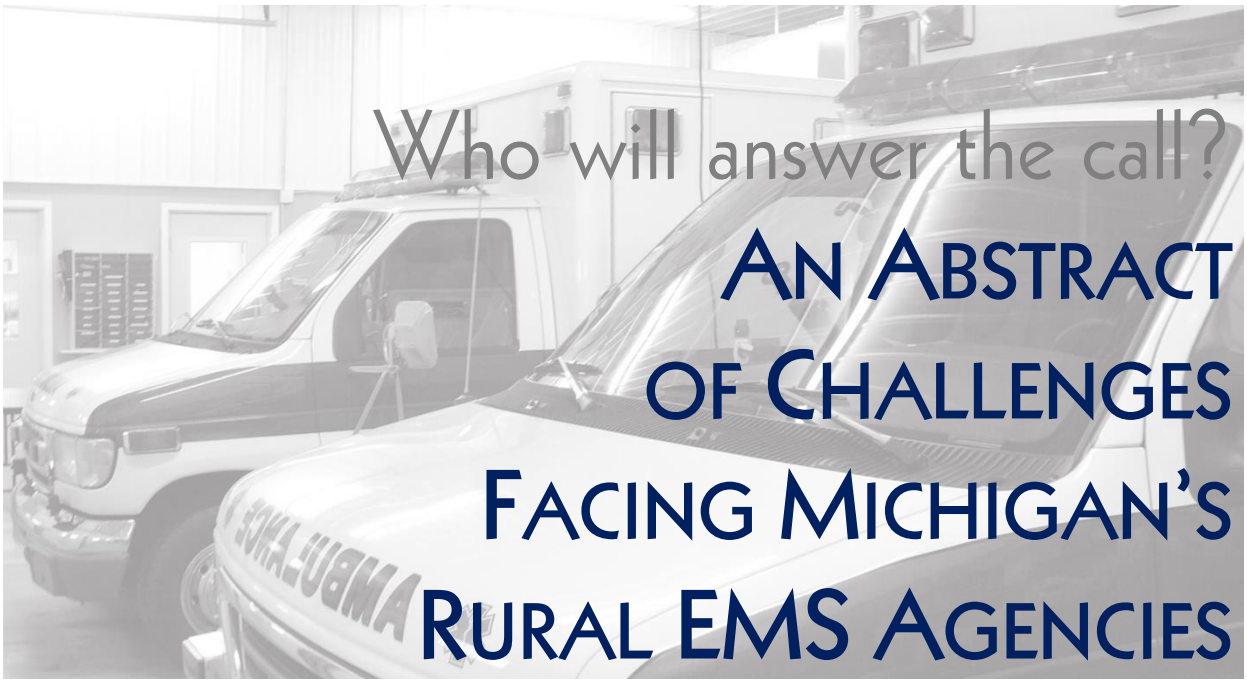

Who will answer the call?

An Abstract of Challenges Facing Michigan's Rural EMS Agencies

Presented by the
Rural Subcommittee of the EMS Coordinating Committee

An Impartial Evaluation Commissioned by the
Michigan Rural EMS Network

Developed by
EMERGENCY MEDICAL **SOLUTIONS** llc

Submitted
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Executive Summary

Key Challenges

Sustaining
Reimbursement
Access to Care

Recruiting
Shortages
Training

Retaining
Workforce
Well-being

The challenges posed to Michigan's rural emergency medical service (EMS) agencies aren't necessarily unique, but they are current and immediate.

EMS agencies – both rural and urban – throughout Michigan are facing common hardships in many of the same discussion points, but what exacerbates them in rural environments are the geography, population volumes, and the overall access to care for its citizens. Each of these factors affects the EMS system, agency recruitment efforts, and provider retention initiatives within Michigan's rural EMS agencies in ways that urban areas can relate to, but not directly compare.

Even nationally, the same challenges faced by Michigan's rural EMS agencies are often replicated across many other states' borders. While these challenges are gaining the recent spotlight in newsreels and social media efforts, much of the weight of the collective voice of the EMS industry is muffled because it is not legislatively recognized as an "essential service," compared to its law enforcement and fire service counterparts.

Nevertheless, efforts by professional associations, stakeholder groups, EMS agencies, and EMS providers themselves have been underway to help bring the many challenges facing rural EMS providers and agencies throughout the state to the forefront, but not always to any avail. Outlined in this evaluation is a high-level overview of a few of the primary challenges facing Michigan's rural EMS system as a whole.

