



APPLICATION FORM

All applications must include the following information. Separate applications must be submitted for each eligible program. **Deadline: June 3, 2019.** 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: County of Henrico
Program Title: Basic Life Support Transport Program
Program Category: Criminal Justice & Public Safety

CONTACT INFORMATION

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SIGNATURE OF COUNTY ADMINISTRATOR OR DEPUTY/ASSISTANT COUNTY ADMINISTRATOR

Name: Anthony McDowell
Title: Deputy County Manager for Public Safety
Signature: *Anthony E. McDowell*

Program Overview

In 2018, more than 41,000 EMS calls for service were dispatched throughout Henrico County's twenty-one fire stations. Due to the increasing volume of 911 EMS calls within our community, the Division of Fire developed a Basic Life Support (BLS) Transport Program. The implementation of this program, which began on July 18, 2018, was essential for Henrico County Division of Fire to be able to maintain our quality EMS care and consistent response times for our citizens. This plan allows the Division to place additional basic life support ambulances in service during identified peak service times to respond to low-acuity calls and increase the reliability rate of the advanced life support units to be available for the high-acuity, life threatening emergencies.

Problem/Challenge/Situation Faced by Locality

Henrico County Division of Fire is an all-hazards, fire and EMS system. Residents and visitors are not charged or billed for fire, EMS or ambulance transport services. Currently, our county is experiencing a 911 EMS call growth rate that is over four times the rate of our population growth. The ten-year growth rate for EMS calls is approximately 38%. Further analysis has revealed that the low acuity calls (ground-level falls, general illness, and lift assists) are increasing at a much faster rate than the high-acuity calls for service.

Prior to July 2018, the Division of Fire had sixteen advanced life support ambulances, which responded to the dispatched 911 EMS calls regardless of the acuity of the call. The increase in our low-acuity call volume and the amount of time a unit spent on these calls was reducing the availability that an advanced life support ambulance would be available to respond within its

district to a life-threatening call. It was apparent that our EMS model of dispatching a medic unit to every call did not accurately reflect the actual call-type for dispatched calls.

In addition, our dispatch system was having difficulty evaluating the nature of the call, and most calls were dispatched with first responder/support apparatus. As a result, we were dispatching fire suppression units more than necessary. This “over” response was leading to an increase in fire suppression units being marked out of service for EMS calls, personnel burnout, and a concern for errors and stress on other emergency resources.

How Program Fulfilled Awards Criteria

Henrico County Division of Fire found a creative and economical solution for handling our 911 EMS system’s increase in low-acuity calls. Since our agency is unique in not recovering revenue for EMS transports, we had to effectively design a program that would allow us to consistently deliver the quality of care that our citizens have come to expect. Careful evaluation of the existing EMS system; including call type, response data, and our immediately, available resources (i.e., reserve ambulances, equipment stores, and staffing) allowed our agency to initiate a sustainable program that has positively impacted the County’s EMS service delivery.

With the implementation of the peak-time BLS Ambulance Transport program, the Division of Fire not only improved the reliability of an ALS ambulance being available to respond for life-threatening emergencies, but also addressed the need for our agency to be able to support the continued increase of non-emergent, low-acuity calls.

How Program Was Carried Out

The Division of Fire developed a five-year program which would reduce unit commitment time, increase reliability that a medic unit would be available for a life-threatening call, and adopted a nationally accredited dispatch system which more accurately prioritizes and dispatches the right resources for the EMS call for service.

An extensive evaluation of our operational data revealed peak times and locations where more low-acuity calls were dispatched. These peak times placed a huge burden on our unit commitment times and the reliability of our advanced life support units.

The unit commitment time is measured by how much time within a 24-hour shift a fire medic unit is committed to an EMS call. The total call time is measured from the initial dispatch and ends when the fire medic unit clears from the hospital or returns to service. An ideal commitment time is between 15% and 25% for advanced life support units. Because our busiest fire medic units were above the unsustainable threshold of 30%, our reliability rate was also impacted. The reliability rate is the probability that the first due unit would be available to receive an emergency call for service. The ideal reliability rate is 75% or greater.

In year one, two key components of the BLS Transport Program were initiated.

