SENECA COUNTY EMS

A 2017 EMS SYSTEM ASSESSMENT

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Frequently Used Acronyms

The Emergency Medical Services field makes frequent use of acronyms that may not be familiar to many persons. To reduce confusion for the purposes of this report the following acronyms are defined as:

ALS	Advanced Life Support (i.e. EMT-I/AEMT or paramedic level agency)
BLS	Basic Life Support (i.e. EMT/EMR level agency)
CAH	Critical Access Hospital
CAAS	Commission on the Accreditation of Ambulance Services
CAMTS	Commission on the Accreditation of Medical Transport Systems
CE	Continuing Education
CISD	Critical Incident Stress Debriefing
ED	Emergency Department
EMD	Emergency Medical Dispatch (pre-arrival instructions for 911 calls)
EMR	Emergency Medical [First] Responder
EMS	Emergency Medical Services
EMT	Emergency Medical Technician certified by Ohio
EMT-I/AEMT	EMT certified by Ohio at the Intermediate level (ILS)
IFT	Interfacility Transfer
MICU	Mobile Intensive Care Unit
Paramedic	Paramedic certified by Ohio (ALS)
PIER	Public Information, Education, and Relations
PMD	Physician Medical Director
PSAP	Public Safety Answering Point
ODPS	Ohio Department of Public Safety
ODOH	Ohio Department of Health
SCEMS	Seneca County EMS
SNF	Skilled Nursing Facility

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Executive Summary

The Paramedic Foundation was engaged by the state of Ohio Department of Health's Office of Rural Health to conduct an assessment on behalf of the citizens of Seneca County, Ohio. This effort was funded entirely by the Medicare Rural Hospital Flexibility Grant Program.

Emergency medical services (EMS) in general, but especially EMS in rural and small-town America, continues to be influenced by the unique way it developed over the last 50+ years. Ohio, as most other states, do not have laws mandating that any form of local or regional government provide EMS. The amount of EMS and the level of care provided is a local issue and has become a product of historical precedent and local initiative.

Modern EMS has roots in the 1960s yet over the last four decades, EMS in most rural communities, has been heavily subsidized by volunteers who donate their time to staff emergency medical response and transportation. EMS agencies that are dependent on volunteers for staffing and fund-raising for revenue have found advancement difficult. It is a challenge to assure a timely response in these settings. In the current era of preparing public safety for effective response to manage natural disasters and other events, the reality of rural/frontier EMS is that the infrastructure upon which to build such a response is itself in jeopardy.

In any given year, roughly seven out of ten Ohioans *do not* engage in *any* organized volunteer work at all. In 2014, only 27.5% of all Ohioans reported any involvement with formal volunteer work during the year. A clear majority of Ohioans, it is clear, simply do not give back to their communities in this way. At the same time that demand for EMS has grown, volunteerism in many communities has noticeably declined in the last decade.

In 2016, the nationwide average value of a volunteer's hour was $24.14 while in Ohio it was $22.99 per hour[1]. For one Ohio ambulance to be staffed 24 hours a day, 7 days per week for a year, the volunteers are contributing $402,785 (8,760 * 2 = 17,520 * 22.99 = $402,785) in free labor to the community per pair of volunteer ambulance staff. In Seneca County, this is multiplied by six, the number of ambulances in the county, to determine the total annual volunteer contribution as $2,416,710.

Further, with regionalization of specialized hospital medical services such as burn, cardiac, stroke and trauma care, EMS is performing more patient transfers to regional specialty care facilities from more distant rural hospitals. There is a need to address IFTs originating from Seneca County's hospitals. The current process negatively affects patients, strains the hospital's capacity to house patients, and provides a negative community image with tremendous and often unnecessary delays.

[1] The Independent Sector. The Value of Volunteer Time. 2017. https://www.independentsector.org/resource/the-value-of-volunteer-time/

In 2016, the Wisconsin Office of Rural Health developed and published 18 Attributes of Successful Rural Ambulance Agencies. Members of our project team were expert advisors to the process and we were the author of the accompanying "EMS Attributes of Success Workbook". This document has served as the cornerstone for rural EMS development ever since and led to the development of a survey for Ohio rural EMS agencies.

This survey provides an opportunity to seek out areas where changes could be made to increase the success of a rural EMS agency. It is impractical to expect that all 18 attributes can be addressed at one time, however, we have provided a series of findings and recommendations based on these to allow Director Majors to seek support and begin implementation of these best practices.

Introduction to challenges in rural EMS

Emergency medical services (EMS) in general, but especially EMS in rural and small-town America, continues to be influenced by the unique way it developed over the last 50+ years. Modern EMS has roots in the 1960s when concerns about soaring highway traffic deaths on newly constructed highways and turnpikes led the federal government to fund a study on accidental death in America[2]. The resulting 1966 report highlighted the need for improved prehospital emergency medical services, especially in rural areas where trauma injuries and deaths were (and remain) most prevalent. Congress responded and began funding EMS development through a variety of pilot projects and funding mechanisms.

In 1973 Congress passed and the president signed the Emergency Medical Services Systems Act[3] which eventually led to the formation of a plan for the development of geographic EMS regions across the United States. The framers of the plan wanted to ensure that EMS everywhere met certain standards and envisioned the development of 304 EMS regions that each conformed to 15 "essential EMS components" [4]. In the early 1980s, before these regions could be established and become self-sufficient, federal funding for regional EMS development was eliminated, leaving local communities to develop EMS with little or no regional planning and funding. As a result, EMS did not develop according to any large-scale planning, but simply developed locally and organically where there was need, desire, resources and leadership.

Over the last four decades EMS in most rural communities has been heavily subsidized by volunteers who donate their time to staff emergency medical response and transportation. Volunteerism in many communities has noticeably declined in the last decade. At the same time demand for EMS has grown. With regionalization of specialized hospital medical services such as burn, cardiac, stroke and trauma care, EMS is performing more transfers to regional specialty care facilities from more distant rural hospitals. In some areas, rural health clinics and hospitals have closed, creating even more reliance on local EMS as the healthcare safety net for medical emergencies. In addition, as baby boomers age, many rural areas are seeing a proportional increase of senior citizen residents.

Modern EMS has kept pace with technological and knowledge advancements in medicine. The care provided by paramedics is fast becoming the standard of care throughout the country. These highly trained professionals provide advanced life support medical interventions and stabilization that is especially needed in rural communities, where response and transport times are extended due to the geographic distances. Of equal rural importance are the many EMT trained personnel who volunteer their time to help in these emergency medical situations.

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[2] Division of Medical Sciences, Committee on Trauma and Committee on Shock (September 1966), Accidental Death and Disability: The Neglected Disease of Modern Society, Washington, D.C.: National Academy of Sciences-National Research Council.

[3] Public Law 93-154.

[4] "History" by Post, C. and Treiber, M. in Prehospital Systems and Medical Oversight. A. Kuehl, Ed. National Association of EMS Physicians. Dubuque, IA: Kendall/Hunt Publishing Co. 2002. pgs. 3-19.

Every community deserves an organized, efficient, sustainable and reliable system[5] supported by EMS agencies, fire departments and law enforcement to ensure appropriate health, safety and security for its residents and visitors.

The regionalization of specialized hospital and health system-based medical services adds to the pressure on rural EMS. Local rural hospitals typically are providing basic services and more complex and specialized interventions are being done at urban centers. This increases demand on EMS personnel to transfer patients long distances for specialized services. In some areas, rural health clinics and hospitals have closed, creating more reliance on local EMS agencies as a healthcare safety net in both emergent and non-emergent medical situations.

Overview of EMS in Ohio

Ohio and most other states do not have laws mandating that any form of local or regional government provide EMS. The amount of EMS and the level of care provided is a local issue and has become a product of historical precedent and local initiative.

The Ohio Legislature has enacted many statutes designed to protect the health and safety of persons in Ohio. Monitoring the performance of Ohio EMS agencies and personnel is the responsibility of the Ohio Department of Public Safety (ODPS). Ambulance agencies are inspected randomly and as often as annually by ODPS for compliance with minimum equipment standards.

ODPS also oversees EMS education and licenses EMS practitioners including Emergency Medical Responders, EMTs, Advanced EMTs, and Paramedics to provide specific scopes of practice. The licenses of personnel are renewed by ODPS every two years upon each practitioner completing specific continuing education requirements, as is the custom nationwide.

Another service provided by ODPS is a data collection system called the Electronic EMS Incident Reporting System (EMSIRS). This data collection system is used by EMS agencies statewide. ODPS publishes an annual report of statistics and benchmarks from the statewide EMS agency data submissions.

Rural EMS Challenges in Ohio

The Rural and Frontier EMS Agenda for the Future[6] expresses the following vision for the future of EMS systems such as that found in Seneca County:

> "The rural/frontier EMS system of the future will assure a rapid response with basic and advanced levels of care as appropriate to each emergency, and will serve as a formal community resource for prevention, evaluation, care, triage, referral and advice. Its foundation will be a dynamic mix of volunteer and paid professionals at all levels, for and determined by its community."

[5] An Analysis of Prehospital Emergency Medical Services as an Essential Service and as a Public Good in Economic Theory, National Highway Traffic Safety Administration, 2014

[6] Rural and Frontier Emergency Medical Services: Agenda for the Future. National Rural Health Association. 2004.

Fulfilling this vision requires the application of significant federal, state, and local resources as well as committed leadership at all levels to address such issues as:

- Ability to provide timely public access and deployment of resources to overcome distance and time barriers
- Adequacy of communications and other infrastructure
- Adequacy of data collection to support evaluation and research
- Adequate reimbursement or local subsidies
- Appropriate levels of care and transportation in remote, low-volume settings
- Assurance of on- and off-line medical oversight
- Effective quality improvement
- Staff recruitment and retention
- The role of the volunteer

The Role of Volunteers in Ohio

In 2004 the National Rural Health Association published a vision for the future of rural EMS in the United States and predicted increasing reliance on rural EMS because "rural and frontier settings have limited and shrinking local health care resources"[7]. In 2005, a report from the International City/County Management Association described EMS systems as "Bending – and in some cases breaking – under the strain of rising costs, reduced subsidies, and increasing services expectations."[8] In 2006 the federally funded Institute of Medicine's comprehensive report, *Future of Emergency Care: Emergency Medical Services at the Crossroads*, described rural EMS in America as facing a multitude of challenges. That report stated, "providing adequate access to care presents a daunting challenge given the distances required to provide care and the limited assets available."[9] In 2008, a nationwide assessment of the EMS workforce funded by the federal government and conducted by the University of California, San Francisco, Center for the Health Professions described the recruitment and retention of EMS practitioners as one of the greatest challenges facing rural EMS.[10]

EMS agencies that are dependent on volunteers for staffing and fund-raising for revenue have found advancement difficult. It is a challenge to assure the timely response of a basic life support ambulance in these settings. In the current era of preparing public safety for effective response to manage natural disasters and other events, the reality of rural/frontier EMS is that the infrastructure upon which to build such a response is itself in jeopardy.

