EXECUTIVE SUMMARY
Mobile Integrated Healthcare

Problem: The healthcare landscape needs to evolve to better address how people access and utilize healthcare resources. The identified concerns include, but are not limited to:

- Some patients' access 9-1-1 and emergency medical services (EMS) frequently for non-emergency issues.
- Many calls for assistance do not require the high acuity resources of an emergency department. There are patients who require medical care that can be adequately delivered or initiated at the site to which the response is dispatched and followed by engagement with an outpatient care resource or transport to a more appropriate destination (e.g. dialysis center, physician's office).
- A growing segment of the population who lack primary medical care resources rely on EMS and emergency departments to access the healthcare system.
- Emergency department utilization for non-emergency medical issues contributes to longer wait times, decreased patient satisfaction, and emergency department overcrowding.
- Hospitals can be penalized financially for patients being readmitted to their system within 30 days from discharge.
- Accountable Care Organizations (ACOs) seek avenues to deliver healthcare in more patient-friendly and fiscally responsible ways.
- The lack of primary care physician resources in Ohio may result in episodic care for many patients rather than continuous monitoring and support for those with chronic illnesses.

What does Mobile Integrated Healthcare solve: Mobile integrated healthcare is a coordinated model of healthcare delivery that utilizes resources that are already well known and trusted in the community; specifically, paramedics, EMS providers, and dispatch centers paired with established outpatient medical service providers and the community's primary care physicians. The inclusion of EMS providers, particularly Paramedics, in this model does not displace visiting nurses, hospice, public health or other professionals and healthcare agencies. Supported by community assessment, mobile integrated healthcare has the capacity to fill the gaps and voids in healthcare needs throughout our state, both in rural and urban landscapes. Mobile integrated healthcare works in collaboration with many agencies and professionals to optimize an individual's health primarily through, but not limited to, the management of chronic disease states. It is also recognized that EMS providers, due to their primary visualization of the residence and interaction with family members, have access to critical information about the status of a patient's home and social environment that hospitals may not have or that a patient may not want to admit is negatively affecting their health status.
The Mobile Integrated Healthcare Committee (hereafter referred to as the Committee), an ad hoc committee of the Ohio Emergency Medical, Fire, and Transportation Services Board, has explored what other states' have implemented with this model of healthcare delivery. States from which we have sought expertise are Minnesota, Texas, Missouri, Pennsylvania, Indiana, and North Carolina. Of these states, Texas and Minnesota currently have the most developed mobile integrated healthcare systems.

What Ohio needs to enable Mobile Integrated Healthcare: EMS in Ohio is regulated by the Ohio Revised Code (ORC) 4765 and the Ohio Administrative Code (OAC) 4765. The definition of EMS in Ohio per ORC 4765.01(G) and ORC 4765.01(H) limits EMS to the delivery of care within the realm of emergency response care. To enable the creation of mobile integrated healthcare in Ohio, a law change in ORC 4765 is required in order to broaden this definition and incorporate non-emergency care that may not require patient transport and to allow transport to appropriate non-hospital destinations.

The committee views this proposed law change as an avenue to enable, and not mandate, those communities who wish to implement mobile integrated healthcare as a gap-filling or supportive element for their local medical systems. If a community or agency doesn't believe their community will benefit from this type of care delivery model, they do not have to participate.

Finance: The committee recognizes that financial issues are a hurdle. Currently, the reimbursement of EMS by the Centers for Medicare and Medicaid Services (CMS) is linked to patient transport. However, there are multiple initiatives ongoing at the federal level to eliminate this requirement and to potentially create funding support for mobile integrated healthcare systems. It is anticipated that implementing mobile integrated healthcare in Ohio may be a two-step process. First, legislative change will need to be enacted, followed by the identification of viable funding resources. The website CMS.gov contains statistical data and funding information, especially the areas of chronic conditions that may be useful to reduce the existing reimbursement hurdles until amendments in federal policy have been made (http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Chronic-Conditions/index.html). In addition, the pending Field EMS Bill (H.R. 809), if passed, will provide support of mobile integrated healthcare at the federal level. Analogous to what has occurred in other states, there may also be ways to partner with hospitals for support of mobile integrated healthcare systems since the 30-day readmission penalties that they soon will face may exceed the costs of including EMS participation. The committee acknowledges that funding is a critical component of this healthcare delivery system; however these challenges are not insurmountable.

