1. MEDIC EMS has a history of being a highly successful agency and often stood as a model agency for other organizations across Iowa.
2. EMS regulation, and enforcement of those regulations, across Iowa has historically been lacking and/or delegated to the local providers to self-manage. State officials have suggested that the local regulation of MEDIC EMS has been very successful.
3. Davenport and Bettendorf fire departments both have high quality Paramedic first responders. Their skills should be relied upon to provide citizens of the County with first response ALS care.
4. Both the Physician Advisory Board and EMS Advisory Committee were recommended to the County during a previous study but were only implemented in formats that did not match those recommendations. Those recommendations, as well as the very narrow roles and responsibilities for each of those groups, remain highly viable to the County.
5. The operational flexibility of MEDIC EMS (offering multiple service lines) was as much a requirement for the agency to survive as it is an example of the high-quality management and leadership within the agency.
6. The operational capacity of MEDIC EMS is currently stressed with the call volume handled. While being very successful in responding to 9-1-1 calls in the community, response times and mutual aid requests for transfers have generally increased over the years. These findings suggest an issue with available capacity for MEDIC to respond to the available call volume.
7. The dynamic deployment model utilized by MEDIC EMS assists in maintaining equitable coverage throughout the Metro operation but does little to address a shortage of resources in the ADM operations, which serve the less populated areas of the County.
8. Scott County's northwestern corner, specifically the service areas assigned to the rural ambulance services or everything west of 60th Avenue, does not receive services that are comparable (in either response times or quality of care) to the rest of the County. As a County based department, this inequity will need to be assessed.
9. The organizational structure of MEDIC EMS has worked well for a 501(c)(3) but can be adjusted to allow for more professional growth and development. An adjusted organizational structure could also help the County department with succession planning, recruitment, and retention.
10. Taking shift supervisors off the transport ambulances will allow them to supervise more effectively and give operational personnel skilled backup responders if needed.
11. The MercyOne Clinton operation presents as an operational challenge in many ways but specifically in staffing and supervising that operation. The current contract for service does not favor emergency service needs in Scott County but does provide a favorable financial gain.
12. There are no specific impacts relating to 9-1-1 dispatching expected because of this transition, however the transition has opened the door to evaluate the future relationship between MED-COM and SECC, as well as to address concerns that external stakeholders have voiced.

## 2.2.2: Administrative Findings

1. MEDIC EMS operates with two primary shift structures:12-hour shifts for the Metro operations and 24-hour shifts for the ADM and MercyOne Clinton operations. The 24-hour shifts present operational challenges as the personnel cannot be expected to be functional for all 24-hours.
2. Current shift schedules will result in multiple compensation rates for the County to navigate to compensate employees appropriately.
3. The volunteer staffing model used by the ADM operation does not appear to be sustainable. The cost of staffing two full-time providers versus filling a volunteer spot with part-time, or over-time, hours should be reviewed.
4. Adjusting to a 12-hour shift across the department would allow for more operational flexibility. While some stations traditionally experience lower response volumes, this could be offset by rotating crews through all the stations. This adjustment would simplify supervision and compensation but may impact retention for those providers that prefer 24-hour shifts.
5. Unit Hour Utilization calculations suggest that MEDIC EMS has been operating at a very high workload. This concern is reinforced by steps taken by the MEDIC administration to delegate responsibilities (such as scanning in paperwork) away from operational personnel.
6. The primary increase in response volumes has originated in the Metro operation, with Bettendorf's response volume increasing at the fastest rate.
7. Increasing MEDIC's staffing by as much as 50% would alleviate much of the operational strain felt on the EMS system, though current workforce conditions would require this staffing increase to be completed in a staggered fashion, if desired.
8. Hourly response volumes were relatively static over the years of data analyzed. These volumes suggest that the shift start times MEDIC employs could be consolidated to a simpler schedule.
9. Basic life support (BLS) transport units, which are operated by crews consisting of two basic EMT's, are a feasible option for many EMS agencies. These units are generally more cost effective and would likely be faster to put in service if increased staffing is desired.
10. Many administrative tasks will need to be reorganized depending on the organizational structure ultimately determined by the County.

## 2.2.3: Financial Findings

1. MEDIC EMS has been operating as an efficient 501(c)(3) for many years. Providing MEDIC financial support that the County has access to will only benefit the care provided to the community.
2. Scott County has provided access to a maximum subsidy of $200,000 to MEDIC. MEDIC EMS did not require the entire subsidy amount in any of the years reviewed.
3. Year-to-year it is expected that MEDIC will continue to see increased expenses related to inflation, etc., but are functioning at a level that will not allow increased revenues. As such, without any other changes, it is projected that MEDIC would need increasing financial support.
4. The MercyOne Clinton operation has proven to be financially beneficial to MEDIC EMS. Previous financial statements may not make the benefit of the MercyOne operation obvious due to allocation methodologies. This operation has helped offset costs associated with administration and MED-COM.
5. There may be ways for Scott County to leverage the financial benefits of the MercyOne operation without requiring that an ambulance be stationed in Clinton County.
6. Given the merger of MercyOne and Genesis Health, the MercyOne operation should be closely monitored as Genesis has an ambulance service that may be a preferable option for MercyOne.

7. The recent relocation of Select Specialty Hospital to a floor of Genesis Medical Center-Davenport will decrease the revenue that MEDIC EMS has previously recognized from transports in and out of their facility and Genesis.
8. The County should be prepared to clearly communicate how each business line operates and is funded. This will help prevent the perception of the County inadvertently funding services for other counties or organizations.
9. Transitioning MEDIC EMS to a department of the County opens multiple possible funding options including funding via the Iowa Ground Emergency Medical Transport (GEMT) program, the Iowa offset program, or via a 422D tax levy if approved by county election.
10. Based on the FY22 expenditures and transport volume, the PCG team conservatively estimated that the County will see a net gain of $1,116,931 of GEMT funding. A cost report will need to be completed based on the expenditures and transport volume during the 6 months from 01/01/2024 - 06/30/2024.
11. There are no direct impacts anticipated on the GEMT funding from any actions taken in regard to a MED-COM and SECC merger (or lack thereof).
12. The Iowa offset program would allow Scott County to seek repayment of uncollected debts. MEDIC EMS has traditionally written off an average of $900,000 of uncollected debts. If Scott County can recover a portion of those funds from the State, this program would be highly beneficial to offsetting the costs associated with providing EMS to the County.
13. The 422D tax levy is a funding option available to Scott County, though the other funding mechanisms available will likely make the tax levy a less favorable option. Establishing an EMS Advisory Committee will make it simpler to pursue this option in the future, if desired.

### 2.2.4: Employee Survey Findings

1. MEDIC EMS employees were generally supportive of 12-hour shifts, with 75% of personnel responding they were on 12-hour shifts and wanted to stay there or were on 24-hour shifts and wanted to transition to 12-hour shifts.
2. MEDIC employees rate the services they provide to the community highly and believe in what they do.
3. Dr. Richard Vermeer, the medical director of MEDIC EMS, was praised repeatedly by both internal and external stakeholders for his leadership over the past several years.
4. There were concerns expressed about the “progressiveness” of MEDIC EMS’s protocols and operations. These concerns were expressed by both internal stakeholders during the survey and external stakeholders during interviews.
5. Respondents stressed that the hospitals, and their staff, do not seem to understand EMS protocols. This concern is generally a universal concern shared by most EMS agencies that are not directly operated by the hospitals.
6. Respondents noted issues with being overworked and concerns with “burnout” throughout the organization.
7. Survey responses favorably evaluated MEDIC EMS, speaking highly of the current culture.

# SECTION 3: BACKGROUND

Every EMS agency, and the community that they function within, is unique. The population served by the EMS agency typically has very specific needs and expectations that may extend beyond, or add specificity to, the types of services provided. A significant amount of background information was uncovered by reviewing the April 2014 *Comprehensive Study of Emergency Medical Services* that Scott County contracted with a consultant to create. Much of the information and several of the recommendations made in that document remain unchanged almost a decade later. This section contains background information that is considered pertinent to the transition of MEDIC EMS to a department of Scott County.

## 3.1: Scott County

The third most populous county in Iowa, Scott County had a July 1, 2021, estimated population of 174,278[1]. The eastern and southern borders of the 465 square-mile Scott County borders are the western bank of the Mississippi River. Scott County is home to Davenport, one of the "Quad Cities."

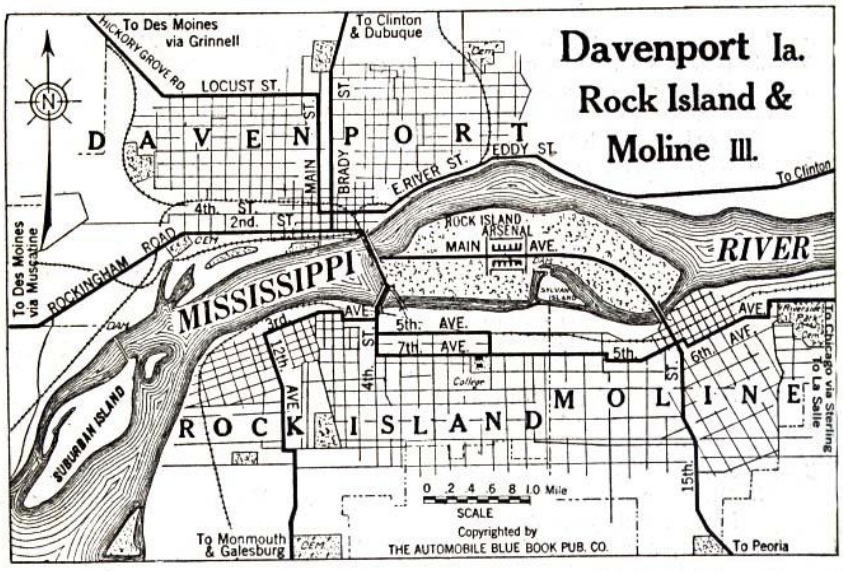


**Figure 3.1: A Map of the "Tri-Cities"[2]**

Initially termed the "Tri-Cities," Davenport, Moline, and Rock Island eventually grew to include East Moline, becoming the "Quad Cities." The Quad Cities Metropolitan area now officially includes Davenport and Bettendorf, in Scott County, Iowa, as well as the communities of Moline, Rock Island, and East Moline from Rock Island County, Illinois. In the 1970s, Bettendorf had grown large enough that there was a discussion to possibly adopt the name of "Quint Cities," but it was determined that the Quad Cities designation was too well known at that point[3]. These cities are all situated on the banks of the Mississippi where a bend in the river causes it to flow back to the west. There are approximately 27 cities, townships, and census-designated places listed on the Scott County website[4], with the City of Davenport and the City of Bettendorf being the most populous of the 27 communities.

The population of Scott County overall has remained relatively static, according to US census data from 2017-2021. To standardize the data across sets, all census data was retrieved from US census reports, with the 2022 data retrieved from the 2022 US census estimates[5]. Davenport has seen a decrease in population of less than 0.5%, and Bettendorf has seen an approximate 2% increase in population year-to-year. There has also been a population increase across the rest of the County. The changes in the population centers, or density, may require future adjustment of station locations, to provide equitable

coverage. These values are meant to show generalized trends versus absolute population values. Recent population trends can be found in **Table 3.1**.

| Government Entity | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Average Pop. Change |
|---|---|---|---|---|---|---|---|
| **City of Bettendorf** | 35,833 | 36,356 | 36,573 | 39,107 | 39,327 | 39, 548 | 2.16 % |
| **City of Davenport** | 102,460 | 102,094 | 101,989 | 101,584 | 101,009 | 100,486 | -0.40 % |
| **Scott County** | 172,691 | 173,019 | 173,400 | 173,216 | 174,170 | 173,924 | 0.13 % |

**Table 3.1: Population by Governmental Entity**

## 3.1.1: City of Davenport

The City of Davenport is the official seat of Scott County. Davenport is the largest community in Scott County and home to an estimated 101,009 people across 65.92 square miles, or 58% of the July 1,2021, estimated total population of Scott County. Davenport was ranked 29th out of 100 cities in the 2020 annual America's Best Small Cities report. Evaluated on 28 factors across six categories, Davenport's success in that evaluation is consistent with their desire to boast a "thriving downtown and business-friendly environment, with a focus on development and revitalization[6]." The Davenport website notes that they are one of two cities, out of a total of 19,500 cities nationwide, with accredited departments that include: code enforcement, fire, library, parks and recreation, police, and public works services[7]. Accreditation is discussed in detail in **Section 3.2.3**.

## 3.1.2: City of Bettendorf

The south-southeastern corner of Scott County is home to the City of Bettendorf, which is the growing eastern neighbor of Davenport. Approximately one third the land size of their neighbor, and roughly 38% of the population, Bettendorf has experienced continuous growth over the past several years. Viewing their community as a "bedroom" community, the primary source of growth in Bettendorf is residential in nature. The I-74 bridge project, which started construction in 2017 and was finished in 2021, has provided additional, safer travel lanes for the commuters needing to travel between Moline and Bettendorf[8]. Developments such as this bridge project are critical to the infrastructure in the growing Quad Cities area. A recent area of significant development is Northeastern Bettendorf. Home to a state-of-the-art complex that spans across 75 acres and includes a 302,000 square foot facility, there have been a number of development opportunities occurring in the area. Part of the I-80 Urban Renewal Plan, there have been additional projects approved with construction on some of those phases planned as part of future development. The complex currently brings in more than an estimated 1.5 million visitors a year[9], providing Bettendorf with a significant source of tax funding. This scale of tourism, especially as the area continues to grow, could present as a meaningful source of response volume and should be monitored.

## 3.1.3: Rural Scott County

The Study has grouped the remainder of the communities into one larger entity known as the rural Scott County. These communities combined account for approximately 19% of the population in Scott County, but are spread out across 376.65 square miles, or more than 80% of Scott County's total area. This results in a very rural demographic with small pockets of concentrated population. Discussed later, the ability to respond to the emergency medical needs of the highly concentrated urban population in addition to the larger geographic but less densely populated rural areas presents a significant operational challenge. One critical function of the smaller communities is the first response agencies that operate out of many of those communities. These fire departments, discussed in **Section 3.1.5**, present MEDIC EMS with various partnership opportunities. MEDIC EMS has already seen success with their ability to partner with some of the local fire departments.

## 3.1.4: Hospitals

There are two primary healthcare systems situated in Scott County; the MercyOne Health System doing business as Genesis Health System and the UnityPoint Health System each have facilities that MEDIC EMS commonly works with. In highly functioning systems, hospitals and EMS systems work together to serve their communities. EMS agencies are inevitably impacted by many of the same patient groups that impact the local healthcare facilities. By understanding the resources available at a specific healthcare facility, EMS providers can ensure that the appropriate patients are transported to the correct facility. These efforts can decrease the amount of time that ambulances are encumbered in the emergency departments while trying to transfer patient care. Through cooperation, hospitals and EMS agencies can improve the quality of care for everyone in the community.

### Genesis Health (MercyOne)

Genesis Health* is the predominant healthcare system present in Scott County. A leading employer in the County, and in the Quad City area[10], Genesis Health System originally consisted of two Davenport hospitals that joined in 1994 to form the healthcare system. From that time, Genesis Health grew substantially in the region and now provides a variety of services to the area, including EMS. MEDIC EMS is impacted, primarily, by the east and west campuses found in Davenport and the new stand-alone emergency department located in Bettendorf. The primary impact of the west campus of Genesis Health comes in the form of interfacility transfers to other facilities, where the east campus is the primary receiving hospital for 9-1-1 responses. Genesis in Davenport is becoming a regional hub for MercyOne due to the quality and number of services that can be provided.

**During this transition study, Genesis Health was officially merged with MercyOne, which is part of Trinity Health, headquartered in Livionia, Michigan. It is believed that, based on conversations with the administrators of Genesis, the naming will remain Genesis Health.*

### Trinity Bettendorf- UnityPoint Health

Trinity Bettendorf is a regional hospital that functions within the large UnityPoint Health system[11]. Providing a local emergency department, their hospital primarily provides basic services and stabilization, as well as some more advanced services like heart catheterizations, imaging, outpatient labs, and various surgical options.

## 3.1.5: Emergency Service Providers

There are multiple agencies that function within the borders of Scott County, besides MEDIC EMS. To provide a truly effective response for the community, it is imperative that these organizations all work together. These collaborative efforts can take many forms. At a minimum, efforts to standardize response expectations, certification standards, and continuing education based on the community needs should occur. Where possible, the first response agencies and MEDIC EMS should work together on topics like group purchasing; similar to their joint efforts on strategic planning, last completed in November 2021. All efforts should focus on the needs of the community that is being served. The sections below detail some limited information about each of these agencies.

### First Responders

For this Study, “first responder agencies” are any agencies that are expected to respond and render aid to the community for a 9-1-1 call that MEDIC EMS would be expected to handle. In Scott County, these services are provided by 16 departments. It is important to note that there are no rules or policies that prevent personnel from functioning for multiple departments. Thus, when reviewing the number of personnel available to each department, it is significant to remember that each person can only respond to one call at a time.

Any response that utilizes multiple departments may be more significantly impactful than initially assumed because using personnel from one department may deplete the personnel available to other departments for subsequent responses. A map representing the diversity of the response areas in Scott County can be seen below in **Figure 3.2**.

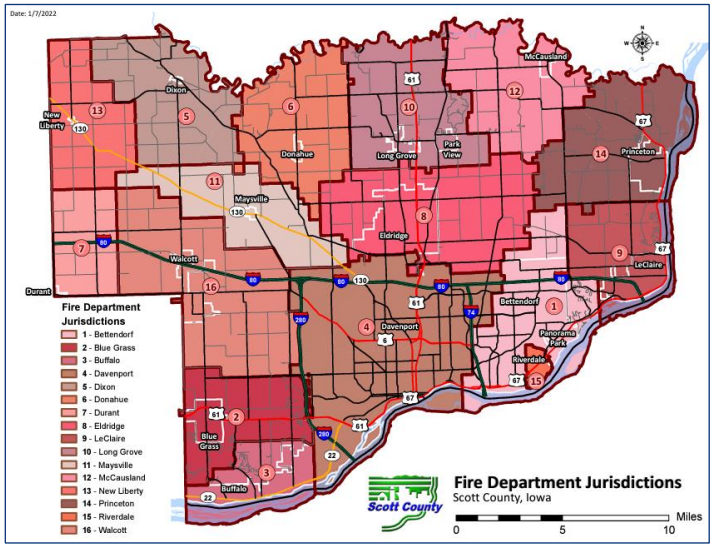


**Figure 3.2: Response District Boundaries for Scott County Responders**

The departments known to be functioning regularly with Scott County and some limited information about them can be found in **Table 3.2**.

| Department | Operational Status | Level of Service | Staff | Medical Director |
|---|---|---|---|---|
| Bettendorf Fire, Rescue and Emergency Services | Combination | Paramedic | 49 | Dr. Vermeer |
| Blue Grass Volunteer Fire Department | Volunteer | EMT | 25 | Dr. Vermeer |
| Buffalo Fire Department | Volunteer | EMT | 25 | Dr. Vermeer |
| Davenport Fire Department | Career | Paramedic | 143 | Dr. Gallops |
| Dixon Volunteer Fire Department | Volunteer | EMT | 12 | Dr. Vermeer |
| Donahue Volunteer Fire Department, Inc. | Volunteer | EMT | 28 | Dr. Vermeer |
| Durant Volunteer Fire Department* | Volunteer | EMT | 24 | Dr. Iltis |
| Eldridge Volunteer Fire Department | Volunteer | EMT | 25 | Dr. Vermeer |
| LeClaire Fire, Rescue and EMS Department | Combination | EMT | 31 | Dr. Vermeer |
| Long Grove Volunteer Fire Department | Volunteer | EMT | 22 | Dr. Vermeer |
| Maysville Fire Department | Volunteer | EMT | 18 | Dr. Vermeer |
| McCausland Fire Department | Volunteer | EMT | 30 | Dr. Vermeer |
| New Liberty Fire Department | Volunteer | EMT | 35 | Dr. Vermeer |
| Princeton Fire Department | Volunteer | EMT | 20 | Dr. Vermeer |
| Riverdale Fire Department | Volunteer | Paramedic | 24 | Dr. Atwell |
| Walcott Fire Department | Volunteer | EMT | 20 | Dr. Iltis |
| ***While based in Cedar County, Durant provides coverage to a portion of Scott County as well** | | | | |

**Table 3.2: First Response Agencies for Scott County**

While some of the exact staffing numbers may vary based on recruitment and retention, the general themes of Davenport Fire Department and Bettendorf Fire, Rescue, and Emergency Services being the two major first response agencies in the County remains true. MEDIC EMS relies on their first responding partners to provide medical care to community members in need prior to their arrival. These first responding agencies can stabilize patients, or even go so far as to inform MEDIC responders of the status of the patient, allowing them to approach the scenario in a more prepared fashion. Many of the response agencies completely rely on volunteer staffing, except for a paid administrative member (i.e., Chief, or similar position).

## Ambulance Services

There are multiple ambulance services capable of providing treatment and transport in Scott County. These agencies have completed the processes described in Chapter 28 of the Scott County Code of Ordinances (more information on Chapter 28 can be found in section 3.3.5). **Figure 3.3** shows the emergency service areas that each ambulance service primarily responds to.

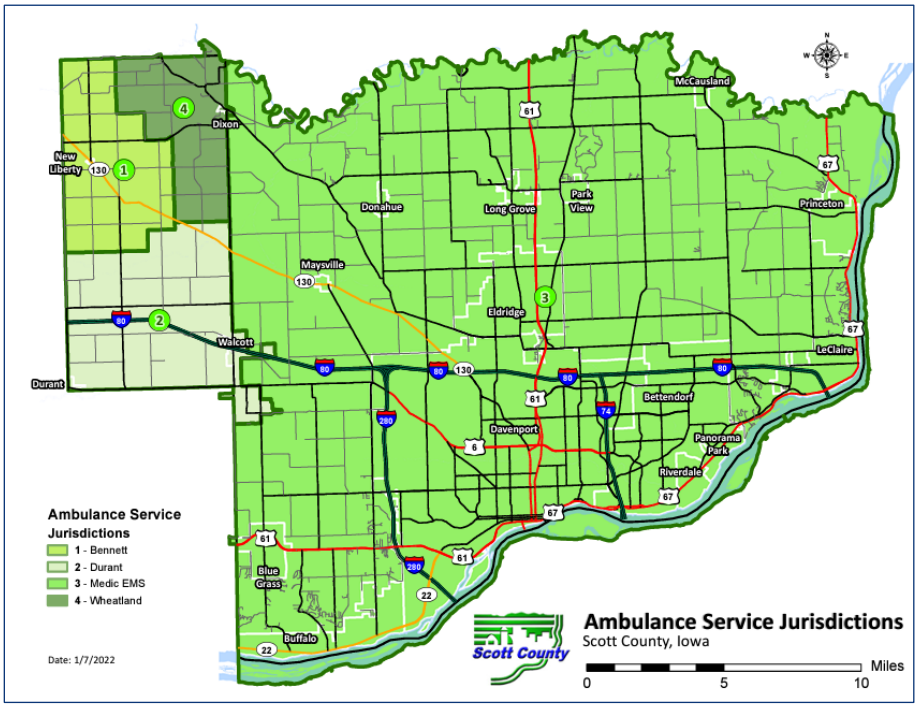


**Figure 3.3: Scott County Ambulance Area Assignments**

The services with currently designated response areas in Scott County can be found in **Table 3.3**.

| Department | Operational Status | Level of Service | Staff | Medical Director |
|---|---|---|---|---|
| Bennett Ambulance Service | Volunteer | Paramedic | 24 | Dr. Vermeer |
| Durant Ambulance Service | Volunteer | Paramedic | 21 | Dr. Iltis |
| MEDIC EMS | Combination | Paramedic | 158 | Dr. Vermeer |
| Wheatland Emergency Medical Services | Volunteer | EMT | 15 | Dr. Vermeer |

**Table 3.3: EMS Agencies in Scott County**

# 3.2: MEDIC EMS

The history of healthcare in Scott County dates to the mid to late 1800s and the start of the Genesis Health System, then known as Mercy Hospital[12]. MEDIC EMS was formed in 1982 when they started to provide advanced life support to the cities of Davenport and Bettendorf. MEDIC EMS is the largest ambulance transport provider in Iowa, and the primary provider geographically located in Scott County.

## 3.2.1: 9-1-1 and Transfer Services Provided

MEDIC EMS provides a variety of services in addition to the traditional 9-1-1 response service expected from their agency. The services provided are differentiated into three primary divisions: the Paramedic, MED-COM, and Transportation Divisions. Each division is highly intertwined with the other. MED-COM employees, for example, occasionally operate in the Paramedic Division.

### Paramedic Division

Responding to an estimated 90 or more calls a day, the Paramedic Division is responsible for providing the "traditional" services for the EMS agency. This division is further divided into three separate operations:

- **Metro** – The metro operation has been providing EMS response services to the Quad Cities for over 41 years. This operation consists of 24-hour Paramedic ambulance coverage via multiple 12-hour rotations.
- **City of Clinton/MercyOne** – Through a contractual arrangement initiated in 2000 with Mercy Medical Center in the City of Clinton, Iowa, MEDIC EMS provides transport services for transfers out of the MercyOne hospital to other facilities. The MercyOne operation also provides support, when available, to the 9-1-1 services surrounding City of Clinton. The MercyOne operation is staffed on a 24-hour rotation.
- **Alternative Delivery Model** (ADM) – Started in 1999, the ADM was an attempt to provide faster response to the rural areas of Scott County, while defraying costs by utilizing volunteer staff to supplement a full-time Paramedic. The ADM model was created, and utilized, in response to a need for EMS response in rural Scott County. These ADM stations are based in Eldridge, LeClaire, and Blue Grass communities. In addition to the response services, each ADM station is tasked with a specialty community education topic. These topics include CPR education, car seat installation and inspection, and Stop The Bleed® classes. The ADM operations function on 24-hour shifts, and the paramedics who staff these locations comprise the MEDIC EMS Field Quality Improvement Unit, responsible for providing review of and feedback on every patient care report generated by MEDIC EMS personnel.

### MED-COM Division

MED-COM is the division of MEDIC EMS responsible for the dispatching of EMS agencies both within, and outside of, Scott County. A more detailed description of MED-COM can be found in **Section 3.2.2**, below.

### Transportation Division

Starting in 2003, MEDIC EMS worked to provide contracted transport, to include courier services, for various organizations. Services provided include ambulatory transportation for occupational medicine visits, etc. This division also serves to provide various administrative services for the Paramedic Division as they transfer paperwork from stations to perform prebilling functions, as well as help deliver required supplies.

## 3.2.2: MED-COM

MED-COM currently provides three primary lines of service: emergency medical dispatching (EMD) for MEDIC, interfacility dispatch for MEDIC, and dispatch services for other agencies both inside and outside of Scott County. The dispatching services for outside agencies appear to provide a net positive income stream for MEDIC, and thus would provide offsetting income to Scott County as well. The contracts related to these outside services will need to be thoroughly reviewed if it is desired to continue providing the external dispatching services. The possibility that some, or all, of the agencies who are receiving services from MEDIC may not want to receive those services from Scott County should not be overlooked. Each service line is unique and requires specific training and experience.

The MED-COM employees are commonly referred to as system status controllers (SSC), versus "dispatchers." The title of SSC is more inclusive of the tasks that those employees complete on a day-to-day basis. The SSCs have the responsibility to EMD the 9-1-1 calls received into Scott Emergency Communications Center (SECC) but are also responsible for directing the transport units based on a dynamic deployment model utilized. Dynamic deployment models result in ambulances being shifted from one area to another based on the probability of another call being received in that area. Generally, this concept helps to decrease response times, and allows for safer responses as the ambulances have decreased distances to respond with lights and sirens.

Another important service provided by the MED-COM staff is a prebilling component of their work. The system status managers of MED-COM use some of their down-time to assist in the "prebilling" process by reviewing patient transport records. An illustration of the general workflow for these billing procedures can be seen in **Figure 3.4**.

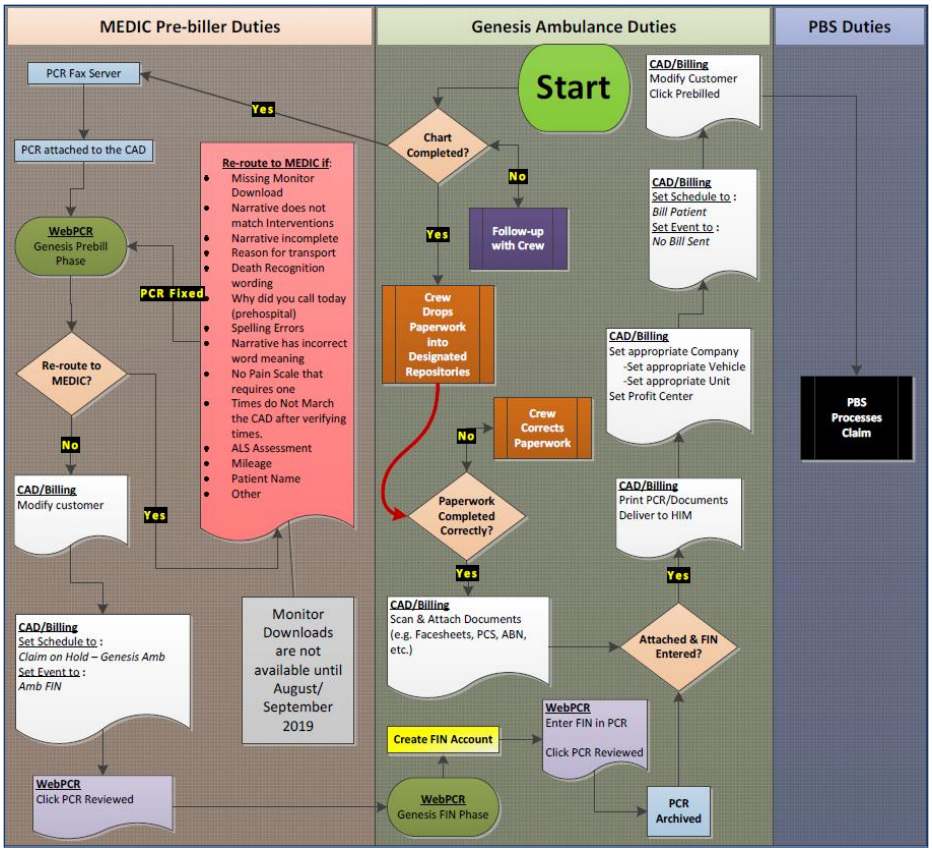


**Figure 3.4: Billing Workflow**

Most of the prebilling process is described in MEDIC EMS policies and matches well with the normal quality assurance and quality improvement (QA/QI) processes followed by most EMS agencies to assure patient record completion. The remainder of the prebilling steps, specifically those steps which detail the assignment of charges and billing modifiers, are very specific to medical and EMS billing. It is important to note that there is no language found in the contracts with their medical billing service, Professional Billing Services of Illinois, Inc. (PBS), that specifically states the requirements for MEDIC EMS to provide these prebilling services. Understanding these processes and codes requires additional training not traditionally provided to EMS dispatch staff.