[7] Rural and Frontier Emergency Medical Services: Agenda for the Future. National Rural Health Association. 2004. p.5.
[8] EMS in Critical Condition: Meeting the Challenge. International City/County Management Association IQ Report. Volume 37/ Number 5, 2005.
[9] Future of Emergency Care: Emergency Medical Services at the Crossroads. Institutes of Medicine of the National Academies. 2006. p. 48.
[10] EMS Workforce for the 21st Century: A National Assessment. National Highway Traffic Safety Administration: Office of Emergency Medical Services. 2008. p. 59.

Volunteer and other rural/frontier EMS practitioners often lack preparation with which to best serve certain community groups and members such as children, the elderly, minority groups, migrant/immigrant workers, farm/ranch families, and persons with disabilities. Volunteer EMS agencies provide a vital community service and an opportunity for social membership, community service fulfillment and recognition, and self-improvement and diversion for their members.

Cycles of episodic hospitalization increase the need for primary care as rural and frontier populations age. As a community's local health resources disappear, the more that community calls upon its EMS practitioners not only for traditional care and transportation to distant resources; but for a range of informal care, evaluation and advice. This expectation is sometimes managed in concert with an informal arrangement with local primary care practitioners and sometimes not, and may extend beyond the generally basic life support scope of practice of a local EMS agency.

Excerpted from the 2016 Ohio Civic Health Index Report[11]*:*

> Volunteerism has proven to be a useful indicator of a community's overall vitality and sense of civic connectedness. A 2011 Points of Light Institute report noted, high rates of volunteer service in a community often correlate with other social 'positives' such as heightened feelings of social trust, higher levels of public safety, increased rates of political participation, and greater levels of cooperation across cultural and economic lines[12].
>
> In any given year, roughly seven out of ten Ohioans *do not* engage in *any* organized volunteer work at all. While millions of volunteer hours are logged by Ohio volunteers each year, it turns out this work is highly concentrated within quite a small portion of Ohio's population. In 2014, only 27.5% of all Ohioans reported any involvement with formal volunteer work during the year. A clear majority of Ohioans, it is clear, simply do not give back to their communities in this way.
>
> Those Ohioans who do volunteer now spend considerably less time on that task than they used to. In fact, the Buckeye State has experienced a long-term decline in total hours devoted to volunteer service that is quite striking with a remarkable 20% drop in aggregate hours since 2006.
>
> Perhaps most alarmingly, participation in volunteerism is now the lowest among Ohio's youngest adults. At least in the 2013 Census Current Population Survey (CPS)[13] data on

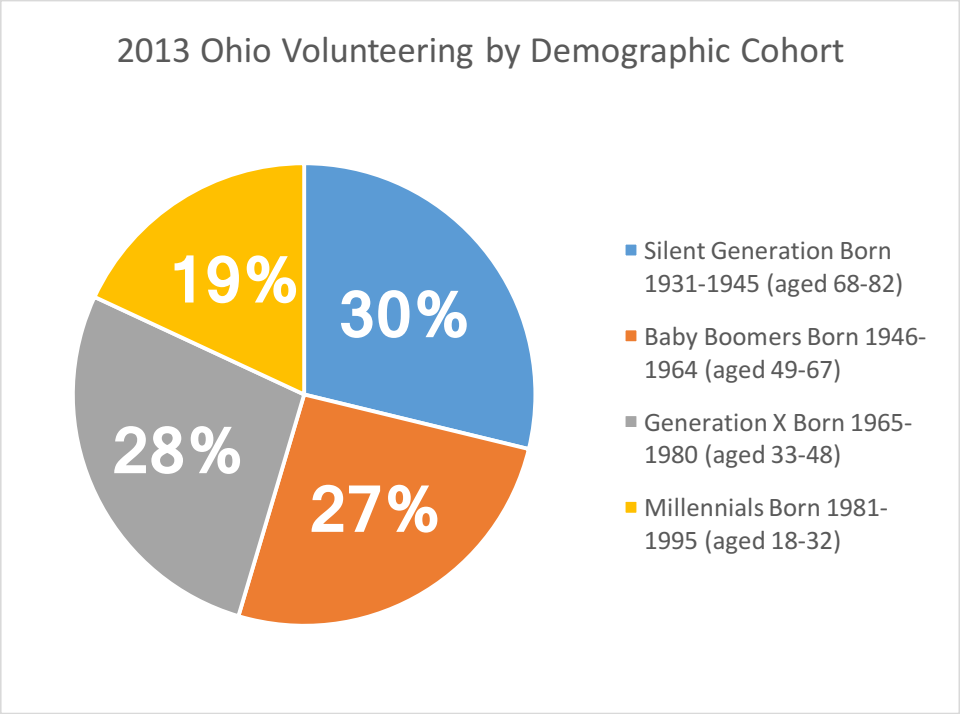
[11] Forren JP., Conover TE. 2016 Ohio Civic Health Index Report. 2016. National Conference on Citizenship (NCoC) & Miami University. http://www.ncoc.org/wp-content/uploads/2016/11/OHCHI_2016_FINAL_20160919.pdf

[12] Huiting Wu. Social Impact of Volunteerism. Points of Light Institute. 2011. http://www.pointsoflight.org/sites/default/files/site-content/files/ social_impact_of_volunteerism_pdf.pdf

[13] The CPS is a part of a broader survey effort that gathers data from approximately 60,000 U.S. households every month. The civic health data featured in this Report is derived from the 2013 September Volunteering Supplement and the 2013 Civic Engagement Supplement.

volunteerism and age, a clear difference can be found between the self-reported volunteer service rates of Ohio's Millennials – those in their late teens, twenties, or early thirties – and those of virtually everyone else in the state. Figure 1 summarizes the relevant 2013 data:

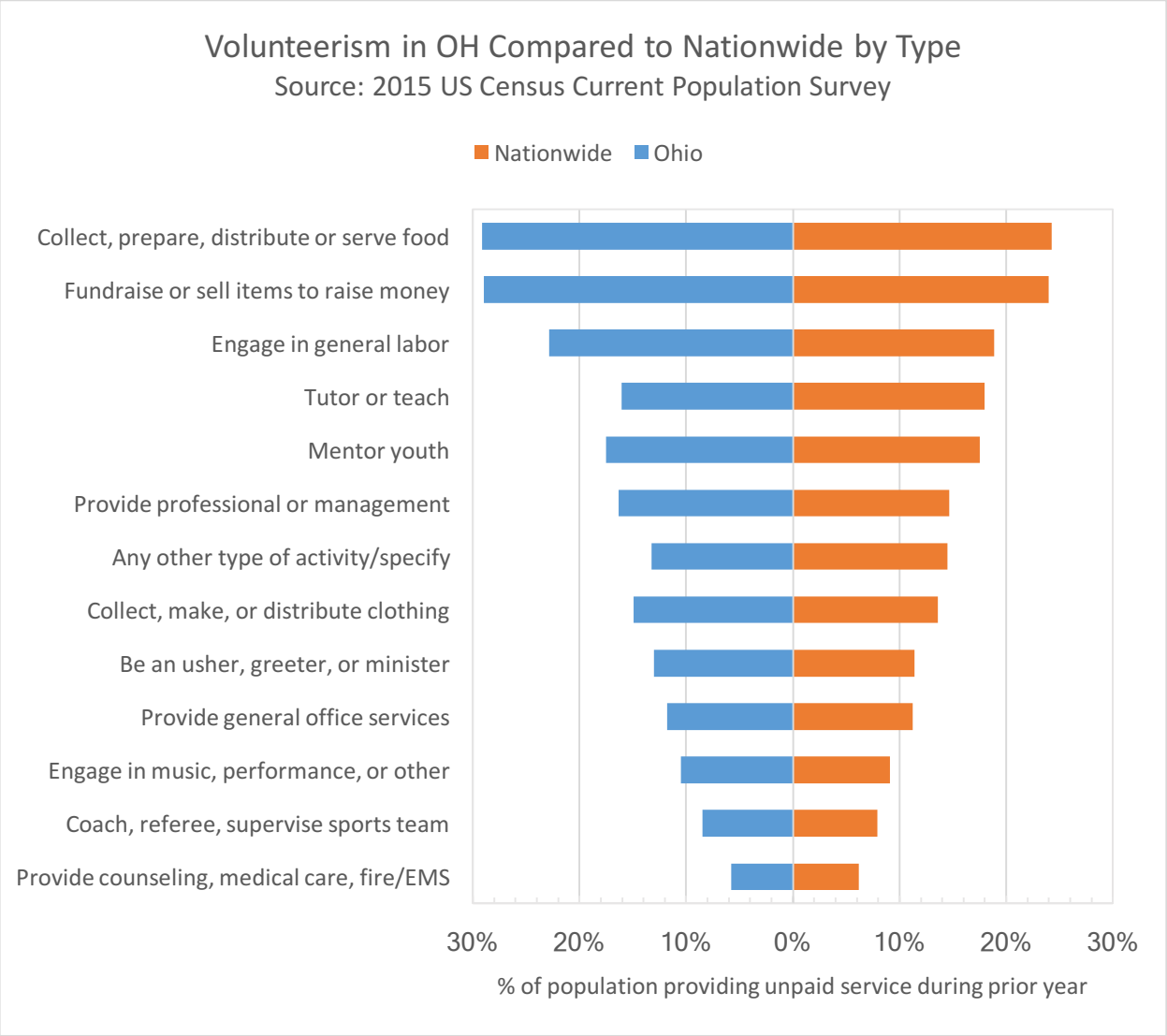
Figure 1: 2013 Ohio Volunteering by Demographic Cohort



During 2013, the data show that fewer than one-in-five Ohioans aged 18-32 engaged in any volunteering within their communities. All other age cohorts, by contrast, exceeded rates of 25%. Why is this difference in volunteering rates between younger and older Ohioans so alarming? Because research on civic engagement tells us that early involvement in community-based action is often critical in shaping an individual's lifelong patterns of involvement in civic and community affairs. Simply put, if many of Ohio's young people today are failing to develop the 'habit' of giving back to their communities at an early age, the implications of that personal disengagement from others may be felt in the Buckeye State's communities for decades to come.

Of greater concern to Seneca County is the impact these trends are having on its EMS system. Figure 2 shows that those that do volunteer are choosing to volunteer more for every other category than they are for "counseling, medical care and fire/EMS, and protective services". This is not surprising when one considers the more significant barriers in place for a medical practitioner versus someone serving in the soup kitchen once a year, or fundraising for a child or school activity.

Figure 2: Volunteerism in Ohio compared to national volunteerism



The Value of Volunteers in Ohio

It can be very difficult to put a dollar value on volunteer time because they provide many intangible services that cannot be easily quantified. For example, volunteers demonstrate the amount of support an organization has within a community, provide work for short periods of time, and provide support on a wide range of projects in ways that paid staff may not be able or willing to do.

