

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.

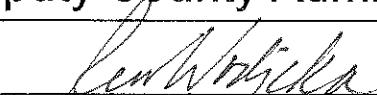
PROGRAM INFORMATION

County: Bedford County
Program Title: Bedford Co. High Frequency EMS User Group Pilot Program
Program Category: Health & Human Services

CONTACT INFORMATION

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Bedford County High Frequency EMS Users Group Pilot Program

Brief Overview

In an effort to reduce unnecessary ambulance transport and to better meet the stated and unstated needs of the community Bedford County established a High Frequency EMS User Group. This multidisciplinary group representing Fire & Rescue, Dept. of Social Services, County Administration and Law Enforcement assembled to share expertise and to determine the extent of the situation in response to routine EMS calls commonly referred to as "frequent flyers."

Quickly it was determined to seek opportunities to meet unmet needs and the shared goal of an improved quality of life for citizens who may be in underserved areas within the community. Candidates selected, who met the predetermined criteria, received a home visit by a social worker/firefighter paramedic team. After the home visit was conducted a case management approach was used to match needs and resources for the individuals. Structured follow up and appropriate referral to service organizations allowed for many of the enrollees to achieve an improved quality of life while attaining a 60% decrease in unnecessary 911 calls for service from the cases managed.

Several impacted individuals did succumb to medical conditions during the pilot project and this fact does speak to the true extent of the degree of illness by some in our community that could otherwise be viewed as system abusers due to the nature of their illness, home environment, or societal distracters.

Bedford County High Frequency EMS Users Group Pilot Program

Executive Summary

In response to increasing rates of 911 calls for medical emergencies, Bedford County endeavored to establish a group to review and mitigate the rising inappropriate use of the emergency medical services system. Often, callers request EMS for reasons that are not medical emergencies, but have no other ability to access the community's system of care. This overburdens the EMS system and leads to a lack of appropriate care for the County's residents. A team of Fire & Rescue, Social Services, Law Enforcement, County Administration and local health providers was assembled to address this problem. The Bridges out of Poverty program has been recently adopted by several county agencies and this provided a common understanding of complex social issues.

By reviewing E-911 Center call data, a list of candidates that had requested EMS over 7 times in one calendar year was compiled. Individuals were selected for enrollment in this Pilot Program. A goal to determine the drivers of high frequency users of the system to better meet actual needs of user. This is in contrast to the punitive methods approach many localities employ for high frequency users. A literature review was conducted with few results to address this topic from a local government perspective. Studies from a health system approach with the goal of reducing return to ED visits and the subsequent financial impact on health care were plentiful.

A multidisciplinary team of Fire & Rescue Paramedic/Nurse and Social Services/Social Worker created a case-work approach for the selected individuals were assigned home visit responsibilities. Support from Law Enforcement and the system operational medical director played a role in overall management. This team approach was found to be beneficial in the complexity of medical and social issues faced by the study group.

A medical history & physical and structured assessment by the assigned social worker allowed for a consistent case management approach to these home visits. Each case was reviewed with the broader team and medical director with the goal of detecting and meeting unmet or undetected needs that may be mitigated appropriately outside the realm of 911 system.

The result was that undetected situations existed with each of the candidates and many were resolved collaboratively. Additionally a number of the candidates did reduce 911 service utilization during the study period. Several had such extreme medical conditions that they died during the pilot program. Overall, this program has a 60% success rate for reducing the use of 911 for inappropriate calls for service.



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Bedford County High Frequency Emergency Medical Services Users Group Pilot Program

April 2018

In many communities throughout the United States, the demand for Emergency Medical Services has increased exponentially in recent years. In many cases, the individuals requesting service are doing so for reasons that were never envisioned by the original mission of Emergency Medical Services. The volume of calls for non-emergency medical, trauma, or psychological issues has become overwhelming for many agencies. In some communities, leaders have elected to take a punitive approach to dealing with individuals who are calling for services inappropriately – charging people with 911 abuse or, in some cases, totally refusing service. Bedford County, Virginia has elected to understand the complex drivers of high frequency EMS users and work with those community members to address the issues in their lives that are causing challenges that ultimately manifest in a call to 911.

In January 2017, several Bedford County department heads from various disciplines attended a local *Bridges Out of Poverty* training. This training is designed to help community leaders understand how economic class can affect people's perceptions and social norms. Bridges brings people from all sectors and economic classes together to build resources, improve outcomes, and support those who are moving out of poverty.