The illustrated workflow in **Figure 3.4** that MEDIC EMS follows for Genesis Ambulance states that PBS is responsible for "adding charges, adding payors, adding ICD-10 codes, and adding attachments such as insurance cards." The steps completed by PBS for Genesis should mimic the steps completed for MEDIC EMS, which leaves the possibility that these prebilling duties could simply be removed from MEDIC staff. If removed from the MEDIC operational staff, these duties would fall back on PBS to complete. It is imperative that the County review the contractual agreements between the EMS department and PBS to ensure that all parties are delivering the required services. If these "extra" duties are given back to PBS, collection rates will need to be monitored to ensure that there is no obvious drop in revenue billed and collected. Acceptable, or expected, billing/collection rates could be built into new service contracts as well.

## 3.2.3: Accreditation

Accreditation can be defined in several different ways. The Oxford definition is the "official approval given by an organization stating that somebody/something has achieved a required standard[13]." Incredibly popular in the educational setting, the origins of accreditation in higher education started as early as the 1800s[14]. Accreditation began as a process to ensure that organizations striving for a higher standard had a way to distinguish themselves from other organizations. To this day, accreditation remains an excellent way for organizations, that on the surface appear to deliver the same services, to differentiate themselves from one another.

The general process of accreditation involves an organization, or individual, being compared with a set of standards by an external reviewer. These standards are generally best practice standards identified by industry leaders and pertinent stakeholders. The International Accreditation Service states that "accreditation is a formal, independent verification that a program or institution meets established quality standards and is competent to carry out specific conformity assessment tasks. Conformity assessment tasks may include, but are not limited to, testing, inspection, or certification[15]."

Accreditation is commonly referenced in the EMS world when determining which agencies are performing at the highest levels. Accreditation for these agencies traditionally occurs by comparing the agency against industry best practices and other agencies that have been proven to perform at a high level. Allowing external evaluators to assess every aspect of the organization, while measuring every service that the organization provides, is a rigorous process that relatively few agencies accomplish. To put this into perspective, it is estimated that there are only 170[16] agencies that are accredited through the Commission on Accreditation of Ambulance Services out of an estimated 14,191[17] EMS agencies that provide ambulance transport across the US.

### Commission on Accreditation of Ambulance Services

Commission on Accreditation of Ambulance Services (CAAS) accreditation is a process where ambulance transport services, like MEDIC EMS, are evaluated against industry standards and best practices. These standards frequently exceed the standards set forth by local or state agencies. The primary focus of the CAAS accreditation is for ambulance services to complete a critical self-evaluation, and then to utilize that information to increase operational efficiencies while decreasing risk to the organization. CAAS

accreditation is an intensive process that validates an organization's adherence to some of the most stringent standards in the EMS industry.

### MED-COM Accreditation

MED-COM is currently an Accredited Center of Excellence (ACE) by the International Academies of Emergency Dispatch (IAED). This accreditation demonstrates that MED-COM meets or exceeds dispatching standards while striving for a constant improvement process. ACE dispatch centers follow best-practice standards that are "scientifically validated, based on knowledge gleaned from millions of calls, and rooted in the expertise of industry professionals[18]." It is important to note that any significant changes in the structure of MED-COM or the delivery of those services could put their status as an ACE dispatch center in jeopardy. Scott County administrators will have to weigh the pros and cons of accreditation and the processes involved. A MED-COM transition to Scott County would not change the structure or operations of MED-COM significantly, so there is no concern for a loss of the ACE accreditation. A merger process with SECC that affects structure and operations could cause the ACE accreditation to be lost. Dispatch centers can be ACE accredited in each discipline (law, fire, and EMS), and a recent discussion between MEDIC Administration and IAED officials strongly supported the possibility that SECC could assume the existing MEDIC ACE accreditation for EMD.

## 3.2.4: Funding Overview

MEDIC EMS is primarily funded by billing for services provided. Detailed in **Section 3.2.1**, these services include the traditional 9-1-1 and transfer services, as well as assorted services provided to other agencies across the area. MEDIC EMS has also had access to a standing subsidy available from Scott County to cover potential funding deficits. The subsidy has historically been kept at a maximum of $200,000, and MEDIC has not utilized the full yearly amount across the years reviewed. A more detailed financial assessment and analysis is found in **Section 5.2**.

# 3.3: EMS Rules and Regulations

Rules and regulations regarding the provision of emergency medical services (EMS) can vary widely from state to state, and even within states. The State of Iowa currently lacks any rules or regulations that require governmental entities to provide EMS services. The closest related language was enacted by Senate File 615 in June of 2021. This file being signed into law allowed for several changes across three primary Iowa Codes (357F, 357G, and 422D).

The first two code provisions dictate the provision of funding for EMS through taxation across "Emergency Medical Service Districts," while the third gives counties the option to declare EMS an "essential service," providing for a maximum tax of $0.75/$1,000, with various sunset timelines if passed in a vote. While not dictating that EMS shall be provided across the state, these code revisions allow for the public to determine the services that they are willing to fund. Currently, MEDIC does not benefit from these funding mechanisms, and there are no immediate plans to enact them.

## 3.3.1: Iowa Bureau of EMS

In Iowa, EMS is governed by the Bureau of Emergency Medical and Trauma Services (BEMTS), housed within the Department of Health and Human Services. The BEMTS estimates that approximately 99 local public health agencies, 118 hospitals and trauma centers, 931 EMS services, and 11,771 EMS providers work with the bureau[19]. BEMTS is led by two Bureau Chiefs, with one supervising the EMS and Trauma division and the other Chief supervising Preparedness and Response. Working under the EMS and Trauma Bureau Chief is the EMS Executive officer who supervises the four EMS Field Coordinators. **Figure 3.5** shows the most recent district division of Iowa EMS.


**Figure 3.5: Iowa EMS Districts**

Unfortunately, Iowa EMS regulators face many of the same challenges faced by the EMS profession, and other state regulating bodies. Lack of funding and appropriate compensation for the positions available has left the regulating body short-staffed and frequently struggling to have a vibrant regulatory structure within the state. A brief search of available positions revealed that field operation Paramedics are generally compensated more appropriately than the Field Coordinators expected to regulate the systems. Thus, it is important for local entities to have a strong ability to self-regulate. State officials made it clear that MEDIC EMS has historically been considered a model system for other agencies across Iowa.

### 3.3.2: Illinois EMS

Given the geographic proximity of Illinois to Iowa, it is important to consider the Illinois EMS system. MEDIC currently requires that their providers are certified/licensed in both Iowa and Illinois. Illinois requires more hours of continuing education to renew the Paramedic certification (25/year as a Paramedic) than Iowa does, but they only require providers to renew once every four years versus Iowa's requirement to renew every other year. MEDIC staff states that employees are currently required to maintain both states' credentials as a condition of their employment due to the possibility of needing to respond into Illinois for some of their calls. While this is typically not an issue for times of automatic aid to another area, if MEDIC continues to provide any scheduled transports, there would be the requirement for both their certifications to remain intact as well as their ambulance certifications to remain intact with the state.

If MEDIC chooses not to continue their services that require Illinois agency/personnel licensure for any patient transport initiated in Illinois, there would likely be no reason for continued dual certification. This would be the case if MEDIC no longer provides transfers out of Illinois but could also limit the mutual aid assistance from other ambulance services for transfers out of Iowa and into Illinois. It is common for EMS agencies to be able to function in scenarios where mutual aid is requested without dual certification. When agencies cross state lines, they are frequently functioning under the originating state's authority, rules, and protocols. The state of Illinois differs in this respect, requiring both the ambulance agency and its providers to be licensed in Illinois for any patient transported from an Illinois location. These practices allow for a very clear delineation of authority and responsibility.

The Illinois EMS system functions via 12 geographical regions. Each region has an EMS System Coordinator who is responsible for coordinating licensure and regulation across their region. MEDIC functions under Illinois EMS region 2. MEDIC has done well to prevent any issues with scenarios involving protocol changes or liability, as region 2 has added MEDIC EMS's protocols to their own protocols as an appendix. This step allows MEDIC employees to function under the protocols they are familiar with, regardless of their location in Iowa or Illinois. The Medical Director for region 2, Dr. Gallops, is also very familiar with MEDIC's protocols and remains well informed via the Scott County Physician Advisory Board.

### 3.3.3: Iowa EMS Association

The Iowa EMS Association, and smaller Scott County EMS Association, are both active organizations that MEDIC EMS participates with. EMS associations are incredibly important for the collaboration of EMS agencies at the local, state, and even federal levels. Frequently, these agencies offer benefits to enrolled agencies and their personnel, such as scholarship opportunities, various insurance benefits, and even educational or other organizational benefits. There are yearly fees associated with many of these associations and the organization will have to weigh the benefits against those costs, but generally the group purchasing allowances alone may be enough to offset the costs of membership.

### 3.3.4: Board of Health

The Scott County Board of Health has historically been charged with oversight of emergency medical services across the County, through the actions of the Health Department. The primary method of control that the County has is via the licensing responsibilities of the Health Department detailed in **Section 3.3.5**,

below. The 1989 Fitch & Associates, Inc. evaluation of Scott County addressed the oversight that the County Health Department had, as well as the lack thereof. Some of the recommendations presented by the evaluation report included the creation of both an EMS – Physician Advisory Board and an EMS – Advisory Council. The general purposes of these groups were to provide clinical and operational oversight, respectively, to the assorted EMS agencies functioning within the County.

The structure recommended by the 1989 evaluation can be seen in **Figure 3.6**.

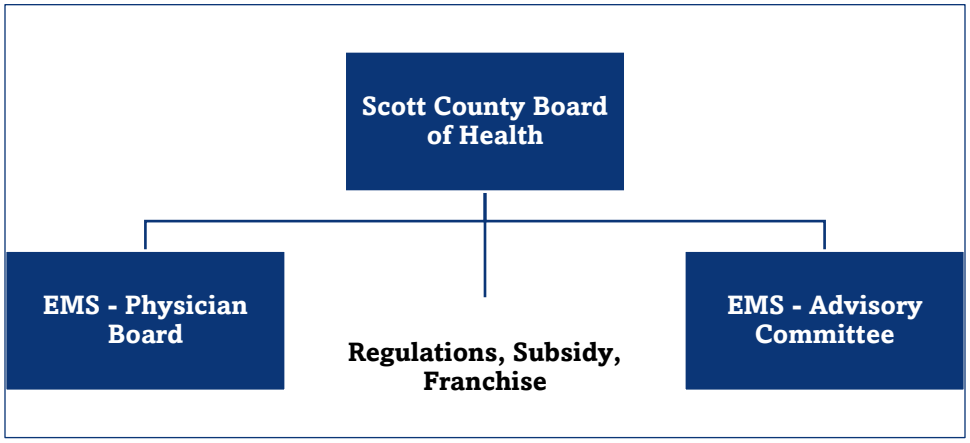


**Figure 3.6: Recommended Structure From 1989 EMS Evaluation Report**

The Physician Advisory Board and EMS Advisory Committee are described in detail below.

## Physician Advisory Board

The Scott County Physician Advisory Board (PAB) was established in 1990 as a response to the need to provide County-wide direction on EMS protocols and treatments. Their roles and responsibilities are as follows:

- Recommend System Medical Director to the Scott County Board of Health.
- Establish, review, and revise clinical standards for EMS Patient care.
- Review and adopt EMS system medical practices.
- Monitor system performance and recommend necessary changes in order to comply with protocols and standards.
- Preview and revise educational material, programs and/or tests developed by the Medical Director.

While the responsibilities for the PAB include system performance and standards, it is important to note that medical treatment of patients and operational performance/standards are generally not similar topics. Furthermore, a knowledge of medicine and patient treatment does not automatically predispose an individual to operational expertise of an EMS agency. If required, the PAB could be realigned (both in membership and purpose) to match the clinical nature and needs of the service provided. Furthermore, it would be advantageous for this group to review high-level clinical quality assurance measures.

## EMS Advisory Committee

Currently within Scott County, there is no true EMS Advisory Committee (EMSAC). Over the years there were multiple renditions of an EMSAC, and based on previous interviews, none of those versions were particularly impactful. EMS is an incredibly important facet of public health, but rarely are the two groups

educated on the purposes and services offered by each other. This is likely due to the reactive nature of EMS contrasting so heavily with the preventative nature of public health. As such, it is important that the administrators of the health department, and the County alike, have experts to rely on for guidance in EMS operations.

The primary duties of the EMSAC, as listed in the 1989 evaluation were as follows:

- Establish standards of performance and monitor compliance with those standards.
- Act as liaisons between the County Health Department and county agencies.

Another important function of the EMSAC is representation from external agencies. The 501(c)(3) board of MEDIC EMS has historically provided a voice for some of the external agencies, though the representative weight of the board may have been slightly skewed in years past. Bringing the appropriate stakeholders, both in type and quantity, to the table will ensure that all of the EMS agencies operating in the County are adequately represented, informed, and monitored for potential needs. This group may also be useful in completing work associated with meeting the Iowa EMS System Standards.

The EMSAC would also be an appropriate group to establish County-wide protocols that work for all of the agencies functioning within Scott County. One of the concerns voiced in the employee survey, see Section 5.4, was the idea that agencies do not operate under the same protocols. This can be confusing for providers and the community alike, and potentially opens up each organization for liability. If, for example, Davenport Fire Department personnel were to treat a community member with a skill that is not recognized, or practiced, by MEDIC employees, it would be inappropriate for a MEDIC paramedic to receive the care of that patient. Instead, the paramedic that provided the treatment, in theory, would be forced to continue the care/treatment provided until a final transfer of care to a higher-level provider is completed. While that example is an extreme example, and is not based on any known incidents, the possibility of such an occurrence does exist if agencies within the County are not all working from the same set of protocols.

An advisory council is only as useful as the personnel that have been chosen to participate in it. The EMSAC could also be reasonably utilized as an arbitrator of operational issues that may arise between the new MEDIC EMS of Scott County and other entities.

While a county EMS association does exist within Scott County, these positions are typically member-voted versus board-appointed. Scott County administrators should evaluate the most appropriate processes for naming members to a possible EMSAC. As the members of the Health Board are appointed by the County Board of Supervisors, who are elected officials, it is reasonable to assume that an EMSAC appointed by the Health Board would be more likely to represent the desires of the community versus an EMS association board voted on by their own members. EMS associations are important to the advancement of the EMS profession, but for representation at the County level, an EMSAC would be more appropriate.

## Regulatory Authority

Following the study, some changes were introduced, including the implementation of a “Public Health Services Coordinator” position established in 1993 and held by one employee through 2019 when he retired. That position was later adjusted and renamed “Public Health Services Manager.” The adjusted manager position had few tasks associated with EMS, being charged with facilitating county-wide EMS efforts through policy and quality assurance efforts. Interviews with stakeholders about this position suggest that while it was occupied by a highly experienced provider, there was still some doubt as to how impactful the position previously was.

The primary authority that Scott County’s Health Department has originates out of the ability to control the licensing of ambulance operations within Scott County. It is not believed that any agency has ever had their ability to operate denied or revoked, but the authority to act is present regardless. This authority is detailed in Chapter 28 of the Scott County Code of Ordinances.

### 3.3.5: Scott County Chapter 28

Chapter 28 of the Scott County Code of Ordinances is the chapter that covers "licensing, inspection and operation of ambulance services, and providing for renewal and revocation of licenses and requiring written reports, and providing for traffic regulation of ambulances, and establishing penalties for violation of its provisions[20]." Initially written in 1979, with multiple revisions since, Chapter 28 provides the County with a very reasonable amount of authority in determining the appropriate service to its citizens. The regulatory system associated with EMS in Iowa is, at best, a stressed system. Localizing regulation is an effective manner of ensuring that EMS agencies are held to the standards that meet or exceed the state and federal standards.

It is important to note that external agencies have voiced concern over the legality of certain sections within Chapter 28. The findings of this study mirrored the findings of the 2014 EMS study, as well as the concerns expressed by outside agencies. Most of the issues have related to the possibility of preventing "equal or higher levels of EMS services from being allowed to function in Scott County," as well as the possibility of preventing "free trade." The concerns originate from the Exclusive Service Areas (ESAs), which designate which EMS agency is the primary response agency for a given geographic area. There were no attempts identified by these external agencies to provide services within Scott County, so it is unclear why the belief remains of an inability to function within the County.

These issues were magnified with the 2013 revision which further defined the ESAs. The subsequent collapse of the Buffalo Ambulance Service, whose ESA was then reassigned to MEDIC EMS, fueled concerns that external stakeholders had that there was a lack of opportunity for other agencies to function in Scott County. Arguably, MEDIC EMS was the most capable and best option for continuity of service to the Buffalo Ambulance Service ESA but concerns still linger with some external agencies. More impactful than the assignment of the ESA was that MEDIC EMS was able to secure the contract providing transport for Specialty Select Hospital. No longer a significant source of transport revenue, with Specialty Select Hospital relocating to occupy a floor within the Genesis Hospital, this contract provided a reasonable number of guaranteed payors to MEDIC EMS through 2022.

During this Study, no agencies in the area were identified that are capable of providing the services currently provided by MEDIC EMS at the level that those services are provided, but this Chapter should be reviewed in its entirety to ensure that the language is appropriate for a county-based EMS agency. Previous legal opinions rendered by the Scott County Attorney suggest that the County was within its rights to enact the ordinances and its subsequent revisions, but that was prior to the County being the primary provider of EMS. Regardless of the future steps taken, there should be an intentional effort to keep the entire licensing process very transparent for the external agencies that may want to provide services to the community in Scott County.

## 3.4: Scott Emergency Communications Center

The Scott Emergency Communications Center (SECC) was developed out of a desire for local agencies to increase the efficiency with which they can communicate. Iowa law, specifically Chapter 28E of the Iowa Codes, allows for state and local governments to enter into intergovernmental agreements that make for more efficient use of their power and, ultimately, their funding. This agreement was created under the cooperation of Scott County, Davenport, Bettendorf, MEDIC EMS, and the Emergency Management Agency (EMA).

The hope was that merging the multiple dispatch centers previously used by each individual entity would increase efficiency and ultimately lead to faster call processing and responder response times across the County. The intergovernmental agreement called for the merging of three of the four County public safety answering points (PSAP), with MEDIC EMS's MED-COM being the only PSAP to remain separate but co-located within SECC for future consolidation consideration.

The staff of SECC and MED-COM are co-located in a state-of-the art facility built to house both the SECC and the EMA operations. The MED-COM and SECC staff answer to different chains of command, but their consoles are side by side in SECC. Currently, the workflow for 9-1-1 response in Scott County as follows:

1. 9-1-1 call is received by a call taker in SECC. At this point the primary reason for the call (medical, fire, or law) is determined, and the location of the incident is verified.
2. If the emergency requires an ambulance, the call is transferred to the MED-COM dispatchers. These dispatchers complete their EMD and dispatch the appropriate EMS units.
3. If needed, the call is transferred back to SECC for the dispatching of other disciplines (law and/or fire).

The two entities (SECC and MED-COM) currently function on two different computer-aided dispatch (CAD) systems. Calls are put into each system and certain information is transferred back and forth by various programs that have been created to allow communication. There are inherent delays in this information transfer, and the transfer is not native to either program, but it has worked for the dispatchers to this point.

In the initial implementation of SECC, it was determined that the consolidation of MED-COM and SECC would be considered within 30 months following the opening of SECC. This consolidation was considered and tabled for future consideration. The separation of MED-COM and SECC continues to be a point of concern for many of the County agencies and stakeholders. These concerns and the steps being taken by SECC and MEDCOM can be found in **Section 4.3**.

# SECTION 4: PHASE 1 – OPERATIONAL ANALYSIS

Section 4 covers the data, and subsequent analysis, recovered while studying the operational capabilities of MEDIC EMS. Most of this information was obtained from stakeholders during the initial phase of the study and was subsequently updated through both phases when additional information was received.

## 4.1: Call Volume and Response Time Analysis

The most visceral representation of an EMS agency's performance, especially for members of the community, is how often an EMS agency needs to respond to a call for service, and how fast the EMS agency can respond to that call. Most EMS providers, administrators, and those otherwise educated in the field of EMS understand that the services provided are much more dynamic than simply responding to emergency calls, but evaluating the response volume can help administrators determine future needs. Call volumes are defined as the number of responses that MEDIC EMS responds to each year. Generally, each response will result in one of several possible outcomes, but these outcomes can be categorized as one of three primary types: no patient contact, a refusal of transport and/or treatment, or a transport to one or more facilities.

### 4.1.1: Call Volumes

Seen in **Figure 4.1**, there has been a steady year-to-year growth in call volume classified as dispatch priorities 1, 2, or 3. Calls classified in this manner can be understood to represent typical calls for emergency medical services. There has also been a slight decrease in the number of calls not directly related to 9-1-1 responses (i.e., transports, standbys, special events, and other assorted calls).

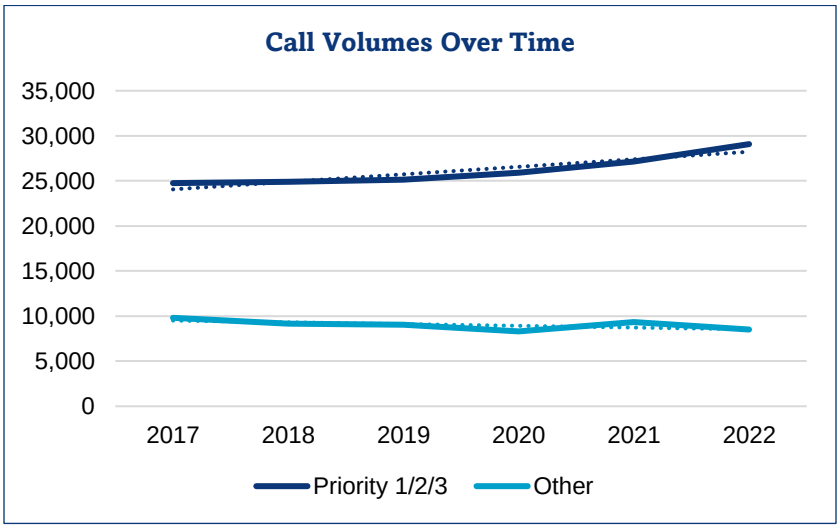


**Figure 4.1: Call Volumes by Dispatch Priority**

While the year-to-year growth in call volume since 2017 averages to approximately 2%, there has been a more significant increase since 2020, averaging 5% in year-to-year growth for the overall call volume. Only time will tell if these increases are solely due to COVID-19 patterns, or if they are representative of a new normal for the communities served by MEDIC.

The "Other" calls noted in **Figure 4.1** represent interfacility transports, standbys, special events, calls outside of the service area, and other specialty services provided by MEDIC (i.e., dispatch priorities 4-9, cancelled calls, and courier calls). Most of these calls could be considered to be secondary responsibilities,

as the primary responsibility of MEDIC is to respond to 9-1-1 calls for service (the priority 1/2/3 calls). When the 9-1-1 call volume increases, there is a drop in the "Other" call volume.

This suggests there is a capacity issue, as increased 9-1-1 calls will often result in an increased number of transports, which should equate to an increased number of interfacility transports, among others. It should be noted that a large source of call volume, Select Specialty Hospital, recently relocated to Genesis Medical Center's East Campus. This agreement allows Select Specialty Hospital to utilize diagnostic and imaging services at Genesis, eliminating many transports that previously occurred because these services were not available at the Select campus.

There will still be a need for some transports, such as patients requiring to be transported back and forth to the University of Iowa, that will be incurred because of Select Specialty Hospital's contracts, but the overall number should drop significantly.

## 4.1.2: Mutual Aid

Since the beginning of the 2018 fiscal year, MEDIC has only had to mutual aid 10 of their emergency calls (priority 1, 2, or 3) calls to another provider. This is approximately 1.2% of their mutual aid volume, suggesting that they focus heavily on being able to respond to the calls in their service areas and are willing to hold non-emergency transports until their capacity allows. One of the reasons for this is the foundational MEDIC EMS agency practice of keeping administrative staff on call when the demand is outpacing capacity. More information on this can be found in **Section 4.2**.

**Figure 4.2** displays the volume of 9-1-1 and interfacility transfer response mutual aid that MEDIC received from other EMS agencies because they did not have the capacity to respond to those calls. Mutual aid calls are defined as responses that are dispatched to MEDIC but are handled by agencies other than MEDIC.

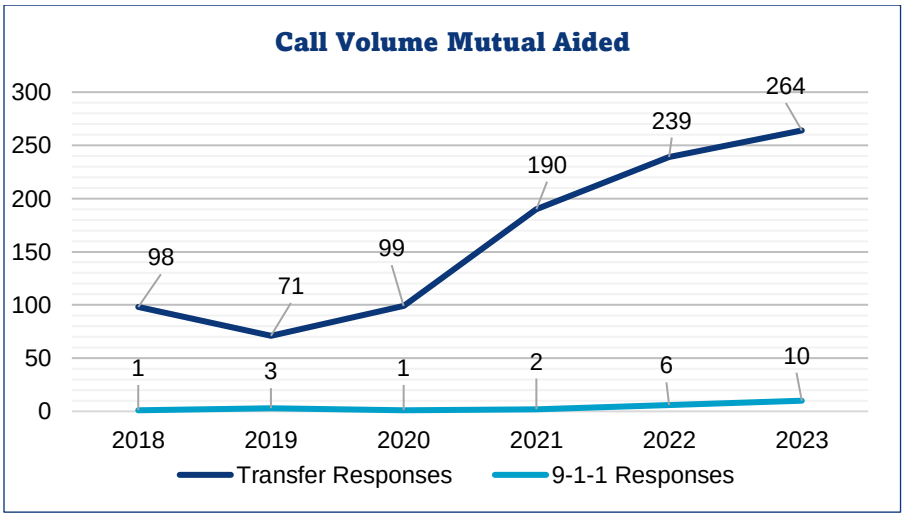


**Figure 4.2: Total Mutual Aid Received**

There are multiple variables that could be responsible for the inability to handle these calls, i.e., the lack of available capacity. Staffing at MEDIC has decreased over the past few fiscal years (FY), averaging 95% of positions being filled from FY18 – FY20, but their fulltime staffing dropped as low as 71% for FY22 and 72% for the first half of FY23. The slight decrease in staffing from FY20-FY21, but the almost 100% increase in mutual aided calls suggests that this problem is likely due to system capacity (the number of ambulances available) related to volume increases coupled with staffing vacancies (see **Section 4.2** for more detailed information).

While one call per day may not significantly impact the revenue obtained from interfacility transports, the inability to respond to these calls suggests daily periods of strain on the system significant enough to limit the ability to respond, or potentially impact response times. FY22 dispatch volume increased 9.4%, and transport volume increased 8.8%. A major strength of MEDIC is its ability to respond to the responses generated by emergency requests, which are intentionally prioritized.

### 4.1.3: Response Times

Response times are defined as the amount of time that it takes for a unit to arrive on the scene of a call for service after being dispatched. MEDIC EMS has been reporting times to the County based on when the call was received to when the unit arrived on scene. While being more indicative of the total time from calling 911 to receiving help, the overall response time is not frequently cited by EMS agencies, as few have direct control of their dispatching operations. National Fire Protection Association 1710, the standard followed by many career fire departments, breaks up the total response time into call answering and processing, turnout (how quickly providers get to their vehicle), and travel (how long it takes the vehicle to get to the scene of an emergency) times. Response times are traditionally indicative of the steps taken to ensure that response units are strategically positioned to respond to the incidents that they are dispatched to, while also being an early indicator of potential issues with capacity in a system. Studies dating back to the 1950s suggest that the time potentially saved by responding to calls for service with lights and sirens is not clinically, or operationally, appropriate in all but a few of the most specific cases, and that the appropriate staging of units is more impactful on time saved.

When reviewing the response times, averages are frequently cited, but 90th percentiles are a more accurate predictor of when a unit would be expected to arrive. Utilizing 90th percentiles, or greater, allows for a transparent approach to communicating with the community and elected officials. **Table 4.1** represents the areas that MEDIC responds to. **Table 4.1** also includes the response times for the City of Clinton, which resides outside of Scott County. These responses are part of an existing service agreement that MEDIC has with MercyOne Clinton. The services provided are detailed in **Section 4.2**. The areas align with the exclusive service areas (ESAs) within Scott County, with the obvious exception of the City of Clinton, and are defined as follows:

- Metro: All of Davenport and Bettendorf
- Rural: All areas outside of the “Metro” that fall directly under MEDIC’s ESA
- RSA: Areas within Scott County outside of MEDIC’s ESA

**Table 4.1** shows an overview of MEDIC EMS’s average and 90th percentile response times for the past several years.

| Area | Time | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|---|
| Metro | Average | 0:05:06 | 0:06:13 | 0:06:34 | 0:06:33 | 0:06:38 | 0:06:38 |
| | 90th | 0:08:04 | 0:09:43 | 0:10:20 | 0:10:30 | 0:10:36 | 0:10:38 |
| Rural | Average | 0:08:43 | 0:09:52 | 0:10:10 | 0:09:54 | 0:09:54 | 0:09:51 |
| | 90th | 0:14:25 | 0:15:57 | 0:16:00 | 0:16:06 | 0:16:23 | 0:16:08 |
| RSA | Average | 0:22:58 | 0:14:00 | 0:13:15 | 0:15:46 | 0:11:12 | 0:10:51 |
| | 90th | 0:38:22 | 0:17:58 | 0:20:14 | 0:25:26 | 0:13:38 | 0:16:58 |
| City of Clinton | Average | 0:06:57 | 0:06:58 | 0:07:33 | 0:07:59 | 0:09:11 | 0:08:35 |
| | 90th | 0:09:48 | 0:10:09 | 0:10:27 | 0:10:56 | 0:13:42 | 0:12:25 |

**Table 4.1: Response Times by Area and Calendar Year**

Seen in **Table 4.2**, MEDIC reports their response fractiles to Scott County in a slightly different format. Their format is based on previously established performance targets. Both methods are accurate ways to display response time frames. As an example, for 2017, **Table 4.1** suggests that MEDIC responded to 90% of their calls in 8 minutes and 4 seconds or less, where **Table 4.2** shows that MEDIC responded to 77.64% of their Code 1 responses in their target interval of less than 7 minutes and 59 seconds.

| PERFORMANCE MEASUREMENT | | 2021-22 ACTUAL | 2022-23 BUDGETED | 2022-23 PROJECTED | 6 MONTH ACTUAL |
|---|---|---|---|---|---|
| OUTCOME: | EFFECTIVENESS: | | | | |
| Urban Code 1 Response times will be < 7 minutes 59 seconds | Response time targets will be achieved at > 90% compliance | 78.98% | 81.00% | 82.50% | 77.64% |

**Table 4.2: Example of MEDIC Fractile Reporting**

Consistent with the response time goals that MEDIC has, as well as the general deployment of their resources, the metro area traditionally has lower response times overall versus the rest of Scott County. The unit based in the City of Clinton also has a lower response time but given that the purpose of this operation is to serve MercyOne-Clinton's scheduled/unscheduled ambulance transfer needs, this operation responds to 9-1-1 calls only when available. Response times have been gradually increasing across the two main areas of response for MEDIC, the metro and rural areas.

## Response Time Standards

The most cited standard on EMS response times is NFPA 1710: *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments*. While specifically targeting "career fire departments," the less than 8-minute response for emergency medical calls is a very commonly found metric that EMS systems strive to meet. MEDIC exceeds the performance noted by agencies across the nation in a 2017 study on EMS response times[21]. In this nationwide study of 485 EMS agencies, the researchers found the 90$^{th}$ percentile response time to be 14 minutes for the suburban setting, 12 minutes for the urban setting, and 26 minutes for the rural setting. NFPA 450: *Guide for Emergency Medical Services and Systems* does not have specific time frames listed for response intervals.