The Independent Sector organization calculates the value of a volunteer hour that meets Financial Accounting Standards Board (FASB) standards and therefore is used by the federal government and other organizations for calculating the value of volunteer services. The Independent Sector's determination can be used on financial statements –- including

statements for internal and external purposes, grant proposals, and annual reports for valuing volunteers performing a specialized skill for a nonprofit or governmental entity.

In 2016, the nationwide average value of a volunteer's hour was $24.14 while in Ohio it was $22.99 per hour[14]. For one Ohio ambulance to be staffed 24 hours a day, 7 days per week for a year, the volunteers are contributing $402,785 (8,760 * 2 = 17,520 * 22.99 = $402,785) in free labor to the community per pair of volunteer ambulance staff. This is multiplied by six, the number of ambulances in the county, to determine the total volunteer contribution in Seneca County as $2,416,710.

Financial Challenges for Rural EMS in Ohio.

Under Medicare, reimbursement for EMS is tied to the transportation of a patient regardless of the need to provide emergency medical care. Managed Care Organizations (MCOs) have in some cases sought to limit access to EMS for their beneficiaries by narrowing the definition of "medical emergency" and the need for "emergency care" to an after-the-fact medical review determination, rather than a patient-centered decision as would be made by a "prudent layperson" at the time of the event[15]. Some MCOs also have instructed patients to call their primary care physicians prior to dialing 911, which may unnecessarily delay needed emergency care.

Many ground and air EMS agencies have experimented with subscription programs. Some have been abandoned when state insurance rules interpreted that they may constitute illegal insurance programs; when they require the billing of non-subscribing patients as well; or, when Medicare requirements for documentation of fees became too complex for smaller agencies.

The bill balance after all insurance has paid an air ambulance company can amount to thousands of dollars. As a result, optional membership programs have been developed by many of the national air medical agencies in areas where they would be the normal requested service.

It is normal for an agency in an isolated community to have a 30 percent to 50 percent "no transport" rate in a state that runs a 10 percent to 20 percent rate overall. It is also normal for members of such an agency to provide episodes of informal evaluation, advice, and care that are never reflected in an EMS patient/run record because an ambulance was not dispatched. These anomalies preclude billing where only patient transports are considered by the payer as a reimbursable service.

[14] The Independent Sector. The Value of Volunteer Time. 2017. https://www.independentsector.org/resource/the-value-of-volunteer-time/

[15] Rural and Frontier Emergency Medical Services: Agenda for the Future. National Rural Health Association. 2004.

Knowledge Sharing for System Success

(alphabetical order does not rank level of importance or concern)

Air Medical Agencies

Air medical agencies are vital in rural areas not only to whisk critically ill or injured patients from the scene or local hospital to specialty centers, but in many areas as the sole source of advanced life support. Many air medical agencies report back to local EMS on their patients and fill a feedback void that specialty centers may leave. Other air medical agencies represent an additional "step-removed" in patient information and feedback flow between local EMS practitioners and distant medical centers. This may become more pronounced as improved Medicare air medical agency reimbursement brings more agencies (sometimes in an uncoordinated/unregulated fashion) into the EMS continuum. In addition, there may be increased requests to use air medical services for rural/frontier patient access to time-dependent specialty interventions (e.g., emergency cardiac catheterization and angioplasty for chest pain patients).

Communication

A reliable communication system is an essential component of an EMS system.
The agency is responsible for utilizing a communication system that is compatible with their local dispatch agency and area hospitals. There is a common statewide radio system that allows for direct communication between all practitioners and facilities to ensure that receiving facilities are ready and able to accept patients and maintain patient and practitioner safety. Consultation with specialty and definitive care facilities is readily available. Minimum standards for dispatch centers are established, including protocols to ensure uniform dispatch and standards for dispatcher training and certification. The center provides certified Emergency Medical Dispatchers (EMD) with a system of priority dispatch. There is an established mechanism for monitoring the quality of the communication system, including the age and reliability of the equipment.

Community Expectations

The presence of an EMS agency in town does not mean that the agency is well integrated into the community or the healthcare system. Members of the community at large, and even its leaders, often do not understand the type and level of care the EMS agency provides. Citizens may expect a paramedic level of care in their community because of popular film and television programs and images of EMS. The actual level of care is rarely discussed in community forums. Tourism and the migration of residents from urban/suburban locales to rural/frontier areas may also import expectations of urban levels and type of EMS response.

The lack of an accurate understanding of what local EMS agency is providing, what other options exist, and what the community's cost would be for such options are barriers to community integration of EMS. Many rural/frontier agencies have come to the brink of extinction or have closed their doors before a community discussion has taken place. In other

places where such discussions have been held, communities have diverted scarce local tax dollars to preserve a more rapid, local advanced level of care.

Regardless of outcome, the community's ability to understand, know options for, discuss, and choose the type and level of care it wishes to have and fund is important. This process of "informed self-determination" (citizens being informed of, and selecting among alternative levels and type of EMS response and their attached price tags), is fundamental to the community integration of EMS. Consumers may subconsciously expect advanced levels of EMS care but have little idea of the level of care actually provided in their community. If there is a discrepancy between the two, they do not realize it, nor seek an opportunity to participate in determining the level of care to be afforded. When used in Maine[16] the process of "informed self-determination" resulted in selection of paid, paramedic staffing despite significant cost increases.

Where a single rural/frontier agency might be unable to sustain basic or advanced levels of care, or assure certain business, operations or clinical functions, multiple agencies have demonstrated the ability to regionalize or otherwise cooperate to do so. Regionalizing has enabled them to share services such as alternative forms of advanced life support intercept, medical oversight, billing, quality improvement, and to seek financial support on a greater geographic basis such as a county or regional tax district.

Rural and frontier settings such as Seneca County have limited and shrinking local health care resources (e.g., physician practices, hospitals); and these are separated from other sources of care by geographic and organizational barriers.

Critical Access Hospitals

The impact of closure of rural/frontier hospitals in the 1990s was addressed in part when Congress established Critical Access Hospitals in 1997. Other than reimbursement provisions for isolated ambulance agencies that are owned and operated by those hospitals, there has been no federal (and limited state) focus on maintaining a safety net of "critical access ambulance agencies". Pressure on Congress to address the rural problem in EMS reimbursement and financing is countered by concerns over reducing reimbursement for urban agencies in a federal health policy that resists increasing the overall EMS patient care reimbursement pot. Surveys of state EMS directors in 2000 and 2004 placed financing among the top four most important issues for rural EMS.

Education and Training

EMS practitioners can perform their mission only if adequately trained and available in sufficient numbers within their agency. The agency has a mechanism to assess current manpower needs and establish a comprehensive plan for stable and consistent EMS training

[16] Rural and Frontier Emergency Medical Services: Agenda for the Future. National Rural Health Association. 2004. p31.

programs with effective local, regional, and state support. The competence of all out-of-hospital emergency medical care personnel is assured by the state on an ongoing basis.

Agency management provides quality leadership through participation in management courses. The agency management, in conjunction with state and institutional support, assures that EMS personnel have access to specialty courses covering topics such as trauma life support, cardiac care and pediatric patients. Personnel maintain a working knowledge of the Critical Access Hospital (CAH) designation and its potential impact on the EMS system.

Facilities

It is imperative that the seriously ill or injured patient is delivered in a timely manner to the closest appropriate facility. The agency participates in a formal system of identifying the functional capabilities of all health care facilities that receive patients from the out-of-hospital emergency medical care setting. This determination is free of political considerations, updated on a regular basis and includes stabilization and definitive care. The agency makes determinations about patient destination in accordance with clinical protocols that address patient conditions of all types, including patients requiring specialty care (such as severe trauma, burns, spinal cord injuries and pediatric emergencies), and when necessary, on-line medical direction.

All facilities to which the agency might transport proactively notify transport organizations or their communications centers when diversion is necessary. Hospital staff routinely participates in telecommunications with prehospital care practitioners and other hospitals when requested to facilitate patient care information and destination determinations. The health care facility assists with logistical support of the EMS system and provides feedback to the agency medical director regarding the patient care provided by the transporting agency. EMS practitioners maintain an understanding of the capabilities of area healthcare facilities.

Funding and Policy

To provide a quality and effective system of emergency medical care, each EMS agency must have in place a consistent, established funding source to adequately support the activities of the agency. This agency has the authority to plan and implement an effective EMS system, abiding by State and local rules and regulations for each recognized component of the EMS system (certification, licensure, standardized treatment, transport, communication and evaluation, services and establishment of medical control). There is a consistent, established funding source to adequately support the activities of the agency and other essential resources which are necessary to carry out the duties as determined by local authority.

The agency operates under a clear management structure with standard operating procedures. The public has a well-defined, easily accessible mechanism for identifying and commenting on policy governing the EMS system. The role of any local /regional EMS agencies or councils who are charged with implementing EMS policies is clearly established, as well as the relationship between agencies. Supportive management elements for planning and developing an effective

EMS system include the presence of a formal EMS medical director, and an EMS Advisory Committee or equivalent for review of EMS medical care issues. The EMS Advisory Committee has a clear mission, specified authority and representative membership from all disciplines involved in the implementation of EMS systems.

Leadership for Survival

Agency chiefs of volunteer agencies find themselves in their positions for many good reasons, but not often because of their leadership and experience or education in management. As a result, they and their agencies vary greatly in their ability to successfully integrate paid compensation into traditionally volunteer work, paid staff into an organization with volunteers, and ALS personnel into a largely BLS environment. The more successful an agency is at accomplishing these types of integration, the more likely it will survive.

Managing Personnel Costs

Historically, rural and frontier agencies have kept their costs low by employing volunteers to provide an austere set of basic life support services. Equipment and training support comes from community fund-raising or modest requests for local governmental subsidy. Volunteer EMS agencies have been increasingly challenged in their staff recruitment and retention efforts. As public and professional expectations of EMS increase, it will become more complex and difficult to support a volunteer EMS agency.

There is a natural progression that EMS agencies go through as service requests increase:

- Agencies start paying stipends.
- Agencies employ a part- or full-time manager
- Agencies employ part- or full-time staff at those times when it is most difficult to attract volunteers (typically Monday – Friday during normal business hours)
- Agencies provide and pay for AEMT and paramedic levels of care when they are not available on a volunteer basis.

This, in turn, places greater pressure on volunteer agency leaders to employ more sophisticated business practices such as patient billing; reimbursement; staff employment subject to complex requirements of the Fair Labor Standards Act, especially where volunteer staff are mixed with paid staff; and, to request local government subsidies.