Summary Points

- There are over 28,000 licensed EMS providers in Michigan that support nearly 800 individual EMS agencies spread throughout various urban and rural communities.[1]
- Less than a dozen states have legislation considering EMS as an "essential service," affording it tax-supported status; Michigan is not one of them.[5]
- With regards to Medicare & Medicaid reimbursement, it is a genesis belief that EMS agencies do not provide reimbursable *patient care* to patients; rather, they only provide reimbursable *transportation services* to patients.
- Michigan's large geography, limited access to public transportation, long travel times to health care, and its general infrastructure status & road conditions are all main barriers to rural health care.[9]
- 91% of managers identified recruitment of new personnel or volunteers as a major or moderate challenge facing Michigan's rural fire/EMS agencies.[14]
- Initial EMT (emergency medical technician) training can take between 160-200 hours, while initial paramedic training typically involves a full-time, two-semester commitment at a local community/technical college.
- 39% of respondents to a 2020 national EMS survey did not recommend their children enter into the EMS workforce (compared to 12% not recommending EMS in 2018). [17]
- Nationally, EMS providers face a burnout rate of 37%.[17]
- 65% of Michigan's rural fire/EMS providers reported experiencing critical stress throughout their tenure and 14% had thought about suicide.[14]

SUSTAINING RURAL SERVICES

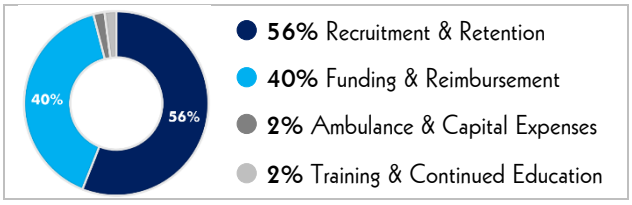
There are over 28,000 licensed EMS providers in Michigan that support nearly 800 individual EMS agencies spread throughout various urban and rural communities.[1] Approximately 75% of Michigan's population consists of urban residents which are spread over less than 10% of the state's total land mass, while its remaining 25% of rural residents are spread over the remaining 90% of the state's geography.[2] This equates to quite the disparity between both the population centers and geographic dispersing of Michigan's residents and their needs – especially when it relates to emergency medical services.

Every year, nearly 10 million Americans receive EMS care from any one of the over 16,000 rural EMS agencies in the U.S.[3] Although not uniformly defined, one statewide survey analysis outlined a "rural" EMS agency as one where the median call volume is nearly one call per day, its primary response territory is often greater than 200 sq. mi., and it often serves a population of less than 5000 citizens.[4] Today, many of these rural EMS agencies are pleading their case for support in the light of both continued and newfound challenges spiraling their existence downward ... and sometimes with no light at the end of their tunnel. The question to ask then, is "what challenges are hindering the progress – sustainment – of prehospital emergency medical services within rural communities?"

A January 2021 report published by the Rural Policy Research Institute noted in its key findings that rural EMS/ambulance agencies are challenged by long transport times and impacts to clinical care, insufficient payment/revenue options, a changing workforce, a lack of regionalized efforts, and insufficient state/federal policy coordination & oversight.[3] This is compounded by the fact that EMS agencies are not considered with the same legislative "essential service" regard as are fire departments and law enforcement agencies in many states. In fact, less than a dozen states have legislation affording EMS agencies this sought after, tax-supported status; Michigan is not one of them.[5] Without this "essential" title, EMS agencies find it harder to qualify for the already highly-competitive tax-funded grants – not to mention the already minimal rural-focused grants.

Challenges facing EMS agencies often revolve around two primary themes: financing and staffing. A survey of over 400 EMS professionals nationwide supported this notion by responding to the question "which of the following is the largest issue facing rural EMS agencies in the U.S.?" (***Figure 1***).[6]

Figure 1: Survey Results: Largest Issue Facing Rural EMS Agencies in the U.S.