As an example, for local response times, one of Iowa's neighboring states, Illinois, reported the median (middle of the set of times) and interquartile range (middle 50% of the response times) from 2015-2019 on their state website[22]. These times are an example of the metrics that a state, or county, can choose to publish for public viewing and transparency. The expected response times are generally set by what the community is willing to accept, but there are multiple illnesses or injuries (such as heart attacks and strokes) where time matters, and increased response times can lead to increased injury or death. The response times calculated for MEDIC are better than the posted results of the counties in neighboring Illinois.

## Response Time Summary

Acceptable response times should be established by reviewing applicable national standards and thorough communication with the community. While MEDIC is accredited through the Commission on Accreditation of Ambulance Services (CAAS), CAAS does not enforce a specific EMS response standard. Conversely, they ensure that the agency understands their response times, and that they have a way to measure, report, and potentially improve those times. As noted earlier, response times are indicative of an agency's ability to appropriately locate response units, which is frequently directly related to the funding accessible to that agency for additional stations, ambulances, and staffing.

# 4.2: Operational Overview

Outside of traditional call volume and response time assessments, the operational structure of MEDIC EMS was also reviewed. While the organizational structure that MEDIC EMS currently employs has sufficed during their years of operation, there may be a more efficient way to organize the department in a manner that encourages growth and development for employees.

## 4.2.1: Organizational Structure

MEDIC currently operates under an organizational structure common to many 501(c)(3) organizations, with several employees, and specifically the Executive Director, wearing multiple "hats." Under the structure of Scott County, many of these ancillary duties, like human resources, finance, etc., will largely be tasked to the appropriate County departments. **Figure 4.3** illustrates a possible example of a future organizational structure. A much more linear approach to the EMS department would result in greater span of control and division of labor. This approach also helps promote internal succession planning and career potential.

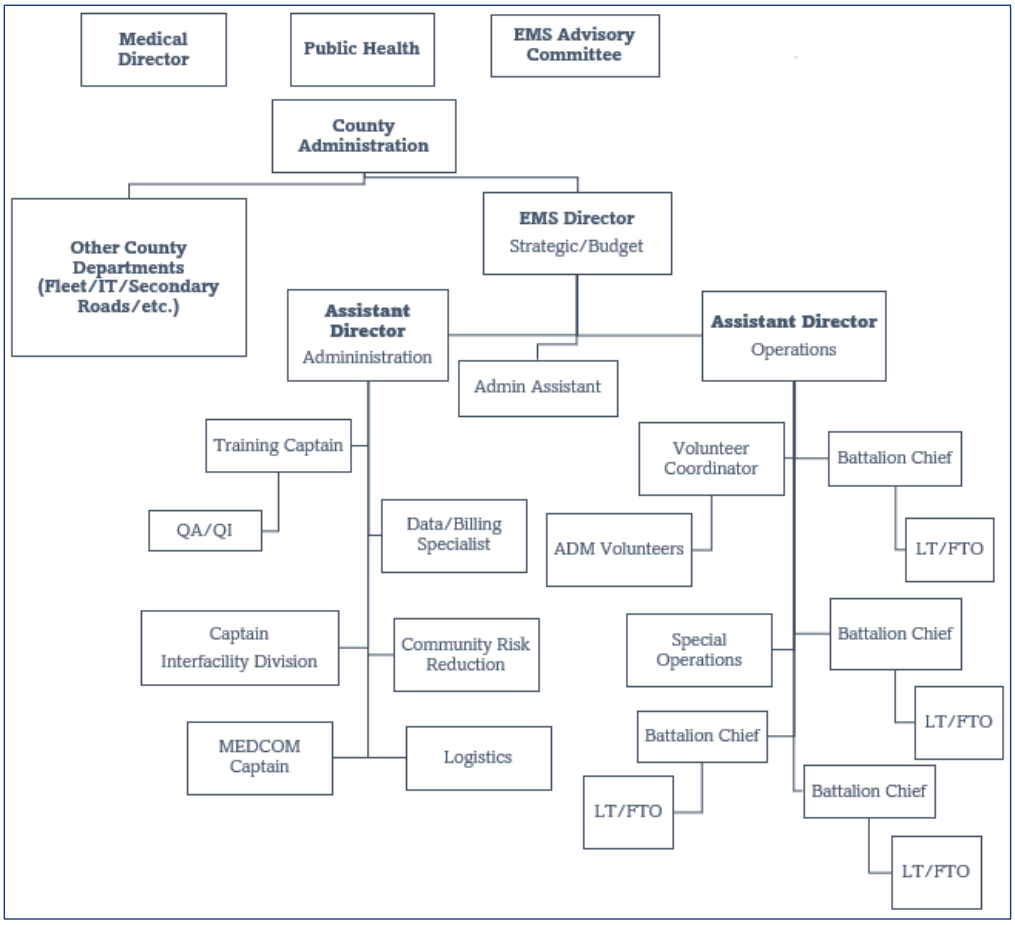


**Figure 4.3: Suggested Organizational Structure**

The titles (such as Battalion Chief, Captain, Lieutenant, etc.) found in the organizational structure are based on common industry practices for an organization of this size. Scott County will need to determine if this naming convention fits in with the needs of the County and local responders, or if there is a desire to change to a naming convention that is common to the County structure. Another possible changes would include changing the use of the term "volunteer," as the County may not deem these paid personnel as "volunteers."

Specific job descriptions for some positions would likely not vary significantly from their current tasks, but many would have more defined tasks assigned to them. This management structure is not all-inclusive. There would be multiple operational positions (system status controllers, ambulance personnel, etc.) supervised by many of these positions. It is also important to note that while the County has several departments that will provide support to EMS operations, the EMS department will likely still need personnel who are subject matter experts in their fields (like IT/ambulance maintenance/software applications/etc.) to assist in those support operations.

One of the important features of this organizational structure is the inherent scalability. This organizational structure is an example of what Scott County may consider for their new EMS department. While the County would not need to change the organizational structure upon the start of the new department, it may prove to be administratively easier to bring MEDIC EMS into the County under the preferred organizational structure, versus trying to remodel the department once it is already functioning. The new EMS Director should be involved in the decision to proceed one way or the other, if possible.

## Span of Control

Span of control is an important concept that has gained varying levels of support across many agencies. The basic concept is that everyone has a maximum number of people/units/tasks that they should be able to reasonably track and appropriately supervise. Per FEMA, the optimal span of control is one supervisor to five subordinates (1:5)[23], but in practice these numbers vary with the complexity of the scenario and the abilities of both the supervisor and the subordinate. As with any other management scenario, the more complex the task and the more personnel to track, the greater the risk of an error. Errors in the field of EMS could cost the County significantly, and worse, could result in death or injury to a patient.

## EMS Advisory Committee

This organizational structure recommends that an advisory committee be created to help guide the future of the EMS department. Given the presence of multiple advisory boards associated with Health Department, this advisory committee should take on the form of a technical advisory committee (TAC), like the committee currently serving the Scott Emergency Communications Center (SECC). The purpose of this TAC would be to advise the County Administration on the technical aspects of EMS provision that are not directly covered by one of the Health Department boards. Working in a collaborative manner with the EMS Director, this board would help to represent stakeholders from various identified agencies, such as the fire departments, local hospitals, and other EMS agencies.

This is also a good way to ensure that the stakeholders from various groups continue to have the buy-in and influence that they previously had with MEDIC's board of directors. The representation within the group should be carefully considered to ensure equitable representation. This should help ensure transparency and avoid potential conflicts down the road. A member of this TAC could also serve on the SECC board in lieu of the position currently held by MEDIC members, which may help provide insight on topics relating to EMS.

## EMS Director and Assistant Directors

These positions are meant to be highly strategic in nature. Just as it would be rare for the Sherriff of a County to be responding to a general traffic accident, these positions should be administrative and not relied upon as operational personnel. A strong operational background and knowledge traditionally lends itself well to helping these personnel in these positions perform at a high level, but their role should be to provide the guidance that their department needs while ensuring that the department has an appropriate representative within the County. An important feature of the Assistant Directors is that not only do they provide oversight in the absence of the EMS Director, but the position also allows for more formal succession planning and development of internal talent. A weakness identified within the MEDIC organization is that in the years since the previous Assistant Director left, there is no identified "next in line"

for the agency. While MEDIC has a cadre of very talented managers and supervisors, an official structure lends itself to more appropriate training and grooming of future leadership.

## Battalion Chief/Shift Supervisor

As shift supervisors, terminology that matches the local fire departments can help with operational awareness on scenes as well as breed familiarity between departments. The first responder professions tend to be highly "title" driven, as these titles lead to very specified command structures and duties. It is not reasonable for a shift supervisor to be expected to understand the needs of their employees, or the general state of operations, if they are (at times literally) elbow deep in their own medical responses. Having shift supervisors that are generally unable to assist the other units with whatever operational, technical, or administrative concern they have is potentially setting the organization up for failure and liability.

There have been multiple studies on the topic of "task saturation" and the impacts that it can have on leadership and operations. Generally, task saturation is defined as having too many things to do and too few resources to do it[24]. The most common resource that many leaders run out of is time. At a certain level of experience, many EMS providers understand what tasks need to be accomplished on an incredible assortment of calls. The ability to delegate these tasks, especially on the most serious or complicated of calls, while keeping track of what has been happening, is the primary way to prevent incident commanders or supervisors from becoming overloaded. Shift supervisors should excel in these skills.

Per the basic tenants of the National Incident Management System (NIMS) and the Incident Command System (ICS)[25], when incidents hit a certain level of complexity, there is a potential need for medical divisions, groups, supervisors, etc., to be involved in the overall command system. For example, a large structure fire, a significant natural disaster, or a multi-vehicle incident on one of the many local interstates are all scenarios where there may be multiple victims that need transport to facilities for varying injuries or needs. Medical group supervisors would traditionally be tasked with ensuring that the victims are transferred to the appropriate facilities in a timely manner. Shift supervisors are best equipped to handle these tasks, in most agencies, but MEDIC EMS would be forced to put a transport unit out of service based on their current model.

Lastly, a model that provides roaming supervisors allows for those supervisors to become aware of and handle, or hopefully prevent, personnel issues considerably faster than a supervisor that must wait until the end of a shift to handle the same issues because they are working on a transport unit.

## Captains

For many EMS services, the title of Captain is utilized for administrative personnel who are dedicated to various divisions within the agency. In the organizational structure above the supervisory positions over training, MED-COM (if they stay under the EMS department), and the interfacility division all have the title of Captain. These titles help to establish the personnel in the hierarchy as having legitimate authority over their tasks and responsibilities. The titles also help the personnel differentiate their experiences within the organization as they choose to promote or otherwise change their relationship with the agency. Allowing for both vertical and lateral growth, hierarchies built in this manner allow for a more fulfilled and better-rounded employee. A structure or hierarchy, such as the one detailed above, can also help with recruitment and retention efforts as there will potentially be more opportunities for growth in the organization.

## Lieutenant/FTOs

For many organizations, the terms Lieutenant, or Field Training Officer (FTO) may be interchangeable. In large organizations, an agency may have both positions available. MEDIC EMS currently works from a system that has two supervisors assigned per shift. One of the supervisors is paid an additional stipend and considered the "primary" while the other supervisor is not. The employee assigned as the supervisor is responsible for the administrative duties for the shift. This includes time-consuming tasks such as staffing.

After a set period, the personnel trade roles and the other supervisor is a primary, etc. This system is peculiar as field operation personnel reported that both supervisors have the same general expectations from both the administration and the personnel they supervise. The "rotation" methodology seems to be more of a cost saving method for the department more than anything else. When compared with the often-analogous fire department practices, if an employee is acting in a role, they are compensated commiserate with their role, but when they are not in that role, they are not expected to complete the tasks/duties associated with that role.

MEDIC is set in a favorable position where personnel of "supervisor quality" have already been identified across the shifts. If half of these personnel were named Battalion Chiefs, and allowed to supervise as free roaming units, and the other half were to take the subordinate role of Lieutenant, the supervision structure within the agency would be very favorable. Ideally, additional personnel would be identified as field training officers, senior, or another term that identifies the Paramedic as meeting a set standard. MEDIC EMS currently has a well-defined FTO program that they refer to as the "MTO" (or MEDIC training officer) program. MTO stands for MEDIC Training Officer. Four levels exist in this program and MTO personnel are compensated at 3% per level. Those FTO/MTOs could then report directly to the Training Captain for various educational initiatives, the training of new hires, remediation, etc.

### Organizational Summary

If there is a desire to grow the structure to increase the services delivered, there is room for those services under the Assistant Directors. There is also the ability to remove positions, like the MED-COM Captain, if it is deemed that those divisions will not function under the EMS department. Providing an organizational structure with more vertical growth will help the agency internally prepare for succession while isolating the chain of command, and thus responsibility, for many tasks to ensure accountability and efficiency. This style of organizational structure may also help MEDIC EMS recruit more highly qualified personnel as the career ladder, and thus advancement potential, will be more clearly identified within the organization.

## 4.2.2: Station and Apparatus Overview

An in-person assessment of available vehicles and facilities was completed during an onsite visit in March of 2023. Both the apparatus and facilities were found to be well cared for. A brief review of the status of stations and vehicles utilized by MEDIC suggests they are operational and in good condition.

### Station Overview

Routine maintenance of the facilities and vehicles utilized by MEDIC is accomplished by the facilities and support manager, where possible, and contracted to other parties when needed. Other than a well-noted desire for more space in the MEDIC headquarters, there were no immediate needs verbalized by the MEDIC staff or Fleet/Support Manager.

It was noted that none of the stations appeared specifically built to be EMS stations. Most of the buildings and spaces have simply been repurposed to allow for apparatus parking and personnel areas. While "specialty" EMS stations are not required, there is a possibility of the stations being designed in a manner more favorable for their use. The signage present for many of the stations was noted to be lacking. While the ADM stations appeared to be more visible, the repurposed nature of many of the other stations may prohibit their ability to produce a high level of public visibility.

Common issues noted across the stations visited were the lack of storage and less than ideal sleeping quarters. An issue that has been highlighted over the past decade is the desire for separate sleeping quarters for personnel working 24-hour shifts. These quarters not only allow for personnel to have an area to decompress, but separate sleeping quarters can also allow for more hygienic crew quarters and decrease the odds of an illness, like COVID-19, from spreading through crews or shifts.

Seen below in **Table 4.3** is a list of the stations that MEDIC currently recognizes and operates out of.

| Station | Own/Lease | 24 Hour | Comments |
|---|---|---|---|
| Eldridge | Own | Yes | ADM |
| Blue Grass | Lease | Yes | ADM, shared space with Blue Grass |
| LeClaire | Own | Yes | ADM |
| Post 2 (HQ) | Own (Lease Land) | No | Land is leased through 2091, with the owner having an early termination clause, if desired |
| Bettendorf | Lease | No | Space in a Bettendorf FD Station |
| West Quarters | Lease | No | None |
| SW Quarters | Lease | No | None |
| MercyOne | N/A | Yes | Part of agreement for services to MercyOne |

**Table 4.3: List of MEDIC Stations**

Worth noting, the least favorable of the accommodations is the MercyOne quarters, which is merely a small room in the basement of the hospital that serves as living space, kitchen, sleeping space, and office. Navigating to where the ambulances are located and back to the quarters is also no small feat. There would certainly be delays associated with responding to 9-1-1 calls, and at night these delays would be expected to range from 5-10 minutes just to get to the ambulance, let alone respond to the call. A review of the turnout times (from the time the unit is dispatched until the ambulance checks en-route to the call) supports these anecdotal beliefs.

**Figures 4.4 – 4.7** display a selection of a few of the stations visited.


**Figure 4.4: Blue Grass ADM Station**

**Figure 4.5: Bettendorf Fire Station**


**Figure 4.6: LeClaire ADM Station**

**Figure 4.7: Eldridge ADM Station**

## Apparatus Overview

MEDIC has a longstanding relationship with their ambulance vendor and their vehicle mechanic, Lindquist Ford. Both vendors and mechanics are incredibly important to the ongoing operations of an EMS agency. A responsive, and detail oriented, mechanic can allow an agency to operate fewer ambulances because the vehicles in service are well maintained and repairs are performed in a timely manner. Some agencies maintain a larger fleet of "reserve" vehicles. These reserve vehicles allow for more flexibility in the timing of repairs and can give the agency more leeway in the event of major mechanical failures or incidents that render the ambulances inoperable.

It is imperative that the County investigates and understands the frequency and level of service that Lindquist Ford is providing for maintenance of MEDIC's vehicles to ensure that there is no disruption in their availability for response. With the frequency of service required for the ambulances, Scott County may find it preferable to hire their own mechanics to service their EMS fleet. While evaluating the frequency and quality of the services provided Scott County should also evaluate the presence, or lack of, specialty certifications that the mechanics at Lindquist possess. The Emergency Vehicle Technician Certification Commission, Inc. is a nonprofit that offers a certification program that helps ensure that mechanics are trained and certified to a standard that recognizes the specific maintenance and repair needs of emergency vehicles.

While suffering from the same logistical backups as any other EMS agency trying to purchase new ambulances, MEDIC has been able to replace units in a timely manner. This speaks highly of the relationship that MEDIC has maintained with their ambulance vendor. Ambulance vendors can assist an agency with ensuring that vehicle replacement policies are kept in-line with estimated costs and lead times associated with acquiring new vehicles.

MEDIC had multiple ambulances delivered in 2023 and appear to track the costs, as well as any maintenance or repair needs, associated with their vehicles in a highly effective manner using the "Fleetio" software. Costs relating to maintenance and repairs are directly entered into the system via an integration with the mechanics at Lindquist. These mechanics have access to Fleetio and can see any of the maintenance/repair requests that employees enter, as well as any applicable comments. This provides staff with a running list of issues and can help administration identify vehicles that are experiencing higher than average maintenance costs. The Fleetio software is also integrated with the Wex fuel cards MEDIC utilizes. Mileages for each apparatus are updated in the Fleetio system each time one of the vehicles' fuel cards is utilized, which gives the Fleet Manager a real time update on when the ambulances need to go for their routine maintenance and inspections, without having to manually check every vehicle in the fleet. It is

important to note that the Fleetio software has a checklist capability that is utilized daily by MEDIC. These checklists include daily operational and safety checks, equipment checks, and even checklists for new employee daily assessments and car seat installations. The versatility of the Fleetio software has allowed MEDIC to find efficiencies in many of their day-to-day tracking needs and has made the program indispensable to their administrative staff.

Another apparatus software utilized by MEDIC EMS is “Road Safety” a Zoll product. The primary focus of this product is to capture “over forces”, and other safety issues, exerted on their vehicles. If an ambulance is traveling faster than the preset limits, an audible beeping is heard in the driving compartment of the vehicle. The same occurs if the vehicle is stopped too quickly or turned too hard. Providing drivers an audible alert gives them an opportunity to correct their actions. It is hoped that they will learn to avoid unsafe vehicle operations. Another important feature is that the software can be programmed to alert certain personnel, like the Director and shift supervisors, of various over force “violations.” This can allow for real-time corrective measures, if needed. Each employee is provided with a “score card” relating to their driving, and this score card is attached to yearly evaluations. Interviews with MEDIC’s Fleet Manager suggest that this product has assisted MEDIC in receiving more favorable auto insurance rates. It is important to note that “Road Safety” is no longer a supported software, but that MEDIC administration has been reviewing options to transition to a comparable program.

MEDIC has ambulances as well as multiple other vehicles in their fleet. The three primary categories of apparatus utilized by MEDIC EMS are ambulances of various sizes and capabilities, command vehicles, and “other” vehicles. **Table 4.4** lists the apparatuses available to MEDIC as of May 31, 2023.

| ID | Model Year | Mileage | Make/Model | Type |
|---|---|---|---|---|
| **MEDIC14** | 2023 | 308 | Ford E-Series | Type III |
| **MEDIC15** | 2023 | 8,687 | Ford E-Series | Type III |
| **MEDIC18** | 2023 | 817 | Ford E-Series | Type III |
| **MEDIC24** | 2023 | 0 | Kia Seltos | Other |
| **MEDIC1A** | 2022 | 6,745 | Ford E-Series | Type III |
| **MEDIC22** | 2022 | 4,483 | Ford Explorer | Command |
| **MEDIC2** | 2021 | 103,797 | Ford E-Series | Type III |
| **MEDIC7** | 2021 | 56,007 | Ford E-Series | Type III |
| **MEDIC10** | 2021 | 102,233 | Ford E-Series | Type III |
| **MEDIC23** | 2020 | 35,854 | Ford Explorer | Command |
| **MEDIC4** | 2019 | 164,313 | Ford E-Series | Type III |
| **MEDIC5** | 2019 | 141,539 | Transit Cargo | Type II |
| **MEDIC6B** | 2019 | 84,291 | F-450 Super Duty | Type I |
| **MEDIC11** | 2019 | 138,633 | Ford E-Series | Type III |
| **MEDIC8** | 2018 | 414,886 | Ford E-Series | Type III |
| **MEDIC9** | 2018 | 173,772 | Ford E-Series | Type III |
| **MEDIC3B** | 2017 | 168,348 | Ford E-Series | Type III |
| **MEDIC13** | 2017 | 240,072 | Transit Cargo | Type II |
| **MEDIC17** | 2017 | 232,730 | Ford E-Series | Type III |
| **MEDIC19** | 2017 | 110,220 | F-450 Super Duty | Type I |
| **MEDIC21** | 2017 | 58,953 | Ford Explorer | Command |
| **MEDIC16** | 2016 | 147,078 | F-450 Super Duty | Type I |
| **MEDIC25** | 2015 | 72,634 | Ford Taurus | Other |
| **MEDIC12** | 2010 | 231,924 | Ford E-Series | Type III |

**Table 4.4: List of MEDIC Apparatuses**

## Ambulances

MEDIC EMS utilizes three types of ambulances: **Type I**, **Type II**, and **Type III**. The exact definition of each type can vary by manufacturer[26], but Type I ambulances are larger units with a patient compartment mounted to a heavy-duty truck chassis. Type II ambulances are van-style bodies, and Type III are generally a smaller version of Type I, with a van-style front cabin and chassis.

- **Type I:** These are the heaviest duty of the transport units utilized by MEDIC. The primary difference between the Type I and Type III is that the three Type I units are all 4x4 chassis and specifically meant to serve the ADM areas that are known for being more rural and needing specialty access. Given the possibility of ADM units needing to respond to the Metro area and the Metro units needing to respond to rural Scott County, it is undetermined how useful it is to have the abilities of a Type I unit specifically allotted to the ADM area. If there is a need for 4x4 capabilities across the county, then it may be reasonable to have all Type I ambulances. Otherwise, a supervisor vehicle with 4x4 capabilities may suffice and would be significantly cheaper to buy and maintain. The difference in purchase price may be impactful when comparing the two ambulance styles. **Figures 4.8 and 4.9** show the front of a Type I and a common patient compartment, respectively.

  The patient compartments of a Type I and Type III are generally very similar with the primary difference usually being the "pass-through" from the patient compartment to the front of the ambulance. In a Type I, the pass-through is a small window, where Type II units generally have a larger, full height pass through as depicted in the background of **Figure 4.9**. A unique benefit of the Type I/III ambulance is that the patient care compartment, or "box," can be remounted onto a new chassis. As long as the patient care compartment is in reasonable condition, and still meets the needs of the service, taking the box off an out of service chassis and mounting it to a new chassis can save the organization significant expenses when buying new ambulances.


**Figure 4.8: Type I Ambulance**

**Figure 4.9: Patient Compartment**

- **Type II:** The van-style apparatuses shown in **Figure 4.10** are less expensive to maintain and more comfortable for long transport distances compared to a traditional Type I/III ambulance. The decreased area in the patient care compartment (**Figure 4.11**) can complicate more intensive care efforts, but for those patients simply requiring monitoring and/or lengthy transport, these are the preferred unit.


**Figure 4.10: Type II Ambulance**

**Figure 4.11: Patient Compartment**

- **Type III:** Remarkably similar in general appearance to the Type I apparatus, Type III ambulances are a more appropriate choice for urban/suburban operations. The front of these vehicles is a van-style chassis, allowing personnel to enter and exit more comfortably and safely. **Figure 4.12** depicts the Type III ambulance used by MEDIC EMS. The body and patient care compartment of Type III ambulances are nearly identical to the Type I ambulances utilized by MEDIC.


**Figure 4.12: Type III Ambulance**

## Command Vehicles

Also known as quick response vehicles (QRVs), command vehicles are meant to provide support to the agency by providing a means to shuttle equipment and personnel through a district while allowing supervisors to take a mobile stance to monitoring the agency's operations. The roaming nature of the QRVs allows the vehicle to be closer to many calls than the transport vehicles. There is also an opportunity for personnel on QRVs to divert transport units, after first responding to the call, to more appropriate calls depending on the status of the system. Ideally these vehicles are equipped with radios, command boards, and other equipment appropriate for the types of calls to which they may respond.

### Other

MEDIC EMS does have two vehicles that fit under the "other" category. These sedans are typically utilized for courier services and other assorted administrative needs. If the department continues their ambulatory transport services for the organizations that they currently service, these vehicles are less expensive to purchase, maintain, and utilize than any of the other vehicles operated by MEDIC, thus making them the most efficient/profitable option.

### Overview

MEDIC EMS is well positioned with the vehicles currently at their disposal. With a well-planned apparatus replacement strategy, MEDIC has vehicles with various degrees of use. Their policy has left MEDIC with multiple front-line ambulances as well as several ambulances available to rotate in when there are maintenance, or other, needs. It is imperative that the County understands the lead time for future ambulances to ensure that there is no disruption in the apparatuses currently available for response.

## 4.2.3: Staffing

Staffing is an issue that has many layers and potentially far-reaching consequences. Agencies across the nation, and even locally in Iowa, have been struggling to maintain appropriate levels of staffing through recruitment and retention activities. Shown in **Table 4.5** are the staffing levels, focusing on the full-time staffing, at MEDIC that have been decreasing over the past few years.

| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023* |
|---|---|---|---|---|---|---|---|
| **Fulltime Staffing** | 100%<br>76/76 | 96%<br>73/76 | 92%<br>70/76 | 92%<br>70/76 | 89%<br>68/76 | 71%<br>54/76 | 78%<br>59/76 |
| **Total Staffing** | 79.6%<br>133/167 | 84.4%<br>141/167 | 94.6%<br>158/167 | 94.6%<br>158/167 | 94.6%<br>158/167 | 81%<br>136/168 | 91.2%<br>155/170 |
| *Values as of 6/30/2023 | | | | | | | |

**Table 4.5: Percent of Total Staffing**

MEDIC administration has acknowledged these staffing challenges, especially among full-time personnel. While staffing is known to be a nationwide issue, MEDIC stated that there are some local challenges as well, including the possibility of a transition to a county-based service. While the transition is not viewed as negative, it is probable that the uncertain nature of the transition may cause challenges in hiring. Another issue is these positions require certain amounts of training prior to being eligible for hire. This means that replacing personnel that leave, or are otherwise unable to work, is not always a fast or easy process.

MEDIC is in an advantageous position because they are almost fully staffed with full-time Paramedics (37/38), which take longer to train and are in a more competitive job market than their EMT counterparts. MEDIC is currently at 19/38 full-time EMTs required for full staffing. This represents a potentially significant staffing cost, as the positions left vacant by the EMTs are being covered by the present EMTs at an overtime rate, or Paramedics, which are considerably more expensive. While part-time or PRN staff are always a source for staffing, they should only be relied on to the extent of the hours they are required to work. A part-time employee providing 600 hours a year to an agency is likely going to be more useful than one providing 100 hours of availability.

These vacancies can also increase the stress on the overall system as there are days when 100% of the ambulances are not staffed, and the employees are working more than initially intended. Increased working hours can result in "poor individual outcomes such as stress and burnout, as well as to turnover within the workforce, thus reducing the number of individuals available to provide high quality emergency care[27]." While exposing the agency to increased liability is a concern, the added stress of additional turnover can exacerbate the staffing issue.

A significant issue is that MEDIC utilizes their administrative staff in operations fairly regularly between daily operations and their on-call scheduling. While there have been no negative consequences directly attributed to this staffing model with MEDIC, there is always a concern that the administrative staff may be less effective and more stressed if they are expected to manage these dual roles so often. It is incredibly important that the administrative staff understands the challenges faced by the operational staff, but they also need to be available to oversee high priority incidents and organizational needs as they arise. Just as the Davenport Fire Department and the Bettendorf Police Department have enough staffing that they do not rely on their administrative staff to provide operational coverage, so should MEDIC EMS of Scott County.

Staffing will need to be addressed immediately to ensure there are no significant issues following the transition to a department of the County. **Table 4.5** refers to the full-time staffing across MEDIC, but there is also a concern with the staffing specifically for MED-COM, which will be addressed in more detail in **Section 4.3**.

## 4.2.4: Operational Capacity

A concern echoed by the two larger Scott County municipalities, Bettendorf and Davenport, is the capacity that MEDIC currently has available to handle the call volume and potential growth. **Table 3.1** reviewed the yearly population changes for Davenport, Bettendorf, and the remainder of the Scott County communities. While population is a reasonable metric to review when estimating call volume fluctuations, it is not the only variable. The changes seen in the population centers are less telling than the change in emergency call volumes for each of the areas over time. These changes can be seen in **Figure 4.13**.

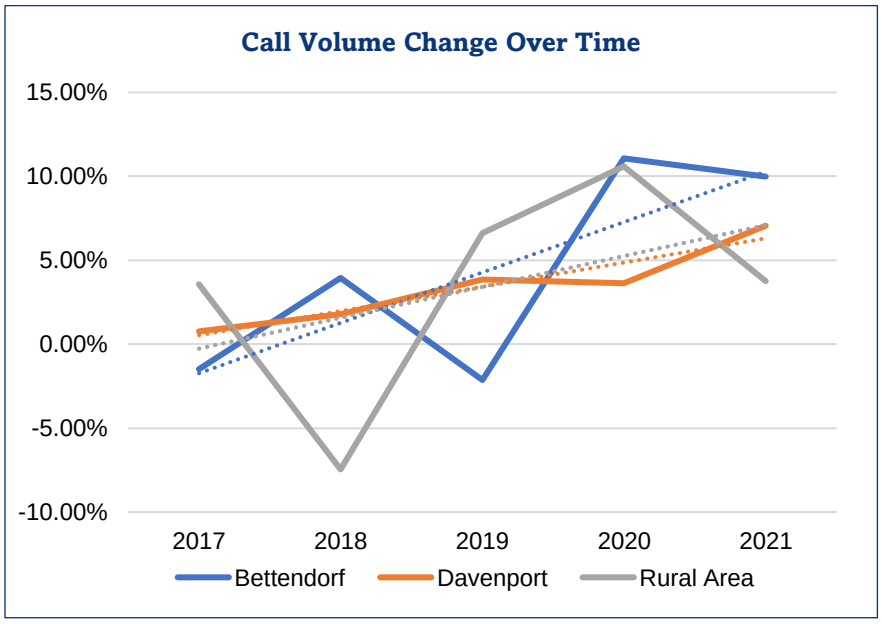


**Figure 4.13: Call Volume Change Over Time**

Seen in the figure above, there has been an increase in call volume for MEDIC over time, but the increased call volume in Bettendorf has doubled that of their neighbor, a 3% linear growth versus Davenport's growth of 1.44%, when represented as a linear trend. These trends not only represent a possible need for additional ambulances and resources, but they also represent a potential need for reallocation of those resources. Bettendorf is a growing municipality and has created a significant number of housing developments for older adults who have a greater demand for ambulance services, while Davenport has much more static

growth. The recent trends in population suggest that people are moving from more densely populated areas in favor of less densely populated suburban or rural areas, and that the availability of remote work is making this trend possible.