Risks of not implementing Mobile Integrated Healthcare: There are many risks associated with not enabling this collaborative model for healthcare delivery. Foremost, EMS providers feel an obligation and a responsibility to the communities they serve and have a sincere desire that all residents and visitors remain as healthy as possible. Without a change in legislation, Ohio will be lagging behind other states in the nation and incongruent with the initiatives at the federal level to facilitate the creation of mobile integrated healthcare systems. The patients in Ohio will continue to receive episodic care instead of cost-effective patient-centered continuous preventative care. The overall cost of healthcare in Ohio will increase while EMS providers, a valuable and untapped resource, will be forced to remain on the sidelines except when they are dispatched for patient transport to an overburdened emergency department. The Patient Protection and Affordable Care Act is emboldening our entire healthcare system to develop innovative ways to deliver quality-driven medical care that is cost-effective. Mobile integrated healthcare is an excellent avenue to achieve this goal and to create a healthier status to the citizens and visitors of Ohio.

Mobile Integrated Healthcare:
A Viable Model for the Partnership of Ohio's Healthcare System with Ohio EMS

The concept of mobile integrated healthcare was fostered by the realization that the utilization of the current scopes of practice of healthcare practitioners in non-traditional settings is a valuable resource for promoting patient-centered health care delivery. Many states and healthcare systems in our nation have created mobile integrated healthcare systems that have demonstrated improved patient outcomes, patient care delivery, resource utilization, and significant cost savings. These successful programs have incorporated avenues that facilitate and encourage the inclusion of emergency medical services (EMS) personnel within their mobile integrated healthcare workforce.

Background:

Community paramedicine, which preceded the concept of mobile integrated healthcare, has previously demonstrated its utility in rural and metropolitan healthcare systems. The U.S. Department of Health and Human Services defines community paramedicine as "an organized system of services, based on local need, provided by emergency medicine technicians and paramedics that is integrated into the local or regional health care system and overseen by emergency and primary care physicians. This not only addresses gaps in primary care services, but enables the presence of EMS personnel for emergency response in low call-volume areas by providing routine use of their clinical skills and additional financial support from these non-EMS activities."[1] In late 2010, a National Association of State EMS Officials (NASEMSO)/National Organization of State Offices of Rural Health (NOSORH) Joint Committee on Rural Emergency Care (JCREC) discussion paper described challenges and opportunities for EMS to fill unmet or unrealized community needs in primary care and community health.[2] By utilizing EMS providers in an expanded role, community paramedicine increases patient-centered access to primary and preventative care, provides wellness interventions, decreases emergency department utilization, saves healthcare dollars, and improves patient outcomes.

In recent years, leaders in our nation's healthcare systems have recognized that community paramedicine, with its meritorious track record, was limited in its design. A broader discussion about the opportunity for EMS providers, functioning within their scope of practice, to become more closely merged into the healthcare system led to a more encompassing concept of mobile integrated

healthcare. This concept was supported by the release of the *National Consensus Conference on Community Paramedicine: Summary of an Expert Meeting*, a document written by the NASEMSO/NOSORH JCREC in 2013.[3] Mobile integrated healthcare, as defined by the National Association of Emergency Medical Technicians (NAEMT), is the provision of healthcare using patient-centered, mobile resources in the out-of-hospital environment. It may include, but is not limited to, mobile integrated healthcare component services such as providing telephone advice to 9-1-1 callers instead of resource dispatch; providing community paramedicine, primary care, or post-discharge follow-up visits; or transport or referral to appropriate care.[4]