Medical Direction

Physician oversight is critical to all aspects of the EMS system that provides patient care outside the traditional confines of a clinic or hospital, and the communications center. The role of the agency medical director is clearly defined, with legislative authority and responsibility for EMS system standards, protocols and evaluation of patient care. Physicians are consistently involved and provide leadership at all levels of quality improvement programs. Medical directors receive feedback from the healthcare facility regarding the patient care provided by the EMS agency and utilize the information as a quality improvement tool. Medical directors are responsible for maintaining policies and procedures incorporating standard treatment protocols. Medical

directors are knowledgeable in EMS system design and development. All physicians providing on line medical direction have comprehensive knowledge about the local EMS system. The availability of on line medical direction is assured by the agency on a formal basis.

Medicare as a Rural Payer

Recent efforts by the federal government to overhaul the Medicare reimbursement system for ambulance agencies have removed some of these historical under-reimbursement influences, and have attempted to account for the greater per-call expense of providing care in rural and frontier areas. But this work stopped short of placing a cost figure on the provision of rural/frontier EMS care and reimbursing at that level.

Medicare now provides enhanced reimbursement for air medical interfacility transports that originate in rural areas when the sending physician or mid-level practitioner simply certifies medical necessity for the flight. Yet similar interfacility transports by ground, while deemed "appropriate" from a Medicare safety standpoint, are still subjected to retrospective medical necessity determinations for reimbursement purposes, and are inadequately reimbursed. Furthermore, the transfer of rural/frontier patients from specialty treatment centers back to local hospitals where family access is improved is not covered by present Medicare reimbursement practices because the transfer is deemed not necessary.

While Medicare has recently provided increased rates of mileage reimbursement for rural ambulance agencies, these are tied to definitions of "rural" that do not include some rural areas and, overall, do not cover the fixed and other costs of maintaining the EMS safety net infrastructure in rural/frontier areas. The issue of responsibility for maintaining this infrastructure has not been resolved.

The Paramedic Paradox

The further a patient is from an emergency medicine facility, the more the patient benefits from the higher levels of local emergency medical intervention[17]. As hospitals regionalize services or simply close and outpatient services are less available to offer sophisticated resuscitation care, dependence for such interventions falls upon local EMS.

Paradoxically, advanced life support (ALS) levels of EMS care are less likely to be available in the rural/frontier setting. This "rural ALS paradox" or "paramedic paradox" results because comprehensive ALS agencies are difficult to establish and maintain in systems that experience insufficient call volume to meet high fixed costs and to enable advanced practitioners to be paid and retain their skills.

Providers in distant hospitals and referral centers often have limited connection with rural/frontier EMS practitioners who bring patients to them. Rural and frontier EMS practitioners are often volunteers who provide emergency medical care and transportation and

[17] Solving the Paramedic Paradox. By Thomas D. Rowley. Volume 8. Number 3. Fall 2001.

then return to home, work, or another non-EMS setting. They know their patient's condition, environment and needs at the time of the emergency call, but this information and other opportunities for clinical feedback or consultation by distant hospital staff may be lost as time and distance from the call increase.

Public Information, Education and Prevention

To effectively serve the public each agency must develop and implement an EMS public information and education program. Consistent, structured programs are in place to enhance the public's knowledge of the EMS system, appropriate EMS system access, bystander care actions and injury prevention. The EMS system actively supports programs that are directed at both the general public and EMS practitioners. With local and state support, the agency enlists the cooperation of other public service agencies in the development and distribution of these programs, and serves as an advocate for change that result in injury/illness prevention.

Quality Improvement

A comprehensive improvement program is needed to effectively plan, implement and monitor the EMS system. The agency is responsible for evaluating the effectiveness of services provided to victims of medical or trauma related emergencies, therefore the EMS agency should be able to state definitively what impact has been made on the patients served by the system. A data collection system (i.e., EMSIRS or equivalent) exists that captures the minimum data necessary to measure compliance with standards and this data is regularly provided to the EMS office. Pre-established standards, criteria and outcome parameters are used to evaluate resource utilization, scope of services, effectiveness of policies and procedures, and patient outcome.

A comprehensive, medically directed quality improvement program is established to assess and evaluate patient care, including a review process (how EMS system components are functioning) and outcome. The quality improvement program should include an assessment of how the system is currently functioning according to the performance standards, identification of system improvements that are needed to exceed the standards and a mechanism to measure the impact of the improvements once implemented.

Medical directors participate in a formal evaluation process with local health care facilities to discuss the patient care provided by the EMS agency. This information is provided to the agency as part of an ongoing quality improvement program. Patient data is collected and integrated with available emergency department and trauma system data; optimally there is linkage to databases outside of EMS (such as crash reports, trauma registry, medical examiner reports and discharge data) to fully evaluate quality of care. The evaluation process is educational and quality improvement/system evaluation findings are disseminated to agency practitioners. The agency assures that all quality improvement activities have confidentiality protection and are non-discoverable.

Resource Management

Agency coordination and current knowledge of system resources is essential to maintain a coordinated response and appropriate resource utilization within an effective EMS system. A data collection system is in place that can properly monitor the utilization of agency resources; data is available for timely determination of the quantity, quality, and utilization of resources. The agency is adequately staffed to carry out coordination of responses and activities. Agency management requests technical assistance both proactively and as needed. The agency receives coordinated and ongoing support at the local, regional and state levels, obtaining both technical expertise and financial support. There is a formal program to recruit and retain EMS personnel, including volunteers. A system of critical incident stress management is used.

System Integration

The delivery of quality patient care requires that EMS components are clearly integrated with the overall health care system. In cooperation with the medical director development and implementation of integration efforts includes triage/transfer guidelines and destination determination for patients based on age and presenting condition, data collection, and quality improvement methods. These guidelines and protocols are developed through a multi-agency, multidisciplinary consensus driven process. Information and trends from data collection should be reflected in community public education and injury prevention programs. Collaboration and planning among all area agencies and institutions with an interest in enhancing the health care system results in coordination of resources on behalf of all participants. Safe, effective and timely inter-facility transports occur because of interagency communications and coordination procedures.

Transportation

Safe, reliable ambulance transportation is a critical component of an effective EMS system. The transportation component of the local EMS plan includes provisions for uniform coverage, including a protocol for air medical dispatch, rendezvous and a mutual aid plan. This plan is based on an ongoing, formal assessment of transportation resources, including the placement and deployment of all out-of-hospital emergency medical care transport agencies. There is an identified ambulance placement or response unit strategy that is based on patient need and optimal response times. The agency has a mechanism for modification, upgrades or improvements based on changes in the environment (i.e. population density). The agency maintains emergency vehicles in a constant state of readiness through routine maintenance, inspections and inventory control. The agency assures emergency vehicle operator competency.

Volunteers and Billing

Many volunteer agencies have considered patient billing as contrary to the community-service nature of their operation. Others simply have had no expertise or infrastructure for collecting fees or maintaining the necessary business functions. Still others have charged nominal fees for their services that have no relationship to cost. The absence of any billing and nominal charges among many agencies in a geographic region caused Medicare and other reimbursement

mechanisms, which used to be based on an average of the billed charges for all agencies in that region ("prevailing charges"), to be artificially low. Where patient billing has been pursued in rural and frontier areas, low reimbursement rates and the relatively low volume of calls have historically generated inadequate revenue to underwrite full-time preparedness – to pay for the labor needed to operate the ambulance agencies.

Currently, EMS agencies that do bill have at least two major choices for doing so.

1. They may use a billing service, which could charge $15 to over $30 per invoice processed; this can be a $5,000 to $10,000 annual cost for a small agency with no guarantee of return. Other billing services charge based on a percentage of amounts billed or received. Using a billing service still requires an agency chief or other agency representative to review patient/run records and other materials submitted to the billing service.
2. They may use internal staff or county employees whose primary job is unrelated to EMS to perform billing functions.

Several electronic billing services are available, with a range of accessibility considerations for rural/frontier agencies. Some software packages are installed on a local computer while others are web-based applications. Electronic billing services may cost thousands or tens of thousands to install and implement and hundreds or thousands in annual maintenance fees, plus the cost of a computer with adequate processing power. At least one web-based service significantly reduces the initial cost to under a few thousand dollars and half that in subsequent years. It uses a Medicare form quality review function to reduce the frequency of denials.

Seneca County OH Findings & Discussion

Seneca County Challenges & Recommendations

Rural and frontier EMS agencies are acutely aware of the challenges that they face. This report is intended to arm the agencies and stakeholders with information about future directions in which their agencies and systems might best head to assure their survival, advancement and growth. More importantly, it is targeted to underscore the local fragility of the entire Seneca County EMS system; to identify the barriers to success; and, to propose solutions and highlight successful practices that they must consider in their spheres of influence.

Inter-Facility Transfers (IFT):

Key informants from the Promedica Fostoria Hospital and Mercy Health, Tiffin, identified difficulties they have in arranging ground ambulance transportation for their patients who require transfer to a tertiary hospital or other out-of-town facility.

Issue: The CAH and other hospitals in and near Seneca County have difficulty securing ground ambulance service to transfer patients out of the emergency department (ED) resulting in extending patient time in the ED which affects patient flow through and delays the patient's arrival at the facility that is best suited to care for the patient.

Recommendation: Through collaboration the CAH, SCEMS and if necessary, other hospital(s) should develop a plan to address the need for increased availability of ground ambulance service specifically for IFTs.

There is a need to address IFTs originating at both Mercy Hospital in Tiffin and Fostoria Hospital, a Critical Access Hospital (CAH) in Fostoria. Today the way IFTs are covered negatively affects patients, strains the hospital's capacity to house patients, and provides a negative community image. When a patient requires transport from a local hospital to a tertiary care or other out-of-town facility, delays which occur while waiting for a transport service "clog" the flow of patients through the ED. Patients waiting for care at a tertiary center experience delayed transports – therefore delayed tertiary care – and patients waiting for care in the ED are delayed as the previous named group of patients occupy beds which those waiting for care in the ED will need.

Key informants from the hospitals relayed examples of patients waiting for 4 to 6 hours or more in the over-crowed local ER while an ambulance capable of transporting the patient can be located and respond, often from a location many miles and an hour or more away. SCEMS does not take IFTs due to the demand such transfers place on volunteers. Those key informants report delays occur 3-4 times each week. One key informant expressed it like this:

> "We have the ability to receive, work with and save a patient's life and then the brakes are put on as we look to find an agency to transport our patient. Sometimes they sit in our ER for three to four hours or even five, six, or seven hours on mental health transfers."

SCEMS volunteers are not paid for time on ambulance calls. If the volunteers were to be tasked with providing staffing for inter-facility transfers there would be a further and increasing erosion of the number of community members willing to serve volunteers for SCEMS, exacerbating a dynamic that is already leaving too few volunteers to provide 100% staffing for all SCEMS squads.

IFTs originating from the hospitals in Tiffin and Fostoria are transported by helicopter or ground, depending on the patient's needs and in part depending on weather. Helicopter service is provided primarily by four different helicopter agencies (Mercy Life Flight, Cleveland Clinic, MedFlight of Ohio, and Care Flight of Ohio). Key informants noted that all but Mercy Life Flight will provide helicopter service to a patient being transferred to the hospital the helicopter is aligned with. It was also noted that each of these helicopter agencies offer a ground-based service in the event of bad weather but transfers are delayed with the ground crews oftentimes needing to come from Columbus, Cleveland, or Toledo.