## 4.2.5: MercyOne Clinton Operation

The City of Clinton sits inside of Clinton County, Iowa. Since 2000, MEDIC EMS has contracted with MercyOne in the City of Clinton to provide support for their interfacility transfer needs. As part of this arrangement, the MEDIC unit is provided subpar and hardly effective accommodations for their personnel and a covered parking space for their transport ambulance. MEDIC EMS prefers to keep both a bariatric-capable Type III and a Type II ambulance at this location, when available, which allows crews to pick the apparatus most appropriate for the required transport. This unit is primarily meant to provide interfacility transportation for MercyOne patients but will occasionally support the local EMS agencies when they need extra units. For some employees, the opportunity to work at a station that primarily focuses on transfers is preferred, but that is not the case for all employees. This operation presents a unique management and staffing challenge, but also some financial opportunities.

### Operational Challenges

Situated approximately 14 miles North of Scott County, the location of the MercyOne base is roughly 30 minutes away from the next closest MEDIC bases in LeClaire and Eldridge, and 50 minutes outside of Davenport. The distance alone places the unit in that station in an unfavorable position if the response volume in Scott County requires additional ambulances. **Figure 4.14** shows the geographic layout of where the MercyOne unit is stationed (shown as a red circle) versus the County boundaries. The locations of the closest MEDIC EMS stations are represented as black circles and the closest Genesis Ambulance station, discussed later, is represented as the blue circle.

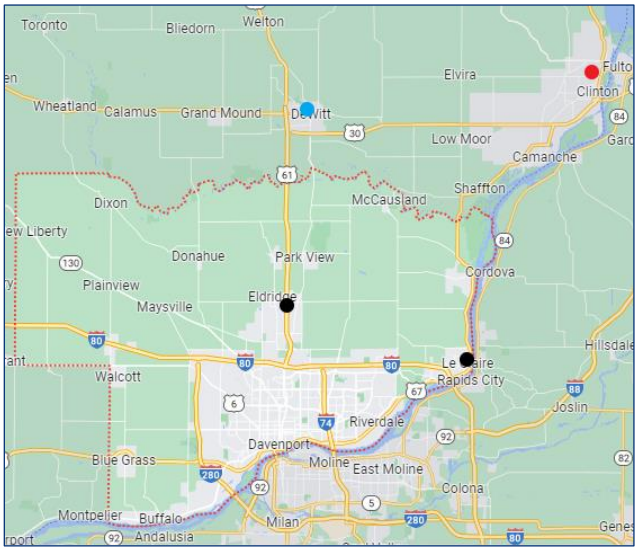


**Figure 4.14: MercyOne Operation Proximity to Scott County**

Another issue reported by the MEDIC administration is that the staffing of this station is particularly challenging. Staff that prefer to work at that station could spend a significant amount of time without ever seeing a supervisor or having meaningful contact with administrators. The staff at this station works on a 24-hour rotation but are frequently covered by staff in 12-hour increments due to current staffing levels.

### Recent Changes

With the merger of MercyOne and Genesis completed there is a reasonable amount of uncertainty as to what may lie ahead for the MercyOne Clinton Operation. Genesis Health has an ambulance service operating out of the Rock County, Illinois area, to include an ambulance currently stationed at the Genesis DeWitt location in Western Clinton County. This location is much closer to MercyOne Clinton than any of the other MEDIC stations and would be a reasonable option for MercyOne if they preferred to contract with the EMS service that they already own. Communication with Genesis Ambulance administrators suggested that the MercyOne contract would be beneficial for their service and potentially allow Genesis Ambulance to staff additional units. They also stressed that the merger of the two healthcare entities is still incredibly early in the overall process and that there are still a lot of future unknowns.

### MercyOne Operation Summary

There are other ambulance services that could potentially take on this contract, if MEDIC were to terminate services there, but MercyOne should be given reasonable (6-month) notice prior to termination of the contract, if deemed necessary. Another consideration for administrators is how this operation may be viewed by the public. There may be concerns of local tax dollars "subsidizing the care of another county/area." While the revenue generated by the MercyOne operation would suggest that the operation represents a net gain, the communication strategy of this operation would need to be carefully considered. The risks and challenges associated with continuing this operation may not justify the revenue generated by this contract. More discussion of the financial impact of the MercyOne operation can be found in **Section 5.2**. A reasonable alternative would be to offer transfer services, when available, by a unit based in Scott County and to ensure that EMS operations in Clinton County are covered by mutual aid agreements.

## 4.2.6: Outside Services

MEDIC provides a wide range of services to outside entities. These services range from providing medical chart hosting services to outright coverage of response areas. Most of these services do not directly impact the availability of ambulances in Scott County and should be seen more as financial assets versus liabilities. These services include 9-1-1 coverage of local townships, transport agreements, and various IT services.

### Muscatine County 9-1-1 Services

Situated just inside of Muscatine County, the Townships of Fulton and Montpelier currently have contracted 9-1-1 coverage by MEDIC EMS. As a result of the contracts, these areas are not simply being covered by mutual aid, but instead fall directly under the ESA of MEDIC, making MEDIC responsible for ensuring appropriate EMS response to the area. This coverage results in $4,400 worth of yearly fees being recovered from the two areas. While not accounting for a large amount of call volume, the fees help to subsidize the costs associated with the rural Blue Grass ADM. There are also opportunities for increased recruitment and outreach into Muscatine County. If the community sees MEDIC actively working in their area, they may be more inclined to function as employees/volunteers for the agency. This operation is different than the MercyOne operation as the ambulance is based in Scott County and readily capable of responding to the needs of the community versus the isolated nature of the MercyOne unit.

### Contract Transport Services

In addition to the services listed above, MEDIC provides transport services for multiple agencies like Hospice Centers and long-term care (LTC) centers. Typically, the agreements are related to the transfer of patients from one facility to the other, i.e., from the hospital to the hospice center or from the hospital to LTC centers as well. If MEDIC EMS continues to maintain the dual-state licensure of their employees, there is a large area available to seek these contractual transports. The transport volume related to the contracts should be guaranteed payors, which increases the revenue generation and overall efficiency of the

unoccupied units. If there is a large enough demand for these types of transports additional units can be placed in service which increases the overall capacity for MEDIC EMS to respond to the 9-1-1 response needs of the community. These contracts should be seen as providing positive financial flow and will have minimal operational impacts if the contracts are written to reflect the routine nature of these transports and the ability for MEDIC to delay the transfers until they are operationally able to accommodate them.

## Chart Hosting, IT Support, and Dispatching Services

MEDIC provides medical chart (electronic patient care record) hosting, billing hosting, cardiac monitor 12 lead transmission support, data analytics, QA/QI hosting, general IT support, and dispatching services for Genesis Ambulance. The organization also provides IT support and secondary dispatching for calls within Scott County for Durant Ambulance Service, and secondary dispatch services for the other two rural ambulance services for any calls within Scott County. The general IT support provided to Genesis Ambulance includes supporting and servicing of the internet modems, tablets, and laptops that Genesis uses on their ambulances. Genesis Ambulance uses desktop computers provided by the hospital system due to access requirements of Genesis. They can utilize the Zoll charting system on those computers, but downloading the application requires Genesis IT support/approval. These services would not be impacted by a transition to a county service unless there is a desire to sever those applicable lines.

Chart hosting support provided to Genesis Ambulance is in the form of application specific (i.e., Zoll charting) support. The provision of chart hosting and dispatching provides a financial benefit for little additional effort. With a transition to the County, primary IT services will potentially fall under the scope of the IT department, so it may be appropriate for the County to review the scope of services delivered to determine future agreements. Any IT personnel with an EMS background and/or familiarity with the charting software would be able to provide the requested support.

Billing hosting support is provided to Genesis Ambulance utilizing both ZOLL CAD and custom applications/processes that MEDIC EMS has developed to enhance reimbursements. MEDIC EMS provides Genesis Ambulance and Professional Billing Services of Illinois, Inc., their billing agency, access to MEDIC EMS systems to perform billing processes including access to operation information through the ZOLL CAD.

MEDIC EMS also provides data analytics to Genesis Ambulance through various means including reporting, data analysis, dashboards, financial data analysis/extracts, State of Iowa/Illinois NEMSIS reporting and various other data requests. Lastly, Genesis Ambulance utilizes MEDIC EMS's quality improvement process that was developed by MEDIC EMS. In conjunction with charting and ZOLL CAD operational information, Genesis Ambulance can gather clinical and operational awareness that they may not have had access to otherwise.

The needs of MEDIC EMS would require specialty IT services, and based on discussions with MEDIC and Genesis administrators, there is no belief that the services provided to Genesis Ambulance would encumber the services already provided. When considering the IT implications, it should be noted that IT services are also provided to Durant Ambulance Service but are charged to the agency by the hour. This arrangement would likely be simple to continue if the current skills and expertise within MEDIC EMS are transitioned to the County. Another minor concern is the requirement for an Illinois dispatching license for MED-COM to function as the dispatch service for Genesis. Currently, all the system status controllers are required to be capable of handling dispatch for Genesis Ambulance. This licensing requirement does not appear to significantly challenge MED-COM, but it does provide revenue and assists in the cooperative working environment between MEDIC and Genesis Ambulance.

# 4.3: 9-1-1 Impacts

Given the status of 9-1-1 call taking and dispatching within Scott County, this transition could have as little of an impact, or as much of an impact, as desired. Currently, MEDIC EMS is dispatched to 9-1-1 by MED-COM after the calls are taken by SECC. For transfers, MED-COM both receives and dispatches those calls as they require the call taker to capture additional information. The ability to receive calls into SECC to be dispatched to the appropriate units will remain unchanged regardless of any more defined impacts to SECC or MED-COM.

## 4.3.1: SECC Impact

### Stay Separated

A scenario with little to no impact involves MEDIC transitioning to the County and bringing MED-COM with them to remain a division under the EMS department. The supervisors of MED-COM currently report to the Quality/Education/Interim MED-COM Manager of MEDIC, and in transition, they would report to the Director of EMS, or preferably to an Assistant Director as shown in **Figure 4.3**. With both agencies functioning under the Scott County structure, there is a chance that communications between SECC and MED-COM would improve slightly, but there has been no concern that the current communications operations need improvement. An important consideration is that the transition of MEDIC EMS to a department of the County and the decision on a merger of MED-COM and SECC are not irrevocably intertwined. Future consolidations or mergers of the two entities could happen at a different date or time, at the expense of possible additional personnel stress.

### SECC/MED-COM Merger – SECC Impacts

A scenario that could have a significant impact would be if SECC and MED-COM were to merge. Historically, the primary driver of a future merger are the external stakeholders within the County. After communicating with these stakeholders, and reviewing their concerns, the most prevalent issues appear to be related to how CAD procedures are handled, and specifically, the fact that SECC and MED-COM utilize different CAD systems creating a perceived issue. To an outsider, this may seem like the simplest and best option, but there is a lot of background that may make this process less feasible. With a transition timeline of January 1, 2024, for MEDIC EMS to transition to the County, there could be enough time to reasonably merge SECC and MED-COM as organizations, but a much simpler transition to the same CAD system should not be overlooked.

There are multiple variations of this type of merger, including a scenario where the MED-COM employees create a separate division within SECC that are capable of emergency medical dispatching (EMD), but remain separate otherwise, or a scenario where the employees are merged with the SECC employees, and everyone is cross trained for the various dispatching disciplines. Interviews with local fire departments and municipalities suggest that a merger, at least of the CAD systems utilized, is a desired outcome. One of the most significant financial aspects of the MEDIC EMS transition to the County is the Ground Emergency Medical Transportation (GEMT) funds that the County will become eligible for. Discussed in **Section 5.2**, the reporting of expenses, and subsequent recovery of those expenses, may be simplified in a merged scenario.

### CAD Merger

The CAD platform currently used by SECC has shown that it is capable of handling EMS dispatch for other agencies across the nation. Whether the specific setup that SECC utilizes would work without some adjustments is to be seen. MED-COM currently utilizes the dispatching platform provided by Zoll. MEDIC EMS uses a suite of Zoll products including the CAD, electronic patient care reporting (ePCR), and billing modules. Additionally, MEDIC EMS has created numerous integrations with this platform to support

dispatching, billing, clinical and general business operations. A shift away from one or more of the individual services, or modules, would not require a shift from the others, as each platform can be utilized independently. It is important that any shift to change CAD platforms considers the possible impacts on the connected platforms, like billing. Given the extent to which the Zoll CAD is utilized by MED-COM for their non-emergency transfer needs, it is unknown if a complete CAD merger would ever be successful, unless MED-COM were to separate out the interfacility transfer operations, as discussed below.

The primary concern noted with a shift away from the Zoll CAD system relates directly to the creation of ePCRs. Currently, when a 9-1-1 call is responded to, the SSCs are able to create a chart, through the dispatching module, for the responding crew to complete in their ePCR system. A change to the CAD system utilized by SECC would no longer allow that creation to occur, but providers could still individually create a chart in the ePCR system. Below is a simple breakdown of the alternatives:

**Zoll CAD Chart Creation Process:**

- EMS call is generated in the Zoll CAD.
- Crew responds to the EMS call.
- A number of charts are created in the ePCR system equal to the number of patients encountered.
- Crew finds the applicable charts “assigned” to them when they open the ePCR module.
- Crew members complete the charts.

**Separate CAD Vendor Process:**

- EMS call is generated in the CAD system.
- Crew responds to the EMS call.
- Crew members login to the ePCR and “import” the data from the CAD vendor.
    - This is a simple process that generally involves the crew member clicking approximately two boxes once a chart is created.
- The crew creates charts in the ePCR system equal to the number of patients encountered.
    - A manual differentiator (i.e., A/B/C or 1/2/3) is added to the end of each run/CAD number.
- Crew members complete the charts.

It is important to note that the above scenario specifically references 9-1-1 calls. Mentioned in other sections of this report, the interfacility transfer services offered by MEDIC EMS are also handled through the Zoll CAD. The way the calls are entered has been reportedly very beneficial to crews. Call data entry, specifically physician certification statements and other billing data, are incredibly important to the ability of an organization to successfully bill for their services. Presently, it is unknown if there have been significant enough advances in other CAD vendors’ software specifically relating to the needs of MEDIC EMS’s interfacility transfer services.

The most significant difference will be the change in accountability noted for crews. Currently, when the ambulances arrive on the scene of an incident, they can notify the SSCs of the number of patients on scene. This, generally, will result in the correct number of ePCRs being created (every patient interaction should have a unique ePCR generated) which can help supervisors and crews maintain accountability. In a scenario where a separate vendor is used, it would be harder for supervisors to ensure this accountability as they would be forced to go back to the CAD records to check on the number of patients reported versus the number of charts created.

There are reports already native to the Zoll ePCR that allow administrators to reconcile the imported CAD record numbers with the ePCRs created within the Zoll software, but there is no way to ensure that multiple victim responses have the correct number of charts unless a new CAD record is created for every patient involved in a response, or manual effort by specific supervisors. It is important to note that the latter process (providers creating their own reports) is generally the standard across the industry for those not using the Zoll CAD.

Concerns relayed from various stakeholders included lack of interdisciplinary access to information and concerns that dispatchers from each discipline did not always have access to the most up-to-date information as calls were being classified by the MED-COM dispatchers. While the merger of CAD systems seemed to be a high-level priority for many external stakeholders, many of the concerns expressed could be rectified with enhancement to the existing CAD to CAD interface. It appears that MED-COM would require their current dispatching software to efficiently handle their transfer volume, but the 9-1-1 calls could all be shifted over to the CAD platform used by SECC. In a scenario where the transfer staff and 9-1-1 dispatching staff are separated (discussed in more detail in **Section 4.3.2**), utilizing the two different platforms would not be hugely impactful.

### Transition Process

After identifying the possible need to evaluate the merger, an SECC/MED-COM workgroup was created by the MEDIC EMS and Scott County Transition team. The SECC/MED-COM workgroup was then supplemented with additional personnel from each agency that were deemed to be beneficial to the process of that evaluation. Frequent meetings have been held to evaluate the feasibility of a merger as well as to evaluate the CAD systems currently being utilized. This study should only be considered as a cursory review of the possible impacts of any future SECC/MED-COM relations. The SECC/MED-COM workgroup should be relied upon for an in-depth review of the consequences, both positive and negative, of a future transition involving the agencies.

### SECC Impact Summary

There are multiple concerns about a merger, but also advantages and future efficiencies. Some of these concerns involve current staffing shortages, seniority lists within each division, pay structure, job satisfaction, and culture. There have been no stated concerns between the two divisions (SECC and MED-COM) and how they currently work together. Many of the concerns of delayed dispatching and other time related issues, which have been verbalized by various stakeholders, have not been justified based on the reviewed CAD data.

While a merger seems possible, an immediate and more appropriate solution to many of the concerns would be for MED-COM to change their CAD system to the system used by SECC. The current MEDIC CAD also includes its billing software and has proven data mining capabilities, which should be considered with CAD changes. Another consideration is the concern that CAD systems for dispatching emergency calls, and those capable of handling the transfer services, may not offer the same options and operability. These systems do not necessarily need to be the same systems.

## 4.3.2: MED-COM Impacts

Like SECC, this transition could have as large, or as little, of an impact on MED-COM as the County desires. If there is a desire to potentially merge MED-COM with SECC, there would be several recommended steps to make the process simpler.

### MED-COM/SECC Merger – MED-COM Impacts

The primary focus for MED-COM and the future transition should relate to the services provided and how to define and isolate those service lines more appropriately. The organizational structure presented earlier

defines two separate divisions of MED-COM, the traditional "MED-COM" division and a separate "interfacility" division. The MED-COM division would be responsible for the dispatching of 9-1-1 calls to MEDIC EMS and the other agencies currently served by MED-COM. In an ideal scenario, these employees would have no other responsibilities (including pre-billing or the receiving/dispatching of transfers). Those duties would be handled by the interfacility division. Treating the MED-COM division in this manner would help make their positions more readily transferable to SECC and vice versa.

It should be stressed that a "complete" or "total" merger of the two entities would take time, funding, and a significant amount of training. A complete merger is not required to start this process. It is possible that MED-COM is merged with SECC and remains a separate division for an indefinite amount of time. This would allow SECC to hire personnel that fit the new needs of the organization, while training those who desire to be cross trained across the necessary disciplines. Given the cooperative nature of SECC and MED-COM currently, anything other than a staggered merger (if a merger is desired) would just increase the stress associated with any merger. The process should be as thorough and thoughtful as the transition of MEDIC EMS to a department of the County.

### Interfacility Division

If an SECC/MED-COM merger is desired, it would make sense to separate the transfer and pre-billing duties from the current duties that the MED-COM employees have. Keeping these employees under the MEDIC EMS department regardless of a future MED-COM/SECC transition status would also allow for a simplified workflow for the interfacility transfer service line. The personnel in this division would be responsible for scheduling transfers as well as communicating the needs for these transfers to the ambulance staff. The most appropriate way for the communications to occur would be for the interfacility staff to contact the shift supervisor. That supervisor would be able to notify and send the closest available unit to handle the response. This type of management would give the supervisors greater flexibility and control of the shift they are expected to oversee, while allowing that supervisor to direct transfers to units with lower call volumes or units that are more appropriately equipped for the transfer.

Another responsibility for the interfacility division would be to complete the pre-billing requirements of MEDIC EMS. Discussed in **Section 5.2**, it is important that these personnel complete only the required steps to leverage the best value from the medical billing company utilized. The service lines continued by the new MEDIC EMS department will help determine the number of personnel required to operate this division. An added benefit of this division would be the opportunity to utilize light duty personnel without requiring additional certifications like EMD training. The administrative duties overseen by this division could vary based on the needs of the department but separating the transfer duties from the 9-1-1 duties would simplify many of the concerns associated with an SECC/MED-COM merger.

## 4.3.3: 9-1-1 Impact Summary

The transition of MEDIC EMS into a department of the County has revealed multiple opportunities. One of the most visible, yet likely least significant, of those opportunities is to evaluate the feasibility of a merger of SECC and MED-COM. Without a future merger, MED-COM and SECC will not face any additional barriers to providing the same high-quality services that their separate agencies are known for. However, there have not been any significant barriers to a merger of the agencies identified to this point. Evaluation of a future merger of SECC and MED-COM, or even the CAD systems utilized, is an opportunity to address concerns that external stakeholders have repeatedly verbalized during the transition process.

With the public nature of the County's structure and subsequent budget, having two separate "dispatch agencies" operating under the same county may not make sense to the community served. Efforts should be undertaken to continue to evaluate the feasibility of a merger of the two agencies, regardless of the overall totality of the merger, and an effective communication strategy should be created to answer and mitigate any future concerns once MEDIC is officially a department of Scott County.

# 4.4: Northwest Scott County

The northwestern quarter of Scott County is currently covered by three volunteer ambulance services. Referred to as the “Rural Scott County Ambulances” in MEDIC’s computer aided dispatch (CAD) data, these services consist of Bennett Ambulance Service, Durant Ambulance Service, and Wheatland Emergency Medical Services. These services respond based on a “tiering model.” This model states, regardless of the call type, the volunteer agency responsible for the area will be dispatched. That provider is then responsible for asking for assistance from a MEDIC ambulance, if needed. With this model, it is challenging to calculate the potential delays in care.

It is important to note that MEDIC functions at the Paramedic level, where the rural ambulance services may respond at the EMT level, up to the Paramedic level. Each service is staffed by volunteers of various certification levels. All three services reported that they respond to 95% or greater of the call volume that they are dispatched to, but each acknowledged an aging staff and no readily present plan for future sustainability. Cedar County for example, the seat of Durant Ambulance Service, is in the process of exploring the “essential service” designation to help ensure the future of EMS in their county. In their current state, none of the rural services can guarantee to provide the same level of care provided by MEDIC.

As a County department, it will be incumbent for Scott County to ensure there is an equitable level of care throughout the County. **Figure 4.15** shows the general distribution of emergency calls across Scott County in 2022. Uniquely, this call distribution has been relatively unchanged since 2017.

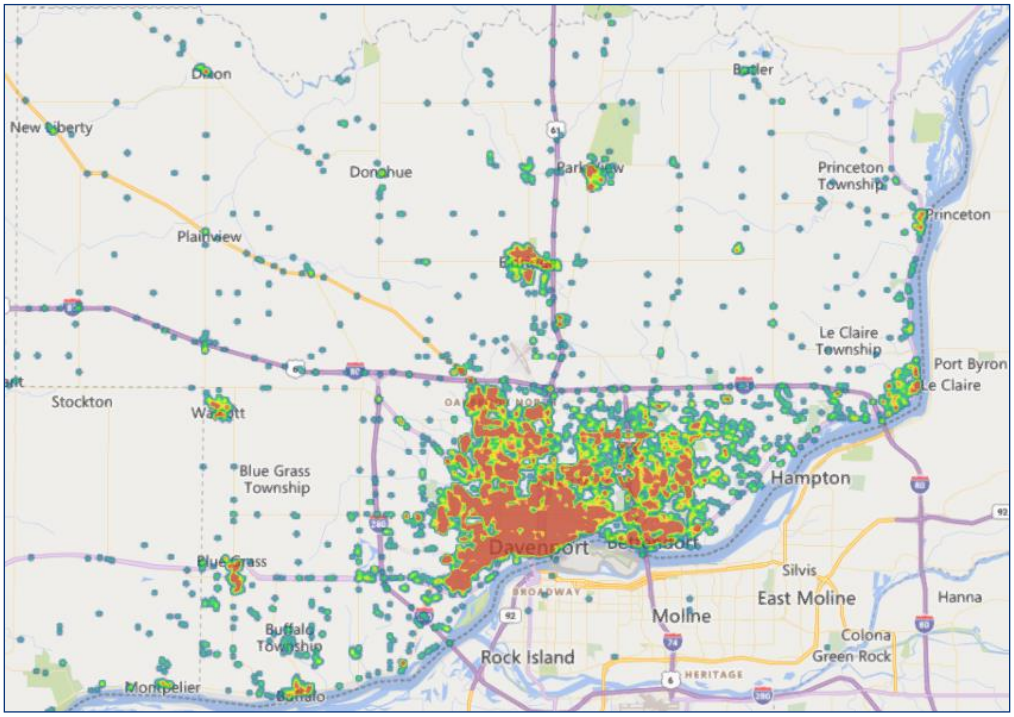


**Figure 4.15: Emergency Call Distribution Across Scott County**

The rural area ambulances provide a significant value to the people of northwest Scott County, but there should be significant consideration in place as to where they fit in the continuity of care. An acceptable model of care would involve changing the dispatch procedures to always send a MEDIC unit and allow for the rural ambulance services to cancel the MEDIC unit once they arrive on scene and determine the call is within their capability.

# SECTION 5: PHASE 2 – ADMINISTRATIVE ANALYSIS

Focusing on the administrative needs of MEDIC EMS as a department of the County, Phase 2 primarily evaluated the staffing needs of the department while reviewing the financial implications involved in the transition.

## 5.1: Staffing Needs Assessment

The staffing needs of MEDIC EMS will vary greatly based on the services provided by the department of Scott County. The current staffing utilized by MEDIC EMS would be sufficient to start operations as a County department, but there are several areas that should be reviewed for potential efficiencies.

### 5.1.1: Staffing Overview

MEDIC EMS functions on a system that incorporates both 24-hour and 12-hour shifts. Generally, the Metro division ambulances (the ambulances based out of Davenport and Bettendorf) work 12-hour rotations, while the ADM bases and the MercyOne operation are all 24-hour rotations.

#### Metro Staffing

The Metro staff work a 12-hour rotating schedule. The utilized rotation is similar to many EMS agencies and results in the employees working an average 42-hour work week. **Table 5.1** shows an example of how the shift rotations for MEDIC EMS work. Shifts 1 and 2 are "day shifts" while shifts 3 and 4 are the night components.

| | | Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|---|---|---|---|---|---|---|---|---|
| Week 1 | AM | 1 | 2 | 2 | 1 | 1 | 2 | 2 |
| | PM | 3 | 4 | 4 | 3 | 3 | 4 | 4 |
| Week 2 | AM | 2 | 1 | 1 | 2 | 2 | 1 | 1 |
| | PM | 4 | 3 | 3 | 4 | 4 | 3 | 3 |

**Table 5.1: 12-Hour shift rotation**

12-hour shift rotations are the most common shift across career EMS agencies. With increasing volumes, some agencies have opted for 10 or even 8-hour shifts. The Metro staff work a variety of start and end times which are evaluated every few months and adjusted based on call volume if needed. The current shift start times utilized by MEDIC are as follows: 5am, 6am, 7am, 8 am, 9 am, 11am, 1pm, 5pm, 6pm, 7pm, 8pm, and 9pm. The supervisors work on the ambulance shifts that start at 7am and 7pm. A common complaint from the crews was related to concerns of not having enough downtime to eat and crews getting off their shifts late. That suggests that the dynamic start times utilized by MEDIC are not currently allowing crews to swap on time, which is a primary function of having so many different transition times. There is more on this topic found in the hourly call volume section below.

#### ADM/MercyOne Staffing

The staffing at the 24-hour stations differs from the staffing for the 12-hour stations. Crews work a 24-hour on, 48-hour off, rotation. The 24/48 schedule, and its multiple variations including the 48/96 and "Kelly" schedules are very popular across the first response professions, but specifically for fire departments. The reason for this is that organizations are allowed to work up to 212 hours across a 28-day period before requiring overtime payment. This partial overtime exemption is detailed in the Fair Labor Standards Act (FLSA), specifically Section 7(k), and is frequently cited when discussing the staffing of first responders and overtime rules. Due to their status as EMT/Paramedics, MEDIC EMS employees do not meet the requirements of Section 7(k) and would not qualify for the overtime exemption.

Currently, the ADM and MercyOne staff are working an average of 56 hours per week on a 3-week rotation, shown in **Table 5.2**.

| | Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|---|---|---|---|---|---|---|---|
| Week 1 | 1 | 2 | 3 | 1 | 2 | 3 | 1 |
| Week 2 | 2 | 3 | 1 | 2 | 3 | 1 | 2 |
| Week 3 | 3 | 1 | 2 | 3 | 1 | 2 | 3 |

**Table 5.2: 24-Hour Shift Rotation**

The ADM model was initially implemented in 1999 with the belief that "volunteer" staffing could supplement a full-time Paramedic at each station. The term "volunteer" is listed in quotations because the personnel are actually paid on-call personnel. There are specific operational policies in place that dictate how far away the on-call personnel are allowed to be from their respective ADM station. Volunteer ADM staff sign up for shifts that are six hours in length. Some volunteers will sign up for multiple shifts in a row. Unfortunately, it has been reported that the volunteer staffing has not been very reliable for the past 10 years, and full-time personnel end up working overtime shifts for coverage instead.

Issues associated with volunteer staffing are not new. The "*Evaluation of Emergency Medical Services*" completed for Scott County by Fitch & Associates, Inc. in 1989 stated that a model relying on volunteer staffing would not be sufficient to meet the growing needs of the County. They pointed out multiple concerns, including a national shortage of volunteers and increasing demands from the public for a rapid, professional response. None of these issues have improved, from a national view, since that time. Conversely, volunteerism across the nation appears to be in a continual state of decline. While MEDIC EMS provides stipends that may encourage "volunteering" more than an agency that does not provide any form of payment, this staffing strategy does not appear sustainable.

A significant concern for agencies that are working multiple shift variations is how to ensure the compensation and workload structures are equitable. It is not healthy or safe to expect providers to regularly work an entire 24 hours without some form of sleep, where that expectation is reasonable for 12-hour staff. Likewise, the 24-hour staff are generally compensated less per hour because of their longer work week and significant amount of built-in overtime. There are multiple ways to approach this compensation issue, including using the fluctuating workweek method, which is allowed by FLSA, but there will still be challenges when employees typically tasked to one division attempt to work for the other division, etc.

## Station Assignments

Staff are currently assigned to the Metro or the ADM operations. Though personnel are assigned to one station or area, ambulances are sent to the calls that they are closest to, in accordance with common EMS dispatch processes. This means that even though an employee may be assigned to a Metro truck, they may respond to a call in LeClaire or another ADM area, or an ADM truck may respond into the center of Davenport, if the call volume justifies it.

Each ADM has a "core" trio of paramedics who must interview to be selected for an ADM spot. Generally, when a paramedic is hired into the system, they gain experience and competence in the higher call volume area covered by the Metro, while the ADM stations are normally covered by "more experienced" paramedics. This style of operation makes sense, given the rural nature of the ADM operations and the lack of ALS trained, or in some areas any, first response. While the ADM stations tend to see a lower call volume, and thus may be seen as an easier workload, it is imperative to remember that the ADM employees are currently on a 24-hour shift. Increasing the daytime workload for a 24-hour ADM employee could result in dangerous working conditions if they fail to have any downtime throughout the night. This topic is discussed more below.