While not all high frequency EMS callers are living in poverty, often individuals who call very frequently have some social, medical, psychological, or other crisis that presents in a manner similar to what is identified in the *Bridges* model. These crises often result in a call for service to the 911 system because the individual believes that they have nowhere else to turn. As such, what some people consider “ambulance abuse” Bedford County recognizes as a personal crisis from an individual that is in need of services within our system of care.

The *Bridges* philosophy identifies three lenses that help us understand how to address members of our community that are in crisis in some form – the individual, institutional, and community lenses. As Bedford County’s leadership began discussing the high frequency EMS user problem in the county it quickly became apparent that by using the community lens we could potentially achieve success in a collaborative effort designed to meet the documented needs of those in our community who are making frequent use of the 911 system. Often that use is an inappropriate substitute for another social or medical service.

From the onset it was accepted that citizens who repeatedly call for 911 services do have a service need – medical, physiological, social, or undirected. It was the county’s goal to meet that community need in an effort to limit repeat calls, versus approaches of criminal prosecution, etcetera when callers are viewed as “ambulance abusers.” Instead, Bedford County, Virginia has chosen to look to this escalating situation from a holistic and citizen centric approach.

The first step was to assess the true impact on the E-911 public safety system. While we had anecdotal knowledge of frequent callers (hearing the same addresses dispatched frequently,

etc.), it was important to assess the data related to high frequency individual callers and number of times public safety services were requested per caller. It was also important to determine what types of complaints and commonalities existed in 911 calls and to determine if local resources existed to meet citizen needs.

A major challenge in this work is simply defining what constitutes overuse of the 911 system. A review of available literature provided that there is no consensus on the term “high frequency user.” As a result, through local determination as informed by the literature, Bedford County agreed to define a “high frequency user” as an individual that called 911 for EMS seven times in a 12 month period. Individuals enrolled in this program ranged from 7 ambulance transports to a high of 32 in a twelve month timeframe. A review of medical charting data produced 10 individuals who met usage criteria.

Patient Number	Age/Gender	Area of Bedford County	No. Transports 2016
1	58 Male	Thaxton	32
2	49 Female	Blue Ridge	24
3	62 Female	Moneta	22
4	35 Female	Goodview	17
5	41 Female	Bedford Town	9
6	66 Male	Moneta	9
7	19 Male	Goodview	8
8	74 Male	Forest	8
9	85 Male	Bedford Town	8
10	67 Female	Bedford Town	7

Once those individuals were identified a meeting of local community service agencies was held to assess the impact on each agency. It was also important to determine what services and linkages did exist and to evaluate if it is possible to address the issues identified. County Administration, Law Enforcement, Fire & Rescue, E-911 Center, Geographic Information System

staff, the local Hospital Emergency Department, Social Services, and a local primary care physician participated in a roundtable discussion. This type of community collaboration helps to build communication and relationship across agencies and departments, and is a parallel process for the improved relationships between these agencies and the community served.

Common among the identified individuals was that they present with multiple and complex complaints and reasons for seeking service – medical needs that present as acute and chronic in nature, complicated and untreated mental health conditions, difficulties of age, and unmet personal and social care issues.

After reviewing available information, a multi-disciplinary team composed of Social Services/Adult Protective Services staff and Fire & Rescue Paramedics/Nurses scheduled a home visit with each of the ten individuals selected for assessment. By performing a structured evaluation, which included the Virginia Uniform Assessment Instrument (UAI) in conjunction with a clinical history and physical examination, the team was able to develop a comprehensive assessment of present crisis in the person's life, which included a review of past medical history and current medications with each patient. This provided an opportunity to identify potential community services – either provided publicly or by private organizations – that are more appropriate than EMS to meet the person's needs.

Once the needs assessments were completed a case management approach where indicated was employed to ensure their long-term success.

Findings from Home Visits

The following were the findings of the medical, psychological, and social complaints of the original 10 individuals the team identified and visited.

Client #1: 58 y/o male. 32 calls for EMS. Orthopedic injury, previously undiagnosed. Chronic Obstructive Pulmonary Disease, Hypertension, smoker 1 pack per day, alcoholic. Lives in trailer without adequate quality of life resources, water, electrical service etc.

Client #2: 49 y/o female. 24 calls for EMS. Chronic Obstructive Pulmonary Disease, Kidney disease, Fibromyalgia, Gout, Hypertension, Diabetes Mellitus. Bedridden and family felt she was “sent home to die.”

Client #3: 62 y/o female. 22 calls for EMS. Chronic Obstructive Pulmonary Disease, Sick, difficulty breathing.

Client #4: 35 y/o female. 17 calls for EMS. Mental Health issues.

