APPLICATION FORM

All applications must include the following information. Separate applications must be submitted for each eligible program. **Deadline: June 1, 2018.** Please include this application form with electronic entry.
If you do not receive an email confirming receipt of your entry within 3 days of submission, please contact Gage Harter.

PROGRAM INFORMATION

County: Chesterfield County

Program Title: Mobile Integrated Healthcare: Shifting Paradigms in 9-1-1 Service Delivery

Program Category: Criminal Justice and Public Safety

CONTACT INFORMATION

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SIGNATURE OF COUNTY ADMINISTRATOR OR DEPUTY/ASSISTANT COUNTY ADMINISTRATOR

Name: _____

Title: _____

Signature: _____

MOBILE INTEGRATED HEALTHCARE:

SHIFTING PARADIGMS IN 9-1-1 SERVICE DELIVERY

Achievement Award Category:

Criminal Justice and Public Safety

Chesterfield Fire and EMS

March 20, 2018

Executive Summary

Chesterfield County Fire and EMS is utilizing a unique and innovative approach to assist residents of Chesterfield County to manage emergent and non-emergent medical concerns. This approach, the Mobile Integrated Healthcare (MIH) Team, utilizes select specially trained and focused paramedics within the department to address frequent users of the 9-1-1 system and residents who have unmet medical needs. This is done by navigating the customers to existing resources to help manage their medical conditions and ultimately not need to use 9-1-1. The program leverages the specialized training of paramedics to help identify medical challenges, then accessing the comprehensive network of county human services and private partnerships. These professional relationships have been forged to help connect the customer to the resources they need. The MIH program, which began initial operations in February of 2014, has responded to over 1000 residents. These customers have been identified by operational crews as potentially needing assistance. Over the last four years, through the intervention of the MIH team, the program has effectively reduced the use of medically related 9-1-1 calls by residents in the program by 49%, connected them with human services agencies like mental health, social services, senior services and connected them with primary care.

The Problem

One of the major issues facing Chesterfield County Fire and EMS (CFEMS) is how to best prepare our Emergency Medical System delivery model to manage the impact upon the system with the growing wave of aging baby boomers. Their needs will require prehospital care to help with emergent and non-emergent medical concerns. CFEMS responded to over 32,000 medically related 911 calls last year. Given the historical data and the projected growth trends of the older adult population, CFEMS expects to see marketed growth in the utilization of the 911 system by this population. This is due to the compounding effects of multiple medical conditions traditionally experienced by older adults.

The challenge becomes how to respond to the growing utilization of the 9-1-1 system for medically related concerns utilizing existing resources. Compounding this challenge is the subset of county residents who utilize the 9-1-1 system frequently, with low acuity or non-emergent calls. In cases of this nature, customers often access the 911 system 20 to 50 times or more a year. This call activity places an additional stress upon the 911 system by tying up valuable resources that could be available for emergent 9-1-1 calls. Understanding the department's need to balance the older adult residents increasing demand for emergency medical services and trying to address the frequent users of the system productively, the Mobile Integrated Healthcare team was developed.

The Program

The concepts of Mobile Integrated Healthcare (MIH), also known as Community Paramedicine, has been gaining momentum throughout the United States for the last two decades. MIH is a community risk reduction strategy that focuses on the EMS system. Programs seek to prevent

needless disease progression through an integrated approach to healthcare. This is done by linking emergency responders, public and private health organizations, hospitals, and primary care physicians together to provide a comprehensive strategy that allows a locality's residents to age in place safely. One of the major issues facing the Chesterfield County Fire and EMS department is how to best prepare and modify our EMS delivery model to manage the impact the wave of baby boomers have placed upon the 911 system. This growing population will require EMS to help with the emergent and non-emergent medical concerns of the county's residents.

MIH programs nationwide run the gamut of application from trying to curb the impacts of high volume users of the 911 system, treat and refer protocols to get patients to a more appropriate level of care when an emergency department visit is not necessary, resource navigators to connect patients with resources that can help them manage their medical needs, to helping primary care physicians assist patients in managing chronic diseases like Congestive Heart Failure (CHF), Chronic Obstructive Pulmonary Disorder (COPD), Acute Myocardial Infarction (AMI), Diabetes, and Emphysema.

In the summer of 2013, Chesterfield County Fire and EMS began to look into the feasibility of developing a Mobil Integrated Healthcare program. Understanding that the nation's population is aging, combined with the medical demand on the Healthcare system from the "baby boomers" is going to make a significant impact upon all healthcare practitioners. This includes hospitals, non-emergent care centers, primary care physicians, and 911 related services. A workgroup was put together to explore the possibilities of Mobile Integrated Healthcare and what that may look like within the confines of Chesterfield County, with a projected pilot program to begin spring of 2014.

The workgroup, under the leadership of CFEMS's Medical Director Dr. Allen Yee, was composed of six (6) operational firefighters and officers. The workgroup was charged with looking at opportunities that would address the predicted explosion of age related 911 call activity in addition to curbing the frequent use of high volume users. The workgroup met with representatives from the Virginia Office of EMS to discuss scope of practice, the Virginia Office of Licensure and Certification to explore the possibility of needing a home health license, Chesterfield County Human Services departments (i.e. adult protective services, mental health, and the senior advocate) to see how departments could crosswalk services to coordinate efforts in providing resources. The workgroup also met with regional partners like the age wave coalition, the council on aging, home health and home care companies, and hospital systems to again try and coordinate efforts to make Chesterfield a more coordinated healthcare community. Through all the meetings and research, CFEMS elected to explore two opportunities to impact the residents of the county.