Primary station assignment dictates the pay rates for employees, i.e., whether an employee is assigned to an ADM station, the Clinton station, or a Metro station. While Scott County currently does not have a compensation system based off location, the employees of each operation (ADM, Clinton, and Metro) have slightly differing duties, so it would be a matter of creating separate pay classifications for each, if continuing this model is desired. ADM personnel have a lower hourly pay rate due to the extended workweek and built in overtime. This is similar for the MercyOne operation, though personnel residing outside of the Clinton locale are paid an extra travel stipend.

While they are allowed to cover shifts on the other operations (i.e., an ADM paramedic can work on a Metro ambulance) pay rates can differ based on where they are working. An ADM paramedic working on a Metro truck, or at the MercyOne operation, will be bumped up to an hourly rate commensurate with Metro employees. All employees are paid at an overtime rate of time and a half for any hours exceeding 40 hours in a week. A consideration for MEDIC would be to evaluate a switch to a 24/72 rotation if the 24-hour shifts are continued. This change would result in a decrease in the hours compensated across the shifts of roughly 30% when comparing the built-in overtime of a 56-hour workweek versus the time associated with an average 42-hour work week.

**Table 5.3** shows an example of the 24/72 rotation.

| | Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|---|---|---|---|---|---|---|---|
| Week 1 | 1 | 2 | 3 | 4 | 1 | 2 | 3 |
| Week 2 | 4 | 1 | 2 | 3 | 4 | 1 | 2 |
| Week 3 | 3 | 4 | 1 | 2 | 3 | 4 | 1 |
| Week 4 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |

**Table 5.3: 24-Hour Shift Rotation**

In contrast to the 24/48 rotation, a 24/72 rotation is a 4-week rotation that will average a 42-hour work week. If the 24-hour shifts are still desired, this would allow for personnel to have hourly rates that are more comparable to the Metro operation. This shift rotation would also give the personnel longer breaks prior to returning for a shift. While the ADM units are not traditionally seen as being particularly “busy” stations (more in **Section 5.1.2**), the impact of a busy 24-hour shift can be significant.

### Staffing Rotations

The concept of station rotations and shift bidding was presented to the employees during an engagement survey. The results can be found in **Section 5.4**. Rotating personnel between stations can help crews learn their response district while preparing them to respond to all types of calls that an agency handles. While ADM units are traditionally lower call volume units, they experience calls that are longer in duration and frequently respond to areas where there is less help available to the paramedic. Other considerations include the public education efforts that the ADM paramedics lead. If personnel were to rotate amongst the stations, the current format of the public education efforts would likely need to be changed or updated.

These “extra” duties could be delegated to supervisors, if they are able to roam the district, or to other officers within MEDIC EMS as a way to increase responsibilities those employees have.

## 5.1.2: Unit Hour Utilization

One of the most standardized ways to review the workload on various ambulances in a system is to review their unit hour utilization (UHU). UHU can be a useful metric when reviewing how much call volume one ambulance, or area, is responsible for versus another. An agency can also use UHU values to estimate the required staffing for a given call volume. **Figure 5.1** explains UHU, as well as modified UHU (mUHU), which is simply a more precise variant of the measure.

***Unit Hour Utilization (UHU)***

Unit Hour Utilization (UHU) is a basic metric designed as an internal-agency quantifying tool to measure unit workload based on call volumes and on-duty hours. The standard formula presumes that 1 call takes 1 hour to complete and divides the number of calls by the total on-duty hours of the unit. The resulting value is then correlated to a range highlighting unit workload.

$$\frac{\text{\# Calls}}{\text{\# Hours On-Duty}} = \text{UHU (Standard)}$$

As an example, an ambulance responding to 6 calls during a 24-hour period would have a UHU of 0.25 [6 ÷ 24 = 0.25]. This value is often determined as an "Average" UHU (Note: this value is not commonly represented as a percentage, as it does not reflect productivity – which would be appropriately represented by a percentage).

| < 0.15<br>Low | 0.15-0.25<br>Below Average | 0.25-0.35<br>Average | 0.35-0.45<br>Above Average | > 0.45<br>High |
|---|---|---|---|---|

This value and rating are not differentiated between 24-hour and 12-hour (or 8-10-hour) staffed units, but it could be fair to expect higher workload values from units that have on-duty crews working less than a 24-hour shift.

When units often have total call times (dispatch through clear times) of greater than 1 hour, a Modified UHU formula may be utilized, which multiples the quantity of the number of calls by the total number of hours to complete each call, then by the total on-duty hours.

$$\frac{\text{\# Calls x \# Hours per Call}}{\text{\# Hours On-Duty}} = \text{mUHU (Modified)}$$

With this example, an EMS agency covering a rural geographical area and having a total (average) call duration time of 1.5 hours and 3 calls per day would have a UHU of 0.19 [(3 x 1.5) ÷ 24 = 0.19].

With any of these metrics, they remain designed to measure workload – not necessarily productivity – between units within the same agency/system.

**Figure 5.1: Unit Hour Utilization Abstract**

The administrators of MEDIC EMS are very familiar with UHU measurements and have been tracking this data for several years. It is important to note that these values are specifically meant to measure the time tracked by CAD data. The UHU values do a poor job accounting for the additional responsibilities that a crew might have, or the time associated with their ability to eat, use the restroom, decompress, etc.

MEDIC EMS has been calculating both the dispatch UHU, where total number of dispatched responses is used as the "# Calls" in the formula above, as well as a transport UHU, where the number of transports is utilized in the formula instead.

**Table 5.4** shows the transport UHU calculated by MEDIC EMS administrators for the past few fiscal years.

| Area | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|
| **Metro** | 0.38 | 0.37 | 0.39 | 0.42 | 0.50 | 0.51 |
| **Eldridge ADM** | 0.07 | 0.07 | 0.07 | 0.08 | 0.10 | 0.09 |
| **LeClaire ADM** | 0.05 | 0.05 | 0.05 | 0.05 | 0.07 | 0.05 |
| **Blue Grass ADM** | 0.06 | 0.06 | 0.07 | 0.07 | 0.08 | 0.07 |
| **MercyOne** | 0.08 | 0.08 | 0.07 | 0.09 | 0.08 | 0.09 |
| **Operational UHU** | 0.29 | 0.25 | 0.26 | 0.27 | 0.32 | 0.33 |

**Table 5.4: MEDIC EMS Transport UHU by Fiscal Year**

The transport UHU is representative of approximately 70% of the calls responded to by MEDIC EMS. Given the amount of time it takes to transport and transfer a patient to the appropriate care, one can anecdotally assume that transport calls would take longer than non-transport calls. The UHU utilized by MEDIC EMS assumes that the average call time is approximately 1 hour, as their values can be replicated by dividing the number of transports for each operation by the total hours of work documented by each of the operations. **Table 5.5** shows the calculated average and 90$^{th}$ percentile values for the total response time across the entire set of CAD data.

| Disposition | Average | 90th Percentile |
|---|---|---|
| **Transport** | 62.55 | 93.7 |
| **Non-Transport** | 40.23 | 46.5 |
| **Average of All Call Dispositions** | **55.97** | **85.97** |

**Table 5.5: Total Call Time Values (Minutes)**

The primary focus of an EMS agency should be being able to respond to the community during their time of need. With that in mind, it makes sense to rely on the 90$^{th}$ percentile total call times listed in the table above when calculating UHUs. This will help ensure that the agency has the capacity to respond to the 9-1-1 needs and may provide extra availability to handle more revenue-generating transfers.

Using these total call time values, a modified UHU (mUHU) can be created, and even a weighted mUHU where the transported and non-transported UHU values are weighted based on their respective response volumes, which may be more representative of the workload on the agency units.

When the average of all call dispositions 90$^{th}$ percentile is utilized, **Table 5.6** shows the new mUHU values.

| Operation | 2023 Dispatched UHU | 2023 90th mUHU | 2023 Weighted mUHU |
|---|---|---|---|
| Metro | 0.71 | 1.01 | 0.95 |
| Eldridge ADM | 0.14 | 0.20 | 0.18 |
| LeClaire ADM | 0.09 | 0.12 | 0.11 |
| Blue Grass ADM | 0.11 | 0.15 | 0.14 |
| MercyOne | 0.10 | 0.15 | 0.15 |
| **Operational** | **0.46** | **0.66** | **0.62** |

**Table 5.6: 2023 Dispatch UHU versus 2023 mUHU**

When the mUHU and weighted mUHU values were calculated and reviewed, it helped give credence to the concern voiced by many of the MEDIC employees that the current workload is substantial. Generally, UHU

values >0.45 are considered to be high. In layman's terms, a UHU of 0.5 would suggest that a 12-hour ambulance ran six 1-hour in duration calls. If you estimate that a crew will take 30 minutes to eat and 30 minutes' worth of restroom breaks throughout the day (both values are less than ideal for many personnel working for 12 hours), that only leaves the crew five hours to complete the following:

- Complete shift turnover with previous and oncoming crews: 30 minutes per shift
- Check the equipment in their apparatus to ensure readiness and restock/clean as needed: 1 hour+
- Refueling their ambulance: 20 minutes
- Assorted drive time between calls/standbys not accounted for during a call.

Another consideration briefly mentioned above is that the UHU values do not take documentation time into consideration. Generally, there are more stringent documentation requirements associated with transport charts versus non-transport charts as the crews need to justify treatment and billing. Based on the assumption that a normal transport chart takes personnel at least 20-30 minutes to complete (which is likely a significant underestimation), a crew that runs six calls and completes the tasks listed above has effectively been actively working the entirety of their 12-hour shift. When shifting around the County to ensure dynamic deployment, handling more than six calls, if any of the calls last longer than an hour, etc., some of the first tasks to be neglected will be food/restroom breaks, and training.

## Staffing Allocation

When using UHU as a primary metric to determine workloads, an agency can help estimate the number of ambulances that should be staffed across the County. Established in the section above, the average amount of time MEDIC EMS spends per call is approximately an hour, which makes the standard UHU formula appropriate for these calculations. These calculations do not account for required operations, or time-consuming tasks such as travel and documentation, that each ambulance crew may be delegated throughout the course of their shift. The formula also assumes 24-hour coverage for all units. That coverage can consist of a single 24-hour unit, or multiple units whose in-service time amounts to 24 hours. **Table 5.7** shows an example of how that estimate would work, based on the 2023 response volume for MEDIC.

| Call Volume | Calls/Day | UHU | Calls/Full-Time Unit | Full-Time Units Needed |
|---|---|---|---|---|
| **35,367** | **97** | 0.25 (Average) | 6/Day, 2,190/Year | 16.1 |
| **35,367** | **97** | 0.30 (Average) | 7.2/Day, 2,628/Year | 13.5 |
| **35,367** | **97** | 0.35 (Average) | 8.4/Day, 3,066/Year | 11.5 |
| **35,367** | **97** | 0.40 (Above Average) | 9.6/Day, 3,504/Year | 10.1 |
| **35,367** | **97** | 0.45 (Above Average) | 10.8/Day, 3,942/Year | 9.0 |

**Table 5.7: Staffing Calculation**

While **Table 5.7** would appear to show MEDIC EMS' staffing UHU as "above average" (given the staffing of an average of 11 units per day) the UHU does not take into consideration the poor proximity of the MercyOne ambulance. There is also a consideration that call volume, and more specifically the dispersion of that call volume across an entire year, is not going to be a steady or an easily predictable value.

Noted earlier, the most important responsibility for an EMS department is to be ready to respond when needed by the community. To account for the extraneous time-consuming tasks that each ambulance may have and the size of the response area, it would be reasonable to maintain staffing levels anywhere from 33-50% greater than the initial calculated values.

**Table 5.8** shows these increased staffing levels.

| Call Volume | UHU | Baseline Units | Increased 33% | Increased 50% |
|---|---|---|---|---|
| **35,367** | 0.25 (Average) | 16.1 | 21.4 | 24.2 |
| **35,367** | 0.30 (Average) | 13.5 | 18.0 | 20.3 |
| **35,367** | 0.35 (Average) | 11.5 | 15.3 | 17.3 |
| **35,367** | 0.40 (Above Average) | 10.1 | 13.4 | 15.2 |
| **35,367** | 0.45 (Above Average) | 9.0 | 12.0 | 13.5 |

**Table 5.8: Staffing Calculation Adjusted For Relief Coverage**

Adjusting the staffing model and providing extra coverage can have multiple impacts on an agency. Not only does the increased staffing allow for a more resilient workforce, but as the impacts of burnout are decreased, unscheduled overtime would theoretically decrease as a "minimum staffing level" could be implemented to avoid immediately resorting to overtime or administrative on-call. With the significant need for transfers in the area, the costs related to the additional staff may be partially offset by the increased transfer revenues.

To limit the financial impact of additional staffing, it would be recommended that any additional units are slowly phased in. Current workloads, and calculated UHU values, suggest that an increase in staffing, of as much as 50%, would provide workload values that are more appropriate for employees, while creating the capacity to respond to additional calls as needed. If the County desires an increase in staffing, it is important to note that the workforce to fill newly created positions may not be readily available. Regardless of the preferred method of increasing available staffing, a staggered approach would be the best approach to prevent undue stress on the department or County.

There are ways to make a transition like that easier, such as staffing basic life support (BLS) units (discussed later) or increasing in-house training opportunities but increasing staffing by 50% overnight would likely not be realistic. Staffing 13.5 daily ambulances, assuming all units were working 12-hour shifts, may provide relief to some of the overworked ambulances while increasing capacity for the County to respond to the needs of the community. Staffing models, apparatus type, and the services provided would all impact the final cost of such a transition. Furthermore, it is important to note that call volumes fluctuate with the time of the day.

## Hourly Call Volume

Presented in an earlier section, MEDIC EMS has multiple start and stop times for their shifts. The idea is that staggering these times allows for ambulances to report to a central area in order to trade off with an oncoming crew, while ensuring that there are still ambulances available to respond to pending calls in the area. Ideally, staggered starts also help to prevent unnecessary overtime, as a crew that is about to go home can be "covered" by crews that still have an hour or two left in their shift. When the yearly response per hour was calculated across the CAD data available, the result was a very predictable call volume pattern that has not shifted meaningfully across those years. **Figure 5.2** shows those results.

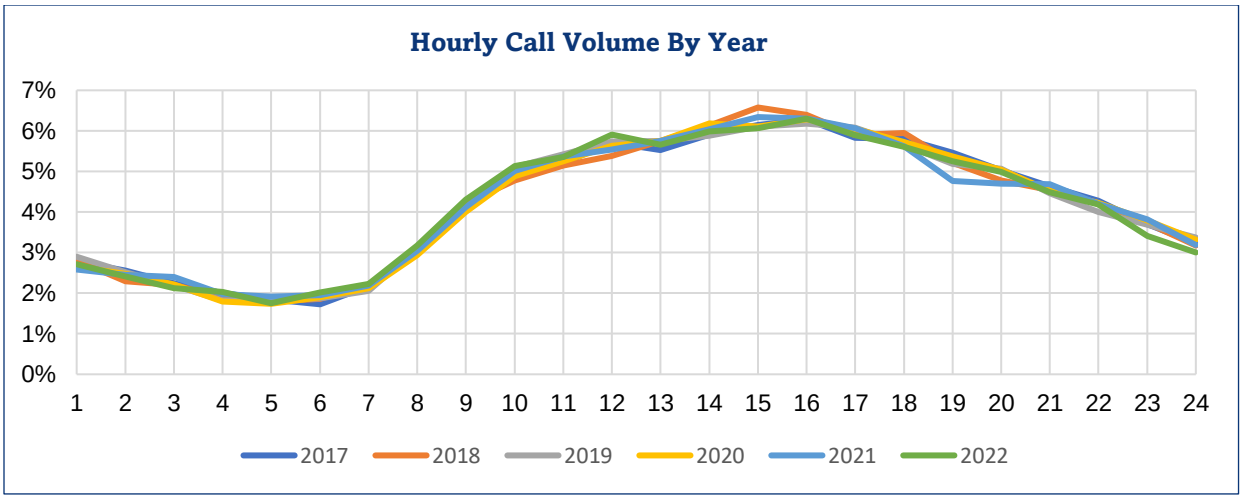


**Figure 5.2: Hourly Call Volume By Year**

The percentage of call volume by hour is important for MEDIC EMS to understand as it helps show the agency when to have the most ambulances in service. Understanding these call volume patterns can also help the future department of the County understand the best times to schedule non-emergent transfers. Inevitably, there are transfers that are more time sensitive than others which will be unable to wait, but for routine transfers, MEDIC EMS could work to schedule them outside of their "peak" response times. **Figure 5.3** highlights the peak call volume across the entire set of CAD data and the average volume of calls per hour. The peak 8-hour period, from 1100-1900, is represented in gold with light blue and gold representing peak 12-hour period.

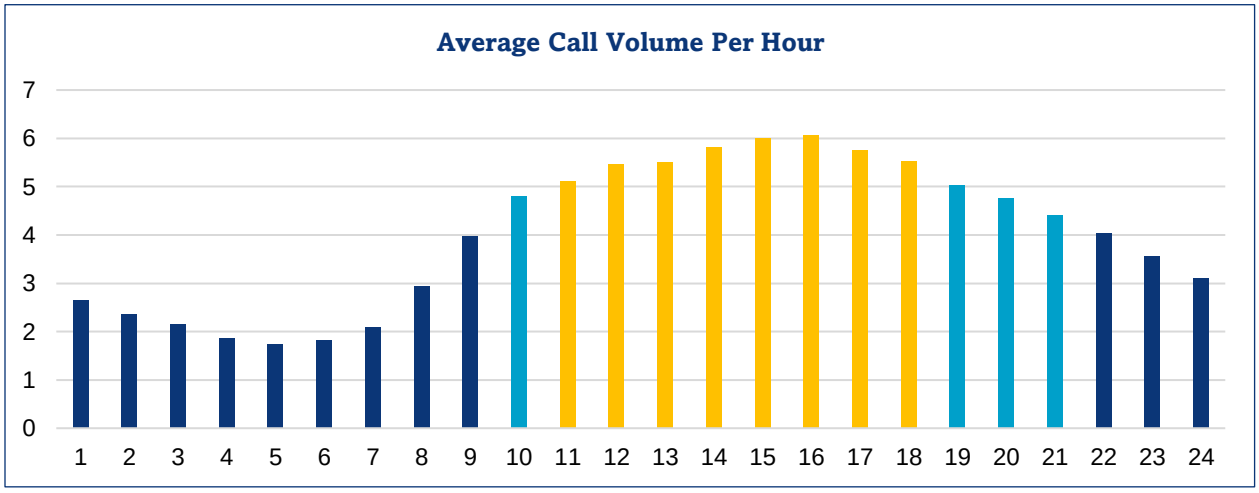


**Figure 5.3: Average Call Volume Per Hour**

The average call volume per hour further substantiates concerns of inadequate unit availability previously suggested by the UHU calculations. During the peak hours, if every call lasts an average of 55 minutes as noted during earlier calculations, MEDIC EMS is at risk of regularly running out of ambulances available for additional responses. If these calls last longer than an hour, as many out-of-town transfers can, the situation could be even more significant.

## Shift Staggering

Of note, MEDIC EMS currently utilizes start times that stagger considerably more than other agencies reviewed by the consulting team. As discussed above, there are multiple reasons to stagger the start of shift times, but the most common reason is related to ensuring the most efficient utilization of staff. Based on the average call volume per hour noted from the CAD data, these staggered starts may be able to be consolidated to far fewer start times, resulting in easier scheduling and more simplified operations. It is important to note that the average call volume per hour is based on the time that the calls were dispatched.

After speaking with MEDIC administration, it was found that one of the primary reasons for initiating the significant staggering of shift start times was to prevent staff from being held over due to transfer calls. Transfers to University of Iowa Hospitals and Clinics, which typically take 3-4 hours, could stack up quickly if MEDIC EMS reduced the ability to send the transfers based on when crews end their shifts. MEDIC EMS tries not to hold crews over for transfers unless they are agreeable to it. A crew that is finishing a 12-hour shift but is held over for a 3–4-hour transfer may end up being at work for 15 or 16 hours. That does not give them enough time to go home and have a reasonable 8-hour down time prior to the start of their next shift if they work the following day.

Scott County administration, and the new EMS Director, will want to review the current transfer policy to determine if simplifying shift start times would be viable. Based on the call volumes in **Figure 5.3**, shift scheduling could be reasonably simplified to the schedule noted in **Table 5.9**.

| Current | | Recommended | |
|---|---|---|---|
| Start Time | Ambulance FTEs | Start Times | Ambulance FTEs |
| 0500 | 0.5 | 0600 | 4 (2.5) |
| 0600 | 3.5 | 0800 | 2.5* (2.5) |
| 0700 | 1.0 | 1000 | 1 |
| 0800 | 1.5* | 1300 | 1 |
| 0900 | 0.5 | 1900 | 1 (2) |
| 1100 | 0.5 | 2000 | 1 (1.5) |
| 1300 | 0.5 | | |
| 1700 | 0.5 | | |
| 1800 | 0.5 | | |
| 1900 | 0.5 | | |
| 2000 | 0.5 | | |
| 2100 | 0.5 | | |

*Includes MercyOne Clinton unit which is generally not available for Scott County Response

**Table 5.9: Current Shift Staggering Versus Recommended Shift Staggering**

**Table 5.9** provides the current and recommended shift staggering schedule based on the continuation of 24-hour shifts for the ADM operations. The recommended staggering for a system that does not have any 24-hour operation (except for the MercyOne Clinton operation) can be found in parenthesis. The “current” ambulance staffing is only available when the department is fully staffed. Current operations typically allow for one unit at 0700, and the 1300 unit is generally not staffed.

It is important to consider that converting ADM operations to 12-hour shifts would require hiring up to 13 FTE, as the rotation would shift to an average 42-hour work week, following the Metro schedule. The recommended shift staggering allows for the potential of crews being in contact with each other and their supervisors on a more fixed schedule. This may result in simpler communication of changes and enhanced leadership. Another concern is how the ADM areas may feel about such a change. The personnel currently operating at the ADM stations have been specifically chosen for their positions based on multiple factors.

Specific factors relating to ADM personnel, and the concerns voiced regarding possible station rotations, are discussed more in depth in **Section 5.4**.

Consolidating shift start times can present a risk of units being out of proximity to calls in the area that each unit should be covering, so there will be an added responsibility for supervisors to monitor unit locations. Given MEDIC EMS' propensity for dynamic deployment, it should not be operationally challenging to rotate ambulances through the chosen location. Continuing to focus on the shifting needs of the County would be encouraged, which could result in additional day-shift ambulances, peak time ambulances, night-shift ambulances, or a combination of the three. It is recommended that the greatest levels of staffing overlap the periods when call volumes are generally the highest.

## BLS Unit Deployment

The transition to a department of the County may provide MEDIC EMS of Scott County with an opportunity to explore additional delivery models, such as tiered response models, within their jurisdiction. EMS agencies across the nation, and some in Iowa, currently operate, or are looking at, models that allow for ambulances to be operated with two EMTs. These transport units generally respond with an ALS unit to all calls, and if the patient care needs fall within the scope of the EMTs, they are allowed to transport the patient, keeping the ALS provider free to respond to additional calls.

This model is not completely unlike the response protocols already utilized in the Northwestern quarter of Scott County. The key difference is that an ALS unit is dispatched to every appropriate call, and response time goals are the same, regardless of the level of care provider dispatched to the response. While transitioning to different models of service may reside outside of the scope of this transitional study, the cost savings of implementing multiple BLS transport units versus additional ALS transport units would potentially be significant.

## Future Considerations and Commentary

MEDIC EMS currently functions at a weighted UHU of 0.62, suggesting that many of the crews are already pushing the limit of what is reasonable. These concerns were separately voiced by many employees in the anonymous survey (see **Section 5.4** for a detailed review of the employee survey). When one considers that some of the apparatus across the system are 24-hour shifts, these values represent a possible safety issue. The costs associated with additional staff, and the likely tax implications, need to be weighed heavily against the benefits. Attempting to staff an EMS service the size of MEDIC EMS at a UHU of 0.25 is not realistic or financially responsible but operating at a UHU of 0.62 is stressful to the crews, especially when 40% of the staffed hours worked are by 24-hour personnel that should be functioning closer to a 0.30-0.35 for safety and employee health.

One of the first comments received from internal and external stakeholders alike was the concern that MEDIC EMS is understaffed for the call volume that they currently handle. That concern has two primary facets: the ability to recruit and retain staff available to work on the in-service ambulances, and a staffing policy that places enough ambulances in service to be able to handle the call volume responded to by MEDIC EMS. Noted earlier, MEDIC EMS has historically had good staffing levels, with a recent downtrend, that should only be made stronger by their presence as a public entity with employees that will have access to state benefits.

Increased apparatus availability is a much more challenging issue to address. Repurposing an apparatus, such as the unit currently located in Clinton County as a part of the MercyOne operation, can help in the short term. If the MercyOne unit were relocated back into the County, placing it near the NW corner of Scott County may help provide coverage to that area. Previous station location studies completed by MEDIC EMS have suggested a station be located in that area, though call volume might dictate a location closer to the Walcott truck stop.

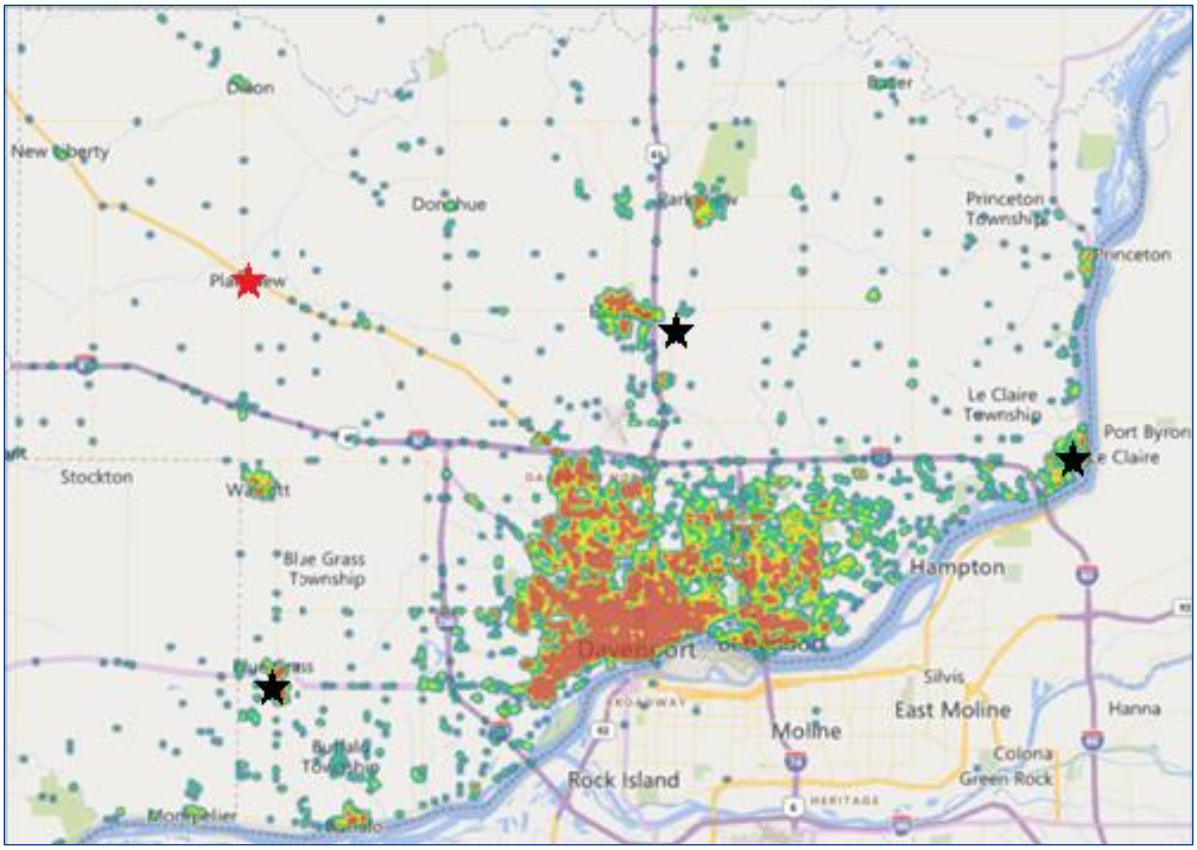


**Figure 5.4: ADM Locations With Shifted Clinton County Ambulance**

A location in/near Maysville or the unincorporated area of Plainview would help to provide equitable response times for the call responses out of New Liberty and Dixon but would likely make the LeClaire ADM primarily responsible for Clinton County transfer calls. Another option would be to shift the LeClaire unit to somewhere near the intersection of 240th St and 240th Ave. This would provide that unit with a more expansive first response area, versus their "backs" being on the river. Any efforts to shift one or more of the ADM units should also result in the evaluation of the current ADM locations to ensure equitable response coverage.

Furthermore, there would need to be intensive communication efforts so that the communities were made aware of how and why changes were occurring. If an EMS station is "pulled" from a community, there could be a significant amount of concern generated by community members and elected officials alike. Especially as MEDIC transitions to the County, any changes of service should be completed in an overly transparent manner to avoid any undue stress or complications.

MEDIC EMS has extra units that are in a reserve status; these units are traditionally rotated in as needed when the in-service units need maintenance. An important consideration is that each unit placed into daily operation would need additional personnel for staffing. Whether or not different service delivery models are feasible in the future for MEDIC EMS of Scott County will need to be evaluated.

# 5.2: Financial Analysis and GEMT Projections

An important part of a future transition of MEDIC EMS into a department of Scott County is to understand the financial impacts of such a transition. If the transition were to result in significant costs, the community would be forced to fund those changes. The County has access to general fund tax support with every $0.01 increase in the urban levy, expected to yield $98,368 in fiscal year 2024 taxes. Scott County administration has allocated a reasonable budget to cover any potential shortfalls until additional funding mechanisms are initiated. The most impactful issues are the financial analysis of MEDIC EMS's previous performance, estimates associated with Iowa's Ground Emergency Medical Transportation (GEMT) program, and lastly, additional revenue potentially recovered from the Iowa Offset program.

## 5.2.1: Financial Analysis

A brief financial analysis of MEDIC EMS was completed during this study. A transition of MEDIC EMS to the County could result in some significant financial implications for the County and the taxpayers in the community.

### Net Operating Expenses

**Figure 5.5** shows the net operating expenses for MEDIC EMS since 2017, before any County subsidy. The asterisk noted on FY20 is meant to denote the year Paycheck Protection Program (PPP) loan funds were received. Without those funds, MEDIC EMS risked running a deficit. The operating expenses are presented without subsidy because it is more representative of the potential financial burden to the County.