In addition to the "bad weather" back up just noted, there are other ground agencies that complete IFTs on a regular basis when requested. Some of those ground agencies are:

- Lifestar Ambulance, part of the Mercy Transport system, provides ALS and BLS service. Lifestar transports non-emergent patients into and out of the Mercy Health facilities to Mercy Saint Vincent Trauma Center in Toledo. In addition, Mercy Transport provides MICU ground transport to all the regional tertiary care centers.
- North Central EMS provides ALS and BLS service in addition to some limited MICU ground transport services. They are based in Milan, Ohio (Near Sandusky)
- HANCO EMS – provides ALS and BLS transports and although past transport patterns reflect the practice of transporting to any destination, the expressed preference is to transport to Blanchard Valley Health System in Findlay.
- Community Ambulance- based in Toledo, provides ALS and BLS service and transports to any facility requested.
- First Care Ambulance, based in Toledo, provides ALS and BLS service and transports to any facility requested.
- Promedica Transport Network provides ALS and MICU ground service and transfers with crews deployed from Toledo, in addition to air transports. Their transports are generally limited to transfers which go to in-network destinations.

Key informants report that even with what may appear to be a robust list of ground agencies, none of these agencies are based in Tiffin or Fostoria. The delay due to distance coupled with unique service related issues, such as lack of staffing, the availability of a ground unit for an IFT is very poor. Finding an agency to do the ground IFT may take upwards of 2-4 hours impacting the total time the patient may (4 to 6 hours or more) wait while occupying precious space in the ED.

Separate from the availability of timely ground transport options transfers oftentimes are made to the Toledo area, approximately 45-60 miles from the hospitals serving Seneca County. Each transfer can consume up to four (4) hours or more of ground ambulance crew time when patient readiness and care issues are included on both ends of the transfer. This makes any plan which relies on stretching the agency of volunteers to cover the IFTs poor at best, more likely, unreasonable.

The affected CAH hospital in Fostoria and SCEMS have an opportunity to collaborate and develop a win-win solution which would address the need to improve access to ground ambulance transportation. Adding paramedics as staff members in a CAH - paramedics who would fulfill valuable job functions within the CAH while remaining available to respond when needed on IFTs - would help address the IFT transport delay problem. The paramedics could be floated between the CAH and SCEMS cost centers depending on the specific work they are doing. Cost-based reimbursement to the CAH would minimize the financial impact on the CAH related to hiring the paramedics. Increasing and billing for a greater number of transfers as represented by the referenced IFTs by SCEMS would allow for reimbursement to cover expenses incurred by SCEMS. Ambulance vehicles and ambulance equipment already owned

and housed by SCEMS could be used for the IFTs without appreciably affecting the mission of SCEMS. Finally, and most importantly, the patients would experience reductions in the time taken to transfer them to a tertiary center and a decrease in the time it takes to be cared for in the ED.

When the concept of having paramedics on staff at Promedica Fostoria Hospital (a CAH), was discussed with a key informant from that hospital elicited the response "*having paramedics in the ED available for ambulance duty would be huge*" in part based on the increased ability to provide excellent patient care and to fill voids experienced in some staffing situations.

An alternate and perhaps more difficult option for resolving the issue of inadequate timely ground transport options could include developing a regional clearing-house for matching needs with resources. In such an option, all ground agencies and hospitals (and other facilities) which may require IFT ground services would need to establish a process by which ground agencies would declare their availability and the clearing-house would match requests with resources. This option could be elaborated on and further developed, however, it must be recognized the bigger the solution the more difficult it is to transform ideas into workable, measurable, actions that escape self-serving interests.

A potential incidental benefit may present itself if increased collaboration occurs between SCEMS and the CAH to ease transport delays as discussed. Opportunities to increase education and quality efforts between the CAH and SCEMS could be capitalized on as expertise from the CAH and pre-hospital sector work closely and better understand the needs and impact each has on the other.

In response to considerations related to using SCEMS paramedics embedded within the CAH for IFTs, one key informant's response "It would be huge if SCEMS began doing IFTs next week!"

Seneca County EMS System

In 2016, the Wisconsin Office of Rural Health developed and published 18 Attributes of Successful Rural Ambulance Agencies. Members of our project team were expert advisors to the process and we were the author of the accompanying "EMS Attributes of Success Workbook". This document has served as the cornerstone for rural EMS development ever since and led to the development of a survey for Ohio rural EMS agencies.

This survey provides an opportunity to seek out areas where changes could be made to increase the success of a rural EMS agency. It is impractical to expect that all 18 attributes can be addressed at one time. More realistically, SCEMS would be wise to review the information presented related to the 18 attributes and through some workable strategic review decide which attributes to address first. Such decision could be made on things such as:

(1) which improved attribute would make the greatest impact on patient care, and
(2) which recommendations could be addressed in a rather quick time frame thereby demonstrating improvements in a shorter period of time.

A well-defined and constructed work plan to follow will assure progress on the selected attribute(s).

The following pages will examine how SCEMS measures up to several of the Attributes of a Successful Rural Ambulance Service.

Operations Attributes

1. A Written Call Schedule
2. Continuing Education
3. A Written Policy and Procedure Manual
4. Incident Response and Mental Wellness

Finance Attributes

5. A Sustainable Budget
6. Professional Billing Process

Quality Attributes

7. Medical Director Involvement
8. A Quality Improvement/Assurance Process
9. Contemporary Equipment and Technology
10. The Agency Reports Data

Public Relations Attributes

11. A Community-Based and Representative Board
12. Agency Attire
13. Public Information, Education, and Relations (PIER)
14. Involvement in the Community

Human Resources Attributes

15. A Recruitment and Retention Plan
16. Formal Personnel Standards
17. An Identified EMS Operations Leader with a Succession Plan
18. A Wellness Program for Agency Staff

Written Call Schedule (Attribute 1)

Each District and distinct agency within SCEMS has a coordinator who assures call schedules are complete and accurate. Some of the districts have schedules laid out, fully covered for two weeks or more and which are available for distribution to the volunteers. Other districts or individual agencies have schedules which do not have coverage 100% of the time. Those that are complete point to tenacious work on behalf of the coordinator to keep the schedule up to date while those that do not have 100% coverage identify the primary problem as a lack of available volunteers.

Schedules are forwarded to the sheriff's communications center prior to the period the schedule covers allowing the communications center time to advise surrounding agencies of needed mutual aid if a specific agency is out of service due to lack of

staffing. Sometimes an agency is out of service but the volunteers that could be part of the ambulance schedule are volunteering instead for fire department's EMR service - apparently preferring not to be part of the ongoing care and transport of the patient.

It is appropriate to consider the fact that providing scheduled staff for the individual agencies rests almost exclusively on the volunteers. Volunteers are the backbone of the districts. The dedicated volunteer staff demonstrate genuine concern related to assuring the districts can provide service to the county. As a fully volunteer organization the ability for a district agency to respond is fully dependent on the availability of its volunteers. The volunteer's availability is directly impacted by, amongst other factors, their occupation, work schedule, and personal activities the volunteers may be engaged in.

Individuals who serve as volunteer members of district agencies make choices, sometimes daily, to invest the time and abilities they have available individually and collectively into volunteering to staff the county's ambulances. They make these choices understanding the opportunity cost of the choices and knowing the negative ramifications their decisions have on other opportunities which could have been pursued.

The sacrifice of the volunteer is shared by those family members and others who are close to the volunteer. That sacrifice also represents a personal cost the non-volunteer spouses, children, friends, parents or other family members. The volunteer chose to provide service to the community as members of a district agency rather than choosing to engage in a more family or personal-friendly activity or event. The value of the contribution made by the membership – measured in commitment, self-sacrifice and even monetary value to the county – must never be overlooked or minimized in any evaluation of SCEMS. (See Financial Section, "Sustainable Budget" for expanded details on the financial benefit of having volunteers provide the staffing.) None of the key informants from within SCEMS expressed concern that demands placed on members is too great.

Volunteers for SCEMS districts do not get paid for they work they perform; but they do receive a small hourly stipend for being on-call. Key informants pointed out that the fire paramedics within the fully-paid fire agencies in Seneca County receive about 60% more in wages and benefits than the few paid Echo paramedics at SCEMS receive. As volunteerism continues to decrease and maintaining a proficient staff of volunteers becomes more difficult, consideration will need to be given to replacing or augmenting volunteers with additional paid staff.

Continuing Education (Attribute 2)

All key informants who spoke to the subject of CE agreed that the amount of CE required of SCEMS staff has not increased in the recent past. All CE needed for re-certification of SCEMS staff is provided by SCEMS. A paramedic refresher class, a more

robust and separate CE effort, is provided in odd numbered years. In addition, SCEMS pays for EMS conference attendance attended by their staff where additional CE is available. International Trauma Life Support (ITLS), Pediatric Advanced Life Support (PALS), and Advanced Cardiac Life Support (ACLS) classes are paid for by SCEMS leading to these additional certifications for their staff. In addition, SCEMS will periodically pay to have an instructor from another agency teach specific courses recommended by and deemed important by SCEMS staff, such as but not limited to Critical Incident Management and self-defense classes.

SCEMS also provides a means for SCEMS staff to access and use online CE. Staff members who choose to utilize this type of education for more than 10% of their CE participate in a "skill competency day" during which the skills of the staff member are assessed and approved according to standards of the SCEMS medical director.

A key informant reported, "If an EMS practitioner attends only half of what SCEMS offers, they (the SCEMS practitioner) would not need to seek any other additional CE recertification courses." This CE represents a very robust offering of CE for any EMS department. SCEMS is commended for the commitment made in putting such a CE program in place and supporting it financially. All SCEMS staff should participate in the CE provided by SCEMS.

Notwithstanding the breadth of CE provided, key informants expressed frustration that many SCEMS staff take the training for granted and attendance is poor. Some report that many staff only come to the actual refresher course(s) offered and do not attend the many other offerings made available resulting in frustration for instructors who have committed to and are prepared to present the CE scheduled. It was noted that consistently 2 of the 6 agencies have well-attended sessions, while the remaining 4 rely more on and expect to be compensated to attend national level conferences thereby forgoing most if not all CE provided by SCEMS. This is a trend to watch in the future. If training by SCEMS is omitted and replaced by CE at national conferences local standards may disintegrate and costs will escalate. Standardized training for an EMS agency is necessary and critical to assure protocols and equipment used by that agency is well known and effectively applied by all their caregivers.