1. On July 18, 2018, the Division placed two basic life support ambulances into service Monday through Thursday from 8:00 AM to 6:00 PM. The ambulances have been strategically placed within our County after a thermal projection of our data was analyzed which revealed zones with higher than normal call volumes during these peak times.

Two-person staffing for the BLS units is currently being supplemented from our current Division employees who are being paid overtime to staff the BLS units.

The BLS units are stocked with the same equipment that is on our advance life support (ALS) units. This allows the unit to be placed into ALS service as needed.

The commitment rate during the first year for each BLS Transport ambulance is expected to be 47% during the first year and will be available to respond to approximately 9% of the low acuity calls.

2. On November 7, 2018, Priority Dispatch went online and is used to dispatch our EMS calls. Priority Dispatch is an accredited Emergency Medical Dispatch System that prioritizes calls based on acuity and then dispatches the closest appropriate units.

In years two through five, the number of units and staffing hours will continue to grow to cover the new demand determined by an annual peak-time response study. Fifteen part-time and four full-time Emergency Medical Technicians will be hired throughout the program to support the additional units that are pressed into service and dictated by demand. The Priority Dispatch system will allow for more effective evaluation of our EMS response data and will allow us to continually reposition units for maximum zone and peak-time coverage.

Financing and Staffing

Currently, there have been no capital purchases for this program. The Division of Fire has utilized reserve ambulances from our fleet for the basic life support ambulance program. If these units need to be utilized for other purposes, the Division has established memorandums of

understanding with the three volunteer rescue squad agencies in the County. These agencies have agreed to allow Henrico Fire to use units during peak days and times as necessary to maintain the BLS Transport Program. Although current staffing is by Division employees who are hired on overtime, we have mitigated the necessary time and expense to hire and train new employees. This has allowed us to make an immediate impact since these employees are already certified as EMS providers, emergency vehicle operators, know the districts, the dispatch system, and the EMS reporting system for patient documentation. In addition, the Division did not need to pay for physicals or background/drug testing for these employees. Throughout the implementation of the program, the approved budget has allowed for fifteen part-time and four full-time Emergency Medical Technicians (EMTs) who will be hired throughout the program as demand dictates.

Program Results

The performance of the BLS Transport Program units has been in line with the projected expectations of the system. From July 18, 2018 until December 31, 2018, the average commitment rate for the two units was 48% versus expected rate of 47%. And, from July 18, 2018 until December 31, 2018 the Division ambulances were dispatched to 7,146 EMS calls during the peak times (Monday-Thursday, 8:00 AM to 6:00 PM). The two BLS ambulances were able to respond to 1,272 of these calls which is approximately 8.9% of the EMS call load. This value is in line with the projected 9.0% per unit. In additional years, we expect to see 36% of the EMS calls to be answered by a total of four BLS ambulances. The evolution of the new Priority Dispatch system will enhance these performance indicators even further.

Also, during this period, Priority Dispatch, a previously budgeted and purchased Emergency Medical Dispatch System, was implemented. This system has enhanced the deployment of the BLS ambulances and has allowed EMS calls to be more accurately triaged for the most appropriate response. One unanticipated savings was the 30% reduction in unit dispatch for calls that did not need emergent/first responder units. This 30% reduction will have future impacts on associated fuel and maintenance costs of first-responding apparatus.

Brief Summary

The primary goal of the implementation of the BLS Transport program was to improve the reliability of an advanced life support unit by increasing the unit's availability to respond to a high-acuity call; however, the program has dynamically affected our current EMS system operations. Since the inception of the program, the BLS ambulances have made a primary ALS unit available to respond to 163 life-threatening, high-acuity calls.

The data demonstrates program success, but more importantly, providers have felt the impact. One of our ALS providers stated in an email to the Chief, *"Ambulance 88 was around the corner, I added them, and they provided the transport. We (Fire Medic 11) were dispatched shortly thereafter on an ALS call...this is good example of the system working correctly and freeing up the ALS unit for that higher acuity call."*

The Henrico County Division of Fire BLS Transport Program has improved our EMS service delivery for the citizens of Henrico County. Two strategically available BLS ambulances have reduced unit movements and our ambulance commitment times at all Henrico County fire stations allowing our highly trained providers to be available for that next life-threatening call.