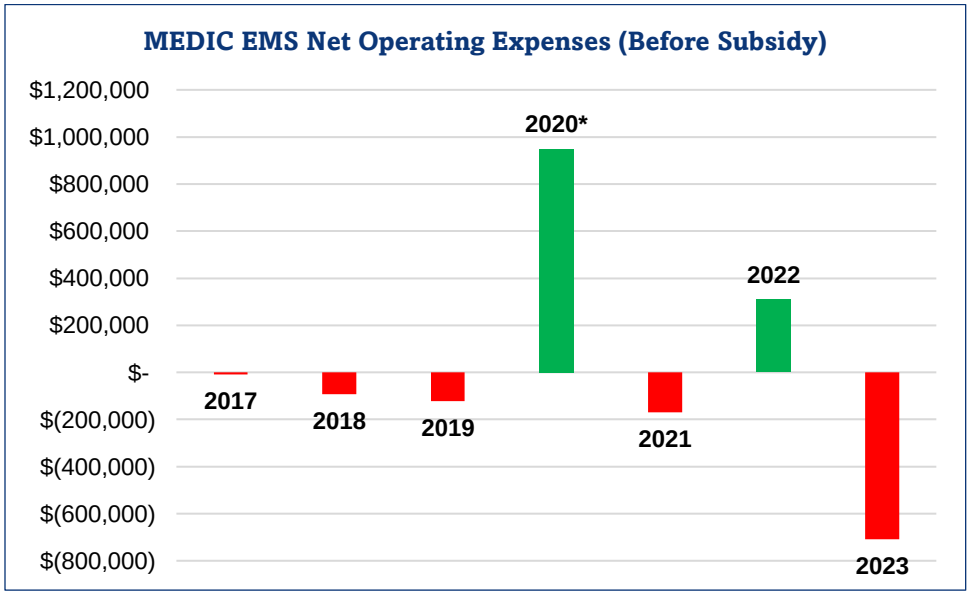


**Figure 5.5: MEDIC EMS Net Operating Expenses**

Consistent with previous statements from MEDIC administration, the subsidy provided by the County did not meet or exceed the maximum contracted amount of $200,000 per year in previous years. FY23 appears to be the first year that a much larger subsidy would potentially be required. As of May 31, 2023, MEDIC EMS sits at a YTD deficit of $708,039.83, with June 2023 expected to provide an additional $80,000, or more, of expenses over revenue. This value may change as funds are reconciled and billings collected, but should be fairly accurate, per the accountant utilized by MEDIC EMS. Of note, FY20 appears to be significantly positive due to MEDIC EMS receiving roughly $1.3 million in PPP loan funds. PPP loans were part of a program established by the Federal Government to assist various entities with paying their staff.

It is not reasonable to estimate the net operating expenses without the PPP funds, as operations were completed with the knowledge of the funding. Without the PPP funds, MEDIC stood to lose more than $350,000, but again, operations likely would have been adjusted to meet their financial needs where available. For example, there was a 10% increase in salary expenses, which was easily covered by the PPP funds, across the company from FY19-FY20, when the two previous years averaged less than 0.00% of a difference, year to year. FY22 appeared to be another revenue-generating year for MEDIC EMS; the excess revenue appears to have been generated from the month ending June 30, 2022, where MEDIC had doubled the net operating revenue traditionally received due to a greater than expected collection percent. Another reason for the excess revenue over expense in FY22 was delayed capital purchases related to covid related supply chain issues, which resulted in a decrease in budgeted line-item depreciation expenses. Those expenses were simply moved to the next fiscal year when the equipment became available. The increased revenue for the Scott County operation was without a proportionate increase in call volume.

## MercyOne Operation

During the transitional study, the MercyOne operation in Clinton has been of particular interest. To ensure that taxpayers in Scott County are not subsidizing the care of another County, or a business in that county, it was important to review the net operating revenue generated by the MercyOne operation. From a high-level view, the MercyOne operation typically brings a small amount of revenue into MEDIC EMS, while occasionally resulting in a loss. **Figure 5.6** shows the net amounts represented in MEDIC EMS' financial statements.

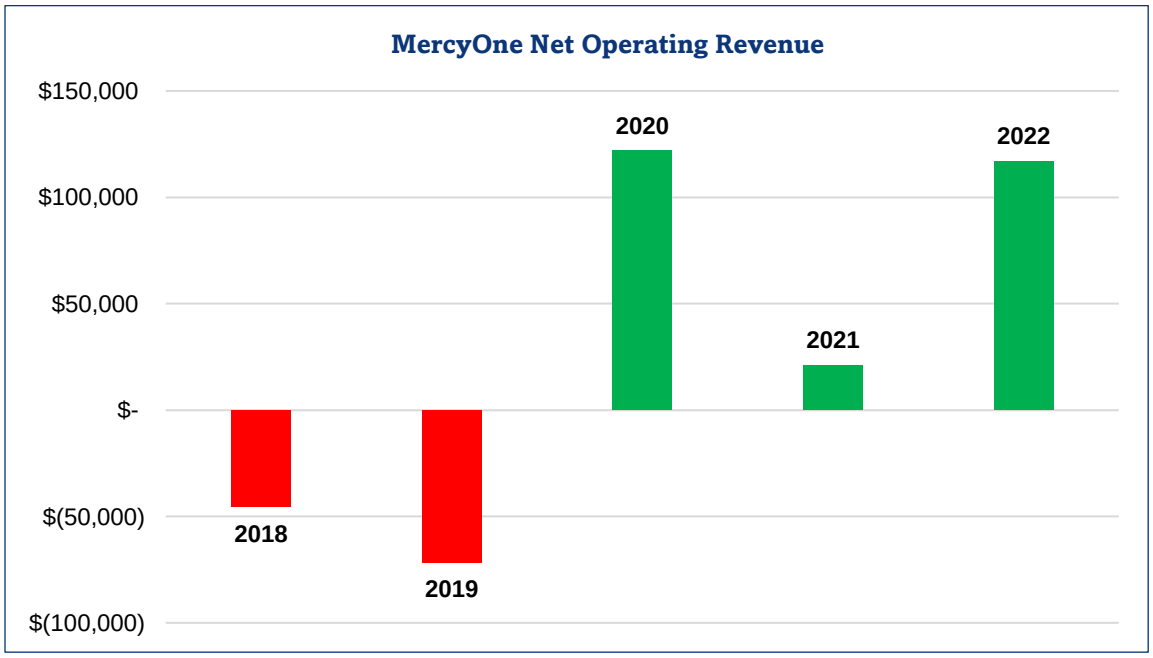


**Figure 5.6: MercyOne Net Operating Revenue**

It is important to understand that the financial policies of MEDIC EMS allow for a significant allocation of the expenses related to MED-COM and "Administration" to the MercyOne operation. Regardless of the allocation method, it is not realistic to think that suspending operations would result in a direct decrease in the expenses that were allocated to the MercyOne operation. As such, the loss of revenue related to the MercyOne operations is more impactful than the possibility of eliminating any of the net operating expenses associated with the operation. **Figure 5.7** shows the net revenue generated by the MercyOne operation without the additional allocations.

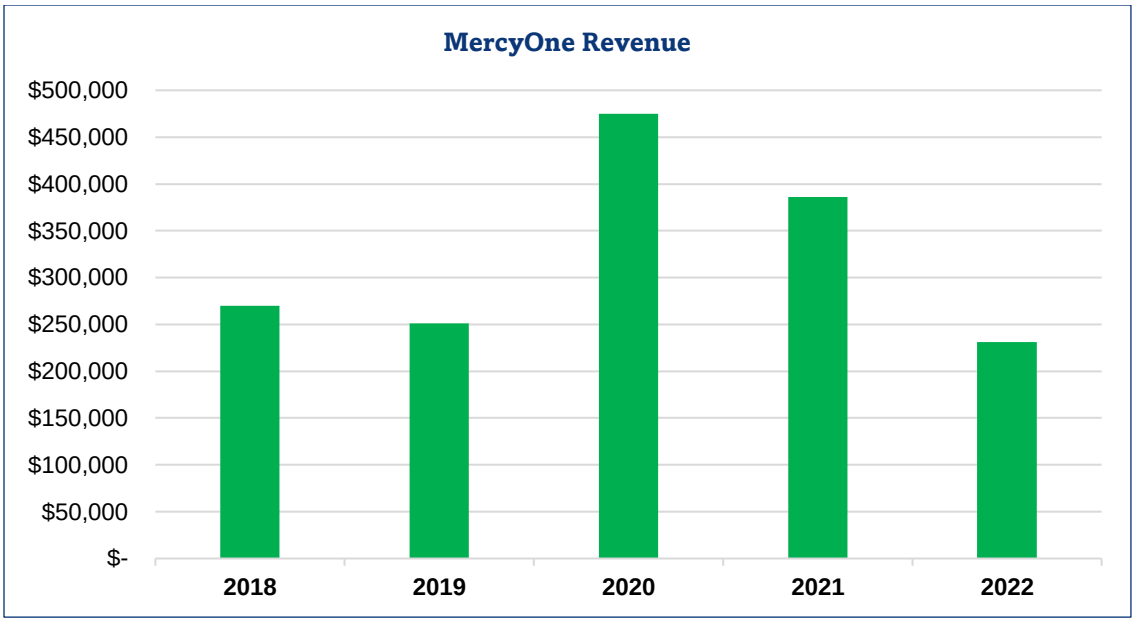


**Figure 5.7: MercyOne Revenue**

A final determination of how to proceed with the contract currently held with MercyOne Clinton will need to be made. There is a possibility that units from Scott County could be dispatched to the MercyOne facility on a PRN basis, but without a contract, those transports will not be guaranteed. As noted earlier, if the revenue from the MercyOne operation were to be removed, the expenses currently allocated to that operation would likely remain. **Figure 5.8** shows the modified expected net revenue if the MercyOne revenue were no longer present.

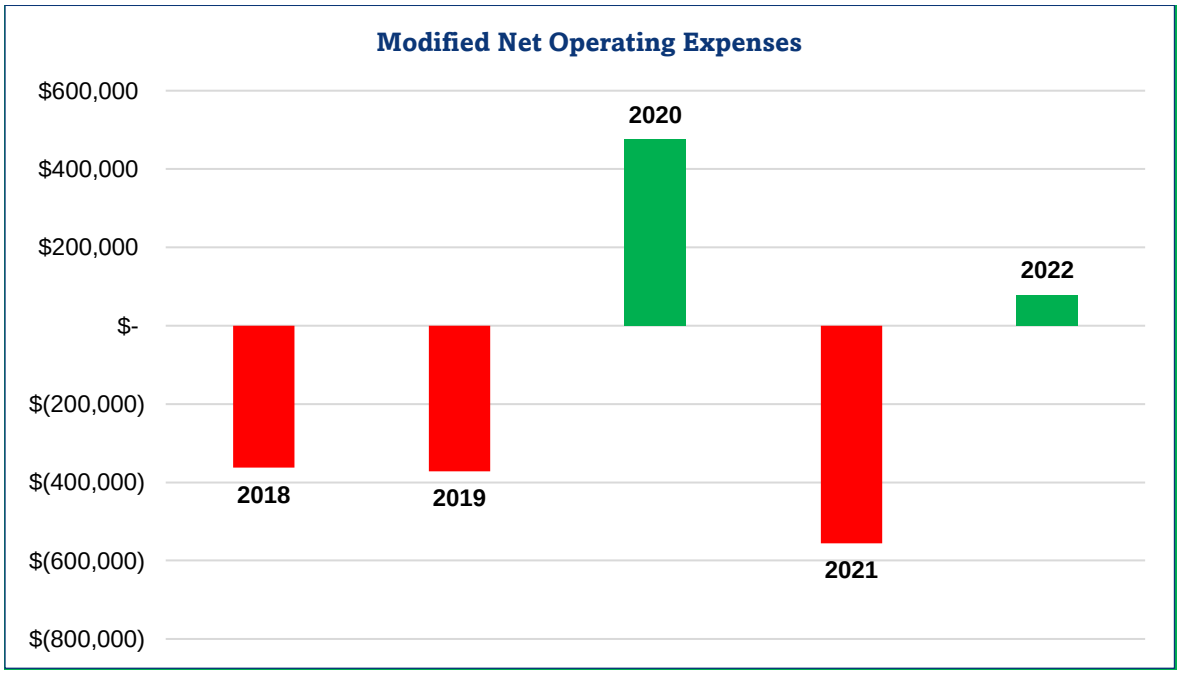


**Figure 5.8: Modified Net Operating Expenses**

**Figure 5.8** offers a "worst case" scenario. This could occur either through Scott County choosing to sever the contract in place with MercyOne (preferably in favor of moving the apparatus stationed there back into the County), or through MercyOne severing the contract in favor of utilizing the EMS service that the hospital system recently acquired. Choosing to move the ambulance into Scott County and offer PRN response will allow operational supervisors to send the "most appropriate" ambulance to provide transport while maintaining the ability to deny the request if the needs of the community deem that a unit is not available.

## Select Specialty Hospital

A potential financial concern for MEDIC EMS was the loss of revenue generated from the Select Specialty Hospital operation. It was estimated by MEDIC administration that these transports represented roughly $200,000 of yearly revenue but were also responsible for significant unit utilization, or decrease in overall available capacity, while units were waiting with critical patients. The estimates appear to be conservative as the revenue from this operation has averaged less than $200,000 year-to-year (shown in **Table 5.10**), and as established earlier, there will still be a need for occasional transfers. The recent MEDIC EMS financial projections for the next fiscal year place the projected revenue from these transfers at $36,000.

| FY17 | FY18 | FY19 | FY20 | FY21 | FY22 |
|---|---|---|---|---|---|
| $ 157,027.01 | $ 160,287.31 | $ 224,998.42 | $ 175,265.54 | $ 215,262.89 | $ 227,672.01 |

**Table 5.10: Historical Select Specialty Revenue**

The official move for Select Specialty's operation to the Genesis campus has not been in place long enough to reasonably estimate the new response volumes. Ideally, the revenue associated with Select Specialty's operation will have less of an operational impact on MEDIC than their previous operations, but that will be at the expense of decreased revenue.

## Financial Analysis Summary

MEDIC EMS has historically functioned using the 501(c)(3) model requiring efficiency and a willingness to adopt their business model to generate revenue where possible. An agency that was initially created out of the need for emergency transportation has adapted to provide interfacility transfers, community education, and other assorted services. Some of these services take MEDIC EMS outside of Scott County. The Clinton operation, for example, stands to potentially be lost regardless of the desires of MEDIC EMS of Scott County, should MercyOne decide to utilize the ambulance service available to their hospital system (Genesis Ambulance).

While these additional services have not historically caused any concern among the local community, that community was not responsible for the financial welfare of the 501(c)(3) (at least to their knowledge). A transition to a department of the County may open several of these business lines up for external criticism.

It will be critical to communicate to the community and any other external stakeholders how revenue is generated and why. Tentatively, MEDIC EMS appears to be in a stable, though potentially worsening over time, financial position. Another consideration is that MEDIC EMS has been lean in their operations methodology, with several administrative personnel completing multiple tasks. Where some agencies would see the ability to decrease expenses by finding positions (HR, finance, payroll, facilities management, etc.) that could be folded into pre-existing departments within a county/municipal government, MEDIC EMS will not experience those savings because many of those functions are handled by personnel that have other duties assigned as well. Expected funding associated with the Iowa GEMT program should be incredibly useful to ensuring a balanced financial future, while allowing MEDIC EMS of Scott County to improve their services and staff workload.

## 5.2.2: Iowa GEMT and Projections

The Iowa Ground Emergency Medical Transport (GEMT) program is a voluntary program that allows for publicly owned or operated providers in Iowa to receive supplemental payments that help cover the difference between a provider's actual cost to transport a patient versus the payments received[28]. The GEMT program in Iowa was authorized in 2018, with a subsequent amendment in 2019.

This program requires that providers account for all the expenses related to providing transport for Medicaid patients and use a formula to calculate the difference between the cost of the transport versus the amount the agency was reimbursed for the transport. Providers can then receive supplemental payments, on a prospective basis, to help offset these costs. This can result in large payments for providers, depending on the number of Medicaid members being transported by MEDIC EMS.

### Enrollment and Participation

There are several steps associated with participating in Iowa's GEMT program. With the transition of MEDIC EMS to a department of the County, the agency will qualify as a public provider as described in 42 CFR Sec. 433.50. From there, the Iowa Medicaid Enterprise (IME) Provider Cost Audit and Rate Setting (PCA) unit must be notified of the agency's desire to participate. Personnel with Iowa Medicaid and the Iowa Department of Health and Human Services have been involved since the early stages of the transition study.

The Iowa Medicaid office has been kept up to date on the status of the future transition, to ensure compliance and ease of enrollment. Prior to the official transition date, or when the Iowa Medicaid office deems appropriate, the County will then need to complete an Intergovernmental Transfer Agreement, a GEMT program cost report, and sign the provider participation agreement. These actions will help to ensure that the County is eligible to file their cost report in July 2024.

### State Intergovernmental Transfer (IGT) Agreements

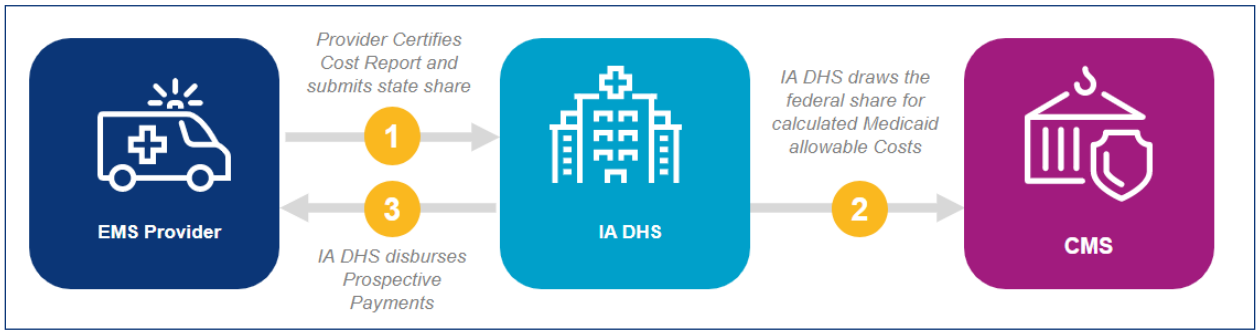


**Figure 5.9: Intergovernmental Transfer (IGT) Process**

The specifications for Medicaid GEMT, or ambulance supplemental payment program (ASPP), vary from state to state. To participate in Iowa's GEMT program, agencies must complete an Intergovernmental Transfer (IGT) Agreement and cost report by November 30th each year. The cost report calculates the provider's add-on rate which represents the uncompensated cost per Medicaid transport. The add-on rate used to pay providers is based on the completed cost report data from two years prior. This means the FY24 cost report (the first report Scott County will complete) will establish a provider's add-on rate for transports in FY26 (July 1, 2025, to Jun 30, 2026).

The provider will complete and certify their IA GEMT cost report and submit the State share of the calculated Medicaid allowable uncompensated care costs to IA HHS via an intergovernmental transfer of funds. IA HHS will use the IGT funds from providers to draw down the matching federal share from CMS for the

calculated Medicaid allowable uncompensated care costs. Then IA HHS disburses prospective payments back to providers through their interim billing of A0999 (state + federal share).

**IGT for Managed Care Organizations (MCOs) (Prospective)**

- Invoiced in advance.
- The first IGT invoice of the year occurs in mid-August/early Sept for **four** months based on the state's projection of IGT by provider based on prior year utilization. After that, MCO IGT is invoiced monthly.

**IGT for Fee-For-Service (FFS) (Retrospective)**

- Based on actual billed transports.
- First IGT invoice of the year for FFS covers Medicaid transports for July-August.
- The state suspends all payable claims until the IGT is received. After that, FFS IGT is invoiced monthly.

## PCG's Cost Allocation Experience

PCG provides Medicaid cost reporting services to over 500 providers participating in Medicaid's Ground Emergency Medical Transport (GEMT) programs in Iowa, Missouri, Florida, Illinois, Oklahoma, as well as other states. PCG currently submits GEMT cost reports in eleven states. Specifically, within Iowa, PCG completes GEMT cost reports for roughly 35 providers. As a result of its work, PCG has acquired vast experience working with fire and EMS departments to identify reimbursable costs and to complete or facilitate the completion of required annual cost reports.

PCG helped to implement the Iowa GEMT program and has been supporting providers since the inception of the program in FY18. Through PCG's work in completing annual cost reports for participating IA GEMT providers, there has been over $8.6 million in additional revenues generated.

## Revenue Potential

The enhanced reimbursement available through the IA GEMT is dependent on a provider's EMS costs, total transport volume, and Medicaid payor mix for a given reporting period. For this transitional study, an estimate of the cost per transport is calculated by multiplying the provider's annual budgeted expenditures amount by an EMS allocation (% of EMS calls vs. other types of calls) and dividing this by the total number of billed transports during that period.

The cost per transport is then multiplied by the number of Medicaid transports to determine the total state and federal share. To drill down to the IA GEMT reimbursable amount, the Medicaid payments are removed, and that value is divided by the number of Medicaid trips to determine the estimated provider specific add-on rate for the fiscal year. To calculate the federal match, the net Medicaid shortfall is multiplied by the Federal Medical Assistance Percentage (FMAP).

The estimated gain to MEDIC EMS by participating in this program, and the related calculations, can be found in **Table 5.11** below.

| Estimating the Add-on Rate per Medicaid Transport: | | |
|---|---|---|
| | $11,282,279 | Budget - EMS only |
| | $642,746 | Depreciation Exp |
| | **$11,925,025** | Total Expenditures |
| **divided** | 28,494 | Total Trips per year + 15% dry runs |
| | **$418.52** | **Average Cost per Trip estimated** |
| **multiplied by** | 6,640 | Medicaid trips |
| | $2,778,950 | Gross Medicaid cost |
| **minus** | $917,399 | LESS: Medicaid revenue ($125 per transport) |
| | **$1,861,551** | **Net Medicaid Shortfall** |
| **divided by** | 6,640 | Divided by Medicaid Trips |
| | **$280.35** | **Provider-specific Add-on Rate for FY24** |
| **Calculating the Federal Match:** | | |
| **100.00%** | **$1,861,551** | **Net Medicaid Shortfall** |
| **40.00%** | $744,620 | State Share IGT (Federal Match estimate = 60.00%) |
| **60.00%*** | **$1,116,931** | **Federal Matching Share - Net gain to Provider!** |
| **PCG is using a conservative Federal Match for Iowa @ FMAP = 60.00%* | | |

**Table 5.11: Estimated GEMT Revenue Based on Previous Expenditures**

The revenue projection above provides a conservative estimate for what Scott County could expect to yield by participating in the IA GEMT.

## Assumptions

The cost report submitted for the IA GEMT requires actual, not budgeted, EMS expenditures to be categorized into various cost centers. Providers have the option to account for annual capital asset costs associated with depreciation. For the purposes of this revenue estimate, the EMS budget and depreciation provided were summed together. The conservative estimate is based upon the FY21-22 Budget and FY21-22 Transports.

The IA GEMT will provide supplemental reimbursement for Medicaid fee-for-service (FFS) and managed care organizations (MCO) transports. Reimbursement will be calculated separately and require in-depth analysis of Scott County's detailed billing data to ensure transports and revenues are accurately identified in the cost report. For the purposes of this revenue estimate, Medicaid FFS and MCO transports and revenues are summed together. The above revenue estimate assumes there will be a full 12-months of transports in the first year the provider is eligible.

The FMAP is computed from a formula that considers the average per capita income for each State, relative to the national average. The FMAP is applied to the total computable amount to calculate the federal share and the amount Scott County can expect to yield by participating in the IA GEMT. The non-federal share percentage is updated on October 1 of each year and is currently at 32.47% and is estimated to be 36.12% for state FY24.

## SECC/MED-COM Status Impacts

Given the effort being made to evaluate the relationship between SECC and MED-COM (**Section 4.3**) it was important to the transition team to evaluate any possible impact on future GEMT funds. There were three possible alternatives for the SECC/MED-COM relationship evaluated:

1. **MED-COM and SECC are separate with no internal billing (within the County) mechanism** - In this scenario, the expenses that would be counted as indirect costs (i.e., counted towards the expenses used on the cost report) would be the expenses that SECC can show were related to call taking. Those expenses would then need to be allocated across the various call types and only the expenses related to EMS call taking would be applicable.

2. **MED-COM and SECC are separate, but SECC "bills" MEDCOM for call-taking -** 100% of the billed costs would be considered indirect costs. This method would make reporting of the costs "simpler" than the first alternative.

3. **MED-COM and SECC merge** - 100% of the costs associated with the call taking and dispatch of EMS calls would be counted towards the cost report. Typically, the easiest way to handle this scenario would be to take the SECC expenses and determine the amount allocated to EMS by CAD data. I.e., 40% of calls are EMS, 40% of the expenses would be counted.

Per PCG's GEMT Program Manager for Iowa, all three scenarios should result in similar expenses, and no scenario is easier or more challenging to communicate to the state office than the others. Scott County finance personnel have also confirmed they have determined plausible budgeting policies that would work for any of the three scenarios. Scenarios 2 or 3 would likely be easier when it comes to determining the expenses, overall. Any merger, or lack thereof, should not impact potential GEMT funding, but something to consider is that the costs of call taking for SECC were never added into the previous GEMT estimates, so it would be reasonable to assume that the estimate previously provided is very conservative if all other factors remain the same.

## MercyOne GEMT Impact

Another highly visible topic in this transition has been the MercyOne operation in the city of Clinton. As such, the impact of a possible change in the MercyOne operation was assessed. With the currently available data, the expenses related to providing EMS services would remain approximately the same, regardless of any changes associated with providing services to the MercyOne operation. As the GEMT funding calculations are based on expenditures, not revenue, the loss of revenue associated with a change in the MercyOne operation should not meaningfully impact the expected GEMT revenue. If there was a decrease in call volume, without a decrease in expenses, the expense per call and the calculated add-on rates would increase proportionately with the decrease in call volume.

## Iowa GEMT Projection Summary

MEDIC EMS of Scott County stands to recover a significant amount of revenue from the Iowa GEMT program. It is important to note that this revenue will not be recovered immediately and will not be without some additional administrative efforts on the personnel of Scott County. The County's discussion with GEMT representatives for Iowa Medicaid determined the County may submit partial year data for the

purpose of filing a cost report that will allow for prospective reimbursements, barring any errors or delays, beginning July 1, 2025.

### 5.2.3: Iowa Setoff (Formerly Known As Iowa Offset)

Iowa has a setoff procedure (commonly known as the "Iowa offset" program) which is detailed by Chapter 8A.504[29] of the Code of Iowa. The purpose of this code is to allow public agencies, like Scott County, to recover debts that exceed $50. The agency wishing to offset the applicable debt must show good-faith efforts in trying to collect that debt from the entity that owes the funds. If these efforts are unsuccessful, public agencies can recoup those debts as long as they meet the definition of "qualifying debt"[30] as found in the Chapter above. The funding for this program originates from multiple sources such as state tax refunds, Iowa lottery winnings, and payments to vendors for services[31]. It is reported that over 500 agencies currently participate in the Iowa offset program with over 900,000 debts reported by agencies at any given time. The Iowa Department of Administrative Services (DAS) estimates that approximately $40 million of debt is setoff yearly.

It is important to note that, as of the time of this study, the Iowa DAS is currently in the process of transitioning this program to the Iowa Department of Revenue (DOR). DAS representatives expressed that this process will now be correctly known as the "setoff" procedure versus the Department of Treasury's "offset" procedure for federal debts. The DOR is expected to "go-live" with their new processes on or before November 13, 2023. At that time, currently participating entities will be eligible to transition to the new program after signing new agreements with the department. The language associated with the new processes can be found in Iowa House File 2565, an Act relating to the setoff procedures used by public agencies.

DAS representatives stressed that the process of submitting claims has, historically, been very straightforward. They also noted that the process of collecting debts via the setoff program has no known definitive timeline because the success in recouping any claimed debts is dependent on the debtor being eligible for payments via one of the sources described above.

This setoff could potentially be very beneficial for MEDIC EMS as a department of Scott County. With an average of 85% of net charges being collected, this would give Scott County a chance to recover some of the remaining 15% of unpaid bills. When looking specifically at the "self-pay" insurance category, the worst performing group in terms of percent of billing collected, less than 5% of the billed charges have been successfully collected across the previous several fiscal years of payor data available. The lack of collections has resulted in an average yearly write-off of $900,000 for this payor group alone. Any percentage of that write-off being collected by the Iowa Setoff program would likely be very beneficial.

Reviewing the setoff procedure, it is important to note that there is a specific priority that dictates which agencies or departments can collect funds first. That, combined waiting on the debtors to receive qualified payments, means that this program may not setoff all, or any, of the unpaid debts, depending on the debts the entity may have to other areas.

### 5.2.4: 422D Tax Levy

As described in Chapter 422D of the Code of Iowa, counties can assess an income surtax, an ad valorem tax not to exceed $0.75/$1,000 of property value, or a combination of the two. This levy must be approved by a 60% majority of voters. The funds collected via this mechanism must be placed in an emergency services trust and only be used for the provision of emergency services. Given the other funding mechanisms currently available to MEDIC EMS, this tax levy does not appear to be required, but it is important to have the levy available in the event of a funding shortage or other implications to County taxing authority. The EMS Advisory Committee discussed earlier is also a requirement for counties seeking to implement a levy via Chapter 422D.

# 5.3: Comparable Agencies

MEDIC EMS is, in many ways, an anomaly within the Iowa EMS system. They are the largest system overall, while functioning as a non-profit organization. This has been successful because of their ability to adapt and provide a variety of services, with no other real competitors in the area. This was potentially one of the primary impacts of Scott County Code Chapter 28 which moderated the service areas for emergency responses. Finding appropriate comparable agencies was challenging because of the uniqueness of their delivery model. After a significant amount of research, consultation with the Iowa EMS representatives, and reviewing previously examined models that were similar to MEDIC, three agencies were identified: Area Ambulance Service (Cedar Rapids, IA); Delaware County, OH EMS; and Orange County, NC EMS. These agencies were primarily compared based on the following characteristics:

- **Area:** The estimated size of the total response area covered by each agency in square miles.
- **Population:** The estimated population served by each agency.
- **9-1-1 CFS:** Approximate number of yearly 9-1-1 responses.
- **Total CFS:** Total number of responses, to include scheduled and unscheduled transfers.
- **Ratio:** A value representing the 9-1-1 responses per capita. Data collected for the 2020 National EMS Assessment[17] suggests an average CFS/capita ranging from 0.1-0.123. That data is based on submissions from 41 states/territories. This metric varies widely based on the needs of the community and the demographics of those communities, but traditionally is 0.123 or higher in more urban settings and will fluctuate closer to the 0.1 value in more rural communities.
- **Units:** Approximate number of ambulances in service over a 24-hour period. For this calculation, a unit in service for 24 hours is equivalent to 1 unit. Each unit that is scheduled for less than 24 hours is given a proportionate value, i.e., a 12-hour ambulance would equate to 0.5 units, etc.
- **Vol/unit:** Approximate yearly call per full time unit based on total CFS.

A summary of the information on each of these comparable agencies can be found in **Table 5.12**.

| Agency Name | Area | Pop. | 9-1-1 CFS | Total CFS | Ratio | Units | Vol/unit |
|---|---|---|---|---|---|---|---|
| **MEDIC EMS** | **468** | **174,669** | **22,150** | **35,367** | **0.127** | **11*** | **3,215** |
| Area Ambulance Service | 260 | 176,204 | 21,800 | 27,251 | 0.123 | 5.5 | 4,954 |
| Orange County | 401 | 149,000 | 12,000 | 12,000 | 0.081 | 7 | 1,714 |
| Delaware County EMS | 459 | 200,000 | 7,300 | 7,300 | 0.030 | 11 | 664 |

*These values account for the MercyOne unit, which, generally, does not handle an even share of calls

**Table 5.12: Summary of Comparable Agencies**

## 5.3.1: Area Ambulance Service, Cedar Rapids, Iowa

Area Ambulance Service (AAS) is the service most comparable to MEDIC EMS. Providing services to the Cedar Rapids area, their organization mirrors MEDIC in many ways. AAS started as a hospital-based service that only recently (2006) converted to a 501(c)(3) organization. Their board is comprised of the local municipal leaders and hospital representatives. The primary difference for AAS is the size of their response area. The smaller response area allows AAS to operate fewer ambulances daily. AAS, like MEDIC, is very aggressive in their deployment models, and tends to review their shift start times every 4-5 months to ensure that the ambulances are being deployed when it is most efficient.