REIMBURSEMENT HARDSHIPS

Headlines have filled news outlets both within the state and nationally screaming common messages like "Michigan EMS say underfunding, paramedic shortage has pushed industry to the brink." In this titled article, the author points out that "EMS is on life support and needs investment to survive," and that organizations like the Michigan Association of Ambulance Services (MAAS) and Michigan Association of Fire Chiefs (MAFC) are "urging state leaders to include a $10M increase in state funding for EMS services to bolster Medicaid reimbursement rates," as EMS agencies are only reimbursed for 10-25% of their costs.[7]

The National Association of EMTs (NAEMT) supports these claims, noting that "in most cases, EMS is reimbursed for transporting patients to a hospital, not for providing medical care."[8] While efforts are underway by the Centers for Medicare & Medicaid Services (CMS) to examine this longstanding practice, it is a genesis belief that EMS providers – via ambulance transports – do not provide reimbursable *patient care* to patients; rather, they only provide reimbursable *transportation services* to patients. This means that if an ambulance crew arrives at the scene of an emergency but the patient is not transported to a hospital, then the ambulance service (likely) receives no reimbursement for their services. Even if transport is sought, the amount of money actually received through standard billing practices (e.g., Medicare/Medicaid, private insurance) hardly covers the total cost of being prepared for and responding to the call, and is only received at a fraction of the total billed value. Realities like this are a prime reason why financial constraints are causing ambulance services throughout rural Michigan – and throughout the rest of the country – to risk closing their doors.

Payor mixes (% of Medicare/Medicaid vs. private insurance vs. out-of-pocket payments for service) and transport percentages can also impact the revenue disparities from one community to another. An *NPR.com* article with commentary from the National Rural Health Association highlights that "many rural ambulance services rely on patients' private insurance to fill the gap. Private insurance pays considerably more than Medicaid, but because of low call volumes, rural EMS agencies can't always cover their bills."[3] In the rural setting, however, payor mixes tend to be higher on the Medicare/Medicaid side, unless the community receives a higher (regular) volume of seasonal visitors consisting of private insurance payer populations. Transport percentages can also vary depending upon the nature of the call types (e.g., patient medical/trauma chief complaints). Therefore, the payor mixes of Cheboygan, Davison, Hancock, Ironwood, Kingsford, and Sparta (all Michigan cities with a population of approximately 4000-5000 citizens) may all present differently and equate to different ambulance transport revenues as a result of their payor mixes.

Access to Care

The *2020 Michigan Primary Care Needs Assessment* noted key findings respective to social determinants of health and access to care for rural communities as a concern, citing that Michigan's large geography, limited access to public transportation, long travel times [to health care], and its general infrastructure status & road conditions were all main barriers to rural health care.[9] Rural EMS agencies, as a result, often serve as the only local option for any source of urgent or emergent health care – despite their traditionally transactional (acute, call-by-call) versus longitudinal (chronic, long-term) healthcare delivery approach (which is typical of the 911-based EMS industry).

According to the *Rural Healthy People 2020* report, "access to quality health services, including EMS, continues to be the top rural health priority." Referencing its "Healthy People 2020 Goals and Objectives" section, goals related to access to emergency medical services that are applicable to rural populations include: reducing the proportion of persons who are unable to obtain or experience a delay in obtaining necessary medical care, and increasing the proportion of persons who have access to rapidly responding pre-hospital EMS care – either basic or advanced life support (BLS or ALS).

The report goes on to summarize that "rural populations continue to lag significantly behind urban and suburban regions in access to [first responders], emergency rooms, longer travel times to emergency services, and appropriate trauma, stroke, and pediatric care."[10] Input provided by the Michigan Rural EMS Network highlights that "the most critical piece of improving EMS systems is the ability to ensure [a] timely and adequate EMS response, which is dependent [upon] sufficient staffing, improved funding opportunities, and reimbursement for EMS service[s]."[11] The sentiment of this statewide organization is also echoed by others throughout the EMS industry.

Needless to say, the system-oriented challenges facing rural EMS agencies throughout Michigan do not seem to have an end in sight without significant local, state, and federal changes.

Recruiting Rural Providers

Recruiting Challenges

Volunteer staff comprise a significant majority of many rural EMS agencies throughout Michigan. A nearby state outlined that 80% of its rural EMS agencies utilized volunteers to staff its organizations. Commenting further to this, it outlined that 59% of its rural EMS agencies do not have their shifts 100% covered at least 24 hours in advance of their start.[4] This all funnels down to personnel ... recruiting more to join.