The Historic Directive to EMS:

In August 1996, the National Highway Transportation Safety Administration, the agency that oversees EMS at the federal level, published a pinnacle report, *Emergency Medical Services: Agenda for the Future* (*Agenda for the Future*). At the beginning of this document, there is a statement titled "The Vision" that has embraced as the overarching quest and purpose of EMS. "The Vision" states "Emergency medical services (EMS) of the future will be community-based health management that is fully integrated with the overall health care system. It will have the ability to identify and modify illness and injury risks, provide acute illness and injury care and follow-up, and contribute to treatment of chronic conditions and community health monitoring. This new entity will be developed from redistribution of existing health care resources and will be integrated with other health care providers and public health and public safety agencies. It will improve community health and result in more appropriate use of acute health care resources. EMS will remain the public's emergency medical safety net."[5] With respect to the integration of health services, the *Agenda for the Future* provided the following recommendations for EMS:

- Expand the role of EMS in public health
- Involve EMS in community health monitoring activities
- Integrate EMS with other health care providers and provider networks
- Incorporate EMS within health care networks' structure to deliver quality care
- Be cognizant of the special needs of the entire population
- Incorporate health systems within EMS that address the special needs of all segments of the population

Emergency Medical Services at the Crossroads, a report published by the Institute of Medicine of the National Academies in June 2006, noted that the EMS systems remain fragmented. The report, like the *Agenda for the Future*, continued to support the evolution and incorporation of EMS as an integral component of the overall healthcare system. One of the recommendations was for the Department of Health and Human Services, the Department of Transportation, and the Department of Homeland Security to jointly undertake a detailed assessment of the emergency and trauma workforce capacity, trends, and future needs, and develop strategies to meet these needs in the future. The report describes a vision of a 21st century emergency care and trauma system where 9-1-1 dispatchers, EMS personnel, medical providers, public safety officers, and public health officials are interconnected and united to ensure that each patient receives the most appropriate care, at the optimal location, with minimal delay.[6]

Identified Challenges:

The Center for Disease Control and Prevention (CDC) has stated that, due to longer life spans and aging baby boomers, the growth in the number and proportion of older adults in our nation is unprecedented. The population of Americans aged 65 years or older is expected to double during the next 25 years to 72 million people. By the year 2030, the CDC estimates that older adults will account for approximately 20% of the population of the United States. The state-by-state report card in *The State of Aging & Health in America 2013* identifies several categories where Ohio is currently in the lower 50th percentile in preventative health measures.[7] These current cited gaps of deficiency will surely increase the future demand for medical care as our population ages.

The American College of Emergency Physicians' National Report Card for 2014, an assessment of America's emergency care environment, also highlights state-specific gaps for Ohio. Although a grade of B- was earned for access to emergency care, Ohio received a grade of C- for public health and injury prevention. Within this report's recommendations, this report states that "the proportion of adults with no health insurance has increased, further limiting access to primary, mental, and behavioral health care. While Medicaid coverage increased for adults, Medicaid fee levels decreased compared to the national average, posing an additional challenge to accessing primary and behavioral health care for this population".[8]

Identified Needs:

The Patient Protection and Affordable Care Act (PPACA) has initiated significant modifications in the structure, administration, and operational status of our healthcare system with additional dynamic changes awaiting in the future. Within the PPACA, there are nine titles, and each of them addresses an essential component of reform. They are:

Title I: Quality, affordable health care for all Americans
Title II: The role of public programs
Title III: Improving the quality and efficiency of health care
Title IV: Prevention of chronic disease and improving public health
Title V: Health care workforce
Title VI: Transparency and program integrity
Title VII: Improving access to innovative medical therapies
Title VIII: Community living assistance services and supports
Title IX: Revenue provisions

Within Title III, the traditional fee-for-service reimbursement of hospitals will transition to a value-based purchasing program for Medicare payments. Physicians will receive incentives to report Medicare quality data. In the near future, long-term patient hospitals, inpatient rehabilitation facilities, and hospice providers will be asked to do the same and may be penalized if non-compliant. In addition, hospital payments will be adjusted based upon the dollar value of each hospital's percentage of potentially preventable Medicare readmissions.