Written Policy and Procedure Manual (Attribute 3)

Written policies are in place for SCEMS. Policies are generally scheduled for a review on a 5-year cycle. Many policies have specific standards to meet, such as "the ambulance/response unit shall be checked every morning or at shift change." (Reference Number: 4). Contained within the same policy is the requirement that the "Medication Bag" is to be checked to assure various controls (e.g., seals) are in place. It is probably implied that the Medication Bag is to be checked daily, but it is unclear if it is to be checked on that schedule or perhaps some other unwritten schedule, such as after

each call when the medication bag has been used, or perhaps only when a seal has been broken.

Issue: There is inconsistency in presentation of established standards within some policies.

Recommendation: Additional clarity should be written into policies to clearly and specifically address the standard which is to be met. Establishing a specific standard to be met in each policy will provide an effective means by which policies can be communicated and revised.

Issue: Scheduled revision dates for policies varies with the generally established length of time between revision being 5 years.

Recommendation: Each policy should be reviewed and revised on a regular cycle of standard length. A review cycle of 5-years is too long for policies affecting EMS agencies. 18-month review and revision cycles is a best practice followed by successful EMS agencies.

Incident Response and Mental Wellness (Attribute 4)

A consistent major focus provided by key informants of SCEMS centered on assuring the residents and visitors of Seneca County have access to and receive excellent emergency medical services when needed. The focus of the SCEMS providers is clearly externally focused with the needs of the patient consuming their attention. The compassion and care SCEMS providers deliver day-after-day is commendable.

EMS providers experience a variety of personal responses to situations they are called to respond to on an on-going basis. Many of those responses are detrimental to the emotional and mental well-being of the provider both immediately and on a long-term basis. Yet not one of the key informants raised any issues related to incident response or the mental well-being of the providers who serve SCEMS so faithfully. That may suggest a general lack of awareness of the need to provide incident response and mental wellness support for the providers who so selflessly give of themselves to the community.

To care for and preserve the staff of SCEMS - which is clearly focused on the patients served – it would be a wise investment to develop and provide incident response and mental wellness care to the providers in an organized manner.

SCEMS can have a significant impact on the well-being of SCEMS provider's by developing a plan and providing training related to the impact of incident responses and committing to mitigate and address some of that impact in a deliberate and effective manner. It is SCEMS's responsibility to put plans in place to care for members who so freely and with purpose expose themselves to the threats of physical and emotional damage.

There are many resources available to an agency desiring to establish a means to address incident response and mental wellness associated with ambulance calls members of the agency go on. One of the most effective is the presence of experienced members who are involved in an incident; those who have experienced responses to high-stress calls and now are serving alongside other agency members. To assure the more experienced members are prepared to provide co-workers with informal and positive debriefing and support, it is prudent for the agency to assure some common understanding of incident response debriefing is held by all members of the agency. Providing basic training on incident response and mental health will help the more experienced members understand the role they can fill. It is a role they are probably already aware of, but perhaps need permission to exercise. In any incident response stress is reduced when roles are clarified. That is true also for the more experienced members being relied on to provide informal and positive debriefing and support to co-workers. Oftentimes working with a hospital or other community resource makes implementation of a plan easier.

A significant caution needs to be remembered: do not let the experience of the SCEMS providers obscure the fact that all SCEMS providers involved in an incident need to be offered care.

Issue: There is a general lack of awareness of SCEMS providers of the immediate and cumulative long-term effects they may experience related to high stress situations may have on SCEMS providers.

Recommendation: A plan should be established using readily available resources to provide education and follow up care for SCEMS providers in relation to the events and untoward experiences they

A Sustainable Budget (Attribute 5)

Key informants provided information that the local sales tax option in Tiffin is maxed out. This may serve as a sign of future funding options and possibilities for all of Seneca County. As of mid-March 2017, Fostoria was considering a 6-mill tax levy as part of their fiscal emergency recovery plan (Advertiser-Tribune, March 15, 2017). Indicators point to the possibility that public funding of SCEMS by means of taxes may become more difficult in the future.

SCEMS sets the charges they use to bill for services by using Medicare allowable charges. All patients transported are billed using the Medicare allowable amounts related to BLS, ALS1 or ALS2. SCEMS also bills for patients who receive treatment but are not transported. Patients who have an outstanding balance are turned over “for collections” if the balance they owe exceeds $25.00. The key informants who provided this information were not able to provide information on overall bad debt percentages. A policy has not been established to direct establishing rates or billing practices, however a Commissioners Resolution exists that does set the rates.

Although SCEMS is financially sound at the present time, there is no evidence that a sustainable budget exists. A sustainable budget is comprised of two equally significant portions. One related to expenses incurred in the delivery of the service and the second is related to the revenue collected through the billing and collections processes.

Expenses need to be accurately accounted for regardless how those expense costs are covered. For example, even though the county budget covers $65,000 of expense each year for major equipment, generally accepted practices would dictate that some amount of depreciation of that equipment in the SCEMS budget be accounted for. A second major example is the value of the time contributed to SCEMS by volunteers. The national average value of volunteer time as reported by Independent Sector was $24.14 per hour in 2016. Independent Sector calculated Ohio's value of volunteer time at $22.99 per hour for 2016. These costs may need to be offset by the charges generated by the service provided by SCEMS in the future and should be considered when establishing cost-based charges for service.

Using the Medicare allowable charge is neither an accurate or a defensible means of establishing rates. According to the United States Government Accountability Office Medicare payment rates are below the actual expenses of agencies across the nation. Using the actual expenses of the agency, dividing that by the number of actual patients that are anticipated to be transported, and adding an adjustment to address anticipated bad debt and government program write-offs will allow SCEMS to establish rates that are both realistic and defensible to the public. Charging more than Medicare's payment will not impact the amount of revenue generated from patients covered by Medicare but it will generate additional revenue by billing fair charges to other patients who may have private insurance or other means to pay.

Finally, by increasing the number of patients transported, additional revenue will be added while incremental costs associated with those additional transports will not increase proportionally to the revenue producing transports already being conducted. If a new service, or expanded service is needed in the community and is added, a new line of associated revenue would be available while expenses would increase incrementally.

Issue: SCEMS funding is a critical issue to understand and address. SCEMS relies heavily on the county budget for financial support. Most of the SCEMS agencies do not have a comprehensive understanding of the cost of operating their agency, especially when volunteer equivalent costs are added to the equation.

Recommendations:

1. Invest the time and effort necessary to assure a well-defined, comprehensive, and usable budget is in place, with enough detail so all revenue and expense can be readily and accurately identified and accounted for.

2. Review and assure that the charges assessed to those using the agencies are accurately reflective of the total costs of providing the service.
3. Assess potential for expanding SCEMS to serve unmet EMS needs in the community.

Professional Billing Process (Attribute 6)

SCEMS bills for services and claims are submitted by an external billing service, HSI Health, Inc. In less than 30 days HSI bills charges using established HIPAA compliant software. Billing policies and other policies to handle claims that have been denied or with a balance due are un place.

On its website, HSI (http://www.hsihealth.com/company/faqs/) promotes that it has an in-house certified ambulance compliance officer as well as a certified ambulance privacy officer. HSI also retains a compliance attorney. No mention was found on the HSI website regarding use of certified billers. Their experience and scope of work indicates a well-established company providing professional billing services to a wide range of EMS agencies. Verifying the presence of certified billers is recommended.

A key informant noted the value of the robust online dashboard provided by HSI for SCEMS to utilize enabling SCEMS to run a variety of reports related to the revenue cycle.

Medical Director Involvement (Attribute 7)

Dr. Michael Fitzpatrick is the Physician Medical Director (PMD) for six ambulance agencies and 12 fire EMR departments in Seneca County, plus for the Tiffin Fire and Rescue Division. He has been PMD for SCEMS since 1997 and is a Board-Certified Emergency Physician employed with Mercy Hospital in Tiffin. A PMD contract and reimbursement plan was implemented by SCEMS for Dr. Fitzpatrick two years ago. Previously, Dr. Fitzpatrick was not reimbursed for his PMD services.

Dr. Fitzpatrick has successfully completed the Ohio EMS Medical Directors Course conducted by American College of Emergency Physicians. He has not completed the National EMS Medical Directors Course and Practicum conducted by the National Association of EMS Physicians. This is not a required course but is recommended to enhance Dr. Fitzpatrick's skills and provide him an opportunity to network with a wide range of PMDs across the country.

SCEMS Director Ken Majors and Dr. Fitzpatrick meet once a month to review charts, protocols and other business related to patient care. Director Majors is responsible to relate meeting information to members of each agency since there is no official medical surrogate assigned to assist Dr. Fitzpatrick. Director Majors and Dr. Fitzpatrick have an excellent working relationship. Practitioners, including nursing personnel interviewed by the assessment team were very appreciative of Dr. Fitzpatrick and Director Majors being available to answer their questions and address their concerns.

Issues: Dr. Fitzpatrick expressed five major challenges he has as PMD:

- Addressing the availability of advanced life support ambulances to be utilized by area hospitals to do inter-facility transfer of critically ill patients.
- Funding to provide advanced practitioners to do inter-facility and emergency patient care.
- Recruitment and retention of basic and advanced practitioners.
- Finding a solution for Mercy Hospital and ProMedica to work together in addressing the pre-hospital and inter-facility patient care issues instead of being competitive rivals.
- Recruiting and mentoring a future PMD

Recommendations:

1. A meeting should be facilitated between area hospital administrators to find common ground in addressing the above issues. Both hospitals can continue to compete for patients but need work together to utilize resources and expertise in addressing issues to enhance EMS patient care for the area. Along with SCEMS and county government officials they should form a special pre-hospital and hospital task force to find local solutions to these patient care challenges. Dr. Fitzpatrick offered to help facilitate this task force and work with others to encourage Mercy Hospital and ProMedica to work together and be leaders in finding solutions to the above challenges.
2. Dr. Fitzpatrick, area physicians, hospital nursing personnel and SCEMS need to begin working together now in recruiting a future PMD so Dr. Fitzpatrick and SCEMS can mentor and train them on the duties and responsibilities of the PMD position and assure completion of the available state and national medical direction courses.

A Quality Improvement/Assurance Process (Attribute 8)

Enhancing patient care is a goal of all successful rural EMS agencies as well as Critical Access Hospitals (CAHs). The CAHs and their tertiary care affiliated hospitals within the patient care hospital network they are affiliated are prime candidates for partnering with SCEMS in quality reviews and improvement efforts. SCEMS transports to eight hospitals in the area.

Each of the regional hospitals that are affiliated with a CAH have a lead network coordinator whose focus is on quality. Positive or negative outcome of a patient is in part determined by the quality of care of the patient receives at the pre-hospital scene and before arrival to a hospital. Once every three months the quality coordinators within the hospital networks meet to review charts, discuss ways to improve quality patient care and provide feedback to medical staff of their hospitals.