Reported shortages of EMS providers in Michigan's rural EMS agencies have recently made the headlines highlighting operational challenges as a result of not being able to recruit more qualified providers to serve within their region. Speaking directly to response time delays as a result of staffing shortages, officials from a northern, rural Michigan EMS agency comment that calls take longer to respond to when there's no one available to cover the daily schedule. What would typically take 35 minutes to respond to some of its furthest [remote] areas "starts to be 40, 45, and then as the shortages got worse over the years, now we're taking an hour!"[12] Officials in another rural Michigan EMS agency comment that as a result of recruitment and staffing shortages, their "medical rescue unit will need to close within the next six months, and the entire fire department within five years if more staff [aren't] hired."[13]

These accounts are backed by data abstracted from a 2019 *First Responder Needs Assessment*, conducted in concert between the Michigan Rural EMS Network and the Northern Michigan Fire Chiefs Association, which highlights that 91% of managers identified recruitment of new personnel or volunteers as a major or moderate challenge facing Michigan's rural fire/EMS agencies.[14] Factors driving many of the recruitment issues plaguing rural EMS agencies often relate to downward-trending population volumes, local businesses that won't allow for employees to leave their jobs upon the tone of their pager, and stagnant local government support that seemingly keeps the EMS industry frozen in time. "We're staffed the same as we were in the 70s and you know the town has grown tremendously," reported a fire/EMS representative from a Michigan city.[15] The aforementioned needs assessment echoes staffing concerns, as it points out that time, lack of interest, and low pay were its top barriers to recruitment.[14]

Initial Education

A large part of the challenge toward recruiting more rural EMS providers is the time commitment. Initial EMT (emergency medical technician) training can take between 160-200 hours, while initial paramedic training typically involves a full-time, two-semester commitment at a local community/technical college. A growing number of states are even requiring an associate degree-level education for its new paramedics, all while an industry-wide discussion has been ongoing to better align initial paramedic education with its colleague-comparison bachelor degree requirements for nurses. Time commitments like these pose a significant challenge for many working adults, who are often students in EMT training courses nationwide. This is not to advocate, however, for a decrease in such training hours.

Michigan's Initial Exam Pass Rates

Recent years have resulted in Michigan's move away from developing and maintaining its own initial EMS provider examinations and toward following the national trend of having the National Registry of EMTs, a private-non-profit certification organization, supporting its initial testing efforts. EMS providers can attend initial education programs in nearly any state and obtain a widely-accepted national certification that affords them the ability to work in different states without having to complete an individual state's certification or licensing exam.

In Michigan, a three-year review of its first-attempt and third-attempt pass rates for the Nationally Registered EMT (NREMT) and Nationally Registered Paramedic (NRP) levels shows the state's exam candidates rank within the average range of the nation (Note: Each candidate is allowed to take their exam up to three times before being required to attend additional remediation education, followed by retesting). ***Tables 1 & 2*** display how Michigan compares to its neighboring states, in addition to the highest and lowest performing states' candidates (Note: Pass rate percentages may change as more candidates complete their testing process; percentages listed are as of July 24, 2021). [16]

Table 1: National Registry – EMT (NREMT) 1st/3rd Attempt Pass Success Rates (2019-2021, Retrospective)[16]

STATE	2021 PASS %		2020 PASS %		2019 PASS %	
	1st Attempt	*3rd Attempt*	1st Attempt	*3rd Attempt*	1st Attempt	*3rd Attempt*
MICHIGAN	69%	*75%*	69%	*79%*	66%	*78%*
Indiana	60%	*67%*	56%	*69%*	57%	*69%*
Ohio	66%	*73%*	65%	*76%*	66%	*79%*
Wisconsin	71%	*76%*	66%	*77%*	67%	*80%*
Highest	91% WY	*92% WY*	85% HI	*90% HI*	84% HI	*94% HI*
Lowest	49% WV	*58% DE*	40% MS	*53% MS*	42% WV	*59% WV*

Table 2: National Registry – Paramedic (NRP) 1st/3rd Attempt Pass Success Rates (2019-2021, Retrospective)[16]