Client #5: 41 y/o female. 9 calls for EMS. Nausea & Vomiting, dehydration. Diabetes Mellitus, Gastroparesis, Kidney disease (awaiting transplant).

Client #6: 66 y/o male. 9 calls for EMS. Foley catheter malfunction. Prostate condition, Hypertension, Back surgery.

Client #7: 19 y/o male. 8 calls for EMS. Anxiety, gastric complaints. Sudden weight loss, anorexia. Lives with father and has had multiple domestic violence incidents with his father.

Client #8: 74 y/o male. 8 calls for EMS. Difficulty breathing, Chronic Obstructive Pulmonary Disease, Hypertension cardiomyopathy, congestive heart failure, smoker and alcohol.

Client #9: 85 y/o male patient. Deceased prior to contact.

Client #10: 67 y/o male patient. Deceased prior to contact.

From this group, we were able to make a number of referrals and identify appropriate services for these individuals. However, the first two in the list have had the most dramatic results and it is worth telling their story.

Client 1 – 58 year old male client calling 32 times for EMS in 2016

This client was reported to have nutritional issues coupled with alcoholism in conjunction with a myriad of clinical diagnoses and barriers to traditional social interaction, including being a sex offender. One of the problems that the team identified is that he did not have consistent access to food, often only eating a mayonnaise sandwich once per day and drinking alcohol excessively. DSS staff was successful in coordinating the delivery of a food box from a local charity organization and ensuring pickup and delivery by staff from their unit. Social skills, shortcomings and previous criminal charges are barriers to this individual advocating for himself or from seeking services including shelter opportunities. However, as a result of the team's food box intervention, his alcohol consumption has decreased substantially and his nutrition has improved. While he still occasionally calls for EMS, it occurs every few months rather than several times per month. After an extensive search for alternative housing a bed was found at a facility in another locality.

Client 2 – 49 year old female client calling for EMS 24 times in 2016:

This client was reported to be bedridden and presented with a host of diagnoses and the expected polypharmacy. Both the patient and the family were unable to provide clear information on the patient's multiple diagnoses or medication regimen except that she had been sent home to die. After careful review of available medical history and medications staff consulted with our EMS medical director in an effort to determine an appropriate course of action. After determining that this individual did have several complex medical conditions and required medication it was determined there were none that would lead to immediate death and that, if properly managed, this person's quality of life could improve dramatically. Through guidance and referrals she is expected

to do well and is routinely taking fewer medications. She is no longer bedridden and has few calls for EMS service.

Needs varied from client to client and encompassed all facets of the impacted individual and often family unit. Several nonclinical commonalities were detected in the cases. In some clients, the individual's transient nature limited their knowledge of the area, which led to their furthered isolation. These commonalities represent a variety of resources that are lacking either in individual homes or in our system of care:

- Access to consistent and safe transportation
- Ability to maintain a domicile and have life needs resources available
- Personal gate keeper of medical & financial information & resources
- Advocacy and representation for clients in multi-agency coordination
- Telecommunications (lacking cell phones)
- Lack of knowledge of local health and social system of care in this community

Social Services continued to evaluate and follow up with clients presenting with various needs. As a plan for specific case management was formulated, the intent was to close out the case once the plan was implemented and appropriate referrals were made.

Challenges Limiting Success

The team did experience several difficulties in establishing a schedule to meet with the enrolled participants for a variety of reasons. Several variables such as: lack of phone service, lack

of orientation to day and time, conflicts with other family care responsibilities, and competing medical appointments. Once all patients did participate in a home visit (two of the ten did not receive a visit because they had already passed away) a meeting of the High Frequency User Group was held to review the information gathered and to design potential interventions to address the individual's issue(s). Some of the interventions include monthly food boxes, transportation to various medical appointments, and transportation to grocery store appointments. These services were provided by a variety of public and private groups.

In terms of the ability to deliver services or orchestrate the delivery of such services we encountered barriers not previously planned for in this nontraditional environment. The interpersonal need, personal hygiene, and past criminal record of some individuals revealed that a deeper service and case management approach was needed. These individuals had restraining orders, one as a sex offender, and many had limited resources to access DSS and other community services. For instance, one individual that was enrolled to receive a monthly food box from a local Christian ministry had no means to pick it up. A Department of Social Services worker accepted responsibility for providing this service to the citizen. Unfortunately, due to program rules, the ministry required that the same worker pick up the box, rather than another DSS worker. This created obvious reliability concerns.

