

2019

Evaluation of

Emergency Medical Services

for

Boardman Township



Executive Summary

The Boardman Township Exploratory EMS Committee describes their recommendations to address concerns regarding the ability of the private ambulance companies to deliver timely 911 response to the residents of Boardman Township. Trend reports of quality metrics demonstrated the increased demand for Emergency Medical Services in Boardman Township, resulting in 911 response times of an ambulance crew on scene as low as 6 minutes 66% of the time. This is outside the specification established by the Memorandum of Understanding Boardman Township currently has with Lane Life Trans¹ for Emergency Medical Service (EMS) calls for township constituents. Current 911 response of Boardman Fire in a fire truck to the scene of a 911 call averages 4.5 minutes. The crew is equipped to provide basic life support and must transfer care to a transporting ambulance service in the current model. There is an upward trend of EMS calls over recent years, which will exacerbate delays in 911 responses to our community.

In December 2018, the Boardman Township Elected Officials laid out guidelines for creation of a Boardman Township Exploratory EMS Committee to explore options for feasibility of Emergency Medical Services in Boardman Township. This document summarizes Boardman Township Exploratory EMS Committee findings and outlines recommendations for most effective and efficient way to ensure Emergency Medical Services for Boardman Township.

Committee Composition and Charge

Seven stakeholders within the community with experience and knowledge in the following relatable fields such as medical, insurance, business professional, and/or legal expertise, with one being a non-industry related resident were selected to serve in the Township Exploratory EMS Committee. Three township employees, specifically, the Township Administrator, Fire Chief and Police Chief provided information, resources, contacts, and served to coordinate meetings, by keeping meeting notes and minutes.

The Elected Officials wanted members of this Committee to be from related fields of business that could help provide insight and expertise in the review and analysis. The Committee Members are:

- Thomas Sanborn, LLC
Attorney at Law
- Daniel Segool, Assistant Vice President / Business Banking Lender
Chemical Bank
- Teresa Volsko, MBA, MHHS, RRT, CMTE, FAARC
Director, Respiratory Care, Transport and the Communication Center
Akron Children's Hospital
- Jeff Michalenok, Former Partner
Cailor Fleming Insurance
- Maryann Forrester, BSN, RN, NRP, EMSI, CCISM
EMS Program Coordinator
Akron Children's Hospital
- Amanda Lencyk, MSN, RN, ACNS-BC, CEN, TCRN
Trauma Injury Prevention and Outreach Coordinator
St. Elizabeth Youngstown Hospital
- Joseph Mistovich, Chairperson & Professor
Department of Health Professions
Youngstown State University
- Mark Pitzer, Boardman Fire Chief
- Todd Werth, Boardman Police Chief
- Jason Loree, Boardman Township Administrator

The committee was educated on the current process for dispatching and responding to 911 or emergency medical service calls, evaluated the costs associated with complimenting the current system by providing a this service through the Boardman Fire Department. Data obtained and used in the analysis included:

- Equipment Start-up, maintenance and replacement cost
- Personnel Cost (Structure, Training, Staffing, and Management)
- Emergency Medical Dispatching Cost as it relates to the COG (Training, Staffing, and Management)
- Current service model in Fire Department
- Community Needs

Current Operational Model

The EMS model in Boardman Township consists of a two-tier response which includes a fire department resource, along with the contracted private ambulance provider. Each of the three fire stations are staffed with firefighters who are medically trained at various skill levels. EMS Protocol is provided through Trumbull Memorial Hospital which allows our personnel to function at their level of certification as directed by Dr. Swift. Currently, the department is staffed with 11 Paramedics, 2 Advanced EMTs, 15 Basic EMTs, and 10 Emergency Medical Responders (EMR). The fire department arrives on scene prior to the ambulance company nearly 50% of the time. During these critical minutes our personnel begin to provide patient care with equipment available on the fire apparatus including an AED, medical and trauma supplies, oxygen, BLS drug kit, IV supplies, and intubation equipment. The current compliment of EMS equipment allows our crews to initially stabilize a patient.