STATE	2021 PASS %		2020 PASS %		2019 PASS %	
	1st Attempt	*3rd Attempt*	1st Attempt	*3rd Attempt*	1st Attempt	*3rd Attempt*
MICHIGAN	64%	*72%*	64%	*78%*	61%	*79%*
Indiana	68%	*77%*	64%	*84%*	67%	*83%*
Ohio	70%	*79%*	63%	*83%*	71%	*87%*
Wisconsin	67%	*78%*	65%	*80%*	74%	*88%*
Highest	100% ID MT ND NJ RI	*100% ID MT ND NJ RI VT*	100% VT	*100% HI NJ VT WY*	100% ID VT	*100% DE HI ID NH VT WA*
Lowest	33% SD	*44% SD*	51% WV	*67% WV*	46% WV	*67% MS*

Continued bi-annual maintenance of National Registry certification is not required in Michigan. To date, approximately 7200 of Michigan's 28,000 credentialed EMS providers hold Nationally Registered status.[16] The need to obtain increased continued education hours, followed by one's interest to remain as an EMS provider in only one state, lead common reasons why this status is not individually maintained. Reflecting recruitment considerations, requiring initial certification with the National Registry allows for states to recruit EMTs and paramedics from neighboring or further states, provided the individual maintains their NREMT or NRP status for reciprocity purposes.

RETAINING RURAL PROVIDERS

KEEPING RURAL EMS PROVIDERS

A *Rural EMS Sustainability Survey* conducted in a nearby state sought the insight of its rural EMS providers to determine which obstacles rated the highest related to retaining staff. 72% of its respondents felt excessive time commitments played a factor into retention efforts challenging rural EMS agencies, 60% of respondents believed that an aging volunteer workforce impacted declining staffing numbers, and nearly 40% of the respondents agreed that inadequate pay or benefits impacted providers' reasons to leave the rural EMS environment.[4] These results are also supported nationwide in the *2020 EMS Trend Report*, citing that 39% of respondents did not recommend their children enter into the EMS workforce (compared to 12% not recommending EMS in 2018); over 45% felt as though their EMS agency was failing to take adequate steps to address fatigue at work; and 51% reported that if they were to leave their current EMS agency of employment, it would be to seek other public safety or healthcare fields of work, to return to school, or to leave the EMS industry altogether.[17] The results of these sentiments are further evident in a statewide assessment from Michigan, as 23% of a total of 256 responding rural fire/EMS agencies reported a net loss in personnel from 2017-2018 and as a result, 25% of these total respondents predict that that they will only be able to provide vital services to their communities for less than five years to come.[14] Now that those five years are nearly up, today's headlines clearly indicate that their predictions were right – and that many rural fire/EMS agencies in Michigan are turning toward closing their doors.

Why is this? A lack of opportunity for career advancement affects many within smaller EMS agencies. Low pay impacts many others – with the average wage of a paramedic only being a little more than $36,000 per year.[15] Combining this with a burnout rate of 37%, it becomes obvious that the EMS workforce is struggling – both in rural Michigan and nationally.[17]

ADDRESSING EMS PROVIDER WELL-BEING

Many of the factors linked to the declining workforce within the EMS industry are related to social determinants of health, particularly *economic stability* and *social & community context*.

Working – or volunteering – in EMS is stressful. The changing and challenging impacts on the workforce due to COVID-19 have exacerbated the social and workplace conditions that surround EMS providers. Opioid overdose surges stress the local response system and stress local responders because – between these two epidemics – it can seem as though all you see as an EMS provider is the bad – ill – side of society. People get hurt ... people get sick ... people die ... and at a higher rate than prior years.

Adding to the challenges of care in rural areas is that the EMS professional is more likely to know – have a personal connection, relationship – with their patients. Burnout amongst EMS providers is high. Suicide rates within the public safety profession are high. Divorce rates are high. All while pay and opportunities for growth remain traditionally low. Alarmingly, 65% of Michigan's rural fire/EMS providers reported experiencing critical stress throughout their tenure and 14% had thought about suicide.[14]

EMS – as a prehospital healthcare industry – is attending to the social determinants of health for their communities and patients, but with the low salaries, under-funded systems, stressed schedules, and vacant-sign challenges that many rural EMS agencies face in today's climate, it appears as though many municipalities aren't addressing these social determinants for their own EMS providers or agencies.