The creation and implementation of measures to help increase the supply of health care workers is one the goals within Title V. There may inherently be a lag time between the time that the proposed training and education infrastructure can realistically generate an increase in the health care workforce.[9] This period of time heightens the need for the available health care workforce to apply the medical skills within their respective scopes of practice beyond the traditional work environments to fill the gap and meet the needs of their communities.

The Evolution of Mobile Integrated Health Care:

The first successful formally structured community paramedicine program in the United States was fostered by Gary Wingrove, a paramedic in Minnesota. There were and still are rural regions in Minnesota where there are no physicians within close vicinity to serve the population. Without community paramedicine, the

residents of these areas would have no readily available access to health care. Since this program was launched, Mr. Wingrove created and currently oversees the North Central EMS Institute that provides a standardized education curriculum to EMS providers being trained to function in a mobile integrated health care system.[10]

Although originally touted as a resource to support rural areas, Dr. Jim Dunford was one of the first individuals to take Mr. Wingrove's community paramedicine model and mold it into a resource for a major metropolitan environment. He analyzed the EMS transport data for the city of San Diego and discovered that 6% of the EMS dispatch calls were for non-emergent complaints or chronic illnesses. He also noted that there was a segment of the population (17.2%) who used EMS frequently to access health care by requesting transport to the emergency department. Specifically, he found that the most frequent users of EMS, who comprised 0.04% of the population of San Diego, generated 5.4% of the 911 calls. In one of several studies conducted within San Diego's community paramedicine system, Dr. Dunford tracked the reduction in emergency department visits, hospital admissions, and hospital lengths of stay for 51 patients over a 31-month period. He found that the overall cost savings for the management of these patients by community paramedics who provided outpatient assessment, medical care, and engagement with existing public health and social service resources was nearly $315,000.[11] Since the initiation of this program, San Diego has developed several mobile integrated healthcare networks that vary in configuration and purpose, one of which resulted in a net cost savings of $700,000 per year.[12]

Mobile integrated health care, a concept sown by community paramedicine, is well-established many countries including the United States. As the role of EMS has become more dynamic, states, such as Missouri and Minnesota, regional, and local health care systems have created paths legislatively to facilitate the creation of mobile integrated health care to better serve the needs of their communities.[413]

The Current Landscape in Ohio:

The access to health care remains a challenge in Ohio. Multiple hospitals with full-service emergency departments have closed during the past decade. Ohio currently has 34 critical access hospitals (CAH) with one CAH closure within the past five years. Distance to travel remains a challenge for many Ohio residents and visitors to access care. There are nine counties in Ohio that do not have a hospital within its boundaries (see Figure 1).

According to the Health Resources and Services Administration (HRSA) within the U.S. Department of Health and Human Services at the time of this report, 74 of Ohio's 88 counties are designated as Health Professional Shortage Areas (HPSA) in the primary medical care discipline. In addition to our rural areas, the HRSA's HPSA data indicates that there are medically underserved areas and populations in all of Ohio's major metropolitan areas despite a higher density of hospitals and medical centers in these regions.[14] Insufficient or lack of primary medical care resources is a substantial causative contributor to emergency department overcrowding, preventable hospital admissions, and overall dysfunctional utilization of available medical assets.