Since SCEMS is a key component in providing patient care, it is important that SCEMS participate periodically in the hospital quality coordinator meetings to receive and to provide patient care feedback to and from each of the participating hospitals. SCEMS participation in network meetings dealing with inter-facility patient transport, protocols, data, trauma, stroke, STEMI and other cardiac issues would help the network hospitals achieve their quality patient care goals and outcomes. It is also important that Director Majors has a working relationship with each network coordinator to address patient quality outcomes. Having open dialog creates trust and a better understanding of what each other's roles are in providing quality patient care. Measurable goals derived from improvements made based on these reviews could be established to monitor improvements.

Issue: There is no formal interaction between SCEMS and the CAH focused on quality improvement.

Recommendation: Director Majors should contact the lead network hospital coordinator and request a meeting with the other hospital network coordinators to begin a dialog and discuss ways to partner in enhancing quality patient care through collaborative quality improvement efforts.

As part of an overall quality improvement/quality assurance process specific and focused education based on quality improvement findings should occur. Education provides an excellent opportunity for pre-hospital EMS and hospital nursing staff to gain an understanding of what each other's roles and responsibilities are in providing patient care. It provides a forum to recognize that they collectively are a team. This joint training is very important to guide the prehospital EMS care for trauma, stroke, STEMI and other cardiac patients. The hospital network system is an excellent resource that should be utilized to provide joint training. These four areas are areas of concern that are important to be addressed to improve patient outcomes in rural areas. Joint training allows SCEMS and network hospitals to maximize their resources and eliminates some duplication of training for practitioners; plus, it is an excellent opportunity to enhance working relationships between pre-hospital and hospital medical practitioners.

Issue: There is no evidence of quality related training which is developed and provided to SCEMS staff in collaboration with the CAH or other network hospitals.

Recommendation: Director Majors should meet with the lead network hospital coordinator and discuss the feasibility of SCEMS and hospital medical practitioners conducting joint trainings in the areas of burn, trauma, stroke, STEMI and other cardiac care emergencies.

Contemporary Equipment and Technology (Attribute 9)

The state of the equipment owned and used by SCEMS is good. SCEMS has the minimum equipment and technology required by licensure in addition to advanced

equipment and technology. A general review of the equipment and also the replacement plans and preventative maintenance (PM) plans revealed:

1. Major equipment is generally described as equipment needing replacement every ten years and is funded through the county budget process. This "durable equipment" includes items like stretchers, stair chairs, monitors, suction units, and vehicles.
2. Minor equipment is purchased through the county's operational budget.
3. A written replacement plan does not exist but is understood and managed by leadership within SCEMS. Execution of this plan is based on the seasoned experiential understanding such leadership has on an "as-needed" basis.
4. There is a formal maintenance plan for patient care equipment and the service is provided by trained/certified technicians or engineers from an outside source.

Ambulance vehicles used by SCEMS to serve the county include a fleet of seven similarly equipped vehicles. By industry standards, these ambulances are "low-mileage". The highest mileage vehicle is a 1995 model which has been in a backup position since 2009. As the highest mileage ambulance in the fleet has 45,000 miles on it. The average number of miles traveled by each ambulance in the fleet is 3,500 per year, with the highest use ambulance (Bascom, unit 201) putting on approximately 5,500 miles per year. Another example of the low mileage accumulation on the vehicles is the 2014 ambulance assigned to Bettsville (unit 301) that just passed 10,000 miles on its odometer.

According to a key informant vehicles are serviced according to the manufacturer's recommended standards for "medium use vehicles." Some of the maintenance is done on the vehicles by Director Majors with the help of a paramedic who has an elaborate set of tools. Each vehicle is brought into the main operating facility three times per year for a thorough maintenance inspection and preventive service. A certified mechanic is used when the repair work warrants that level of expertise.

There are two dominant industry methods for determining when an ambulance should be replaced. High volume agencies will generally replace units based on mileage. Low volume agencies will generally replace them based on age. A national benchmarking program reveals the best practice at 150,000 miles or 10 years. Adoption of a specific replacement schedule will aid the county's budget process.

It was not possible for us to determine the cost per mile of operating the ambulances with the information we had access to.

Key informants report the local biomedical engineer that does the preventive maintenance on their electronic and durable equipment is certified to provide the service on many of their most-used pieces of equipment. The engineer has a noteworthy background in providing and directing PM as the former head of Biomedical Engineering at a local hospital before establishing an independent company to provide

PM service. All equipment is serviced one time per year under the agreement SCEMS has with the biomedical company.

Equipment Replacement Funding

Major equipment is funded through the county budget. Each year $65,000 is budgeted in the county budget to fund major equipment. The plan includes purchasing a new ambulance every three years with the dollars accumulated over the three previous annual budget periods. SCEMS seeks and has been successful in obtaining grants. When grants are obtained, they are used for the purpose stated as a condition of the grant. In the past, grants have been received to purchase vehicles, in which case SCEMS has used the dollars accrued for major equipment on items other than vehicles. According to a key informant, "we (SCEMS) use creative financing but have been successful. Our elected officials have been very cooperative allowing us to purchase the equipment we need. We do everything using the $65,000 per year and seek grant money to [balance it out]."

Issue: Funding is presently working to meet the needs of SCEMS. Uncertainty in future funding levels may develop as county economics change, flexibility in using funds allocated for major equipment may be curtailed if elected officials need to or are inclined to make changes in the practices used.

Recommendation: Funding provided through the county budget should be well defined and policies detailing how such funds can be used should be established. SCEMS leadership should explore and develop alternate means of obtaining funding as a contingency plan which can be implemented in a well thought out manner to minimize the potential of any possible changes to the present funding mechanism.

The Agency Reports Data (Attribute 10)

Operational and clinical data are collected and submitted to regulators, automatically through SCEMS charting software. Key informants offered comments such as this:

> "We report everything to the state automatically with our software. Times are crunched and data is stored, but rarely do we ever see anything come from all the data that the state pulls from our charts."

A common theme of those interviewed was the difficulty associated with entering all the data points required by the state (i.e., completing the electronic medical record). SCEMS team members are required to complete what they perceive as an onerous task without understanding the value or experiencing any benefit from doing so. As one key informant expressed "we don't have any idea what the state is looking for, they just add boxes."

Issue: Data is being collected and key informants indicate there is no understanding of what the data is being used for.

Recommendation: With a focus on what is important to SCEMS as well as to the CAHs served by SCEMS, a quality project should be established to use data collected to improve patient care. As an example, data could be used in a variety of QA/QI processes to address specific categories of patients, changes in protocols and practices could be made, and results of those changes could be measured to quantify improvement.

A key informant provided 2016 YTD summary information related to what is known within the EMS industry as the "chute time" (i.e., the time difference between when a caller dials 9-1-1 and the ambulance is moving) and "response time" (i.e., the difference between when a caller dials 9-1-1 and the time the ambulance arrives on the scene of the emergency.) A key informant provided this information, reportedly obtained from the "Enroute Time" and "Time on Scene" reports from EMSCharts.

	Chute Time (in minutes)	Response Time (in minutes)
SCEMS Overall	5.11	11.29
Echo-1	1.29*	8.9*
Attica 101	4.45	8.31
Bascom 201	4.47	9.71
Bascom 202	4.30	12.36
Bettsville 301	7.07	12.24
Bloomville 401	7.03	11.33
New Riegel 501	5.65	11.30
Republic 601	6.69	11.24
*Not included in the SCEMS overall to help differentiate between the on-duty paid staff responses and the volunteer on-call staff responses.		

In accordance with SCEMS policy, Echo-1 maintains a "chute time" of less than 2 minutes. Even with arguably greater distance to travel on average from the station Echo-1 is on the scene in a time that is similar to that of the responsible ambulance agency. Some unit's chute times are more than two and one-half minutes less than other units, perhaps reflecting on availability of volunteers to efficiently staff a particular unit or the ability of the volunteer to get to the location the unit is garaged at.

Further analysis of data should be undertaken to identify time required for each ambulance to start moving to get to the ill or injured person by day and evening, during the work week and generally over weekends to help provide insight into quality improvement processes related to unit response zones.

Issue: Out of chute response times for some SCEMS units are nearly 50% greater than out of chute response times for other SCEMS units.

Recommendation: A quality project should be constructed to identify the factors causing the significant disparity between out of chute times between the agencies. Based on findings a process improvement plan should be created. Such improvements may suggest consolidating response zones (areas) for some units during specific times of the day. Findings may also help point to periods of time during the week in which fully paid on-duty staff should be added to the schedule or moved to in the schedule.

A Community-Based and Representative Board (Attribute 11)

While SCEMS is overseen by the Seneca County Board of Commissioners, the board does not take on the roles and functions of a community -based and -representative board. The County Board of Commissioners is a major stakeholder in SCEMS by establishing funding which is allocated to operate SCEMS. The role of a community-based board is to provide oversight from a system perspective without specific bias towards any political sub-division. Commissioners by the nature of their election cannot remove themselves from such bias. To this point, key informants point out that output from the Board of Commissioners results in negative press, which has the potential to negatively influence the community in regards to SCEMS.

A key informant noted: "EMS in the county has been really contentious the past two years. Politicians say the volunteers are not in service enough. There has been a lot of damage due to the contentious nature of political comments and perspectives shared."

The solution offered by this key informant was to "get the leaders to sit down and talk it out!"

Another key informant reported "The Commissioners have stirred the pot until it gets near exploding, then they say, 'It's your job (SCEMS) to take care of it'; they need to quit stirring the pot."

Actions such as the ones noted by the key informants just cited lead to declining morale amongst the volunteers who have then asked, "are they (the commissioners) trying to get rid of us?"

Commissioner Mike Kershner said the county's long-term goal is to create a countywide EMS system (Advertiser-Tribune, March 9, 2017). That being the case, it would be wise to establish a community -based and -representative board to oversee SCEMS and guide the movement towards a single countywide EMS System in a methodical, well thought-out and deliberate manner. A well-structured and functioning community -based and -representative Board would invest itself fully in understanding EMS in Seneca County. Further it would serve as a strong, positive, fiscally responsible group supporting and directing the operation and improvement of SCEMS in caring for patients.

Issue: There is need to establish a community -based and -representative board to

oversee the functions and future of SCEMS.

Recommendation: Oversight of SCEMS should be transitioned to a separate oversight board made up of individuals from the following disciplines:

- an elected official
- someone from within hospital leadership
- a government administration representative
- business/financial leader
- an engaged patient who has used the service
- an ex-officio non-voting member from SCEMS.

A charter for such oversight board needs to precede the establishment of the board to assure the candidates understand the boundaries they will work within. The oversight board should develop expertise in issues and operations important to the public, SCEMS and the various government, health care and business communities represented.

Agency Attire (Attribute 12)

SCEMS has a written uniform policy (#27). The policy appropriately calls the attention of the individual practitioner to some of the dangers associated with the roles filled by the SCEMS staff. The policy details some personal clothing and footwear which is deemed "not acceptable" to be worn while on EMS responses due to safety and general appearance. The policy includes an awareness that the individual practitioner is responsible to maintain a professional appearance in the public's eye. The policy warns the individual practitioner "If you are not dressed appropriately and are hurt on scene, Worker's Comp will not accept your claim."