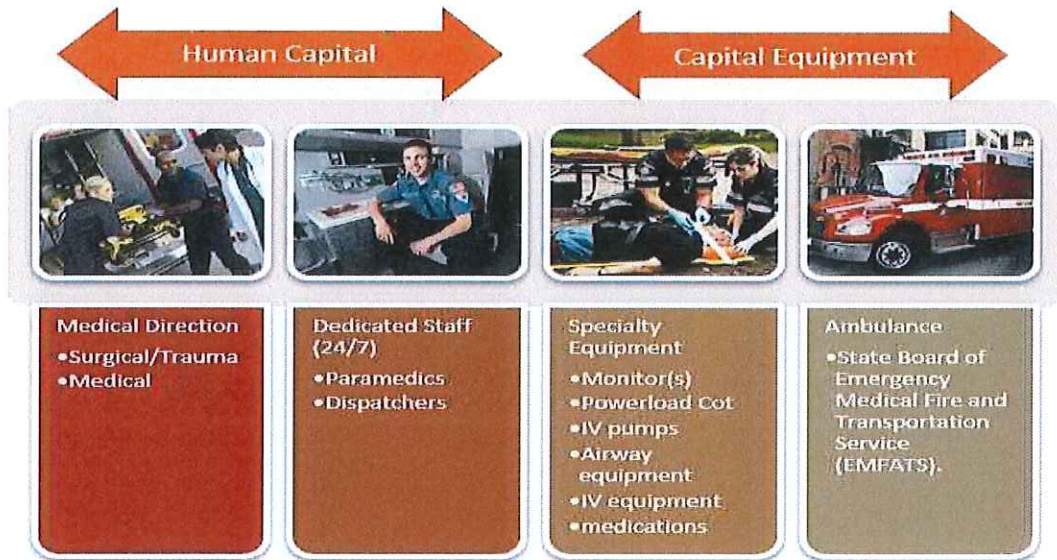
The current demand for medical services in Boardman Township is high. The Boardman community is unique in the fact that we are the mecca for activity in the Mahoning Valley. Our residential population is 40,000; however, the day time population swells to nearly 100,000, due to Boardman having a significant commercial setting that includes various businesses, industrial, retail, dining, and a large medical service presence. The average call volume for medical emergencies is 12 calls per day and many days that demand is even higher. The unique aspect of this call volume comes in the way of multiple calls occurring simultaneously. On average, there are 122 times a month where we have 2 or more emergency calls occurring simultaneously.

Boardman Township has joined a council of governments (COG) with Austintown and the Mahoning County Sheriff's Department. Under this COG, a joint radio system was purchased, and the consolidation of the Sherriff's Dispatching Center with Boardman and Austintown Township occurred. There is a protocol set by the State of Ohio that requires any agency providing EMS services must provide emergency medical dispatch (EMD). This requires a Dispatcher to stay on the call with the caller until the EMS crew arrives on scene providing instructions to support the best possible outcome for the patient. Additional training, software and staffing are needed to meet this requirement. Dispatcher turnover is higher due to the nature of the job and the system used to aid them is just being upgraded. The upgrades to the Computer Automated Dispatching software, voice call logger, and county 911 software are all in progress. While the CAD upgrade may have a positive impact on dispatch personnel requirements, it's expected that meeting adequate staffing levels in the Boardman Communications Center will continue to be a challenge.

Options

Option	Benefits	Risks
No change in the current model	No financial impact on the township or its constituents	Risk for adverse events due to 911 response time delays, including temporary or permanent harm including risk of death.
Single EMS unit model - operating out of the main fire station	Does not improved 911 or emergency medical service to the community	<p>Only addresses a small portion of the need.</p> <p>Does not negate the need for contracted services from private ambulance company.</p>
Double EMS unit model - operating from the main fire station and/or a second fire station.	<p>Improved 911 or emergency medical service to the community.</p> <p>Fewer responses to a medical call by a fire truck and crew.</p>	<p>Does not adequately address the community need.</p> <p>There would be an increased need for outside ambulance companies to provide backup.</p>
Three EMS unit model	<p>Serves a majority of the 911 or emergency medical service community needs</p> <p>Can be implemented effectively with mutual aid agreements to accommodate surge.</p> <p>Ability to extend the life expectancy of current fleet of fire apparatus due to approximately 50% decrease in fire truck responses to 911 calls.</p>	Financial implications *Refer to capital investment and summary of the financial commitment below.