The AAS representative acknowledged that many of their operational policies are based on the desire to run as "lean of an operation as possible," and that the efficiencies are a necessity for the organization to survive versus a preference. Area Ambulance Service ambulances are all on 12-hour shifts, with a maximum of eight ambulances in service at a time, while dropping to as low as four at periods of lower anticipated volumes. A unique similarity that AAS shares with MEDIC is their dispatching. AAS has dispatching services that are a secondary PSAP for Linn County. They dispatch all of their own EMS calls as well as their own transfers. In discussions with AAS, they denied having any external stakeholder complaints similar to the concerns that are expressed about the current division of MEDCOM and SECC.

### 5.3.2: Orange County Emergency Services, North Carolina

Orange County EMS (OCEMS), a division of Orange County Emergency Services, is a county-based service just west of Raleigh, North Carolina. The primary focus for OCEMS is the 9-1-1 needs for their area, but they also provide a limited number of transfers for their local hospitals. While the response area of OCEMS is closer to the size of MEDIC EMS's response area, OCEMS is more rural, with 15% less population, and has a lower annual response volume, approximately 27% less than MEDIC. Orange County EMS utilizes an aggressive "move-up" policy, like the dynamic system status management utilized by MEDIC. This system, just like MEDIC's, strains the 24-hour employees who may have less interrupted sleep than the call volume in **Table 5.12** would suggest as the move-ups are not tracked as responses.

OCEMS is like MEDIC in that they also operate on a staffing model that allows for both 24-hour and 12-hour shift rotations. Generally, the 12-hour personnel selected the 12-hour shift secondary to specific lifestyle preferences or family needs. It can be challenging for employees to arrange for 24-hour childcare, for example. Both the 12 and 24-hour rotations are incredibly common across the EMS and fire professions, but the 24-hour shift is continuously gaining more attention/notoriety for the health issues related to sleep deprivation. OCEMS can maintain the current 24-hour scheduling primarily because their transport units are handling half of the calls, on average, that the MEDIC units are handling.

### 5.3.3: Delaware County EMS, Ohio

Delaware County EMS (DCEMS) is based out of Delaware, Ohio, which is located just north of the state's capital, Columbus. DCEMS is a county-operated EMS agency and serves a population of approximately 200,000 residents across their 459 square mile service area[32]. While the DCEMS County website appears to be relatively outdated with no recent call volume information posted, a review of their various social media accounts proved to be more informative. DCEMS is a CAAS accredited agency that provides multiple additional services and teams such as bike teams, rescue task force teams, peer support, and honor guards[33]. DCEMS also provides a community calendar that provides the dates and times for various community interaction events.

DCEMS provides ALS ambulance coverage with EMT and Paramedic crews staffing 11 ambulances through 10 stations. Of the 10 stations, eight are standalone EMS stations, while two are co-located with local fire departments. The agency provides only 9-1-1 response throughout its county and is strategically located to provide regular response coverage within four to eight minutes for any high-acuity calls[32]. DCEMS responded to over 7,300 calls last year, which is only 44% of the 9-1-1 call volume handled by MEDIC even though they have roughly 14% more population across a slightly smaller response district. The focus of this agency, nevertheless, is to prioritize adequate geographic system coverage to its residents over unit workload.

EMS crews for DCEMS work 24-hour shifts under a three-platoon (A/B/C shift rotation) system, averaging a 56-hour work week. DCEMS reports 120 full-time employees with an organizational structure like many agencies of its size, and similar to the organizational structure recommended for MEDIC. Their agency is led by the EMS Director, who is supported by two Assistant Chiefs. One of the Assistant Chiefs of Operations supervises six Captains (shift supervisors; two for each of its three shifts). These shift

supervisors roam the district in quick response vehicles (SUVs) and provide daily operational oversight. The ambulances are staffed with a Lieutenant (presumably a paramedic) and their partner, though as of this report there are only 10 Lieutenants across the 11 ambulances in operation. These Lieutenants are divided between the two Captains, with each being responsible for supervising the crew they are working on.

## Comparable Agency Summary

As assumed by many of the stakeholders interviewed, MEDIC EMS appears to be a busy agency that accomplishes a lot with very little. The “do-it-all” structure of MEDIC EMS made it challenging to find truly comparable agencies. Iowa EMS representatives stated that, other than AAS, there were no agencies in Iowa, or that they knew of, that handled the call volume and number of service lines in a manner like MEDIC EMS. Several agencies across the nation are known to provide both 9-1-1 response and interfacility transfer services, but these agencies typically deliver a service model that allows for one division to handle the 9-1-1 responses while the other division handles transfers, versus MEDIC having ambulances that will handle whichever call type is currently dispatched to them. This mixture of services is one of the many attributes that likely makes MEDIC EMS a more appealing employer for employees who are desiring to diversify their experience.

# 5.4: Employee Operational Survey

The most important resource for any organization is the employees. Change inherently invokes stress, and that stress can increase incidence of turnover, burnout, and other negative outcomes. A key focus of this transitional study was to review the potential impacts on the internal stakeholders (people and departments functioning within MEDIC EMS and Scott County currently) as well as the external stakeholders (entities identified as potentially being impacted by this transition). It was determined that the most efficient way to gather information, such as their thoughts and opinions, from the employees was to conduct an anonymous survey.

## 5.4.1: Overview

An employee engagement survey was developed by PCG with approval, and adjustment, of the questions provided by key members of the Scott County transition team. A link was used to electronically disperse the survey to every employee of MEDIC EMS. A total of 158 emails were sent via the internal MEDIC email system.

The survey was designed to provide anonymous results which were sent directly to PCG's server; 90 responses were received, representing 57% of the MEDIC EMS employees: 66% from full-time employees, 30% from part-time employees, and 4% from volunteer employees. Single-choice, multiple-choice, Likert scale, 0-10 rating, and free text options were available for each participant in the survey.

*Disclaimer: There was the possibility of duplicate/inaccurate responses. To keep the anonymity of the responses intact, PCG did not isolate any responses or delete them from the datasets. When reviewing the responses, there were not any obviously copied or duplicated responses, but there were no preventative measures in place to stop employees from submitting multiple responses. It should also be noted that the questions were provided, in many instances, without additional background or description of the information that the question was seeking to understand. As such, there were some questions that were answered either inappropriately or with information not pertaining to the actual question. These instances did not appear to meaningfully impact the overall outcome of the survey.*

The basic demographics for the 57% of employees completing the survey revealed that the employees are:

- 56% male, 43% female, and 1% preferred not to answer.
- 94% white, 2% Black or African American, 1% Latino, and 2% preferred not to answer.

When compared with the data found in a 2020 national assessment of EMS agencies, MEDIC EMS appears to have a more diverse service than average in some categories, but less in others. The demographics of MEDIC EMS are less diverse than the demographics of their community, comparatively[1, 17].

Out of the responses received, 49% of respondents are Paramedics, 33% are EMTs, and 18% identified as being in an "other administrative position." Given the current operational model of MEDIC EMS (discussed in other sections), and the known EMT shortage, this breakdown appears appropriate. Impressively, greater than 62% of the respondents reported being certified for 5+ years with 38% reporting 10+ years. This suggests that many of the employees are long-term employees. Understanding the length of service that many of these employees have provided to MEDIC EMS should also help Scott County prepare for questions regarding retirement, specifically how the transition may impact these employees who are closer than others to retirement.

In a profession which typically sees a transient workforce and higher-than-average turnover, MEDIC EMS has strength in their tenured workforce. Greater than 64% of their staff has been with the organization for 5+ years and 41% has been with MEDIC EMS for more than 10 years. This leads to stability and gives

management a core of knowledge that should be relied on for improvements. The tenure should also provide for ample succession planning opportunities.

In addition to the initial demographics section, the survey covered the topics of schedules, operations, support, health equity, and ended with a section where respondents were allowed to voice any additional concerns. Each of those topics can be found detailed in the sections below. Some of the key findings were as follows:

- Respondents believe in the care and service they are providing. “Excellent company,” “exceptional service,” and “community focused care” were frequently used phrases.
- 75% of employees have identified 12-hour shifts as the preferred shift.
- Many providers note that response times could be better, but the system is “strained.”
- Survey respondents rated their medical direction as readily approachable but expressed concerns with a “lack of progressiveness”. It appeared that these concerns were related to the protocols, medications, and procedures that the respondents have access to.
- Workload and pay are the primary sources of stress, with 85% of respondents noting that their workload is the issue.
- When asked about culture, those who responded negatively frequently cited burnout and lack of full staffing as the concern.

*For easier and direct correlation, direct employee quotes and survey data citations are referenced by listing the survey question’s number in brackets (e.g., [Q1]). Further information related to the contents of the employee engagement survey can be found in* **APPENDIX B** *of this report.*

## 5.4.2: Schedules

Noted earlier in the Report, MEDIC EMS works a variety of shift schedules. This section of the survey was to evaluate the employees’ opinions of a 12 versus 24-hour shift and their overall preferences. While reviewing the responses for this section, it was important to note that 53 of the 72 (74%) responses from employees presumed to be working a 12 or 24-hour shift were from Metro operation-based employees [Q10]. Overall, it appears that the 12-hour shifts are favored with 75% of employees responding that either they currently are on 12’s and want to stay there, or that they are on 24’s and want to go to 12’s [Q11]. This percentage is again represented in Q12 where 75% of employees agreed that if all shifts had to be 12 or 24-hour, that 12-hour shifts are preferred with specifically the 12-hour day or night rotation being the preference. 7% of employees noted that if they were not provided with the ability to work the shift of their preference they would “most likely” leave MEDIC [Q13].

One question that received very favorable ratings was whether the employees would be willing to work a schedule that rotates them between Metro and ADM stations [Q15]. Rotating personnel to different EMS stations is a common practice for many EMS agencies. The benefit is that an employee at a “slower” station can be shifted to a “busier” station to help keep their skills up, while the “busier” employee can be sent to a “slower” station to help prevent burnout. Another consideration is that these stations are in locations that will traditionally have different call types associated with their community. Where a Metro station may have more traumatic injuries, drug overdoses, and traffic accidents, rural stations may have more calls relating to sick persons, cardiac issues, etc. Rotating providers can help ensure more well-rounded personnel and can assist with understanding the geography of the overall district. Only 24% of the surveyed employees reported that they would rather not rotate stations [Q15].

### Consultant Comments

An issue present, nearly universally, across survey administration is the ability for respondents to understand the intent of the question. This particular issue appeared to be prevalent across the scheduling section of the survey, versus the rest of the survey, hence being mentioned here. One question that may have required more explicit wording was [Q11]. The purpose of this question was to gauge the overall preference for what shift the employees wanted to work versus what station or operation they were functioning out of. The reality is that most of the units within the MEDIC EMS system are too busy to accommodate a 24-hour schedule reasonably and safely.

As such, when 14% of 12-hour respondents stated they wanted to go to 24-hour shift, the assumption would be that these respondents actually meant that they wanted to go to a lower volume station to work. The same could be said when 100% of the employees who answered that they currently work a 24-hour shift and want to stay on a 24-hour shift were noted to have responded that they have 10+ years of experience; it may be suggestive that these employees really meant that they would prefer to stay in the lower volume ADM operations. Crews attempting to work 24-hour shifts while responding to an average of 12-18 calls per day would not be desirable.

## 5.4.3: Operations

The operations section started with a question about where stations can or should be located and progressed into questions regarding the quality of relations with external agencies, equipment used, response times, and the medical direction for MEDIC EMS. When it came to station location, the respondents resoundingly chose “no opinion” with an additional 22% opting for a fire/EMS shared space and 18% preferring EMS only.

The relationship between MEDIC EMS and other key agencies in the area matched well with the anecdotal beliefs on the status of those relations following interviews with the staff. The overall rankings for agencies were fairly similar, with mostly “average” rankings across the board, save for four slight outliers. Bettendorf FD and Bettendorf PD scored remarkably well, with 81.3% and 63.3% of respondents, respectively, noting that the general working relationship was “above average or exceptional.” Davenport FD and Davenport PD had the largest percent of respondents noting a “below average or poor” working relationship.

When asked about equipment, personnel generally rated the equipment as “high quality.” Trauma/splinting equipment was the only rating that stood out as worse than the rest with 15.6% rating the equipment as “poor.” Response times were also seen as positive by most of the respondents. 70% of the responses believed times were good across the County with only 7% believing times across the County are not appropriate. Further questioning showed that there were several common issues noted by respondents:

- Staffing issues impact response times heavily.
- ADM units are the only Paramedic coverage in rural areas, Metro areas have coverage.
- ADM staffing model is not sufficient (out of station response).
- EMD is not being appropriately utilized; it is being overused.
- Poor operational decision making; sending transfers when low on ambulances.

Overall, on a scale of 1-10, when the respondents were asked to rate the usefulness of the dynamic deployment (posting system) utilized by MEDIC EMS, the mean, median and mode were 6.8, 7, and 7 respectively. This suggests an overall belief that the posting system provides a positive impact on response times, which has been reinforced via multiple studies[34].

## Medical Direction

It should be noted that the Medical Director for MEDIC EMS, Dr. Richard Vermeer, has received a large amount of praise from various stakeholders throughout interviews completed as a part of this transition process. The praise has come from MEDIC employees, County officials, other physicians, and local first responders alike. With that praise has come some concerns that were reiterated in survey questions [Q23] and [Q25]. Medical direction, in the survey, was addressed as two separate groups. The first question had MEDIC providers rate their Medical Director, and the second question rated the respondents' level of satisfaction with medical direction received online or from the emergency department physicians when guidance is needed during patient interactions.

The survey asked respondents to rate the MEDIC Medical Director across four different dimensions: progressiveness, impact/involvement, communication, and approachability. Overall, respondents rated Dr. Vermeer similarly across the fields of impact, communication, and approachability with 77% of responses indicating that the respondents were either "satisfied" or "very satisfied." The one area where the ratings dropped significantly was the dimension of "progressiveness." More than a third (35%) of respondents indicated that they were either "dissatisfied" or "very dissatisfied" in this category. This concern regarding progressiveness was mentioned repeatedly throughout the study during interviews with both internal and external parties.

On the topic of online medical direction, the respondents had very favorable ratings across the three dimensions that the online medical direction was evaluated on: ease of access, knowledge of EMS policies, and reliability. Online medical direction occurs when a provider is dealing with a patient that either does not fit in a treatment protocol or has specialty circumstances. The purpose of the online medical direction is to give EMS providers immediate access to expert consultation. While the ratings across the survey were favorable, with respondents' ratings being greater than 80% in the positive for ease of access and reliability, the least favorably rated dimension was knowledge of EMS protocols [Q24]. These concerns were reiterated in the responses recorded for [Q26]. Some of the concerns noted from the survey are as follows:

- It would be useful to have county wide protocols and formularies.
- "Just transport to the hospital may not always be in the patient's best interest."
- "I get the answer of the RN, not the ER doctor."
- ER physicians are not aware of the protocols or medications available.
- "Hospital staff know… little about pre-hospital care and… don't know how little they know."
- "Follow your protocols is not a helpful answer."

## Consultant Comments

The working relationship between two first response agencies is rarely impacted by one single topic. Administrator interactions, interagency support, mission and goal congruency, etc., can all have a major impact on how well two agencies interact. The rating of one agency's interactions with another should not be seen as a representation of the skills that the rated agency has but should be a significant indication of where there are areas for growth and communication. After speaking with, and visiting during the on-site time, there is no doubt that all three of the primary agencies mentioned above (MEDIC, Bettendorf, and Davenport) offer high quality services to their communities and the patients they interact with. There is certainly room for the three agencies to communicate better at all levels.

When considering deployment strategies, dynamic deployment is the single most effective measure to decrease response times across a coverage area. The concern that rural areas of the County potentially suffer at the expense of the more urban areas is not unfounded, but that does not necessarily need to be

the case. Statistically speaking, there is always a greater chance of a larger number of calls from the more urban areas than there is from less densely populated areas. It stands to reason then that anticipating demand will likely cause a system to shift ambulances into that more densely populated area, but the only driver for that shift is agency policy. The potential for future calls should influence the location for dynamic deployment, but it should not be the only driver. Other factors, such as drive time, access to care, first response capabilities, etc., should be considered when creating deployment strategies. A valid point repeatedly noted by the respondents was that community members in Davenport and Bettendorf have nearly immediate access to ALS care regardless of MEDIC EMS presence, where the community members in the rural areas only have access to ALS care on the arrival of MEDIC.

Response times are an important metric for most first response agencies. Staging resources, either via dynamic posting policies or increased staffing, are the two best ways to improve those times. It is also important that the agency is utilizing EMD and priority dispatching in a manner that sends the closest appropriate EMS unit at the appropriate speed to the correct location for a call. It is important to remember that responding with lights and sirens is considerably more of a "traditional" approach versus an approach backed by any science[35]; it does not save any meaningful amount of time that could not be saved by appropriate dynamic staging policies. There is evidence that utilizing lights and sirens can be *operationally* pertinent, as the units will generally clear calls in shorter periods of time and those small periods of time over longer periods of time can add up to significant portions of time for an EMS agency, but there has been no link that the small periods of time are *clinically* helpful. Increasing staffing will safely account for considerably more availability than crews utilizing lights and sirens for call responses.

Medical direction is generally a topic that brings in a large amount of opinions/commentary, regardless of how successful an organization is. Medical direction for an EMS agency is generally broken up into two separate components; the medical direction that functions as a guiding authority within their agency, and the online (usually via phone, radio, or verbal order) support that providers receive when they have a question about the patient they are caring for and either need to deviate from an established protocol or just need help from a physician to make an appropriate treatment decision. Protocols are directly influenced, or at least approved, by the medical director of an EMS agency. Their knowledge and desire to bring in the newest or most advanced protocols for their providers, will have a significant impact on the overall progressiveness of a department.

Progressive departments will attract the attention of paramedics, experienced and new alike, who are looking to advance their knowledge and skills. Unfortunately, these "progressive" measures generally can be translated into both a cost and risk to the agency. While it is relatively simple to sit at an operational level and express concern over the lack of a change, or not having the "latest and greatest" technology, it can be much more challenging to justify the costs and risks associated with the new advancements from an administrative level.

A lack of communication regarding the change, or stagnation, of protocols is just as likely as a "true" lack of progressiveness. It is just as important that providers have a medium to express a desire for change, as it is for medical direction or administration to have a medium to explain why a change is not going to occur. Anecdotally, it can be noted that the equipment and protocols utilized by MEDIC appeared, at a superficial level, to be on par with any other "progressive" agency inspected by the consulting team.

The concerns that the hospital staff, or online medical direction, do not "understand the capabilities of the ALS providers" is not a concern unique to MEDIC EMS. The only way to "bridge" that gap for many agencies is to either be a hospital operated organization that has a significant amount of influence on the continuing education of the hospital staff, or to ensure that there is a clear reporting and follow-up mechanism for documenting incidents where this lack of understanding is an issue. These issues generally tend to be the most prevalent when providers are handling the sickest, or most critical, of their patients, so it is understood why there may be a perception of a significant barrier, but with an intentional effort from the agency medical direction and administration to communicate these concerns, the perceived relationships will likely improve.

## 5.4.4: Culture and Support

MEDIC EMS is a proud organization with a history of service to Scott County and the surrounding area. The answers associated with [Q26], which asked the respondents how they felt about the service they provide, are well represented in the word cloud found in **Figure 5.10**.


**Figure 5.10: Question 26 Word Cloud**

The responses received in the survey support that the MEDIC employees feel strongly about the services they provide and the culture within the organization. Those sentiments were noted in the following questions [Q27/28] where respondents were asked to rate how supported they feel, emotionally and professionally, by their management, supervisors, and their colleagues. Across the board, more than 75% of respondents rated the support received as “supported” or “very supported.” When specifically asked to rate the “culture” of MEDIC [Q30] on a 1-10 scale, the average rating was a 7.36, and the mode (or most selected rating) was an 8.

Stress on the employees [Q32] was rated more poorly, overall, than the culture was. On a scale of 1-10, with 1 being no stress and 10 being significant stress, the average rating was a 5.9, but the mode was an 8, suggesting significant levels of stress. These ratings are reinforced by the responses to [Q34/35] where respondents noted a high level of burnout within their organization, seen in **Figure 5.11**, which represents employees’ opinions on the number of their coworkers that they believe are experiencing burnout.

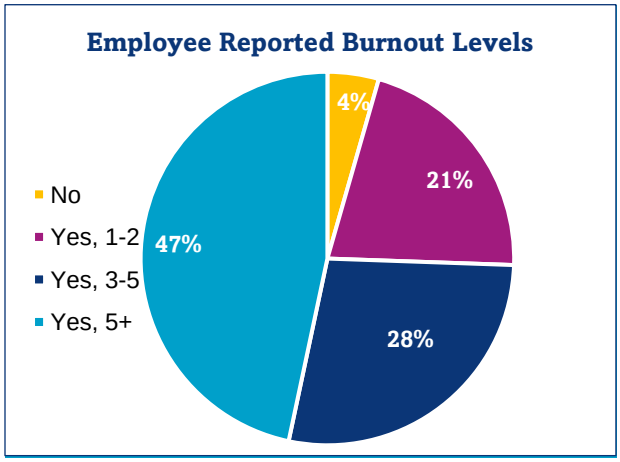


**Figure 5.11: Employee Related Burnout Levels**

The respondents are overwhelmingly planning to stay with MEDIC EMS [Q36/37] with roughly 70% reporting plans to stay in the same position or pursuing advancement for their short (1-5 years) and long-term (5+ years) plans. Several providers noted they have plans to retire when asked about their 5+ year plans, so it will be important to strategize for those openings to prevent any staffing issues.

### Consultant Comments

Not surprisingly, those who rated any of the fields as "not supported" [Q27/28] generally had very poor ratings across the entire survey, with very little variation in any of their ratings. When employees rated the culture [Q30] as less than a 5, the comments as to why were very similar. Many employees directly stated that their ratings of high stress [Q31] or a poor culture [Q30] were related to [Q32/33] high workloads and issues with pay. The reports of high workloads are consistent with the concerns noted by respondents in earlier questions where staffing was repeatedly mentioned as an issue. Ideally, correcting the low staffing levels can potentially decrease the stress on the employees while improving culture scores.

Pay for the providers was a significant issue. This issue came up both during the "stress" question as well as the "recruitment" question. A pay study was not completed as a part of this transitional study, but the transition to the County should assist with benefits, which will influence overall compensation, even if pay rates are not directly impacted by the transition. Respondents also reported a concern with "lack of advertisement" of their services/MEDIC EMS may be "hurting" recruitment. Many folks have cited Davenport Fire as a good example of a local agency's advertising methods. More investigation could be completed into reviewing what the employees feel is being done for advertising. This may be a scenario where there are steps actively being taken that the respondents simply have not noticed or been otherwise informed of.

## 5.4.5: Health Equity

A very brief part of the survey [Q39-44] covered issues regarding health equity within the MEDIC EMS services. Overwhelmingly, the respondents believed that MEDIC provides training and education that allows the providers to deliver equitable care for patients across all backgrounds. There were multiple comments that suggested areas of improvement, but generally, respondents reported a belief that they provide equitable care. The most cited issue with health equity was the concern that socioeconomic statuses impact the way some providers appear to view their patients. There were no reports of outright discrimination but concerns of disparity of care were presented in the comments.

### Consultant Comments

Health equity is incredibly important in the realm of public health, and there is a significant difference in the population density across Scott County. Understanding the different populations within the County and where those populations primarily exist can help the employees provide more appropriate care. What is right for someone in the center of Davenport may be considerably different for a patient in Bettendorf or a patient from a rural corner of Scott County. Mentioned earlier, as a County department, it is important that everyone in the County is presented with equitable care. Another important distinction is to be able to communicate the difference between equity and equality to the staff and community.

Likely a failure in how the survey was written, [Q44] was meant to illicit any concerns that the respondents had regarding the equity of the treatment of patients by MEDIC EMS. Many of the respondents took the question in terms of equity in care across all of health. The concerns listed by the respondents show that there are opportunities for education across MEDIC employees. It also reveals that many MEDIC employees are aware of the broader issues facing health equity, which bodes well for any educational efforts.

## 5.4.6: Concerns

The survey ended with a final question allowing respondents to voice any concerns that they felt were not addressed by the survey or the transition team to this point. Several of the concerns listed either had been addressed, but not released by the time of the survey, or were subsequently added to the Study later. Some of the concerns that were noted by employees could be broken up into three different categories, which are listed below.

### Ambulance Equipment

Multiple providers listed hearing protection and internet access as being areas of improvement in the survey. Studies since the 1980s have suggested that hearing loss across ambulance providers tends to occur at a faster rate than the general population[36]. Since that time, there have been constant improvements in the sound proofing of ambulances, but 40 years later, personnel are still experiencing hearing loss at a rate greater than the public[37].

Hearing protection serves to give providers less exposure to ambient noise while allowing them to communicate with each other and their dispatchers more effectively. The cost of implementing such a change would be significantly less than the potential costs associated with worker's compensation claims. Internet access stability is generally a facet of the equipment utilized and the support provided. Anecdotally, concerns regarding connectivity are generally represented as being more significant than they really are. Providing a simple "reporting and tracking" mechanism may assist in routing out if connectivity problems are unit, or user, specific in nature. Any persistent issues will need to be assessed by County IT.

### Public Education and EMD Use

Several comments in this section were directly related to the communication that MEDIC employees have with the public. Those concerns were easily categorized into three sections: overuse of 9-1-1, appropriate EMD, and advertising of services. Overuse of 9-1-1 services is an issue that EMS agencies are facing across the nation. The reality is when the community has a need, and either a lack of resources or a lack of knowledge as to how to handle that need, calling 9-1-1 is commonly the answer. From homelessness to substance abuse to chronic medical problems, EMS is generally only left with the option of transporting a patient to the local emergency department. This means of transport tends to "waste" resources, as the person generally does not need EMS care, and overstressed emergency departments are ill-equipped to handle many of these non-emergent needs. The system functions in this manner because EMS agencies would not survive if they were unable to bill, and most insurers/payors will only pay for transport to emergency departments.

While the transition of MEDIC to a department of the County is not expected to impact the overall significance of this issue, it will be paramount for the new EMS Director to continue to explore avenues such as community paramedicine and non-traditional transport destinations to help alleviate this issue. The future County department may already have a path to adding these services. MEDIC EMS was contacted by Anthem Health in 2022 to participate in a funded option for approximately 300 high utilizers. With the transition to Scott County underway, a decision was made to table this effort until after the transition. Anthem had the ability to provide Community Paramedicine training as well as specific documentation software. Other Iowa EMS agencies working with Anthem include Mercy Ambulance in Des Moines and Waterloo Fire. They would potentially be valuable sources of information if the addition of these services is desired in the County.

Another way to address the concern of high utilizers of EMS is to increase the amount of public education that specifically deals with when and why to call 9-1-1. The additional public outreach will help increase community awareness of MEDIC EMS and the services they provide, which may also help with recruitment and retention.

The other primary issue noted in these comments was related to appropriate use of EMD by MEDIC/MED-COM. The purpose of EMD is to send the correct resources at the correct speed to people in the community that require EMS response. When reviewing the CAD data, there was no obvious indication that EMD was not being correctly utilized by MED-COM, but several employees noted that there was a perception that responses were being categorized as more critical than necessary. While the use of EMD by MED-COM can be reviewed, this also sounds like a chance to educate the EMS providers on how EMD functions, and some of the intricacies. Dispatchers are only as good as the information they are receiving from the public, and concerns over whether calls are being appropriately categorized by EMD is not new or unique to MEDIC.

It should be noted that MEDIC EMS has had a process in place for stakeholders to be able to “flag” calls they felt were incorrectly coded using an online form. Once the form is received, an investigative committee reviews and provides feedback to both SECC and MEDIC administration. The process has been shared with the local fire and police agencies. Both Davenport Fire and Bettendorf Fire routinely submit feedback through this process. There are also auto generated "flags" for review based on criteria (e.g., dispatched non-emergent but transported the patient emergently, no fire response was indicated but fire was dispatched, etc.). The process has been reported as a success in fine tuning the responses for all agencies. Many of the changes in response have come from employees and local fire departments using this process.

## Recruitment and Retention

Recruitment and retention efforts can be highly variable across agencies. The most cited recruitment issues were related to the perception that some local agencies highlight their services in a more visible manner than MEDIC EMS. Shown in the survey responses collected from the employees of MEDIC EMS, as well as anecdotal experiences during the on-site visit, the employees are proud of the services provided by their department and there is a desire to publicize those efforts. With the transition of MEDIC EMS to a department of the County, it is probable that recruitment efforts are going to be more fruitful. MEDIC EMS has not historically noted any obvious issues with recruiting new employees, other than the time required to train and release new employees, but any efforts to improve recruitment may also improve the quality of the new employees brought into the system.

Arguably, efforts to retain employees are going to be more cost effective than the efforts to recruit and subsequently hire new employees. Several aspects of retention have been addressed in this study to include the implications of County benefits, organizational structure recommendations, and potential staffing variations. Pay was noted by many employees, but historically, pay rates do little to encourage employees to stay. An organization’s culture will have a significant impact on the retention rates. With the transition to a department of the County and the recruitment of a new EMS Director, it should be expected that there will be a shift in the culture of MEDIC EMS that may have a significant impact on the employees. Working to ensure transparency at all levels of the department and any subsequent changes may lessen the impact of the culture shift.

# SECTION 6: CONCLUSION

The transition of MEDIC EMS to a department of Scott County is going to be highly beneficial to both the continuity of EMS services within the County and the communities the County serves. This transition will have an impact on MEDIC EMS as well as the County, but it is believed that none of the negative impacts will outweigh the benefits of transitioning the service. The purpose of this study was to assist Scott County in evaluating the feasibility of the transition while assessing three key areas of MEDIC EMS: operations, finances, and administration. These assessments occurred across a two phase, six month long, evaluation that included many internal and external stakeholders.

## 6.1: Operational Conclusion

Operationally, MEDIC EMS was repeatedly touted as an example system across the state. Representatives from the Iowa Bureau of Emergency and Trauma Services noted that there have been no known operational concerns from the department. MEDIC EMS has traditionally exceeded the standards set forth by the state and is one of the few CAAS accredited agencies in the area. MEDIC EMS has set standards for response across its service area and has expanded its business lines rapidly since inception to meet the growing needs of the community. The flexibility that the organization has functioned with is a hallmark of smaller 501(c)(3) organizations, but with the right leadership in place and a constant vigilance to the changing needs of the area, that flexibility can remain.