In the event of a gubernatorial declaration of emergency that affects the public's health, EMS providers may perform immunizations and administer medications within the parameters cited in the Ohio Administrative Code 4765-6-03. A prime example of the value of the EMS workforce was evident during the H1N1 influenza pandemic in 2009 when public health agency resources were overwhelmed by the demand for mass vaccination of the general public. With the declaration of emergency by the governor during this health crisis, Ohio EMS providers while functioning within their respective scopes of practice partnered with public health agencies in the administration of influenza immunizations. In fact, Ohio was one of the states in our nation highlighted by the Institute of Medicine where EMS providers, a previously untapped resource, played a significant role in the mass vaccination campaign and administered immunizations to a large segment of Ohio's population.[15]

Currently, Ohio law allows certified EMS providers to perform only emergency services, per Ohio Revised Code (ORC) 4765.01. Ohio law prohibits a certified EMS provider from performing non-emergency services if the provider is holding him or herself out as an EMS provider, or otherwise representing him or herself as a certified EMS provider, per ORC 4765.50. Immunity from civil liability applies only if a certified EMS provider is administering "emergency" medical services. Therefore, certified Ohio EMS providers who act in non-emergency circumstances will not have the immunity from civil liability afforded under ORC 4765.49. Additionally, if such a provider is working for a political subdivision, joint ambulance district, joint emergency medical services district, or other public agency, these entities will not have the immunity protections from civil liability under ORC 4765.49. Further, certified Ohio EMS providers and EMS agencies may be subject to disciplinary action by the State Board of Emergency Medical, Fire, and Transportation Services.

Statutory changes are required before Ohio certified EMS providers would be permitted to render non-emergency care. Ohio Revised Code 4765.01 was legislated on September 17, 2002. Despite the recommendations with the *Agenda for the Future* which was written in 1996, current Ohio law inherently restricts the ability of the EMS provider to become fully integrated into the health care system, a shared goal of the *Agenda for the Future* and *Emergency Medical Services at the Crossroads.*

Conclusion:

Our healthcare system is rapidly approaching a critical brink, and the need to maximize and appropriately utilize our available resources has become an imperative directive. As our population ages over the upcoming decades, the delivery of primary care and preventative care must have an alternative avenue to be provided at sites outside of emergency departments and hospitals. Failure to create these paths of opportunity will needlessly push our healthcare system towards collapse.

Hospitals will soon be expected to meet performance measures to be eligible for reimbursement. The anticipated financial losses borne by hospitals for patient readmissions have not yet been projected for Ohio. However, if one translates the cost savings gleaned in San Diego for 51 patients served by their municipal community paramedicine program, the losses will surely be in the range of millions of dollars for healthcare systems that lack a mobile integrated health care resource. The widespread lack of primary care resources in the vast majority of Ohio counties underscores the need for mobile integrated health care in both our rural and metropolitan communities. A proactive home visitation that results in the avoidance of a 9-1-1 transport, an emergency department visit, or a hospital admission provides benefit to the patient and to the healthcare system. The skilled Ohio EMS providers can support the existing outpatient healthcare providers, reduce the fiscal burden of Ohio's hospitals, and help close the gaps the needs identified by a community.

Mobile integrated health care must be transitioned from a viable option to a purposeful reality for Ohio. In order for EMS to participate in this model, Ohio law must be changed to allow EMS providers to perform the services for which they are currently trained in non-emergency situations. This law must be amended to reflect the vision of EMS that is described in the *Agenda for the Future*. Once this task is completed, the State Board of Emergency Medical, Fire, and Transportation Services and the Ohio Department of Public Safety, Division of EMS can create

the foundation that will allow local, regional, and state health care systems to incorporate Ohio EMS providers into their workforce and the mobile integrated health care networks they wish to build.

The State Board of Emergency Medical, Fire, and Transportation Services and the Ohio Department of Public Safety, Division of EMS support the inclusion of Ohio EMS providers as vital participants in mobile integrated health care systems. We will partner with hospitals, public health agencies, and other healthcare organizations in our ongoing commitment to ensure appropriate and quality care to the residents and citizens of Ohio.

Figure 1: Ohio Counties without a Hospital within its Boundaries*

**Based upon information provided by the Ohio Hospital Association on June 19, 2014*

References:

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