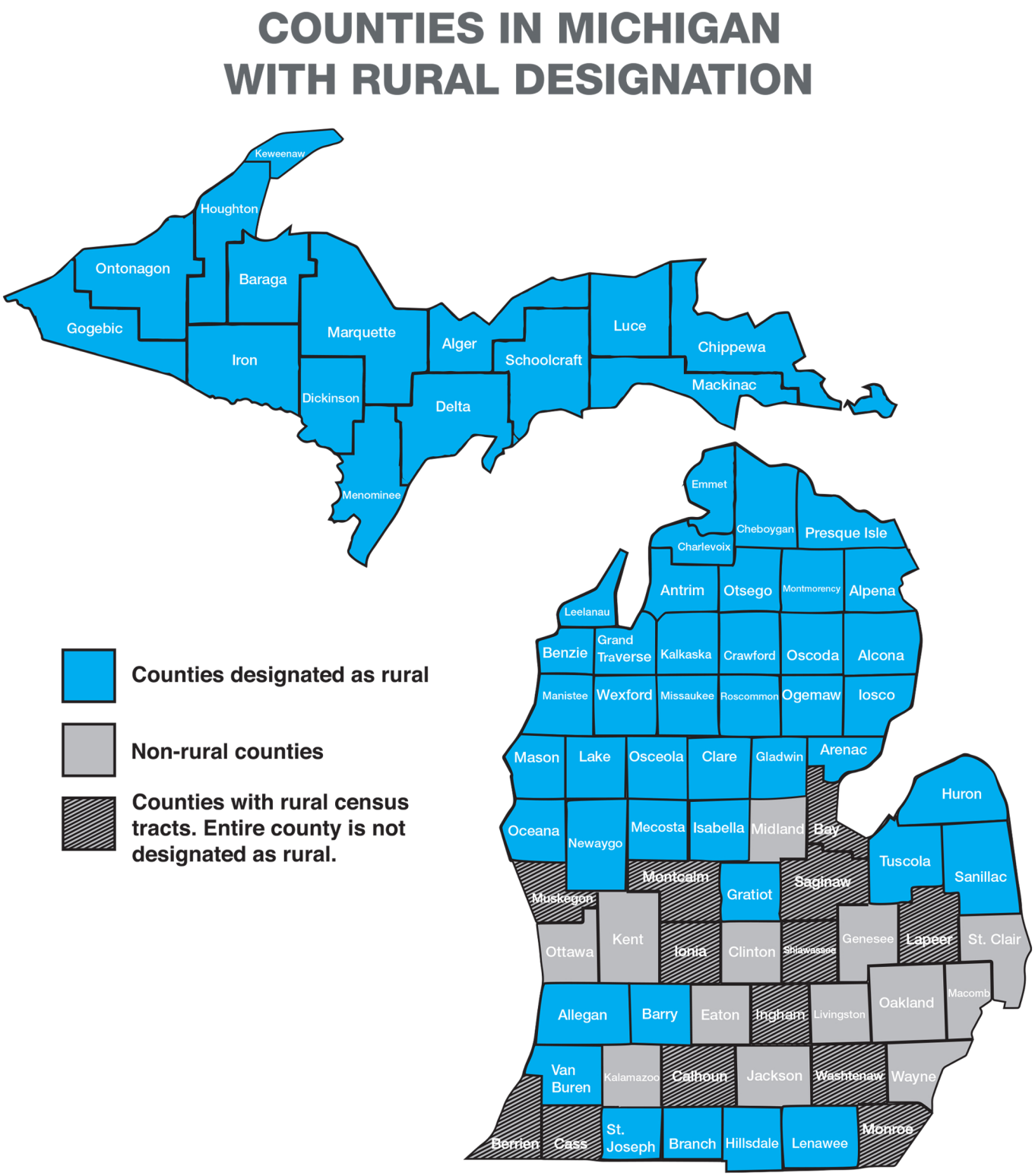
CLOSING VIEWPOINT

Michigan's rural EMS system is at its max ... its limit. Doors are on the verge of closing and providers are already leaving, all without a replacement of new individuals ready to fill-in the existing gaps.

While models already exist to aid rural EMS and healthcare agencies to assess their current status, evaluate alternative models & cost impacts, provide for a decision-making forum platform, and identify a route toward a new operating model, none of what is discovered or hoped for will make a difference without proper support ... proper funding.[18]

EMS – in many rural settings – is on life support ... and Michigan is not immune from this reality. It's past the hope of a proactive vaccine to help keep the systemic spread of hardship at bay ... it's at the point of requiring aggressive resuscitation before it arrests entirely. *

Appendix A – Counties in Michigan with Rural Designation[19]



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