The only operational concerns noted were related to the service area covered by MEDIC EMS versus the requirements of a County department and staffing levels. With MEDIC EMS transitioning to a department of the County, it will be incumbent on the County to ensure that everyone is receiving equitable levels of service. The Northwestern portion of Scott County currently is not receiving the same standard of response and care as the other taxpayers in the County. That can be addressed via changing response policies, staffing an ambulance in the area, or by other means, but it should be addressed. Staffing levels are discussed in detail under the administrative assessment.

## 6.2: Financial Conclusion

The financial assessment of MEDIC EMS reiterated many of the beliefs already held by the MEDIC administration. The future revenue generated by MEDIC EMS of Scott County may be variable based on the services provided. Functioning at a high level of efficiency, the organization was still operating at a loss for many of the reviewed years. The subsidy provided by the County was enough to cover the financial need of the years in question, but projections suggest that all things being equal, these losses were going to increase year to year. Transitioning MEDIC EMS to the County opens multiple avenues for MEDIC to receive additional funding not previously available, at no cost to the County taxpayers. The additional funds should help offset any additional costs incurred by MEDIC EMS while allowing the County to potentially expand services, if desired.

Areas of financial concern include the continuation of the MercyOne operation and other transfer contracts that MEDIC EMS currently has. The reality is that these operations help build capacity within the system to respond to 9-1-1 calls, while providing revenue to the department. The specific language in the contracts could be amended/updated to ensure that MEDIC prioritizes 9-1-1 calls but can still benefit from the revenue generating contracts. An example of this would be to bring the MercyOne operation ambulance into Scott County, where it will have a primary responsibility to handle County calls, while offering to send an ambulance to MercyOne to transfer patients when the system status capacity can allow for that to occur. This should decrease the strain on 9-1-1 operations within Scott County while still allowing for some revenue generation out of the hospital operation.

## 6.3: Administrative Conclusion

One of the areas for potential improvement will be related to the administration of MEDIC EMS. The management of MEDIC EMS, including the efforts of the Director and Board, has been exceptional during the years reviewed, and especially during the COVID pandemic where many agencies were strained. Areas for possible improvement, or added efficiency, are in the areas of staffing and organizational structure. For the purposes of staffing, the current 24- and 12-hour shifts should be reviewed. As MEDIC, and many other operations, has shown, it is possible to compensate both 24- and 12-hour employees equitably, working the same positions in an organization, but it can present additional challenges for a County payroll department that are not necessary. It has been noted that the shift from the 24-hour ADM model to a 12-hour model across the department will not come without additional concerns. The 24-hour ADM model was created out of a fiscal need with the units being supplemented by "volunteer" staff. The "volunteer" staffing model is no longer practical, due to a decrease in available staff, or equitable, due to response policies dictating the ADM operations, for the areas served.

External stakeholders from at least one ADM area have noted concerns with the "loss" of their ADM-specific paramedic, citing the need for these paramedics to possess specific knowledge and skills relating to their geographical areas and community specific needs. While this knowledge may assist the paramedics with the care of very specific community members, the reality of 9-1-1 care is that any of the ambulances may be tasked with responding to any area throughout the County. Another reality is that the most common types of calls that MEDIC employees may respond to in each area may vary; the providers need to be competent across the spectrum of care that they may provide, regardless of their primary assignment.

Station specific personnel will always be easier on external personnel, as the other responders get to "know" the tendencies of their MEDIC employee partners. The same is true in the Metro operation, where employees noted in their survey responses that "certain crews get along better with some crews than others." These findings do not make station specific assignments the correct option across the County. Instead, there should be an easy, preferably transparent, way for external entities to express concerns they may have with specific employees, as well as a process for MEDIC employees to express concerns they have with their external partners. There will always be some level of conflict as MEDIC employees interact with other first responder agencies, often in stressful situations, it is how those conflicts are handled that will ultimately determine interagency relationships. Additional staffing will be needed for the Northwestern corner of Scott County if there is a desire to ensure response times and capabilities are the same in that area as the rest of the County.

Another area of efficiency is the organizational structure. The intricacies of organizational structures can vary from department to department, but there are many common themes throughout those structures. The most important theme that is missing from the current structure is maintaining a reasonable span of control that allows for an impactful relationship between supervisors and their subordinates. The structure presented in the study above provides a general guideline for what the new structure could look like, but the key takeaways are to develop a structure that is more vertical in nature. The structure being "taller" versus "wider" provides many advancement and career opportunities to the employees, which encourages retention while also allowing for a higher degree of delegation. Delegation helps to prevent the burnout of senior leadership of an organization as much as it helps to encourage career advancement within an organization.

## 6.4: Summary

MEDIC EMS is a highly functioning organization that will perform well as a department of the County. This change will benefit MEDIC EMS as well as the community served. While there will likely be an inherent loss of some flexibility/agility in the department due to a transition to the County, as is common when organizations move to municipal or county structures, it is unlikely that there will be any other major issues or changes that occur otherwise. MEDIC EMS, though it was a 501(c)(3) organization, always had significant influence from the County and local municipalities due to the structure of their board. Many of the representatives on the 501(c)(3) board were/are elected officials, so it is reasonable to assume that their actions were best in line with the demands of the community.

This transition should allow for Scott County to solidify the service lines present in MEDIC EMS while creating the best possible department. It is rare in county government that a department of this size and influence can be "built from the ground up," and the efforts seen within the transition team signify that this sentiment has not been lost on any of the County or MEDIC EMS management team members. Scott County should strive to keep as much of the "legacy" MEDIC EMS intact, while working to address some of the topics noted above. Change of any type is always going to be challenging for the employees, but there are multiple smaller changes that can occur to really highlight the department and its services. This change will likely strengthen the resiliency of EMS in Southeastern Iowa as a whole, and MEDIC EMS of Scott County will continue to serve as a model system in Iowa for years to come.

# SECTION 7: APPENDICES

## Appendix A: References

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# Appendix B: Employee Survey Results

## Survey Introduction

Below are the results of the employee survey conducted in conjunction with the transition study. Two things should be noted prior to reviewing the results:

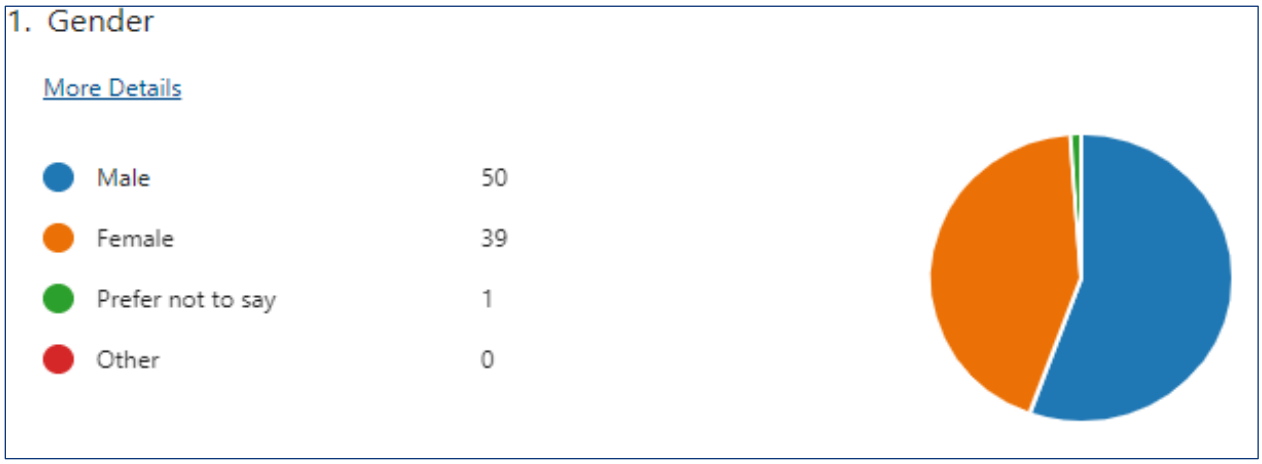
1. *Any questions that called for written responses were excluded from the survey results below to protect the anonymity of the survey participants. Those questions were questions 18, 21, 25, 26, 31, 38, 40, 42, 44, 46, 48, 50. Apart from questions 26 (what words would you use to rate MEDIC EMS and the service provided overall?), 38 (what suggestions do you have to improve recruitment and retention within MEDIC EMS?), and 50 (do you have any concerns that you feel have not yet been addressed by this questionnaire, or by the transition team (to include the County consultant) yet?), the excluded questions were comment sections that allowed respondents to clarify why they had answered a previous question in the manner they did.*

2. *The survey platform utilized was Microsoft Forms. Microsoft Forms has a feature known as the "Net Promoter Score" or NPS. In general, the NPS is calculated by labeling respondents as "Promoters", "Passive", or "Detractors" based on how they ranked the question. Those who responded with a score of 1-6 were labeled as detractors (bringing the NPS down from 0), while those who responded with a 7-8 were passive (having no impact on the NPS), and those who rated the item as a 9-10 were promoters (raising the NPS). Respondents were not notified of the rating structure system, and likely utilized the rating system as an evenly weighted system from 1-10. Questions where respondents rated an item 1-10 were generally discussed in more detail in the study.*

While there was an effort to engage all employees, with a timeline that allowed all the employees an ample opportunity to participate in the survey, a total of 90 responses out of an estimated 158 personnel were recorded. Due to the specific nature of some questions, and subsequent branching associated with those questions, there will not be 90 responses recorded for every question.

Noted earlier, it is believed that all 90 responses were unique entries. A review of the entries did not reveal any obvious duplicative, or grossly incomplete, responses. The results below are indicative of the total set of responses, and none were excluded from the survey analysis.

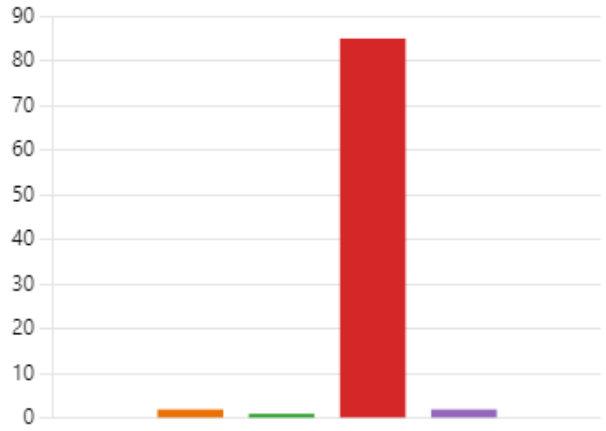
## Survey Results



## 2. Race

More Details Insights

| | |
|---|---|
| Asian | 0 |
| Black or African American | 2 |
| Latino | 1 |
| White or Caucasian | 85 |
| Prefer not to say | 2 |
| Other | 0 |




## 3. Ethnicity

More Details

| | |
|---|---|
| Hispanic | 2 |
| Not Hispanic | 87 |
| Prefer not to say | 1 |

## 4. Employment Status

More Details

| | |
|---|---|
| Full-Time | 59 |
| Part-Time | 27 |
| Volunteer | 4 |

5. What is your level of certification?

More Details Insights

| | |
|---|---|
| EMT or AEMT | 30 |
| Paramedic | 44 |
| Other Administrative Position | 16 |

6. How long have you been an EMT or AEMT?

More Details

| | |
|---|---|
| Less than 1 year | 3 |
| 1-3 Years | 4 |
| 3-5 Years | 5 |
| 5-10 Years | 10 |
| 10+ Years | 8 |

7. How long have you been a Paramedic?

More Details

| | |
|---|---|
| Less than 1 year | 5 |
| 1-3 Years | 8 |
| 3-5 Years | 3 |
| 5-10 Years | 7 |
| 10+ Years | 21 |

## 8. Which of these options best describes you?

- EMT or AEMT that plans to remain as a EMT or AEMT
- EMT or AEMT that plans to advance to Paramedic
- EMT or AEMT actively attending Paramedic program
- EMT or AEMT without the resources to attend Paramedic program
- Other

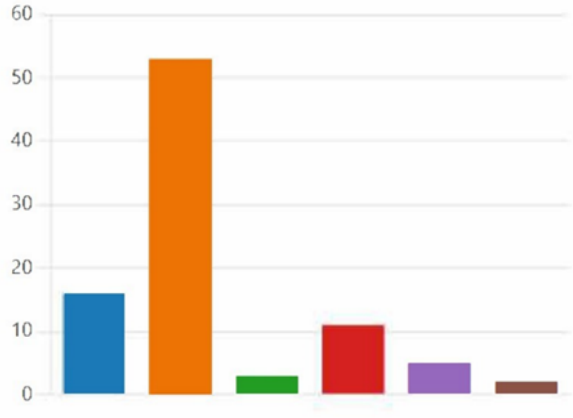
## 9. How long have you worked for MEDIC EMS?

More Details

| | |
|---|---|
| Less than 1 year | 8 |
| 1-3 Years | 15 |
| 3-5 Years | 9 |
| 5-10 Years | 21 |
| 10+ Years | 37 |

## 10. Which operation do you primarily function out of?

| | |
|---|---|
| ADM | 16 |
| Metro | 53 |
| Clinton | 3 |
| MED-COM | 11 |
| Administrative Manager | 5 |
| Other | 2 |



11. What is your current shift length?

More Details Insights

| | |
|---|---|
| 24-hour and want to stay on 24's | 8 |
| 12-hour and want to stay on 12's | 51 |
| 24-hour and want to go to 12 | 2 |
| 12-hour and want to go to 24 | 10 |
| 8 Hour Shifts | 19 |

12. If all the providers needed to work the same shift, what would be your preferred work rotation (Fixed entails that you are on day OR nights unless you take a position on the opposing shift)?

More Details

| | |
|---|---|
| Two-week fixed 12-hour shifts | 39 |
| Two-week rotating 12-hour shifts | 14 |
| 24-hour shifts | 18 |

13. If the chosen schedule does not match your preferred schedule, would you:

More Details

| | |
|---|---|
| Stay with MEDIC | 44 |
| Stay, but consider leaving MEDIC | 22 |
| Most likely leave MEDIC | 5 |
| Definitely leave MEDIC | 0 |

14. Do you believe a shift-bidding system should exist ("shift-bidding" refers to a system where fulltime providers are allowed to choose which shift they work based on seniority)?

| | |
|---|---|
| Yes, once a year | 23 |
| Yes, twice a year (fall and summer) | 25 |
| No, providers should be able to request changes as needed | 16 |
| Other | 7 |

15. Would you be willing to work a rotating ADM/Metro rotation (if the schedules were the same)?

More Details

| | |
|---|---|
| Yes | 43 |
| No | 17 |
| Other | 11 |

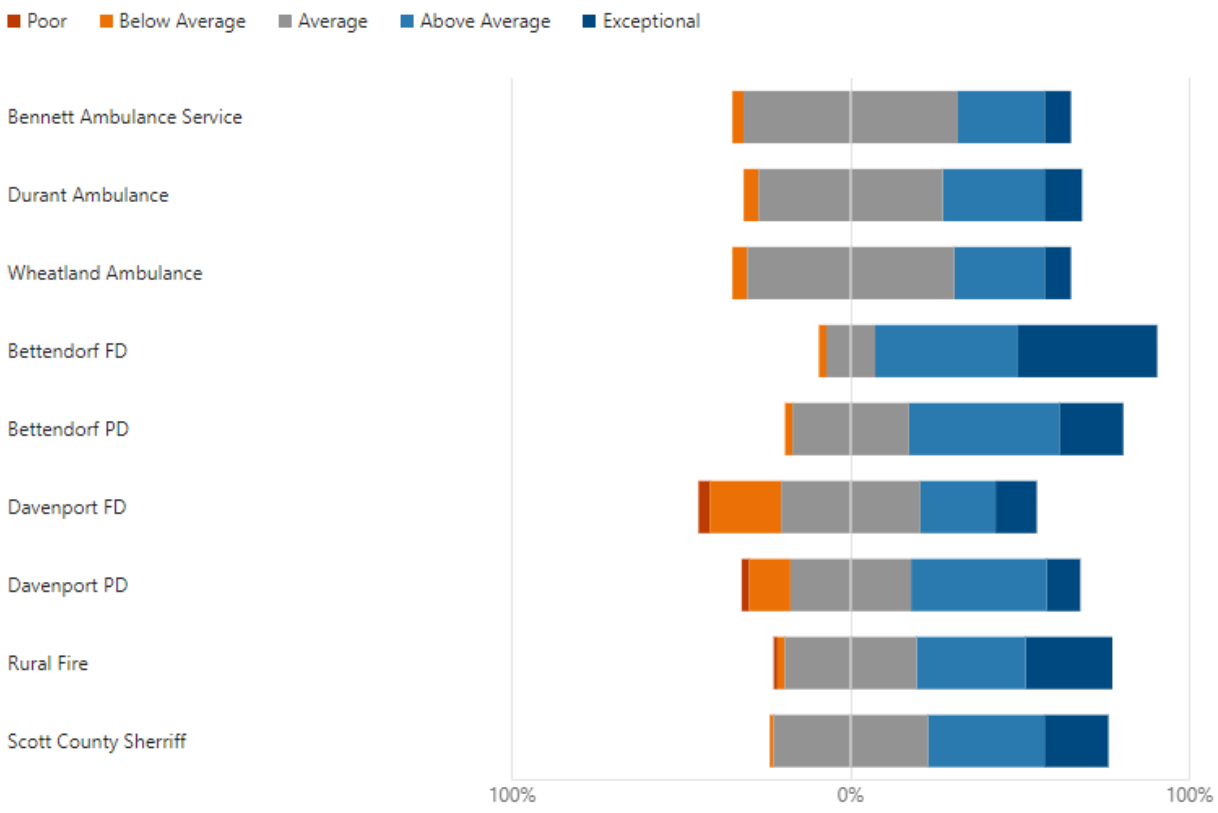
16. What type of station do you prefer?

More Details

| | |
|---|---|
| EMS Only | 16 |
| Shared Fire/EMS location | 20 |
| No opinion | 41 |
| SECC (MED-COM Staff) | 9 |
| Other | 4 |

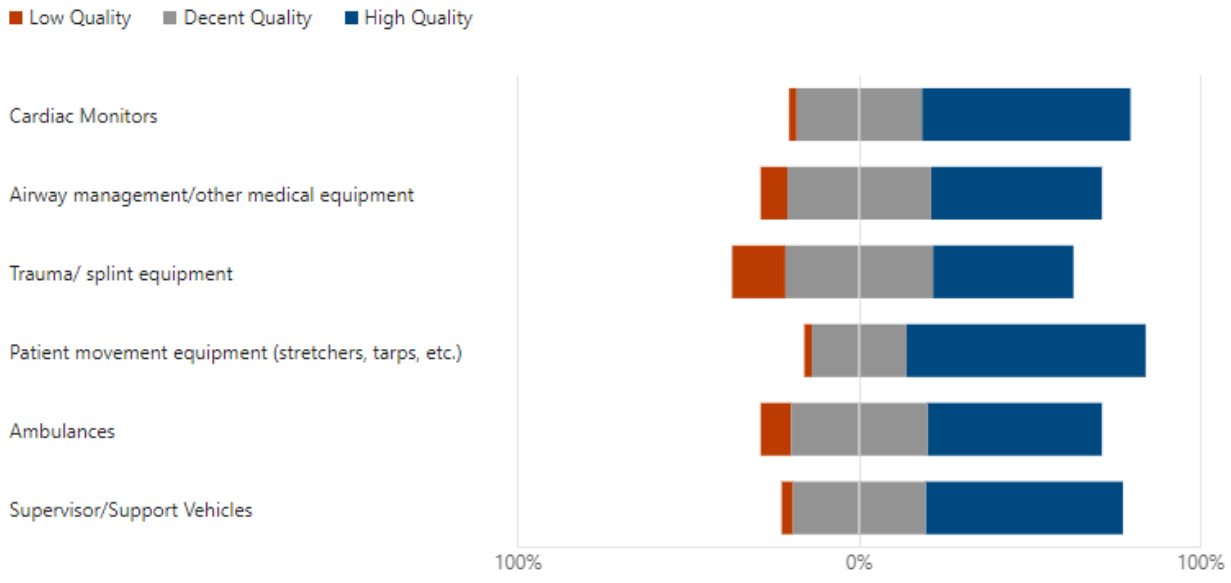
17. How would you rate the general working relationship with the following?

More Details



19. How would you rate the following items?

More Details




20. What is your perception of MEDIC's response times?

22. How would you rate the posting positions and their impact on response times?

More Details

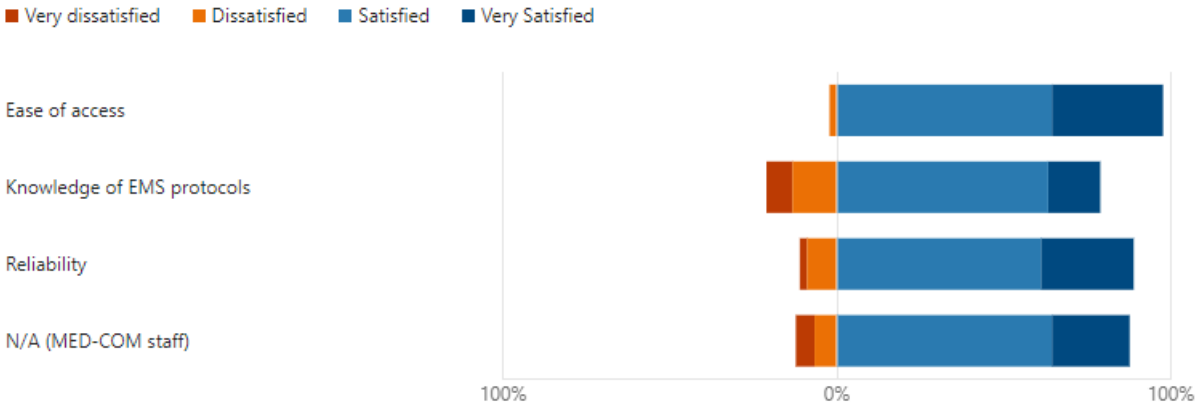
| | |
|---|---|
| Promoters | 20 |
| Passives | 37 |
| Detractors | 33 |


23. How would you rate the level of satisfaction with the MEDIC Medical Director on the following areas?

More Details

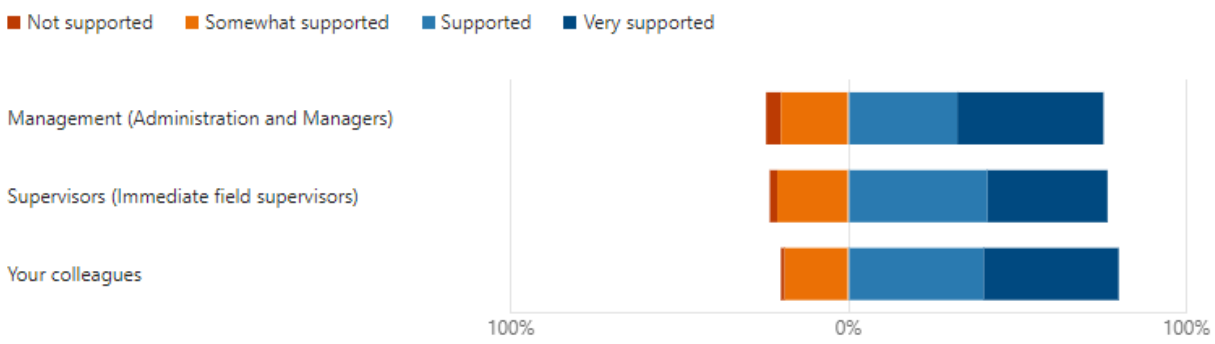

24. How would you rate the level of satisfaction with the ED/Online Medical Direction (on calls/time sensitive) on the following areas?

More Details



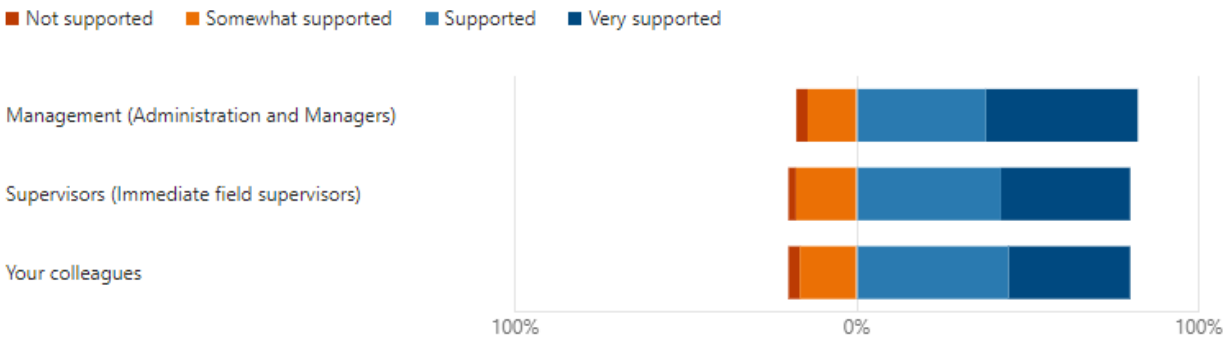
27. How emotionally supported do you feel by the following?

More Details




28. How professionally supported do you feel by the following?

More Details



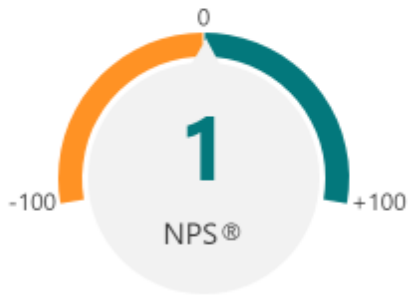

29. Do you feel that employees are recognized when they do a good job or go "above and beyond?"

More Details

30. Overall, how would you rate the culture at MEDIC?

More Details

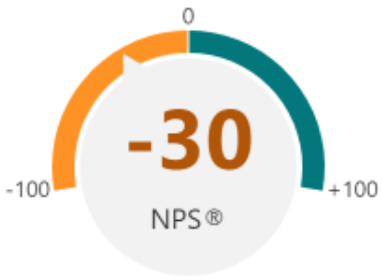
| | |
|---|---|
| Promoters | 19 |
| Passives | 53 |
| Detractors | 18 |




32. Overall, how would you rate your level of stress or burnout related to working for MEDIC?

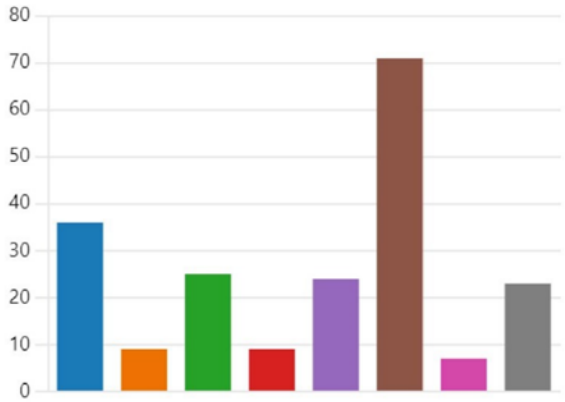
More Details

| | |
|---|---|
| Promoters | 18 |
| Passives | 27 |
| Detractors | 45 |




33. What, if anything, adds to the stress or burnout you experience with MEDIC (select all that apply)?

| | |
|---|---|
| Pay | 36 |
| Transition to the County | 9 |
| High-emotion calls | 25 |
| Dislike of coworkers | 9 |
| Shift schedule | 24 |
| Workload/overtime needs/lack of providers | 71 |
| Nothing | 7 |
| Other | 23 |



34. Do you believe that any of your coworkers are abnormally stressed or "burned-out?"

More Details

| | |
|---|---|
| No | 4 |
| Yes, 1-2 colleagues are | 19 |
| Yes, 3-5 colleagues are | 25 |
| Yes, more than 5 colleagues are | 42 |

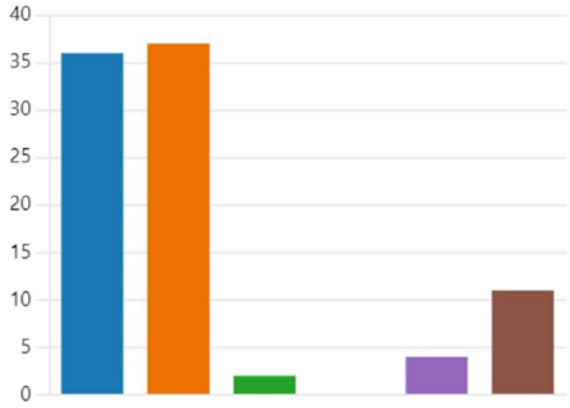
35. Do you believe that there is enough upward mobility and professional opportunity available at MEDIC EMS?

More Details Insights

| | |
|---|---|
| Yes, ample | 10 |
| Yes, some | 36 |
| No | 38 |
| Other | 6 |

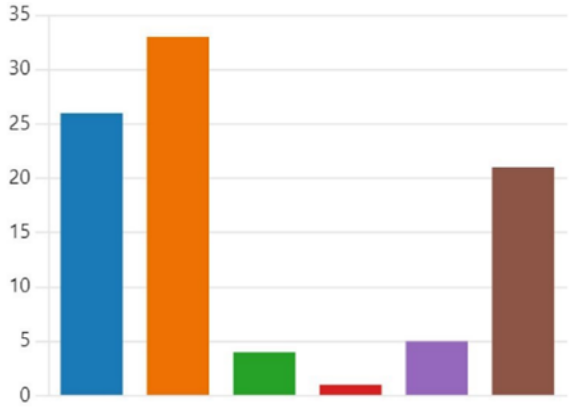
36. What are your short-term plans (1-5 years)?

| | |
|---|---|
| Stay with MEDIC, in the same position | 36 |
| Stay with MEDIC, but pursue advancement | 37 |
| Leave EMS as a whole to pursue another career | 2 |
| Leave MEDIC for another EMS Agency | 0 |
| Leave MEDIC to pursue a fire/paramedic position | 4 |
| Other | 11 |



37. What are your long-term plans (> 5 years)?

| | |
|---|---|
| Stay with MEDIC, in the same position | 26 |
| Stay with MEDIC, but pursue advancement | 33 |
| Leave EMS as a whole to pursue another career | 4 |
| Leave MEDIC for another EMS Agency | 1 |
| Leave MEDIC to pursue a fire/paramedic position | 5 |
| Other | 21 |




39. Do you believe that MEDIC EMS provides the education and training necessary for you to provide equitable training to all members of our community (across all races, socio-economic statuses, gender identities, etc.)?

More Details

| | |
|---|---|
| Yes | 84 |
| No | 6 |

41. Do you believe that MEDIC EMS provides the same level of care to all members of our community (across all races, socio-economic statuses, gender identities, etc.)?

More Details

| | |
|---|---|
| Yes | 86 |
| No | 4 |

43. Do you believe that patient outcomes are the same for all members of our community (across all races, socio-economic statuses, gender identities, etc.)?

More Details

| | |
|---|---|
| Yes | 76 |
| No | 14 |

45. Do you feel that MEDIC EMS fairly and equitably recruits job candidates?

More Details

| | |
|---|---|
| Yes | 87 |
| No | 3 |

47. Do you feel that MEDIC EMS fairly and equitably promotes staff?

More Details Insights

| | |
|---|---|
| Yes | 79 |
| No | 11 |

49. How would you rate the level of appreciation and support that MEDIC EMS receives from its citizens?

More Details

| | |
|---|---|
| Promoters | 15 |
| Passives | 35 |
| Detractors | 40 |