The first was the facilitation of community resource coordination, which attempts to connect patients to resources they may or may not be aware of. Because of the number of issues facing our older adults, the focus of the program is driven more towards the community coordination strategy where providers would assist patients in navigating to resources either known or unknown that can improve their ability to manage their medical conditions. That navigation can be to a primary care physician; it can be to county social services or mental health, it can be to get them in contact with home health or even hospice if their disease progression is to the point that end of life decisions need to be made. MIH providers can assist patients in getting Medicaid or Medicare applications filled out; have their medications inventoried so the doctor's office can reconcile them for potential side effects and negative interactions; and home safety surveys can

be completed to determine if a patient may need some form of durable medical equipment to decrease falls within the home.

The older adult populations who are trying to manage their health and age in place at home with chronic medical problems are the true target of the efforts behind the program. Through this focus is the integration of healthcare services that can ensure that care provided by CFEMS does not occur in isolation and that positive effects are enhanced by linkage with other community health resources.

The second issue impacting CFEMS is the excess use of the 911 system by frequent callers. Chesterfield calls these residents, loyal customers. Loyal customer populations provide several negative impacts on the 911 system. Most of the loyal customer's calls are non-emergent and often non-medical calls that require a fire engine and an ambulance to respond to a residence for a complaint. When that piece of apparatus is tied up on a non-emergent call they are not available to handle an EMS or fire call in their first due response area which decreases overall response time to an otherwise emergent problem. Often in both medical and fire-related responses, time is a critical factor in successful mitigation of the incident. If the first due units are not available due to a call that could be handled in a different format, lives could be at risk.

Loyal customers present a unique challenge to responding crews due to the frequency of responses. Despite strong leadership and professionalism from our crews, every human has a limit to their patience. This limit is often tested once the Loyal Customer has called 911 for the third, fourth or fifth time per shift, every day, for the exact same issue. In cases like these the customers are in a position where they are personally incapable of resolving their issue and they do not have the desire to seek a true resolution to the problem. Instead they choose the simple,

short term solution by calling 911. Loyal customers also represent opportunities. Opportunities to help them navigate to public health resources known or unknown, opportunities to decrease excessive use of the 911 system and needless transports to the emergency room, thereby allowing fire and ems units to remain available in their first due response area to handle other emergent calls. There are opportunities for community education, home safety, referral to home health-related industries, and opportunities to discuss the most appropriate place to live and age as their current home may not be the best place if they are unable to take care of themselves.

The pilot program was formed with three (3) paramedics and one (1) supervisor from operations who were converted, on a trial basis, to a 40 hour work week to a dedicated MIH team. The early success of the program solidified the impact of the effort, and the MIH team remains at the four-member staffing level.

Program Costs

The MIH program costs are essentially absorbed by existing costs already encumbered by the department. Because funding opportunities or cost recovery options for this innovative program utilizing the public safety model have not been completely developed it was necessary to utilize existing resources (i.e. personnel, vehicles, and technology). The vehicles being used by the program are already a part of the departments fleet program and were just reassigned from the available pool vehicle, personnel were loaned from operations, and the needed technology utilized equipment that could be repurposed if the program was found to not be successful. The greater challenge for other departments that may not have the existing resources would be how to fund the following:

- Four (4) Full Time Equivalents (FTE)

  - Salary
  - Benefits
- Four (4) staff vehicles
  - Vehicle cost
  - Fuel
  - Maintenance
- Four (4) tablet computers with standalone internet connectivity
- Office space and furniture for four (4) personnel
- Office and Printing supplies

Results

To date the program has on-boarded over 1000 cases. We have seen a reduction of 9-1-1 usage of those who participated in the program by 49%. This equates to nearly 1500 9-1-1 calls avoided per year. This was acomplished by connecting patients with social services, home health, and primary care doctors. In addition families were helped to find permanent living arrangements for their loved ones whom they could no longer care for on their own. For loyal customers, the program has been able to reduce their 9-1-1 usage by 70% and in some cases eliminate usage altogether. The partnerships the program has created results in joint efforts between adult protective services, mental health, and adult substance abuse. This allows us to streamline cases held in common and reduce workload by sharing information and resources. The program has expanded to include a partnership with the Chesterfield County Sheriff's Department and mental health to help combat the opioid crisis. The MIH program now has a peer counselor from mental health embedded within the program to focus on opioid addiction and recovery and report a 50% success rate in getting recent overdose victims into treatment.

Some statistics from the program:

Average residents referred per month – 23

The average age of resident – 64

The average duration of the case – 78 days

Top three identified concerns:

Inadequate self-care

Frequent Calls

Resource needs

Worthiness of Award

Chesterfield County's strategic plan demonstrates the county's commitment to deliver services that make it the best community in which to live, learn, work and play. This plan serves as a roadmap that guides decision-making during times of prosperity or challenge. These priorities are set through five goals, focusing first on the results and then determining the effort needed to deliver those results. The first goal "Model for excellence in government" states in part that as a county, departments should understand and respond appropriately to customers' key needs with effective, collaborative solutions and to think and act regionally to maximize positive outcomes and leverage resources.

The Chesterfield County Fire and EMS Mobile Integrated Healthcare (MIH) program does just that. As healthcare needs and demands challenge both communities and first responders, the MIH program addresses the communities need in an innovative and collaborative way that

leverages community partnerships, human services resource navigation, compassion, and professionalism. This is done in a way that is found in few areas of the region or the country. The MIH program highlights what can happen when you endeavor to fill the unique needs of ones customers with an equally unique solution that is both transformative and effectual to both the Fire and EMS service and to the residents of the county.