Issue: SCEMS does not provide a complete uniform for the individual practitioners but offers direction on what the practitioner should wear as uniform parts. SCEMS may not adequately protect their practitioners given this approach and most certainly misses an opportunity to mold the perception the public has on SCEMS.

Recommendation: Uniform costs should be a line item in the SCEMS expense budget. Uniform attire should be chosen based on safety, utility, and appearance to keep the practitioner safe, increase the visual image of SCEMS to the public and to maximize durability of uniform parts thereby minimizing on-going replacement costs.

Public Information, Education, and Relations (PIER) (Attribute 13)

Presently SCEMS has no formal PIER plan. The work SCEMS does in providing information and educating the public about SCEMS is done by individuals, with specific intent for specific events. For example, SCEMS agencies are regularly present at community events, including sporting events at schools, and key informants say such presence is noted and appreciated by the community members. In addition, key informants say there is considerable mention of SCEMS in the newspaper, generally

related to the updates and reviews asked for by the County Commissioners. This may not necessarily be the ideal coverage because of issues identified in a previous section.

There are many reasons of importance for establishing and executing a PIER plan. In the context of this section a PIER plan can impact recruitment and to perhaps a lesser degree retention of team members, especially volunteers. What the community learns about SCEMS will impact the level of desire community members have in making a commitment to serve others by donating their time by becoming a volunteer with SCEMS. Identifying and delivering messages that accurately and effectively portray the mission and purpose of SCEMS in context of the community helps community members learn accurately about SCEMS.

Issue: SCEMS would benefit from a well-defined and implemented pubic information, education and information plan.

Recommendation: All messages delivered to the public regarding SCEMS should contain or be influenced by key messages established and laid out in a strategic manner. Having a well-developed PIER plan outlining what steps should be taken, what messages are most essential at any given time, and how SCEMS will effectively deliver those messages will positively impact the SCEMS image in the community. Expertise to develop such a plan can be found from a variety of sources. This is another economical and effective potential opportunity to establish a collaborative effort with Tiffin University or Heidelberg University. Working collaboratively, students can be given the opportunity to develop a meaningful and effective PIER plan which can be implemented by SCEMS while the student gains real-life experience in a field of academics related to communications, marketing or a similar discipline.

Involvement in the Community (Attribute 14)

SCEMS provides standby services at public events such as school sporting events. In addition, the volunteer staff of SCEMS provides "group specific" education as requested by various other groups the volunteer is part of. Perhaps the greatest contribution demonstrating involvement in the community is the actual volunteer service provided by individuals as volunteers with SCEMS. The community may not understand that involvement however, using some of the resources noted in Attribute 13 would likely increase the public's understanding of the enormous involvement SCEMS has in the community, much because of the volunteers of SCEMS.

A Recruitment and Retention Plan (Attribute 15)

No specific or documented plan related to recruitment and retention exists for SCEMS. The diminishing availability of people in the community who want to and can afford the investment of time to be a volunteer with SCEMS is also diminishing. Key informants described episodic attempts to engage potential volunteer candidates through community efforts and even some efforts within schools.

Retention of current volunteers is not specifically addressed nor is there any plan in place that would help guide such an effort. Key informants provided the insight that Ohio Public Employees Retirement System (OPERS) is not available to volunteers or volunteers who receive a small stipend, such as SCEMS volunteers. OPERS requires that employees be full-time or part-time employees; volunteers do not qualify for OPERS.

Some misinformation may be serving as a detriment to gaining commitments from new recruits. Several key informants reported that "increasing and demanding initial and on-going training as reasons some community members will not become volunteers." This perception is not accurate. The amount of initial training as well as CE required has not increased in the recent past. While the commitment levels and training requirements must be clearly presented to potential recruits with the absolute expectation they will meet those requirements, how that is conveyed is important. As part of the recruitment effort the messages need to be clear, accurate, and easily repeatable so the messages do not serve as a deterrent to recruitment.

Issue: SCEMS would benefit from a well-defined and implemented recruitment and retention plan.

Recommendation: All efforts to attract and retain volunteers are worthwhile. Having a well-developed plan outlining what steps should be taken and in what order and how SCEMS will effectively sustain those efforts will make a recruitment and retention plan successful over the long term. Expertise to develop such a plan can be found from a variety of sources. A unique opportunity may exist for SCEMS to engage students from Tiffin University or Heidelberg University to construct a recruitment and retention plan for SCEMS as part of their academic work. Providing students who are developing professional skills in efforts related to recruitment and retention the opportunity to take on a project under the supervision of a professor or mentor becomes a worthwhile exercise for the student and could meet the needs SCEMS has.

Formal Personnel Standards (Attribute 16)

Section 3 of the written policy and procedure manual outlines SCEMS's commitment to the individual employee/volunteer. In a general manner, it expresses expected standards the employee/volunteer will meet, including maintaining conduct in harmony with the EMT Oath. The policy does not address levels of performance desired of the employee/team member in a comprehensive manner. (See discussion below.)

Generally speaking, SCEMS policies lack specific performance standards. More specifically, policies do not address things such as the number of call shifts and the number of ambulance calls each volunteer is expected to cover. These two standards are mentioned as examples as they were the only two metrics expressed by key informants as being practically important to the staff. These key informants maintain

that some volunteers under-perform in respect to covering call time and going on ambulance runs.

Key informants expressed the reality, in a matter of fact manner, that some volunteers will respond to the scene as EMRs but refuse to respond as part of their political subdivision's ambulance agency to avoid getting "tied up" in transporting the patient. At times, some of the volunteer ambulance members who evade transport duties convey comments such as "sucks to be you" to those from the bordering political subdivision who are covering local uncovered call time. Such behavior is demoralizing to the dedicated volunteer staff and does nothing to enhance patient care.

The key volunteer informants also conveyed that some "listen to see what kind of a call it is before deciding whether to respond." Volunteers who are the recipients of this lack of professional etiquette and who observe the evasive behavior question what can be done to correct this situation with under-performing volunteers. A commonly expressed and held understanding is "you can't fire a volunteer." The misunderstanding "that you can't fire a volunteer" is pervasive and works to undermine the efforts of the highly dedicated, capable and well-performing SCEMS volunteers who make the agency work. Criteria is lacking and should be constructed and all SCEMS volunteers should be familiar with and required to meet specific performance criteria contained in written policy.

Another key informant, commenting on the specific geopolitical area they volunteer in, offered that there are five very active EMS practitioners on the roster and another 10 who don't participate at all. Clear standards which are uniformly applied will motivate the high performers and make the district or township unit more reliable.

In the "Emergency Medical Services Agreement" between the "county" and the "political subdivision", specifically in Section 1 and Section 7 of the county's responsibilities, the County selected and employed EMS Director is given supervisory functions of management. Further, in Section 14, issues related to providing standard operating guidelines for personnel are expressed.

Issue: There is a perception amongst SCEMS members that "*you can't fire a volunteer*" and therefore a corresponding need to reluctantly accept sub-standard commitment, performance and interactions from some volunteers.

Recommendation: Standards should be defined where they do not exist, reviewed and updated where they do exist and systematically presented to all members of SCEMS with the expectation that the standards will be met by all members. Clearly written and followed corrective action guidelines should be applied to any member in any position not meeting the standards regardless of rank or tenure within SCEMS. These standards related to not meeting the desired performance criteria should include an endpoint whereby it becomes an acceptable practice within SCEMS to in essences say, "thank you

for your years of service, it is time to move on" thereby ending the membership of those who are "hanging on" for any variety of reasons.

An axiom expressed, "get rid of the bad apples and morale will improve" is a powerful means to motivate members who are eager to embrace a culture of personal responsibility and commitment focused on providing patients and the community with the service they expect.

Finally, there is no written policy on how compliance with policies will be reviewed. Undertaking such a review is extremely difficult without specifically defined standards in place operationally defining what the standard is. Once the policies contain specific standards, as noted in two of the recommendations in this section, SCEMS leadership and team members will be able to quickly and easily identify "yes" the standard is being met, or "no" the standard is not being met and "here is the specific deficit."

An Identified EMS Operations Leader with a Succession Plan (Attribute 17)

There is a well-established leadership structure within SCEMS with an operations leader and an assistant operations leader. Both Director Majors and the Assistant Director of SCEMS have leadership training that has prepared them for the positions they fill.

Director Majors' leadership training is built on the foundation of his significant clinical experience as a Registered Nurse and a paramedic. He has well documented leadership training provided by the U.S. Military, through Mercy Medical as a Regional Supervisor, the Ohio EMS Chief's Association, and he is a graduate of the Ohio Fire Academy Leadership development program.

The Assistant Director also has formal training to equip her for the position she holds. Built on a baccalaureate degree she has received formal leadership training through the Ohio Fire Academy and the Ohio EMS Chiefs Association.

Both Director Majors and the Assistant Director would benefit professionally from and bring value to SCEMS if a formal plan were created and implemented identifying specific leadership enhancement courses each will complete. The source of such training could be national level EMS leadership seminars or EMS related management and leadership courses provided by accredited training institutions. A unique benefit of receiving such additional national EMS leadership training is the network which can be developed with other EMS leaders who provide similar leadership in similar agencies. Funds expended for travel and completion of this training is a valuable investment for SCEMS. Director Majors and assistant director should also pursue credentialing from the American College of Paramedic Executives (ACPE) as Supervising, Managing or Executive Paramedic Officers.

There is talent within SCEMS which could be tapped for succession purposes but there is

no formal succession plan in place. Long-term stability of SCEMS would be enhanced if a plan was developed which includes clearly stated and measurable objectives for potential successor candidates to follow in seeking comprehensive leadership training and credentialing through the ACPE.

A Wellness Program for Agency Staff (Attribute 18)

According to key informants no structured debriefing plan is in place to aid the practitioners within SCEMS. Some informal peer-to-peer support is provided and embraced within SCEMS.

Issue: A well-developed CISD plan does not exist for use by SCEMS practitioners.
Recommendation: A plan should be developed and implemented so appropriate care is offered and provided to SCEMS members who experience duty-related instances of emotional difficulty. Caring for our care-givers, doing what can be done to keep them healthy physically and emotionally, should be of high priority importance. Resources may be available from within the CAH or other nearby ambulance services. Generally, CISD efforts do not occur from within one agency but are the result of a collegial professional interaction between agencies and various healthcare practitioners. These efforts should extend well beyond boundaries of individual departments and care provided should ideally come from a well-trained team. Oftentimes, such care is best provided by trained team members who are not directly involved with the department that has experienced the event causing the emotional trauma. Many resources are available through national groups to help to establish and deploy such a plan. SCEMS administration should consider meeting the North American ANSI standard for Paramedic Psychological Health & Safety that will be published by the Canadian Standards Association in Fall 2017.