Outcomes for the System

A common theme in this effort was the lack of information by those served concerning resources potentially available to segments of the at-risk community. Nationally, a Fire and Rescue system is often perceived to be the "community safety net" and as one of the few organizations

that will always come when called. Unlike the police department, callers are not in jeopardy of incarceration, fines or investigation when summoning assistance. As such, for many of these individuals, it seems appropriate to call EMS to receive some kind of service, even though that was not the appropriate service to summon.

While there are still considerable demands for EMS services delivery it became apparent that it is possible to reduce inappropriate use of the EMS system by properly managing high frequency clients who often have needs that cannot be met by an ambulance ride to the emergency department at the local hospital.

During this process we determined that individuals of certain portions of the community call 911 as a generalized portal into the health and social services arena. This 911 call may provide access to the expanse of the human services buffet, but there is a clear need for education for citizens as to the availability of resources and the need for true “advocacy” for these individuals.

Patient #	Age/ Gender	Area of Bedford County	2016	2017	2018[^]
1	58/ Male	Thaxton	32	14	3
2	49/Female	Blue Ridge	24	6	3
3	62 / Female	Moneta	22	7*	*
4	35/ Female	Goodview	17	0*	*
5	41 / Female	Bedford Town	9	3	0
6	66 / Male	Moneta	9	0	0
7	19 / Male	Goodview	8	6	0
8	74 / Male	Forest	8	0	0
9	85 / Male	Bedford Town	8	0*	*
10	67 / Female	Bedford Town	7	0*	*

*deceased prior to the end of the calendar year
^ as of the end of the first quarter of calendar year 2018

Lessons Learned

As a result of this pilot project, several lessons were learned and will inform future efforts to resolve problems related to high frequency EMS use.

1. **Use of a holistic approach** – A multidisciplinary team with ongoing institution to institution collaboration and program development provided a diverse understanding of each client’s condition. A critical review is needed to determine if a Family Services Specialist’s time could be better spent working with Fire and Rescue to address the biopsychosocial needs of the county residents who frequently use emergency transport. This provides for an opportunity to address medical and mental health care issues while consolidating resources. Additionally, this ensures that the appropriate service is provided, rather than inappropriately utilizing the EMS system, hospital emergency rooms, or law enforcement.
2. **Education and Advocacy (clients)** – The need for increased education & advocacy was abundantly clear in many encounters. The lack of awareness of available services was very clear to many of our participants. One gentleman was signed up to be an Angel Tree recipient and received needed household items; this impacted his quality of living and general outlook greatly. He had no knowledge of such a program nor the access to sign himself up for such a benefit.

3. **Education and Advocacy (service providers)** – With respect to our EMS providers, there was a major lack of knowledge of the true need for assistance for many of these individuals. This was due to cultural or situational conditions that many of our providers have not personally experienced. Considerable training of EMS providers is needed to successfully identify actual patient needs and to develop an understanding of what services exist.

4. **Wrapping Services** – It is evident that there are opportunities for the inclusion of further services that are provided by the community while we are in the home. For instance there is an opportunity to complete a fire safety checklist while in homes that we are visiting.

5. **Information collection** - Structured encounter forms and templates to collect the breadth of the information available concerning the individual, the family and the living and financial environment are needed.

Future Directions

1. Identify needs not being met. To meet the detected need of inappropriate use of EMS in the community, a team of dedicated staff members from the Department of Fire and Rescue and Department of Social Services should be created to meet the stated and ongoing need and to seek collateral opportunities to meet other as yet undetected needs of the target group.

2. Expand the definition of high frequency user. It is worth noting that the filtering process performed to detect the high frequency users identified individuals with a specific set of conditions. However this leaves out callers that may have used 911 for the purpose of accessing other services a few times per year. For instance, if 500 other citizens have called 911 twice in the past year, they do not reflect in the HFU category. They are, however, depleting resources and may not have important needs met and may in the future rise to the point that they do get identified as requesting EMS 7 or more times. Facilities should be filtered to detect overuse by Nursing Homes, Urgent Care Centers and the like. Essentially, an early warning system should be created.

3. Update the EMS call data for 2017. EMS call data from the 2017 calendar year are currently being revised to detect an updated list of High Frequency Users. This updated information will also be filtered to detect any patterns from previous clients and will be the basis for the next phase of this project. Lessons learned will be incorporated and additional stakeholders will be sought out to meet needs in the field component as well as clinical and administrative components.

4. Expand the collaboration with other agencies. The agencies that should be represented include at a minimum Fire and Rescue, Social Services and local law enforcement staff. We should also expand collaboration with the local Centra health system, Johnson Health Center, private physician practices in the community, Bedford Ride (volunteer transportation services), and ministerial organizations.