Capital Investment



Financial Commitment

A snapshot of the financial analysis is found below. This is based upon a full workbook found in Appendix B.²

	Year 1	Year 2	Year 3
Expense			
Capital			
Ambulance	\$ 166,282.41	\$ 166,282.41	\$ 166,282.41
Buildings	\$ 3,082.40	\$ 2,080.62	\$ 2,184.65
Vehicle Replacement Fund	\$ 70,000.00	\$ 70,000.00	\$ 70,000.00
Salaries and Benefits			
Personnel	\$ 1,308,487.53	\$ 1,426,284.70	\$ 1,554,103.56
Operating Costs			
EMD Software	\$ 120,859.00	\$ 11,700.00	\$ 11,700.00
Fire Training Cost	\$ 1,000.00	\$ -	\$ 1,000.00
Dispatch Training Cost	\$ 28,215.00	\$ 7,120.00	\$ 7,120.00
Drug Cost	-	-	-
Fuel Cost	\$ (10,539.56)	\$ (9,907.10)	\$ (9,312.67)
Insurance Cost	\$ 1,487.03	\$ 1,487.03	\$ 1,487.03
Maintenance	\$ (700.00)	\$ (700.00)	\$ (700.00)
Total EMS Program Expense	\$ 1,688,173.81	\$ 1,674,347.66	\$ 1,803,864.98
Revenue			
Insurance	\$ 363,698.50	\$ 385,520.41	\$ 408,651.64
Medicaid	\$ 30,505.64	\$ 32,335.98	\$ 34,276.14
Medicare	\$ 391,867.00	\$ 415,379.02	\$ 440,301.76
Private Care	\$ 187,834.50	\$ 199,104.57	\$ 211,050.84
Total Revenue	\$ 973,905.64	\$ 1,032,339.98	\$ 1,094,280.38
Operating Margin			
	\$ (714,268.17)	\$ (641,375.22)	\$ (708,357.71)

"Year 1" will have "start-up" cost associated with hiring, training, equipment, and software. Revenues listed above were done with the assumption that everything is in place to run an EMS at the start of a year. This highlights the need for having "start-up" revenues established and understanding what billing model will be pursued. Those two factors will ultimately impact the how this program moves forward for sustainability of the service.

Options for Operationalizing EMS Services

Option	Detail
Hard Bill for all EMS services	All patients (residents and non-residents) would receive a bill and would be responsible for any amounts not covered by insurance.
Soft Bill	Boardman residents insurance would be billed. Township would write-off remaining balance (no co-pay for residents). Hard billing will continue for non-residents.
No Bill	Township will subsidize EMS services for residents. No bill will be presented to their insurance company. Hard billing will continue for non-residents.

Due to the inability to differentiate residents versus non-residents on call volumes (this information is not tracked), the financial analysis was based on only option two, soft billing. Changing to option one would decrease the amount of funding needed to support the EMS system and option three would increase the amount of funding needed to support the EMS system.

Supplemental information is found in Appendix C.³

Recommendation

In studying EMS in Boardman, the committee found that the issues facing Boardman are not unique to our community, but are, in fact, part of a trend that is seen nationwide. The issue of increased response times is being experienced in many municipalities. It is also reasonable to assume that the problem will get worse over time given the increasing demand for EMS in our community.

The committee believes that a proactive response is warranted, rather than waiting for the situation to reach a critical stage. In addition to our specific recommendation, the township would be well served to investigate any partnerships that may be developed within the area.

There is no one recommendation that will eliminate all the issues faced in EMS, so we don't present our recommendation as an absolute solution. We believe this is not the end, but rather the beginning of an important community conversation.

It is the recommendation of the Boardman Township Exploratory EMS Committee to support a three-unit model. This means locating an ambulance and crew at each fire station in Boardman. It will provide the most timely, efficient and effective emergency medical service to the constituents of Boardman Township. We acknowledge that this model will require funding above and beyond the expected revenues generated by billings.

We believe it is important for the residents and leaders of our township to have an open dialog surrounding the issues we face and how to fund the solutions we consider. We thank the Trustees for the opportunity to serve our community through this committee.

END NOTES:

¹ Appendix A: Memorandum of Understanding between Boardman Township and Lane Ambulance

² Appendix B: Full financial workbook

³ Appendix C: Supplemental supporting documents