

Foundation Full Application

Application Guidelines**Application Guidelines**

The mission of the BlueCross BlueShield of South Carolina Foundation is to promote and support healthier South Carolinians, particularly the economically vulnerable, by supporting solutions to address gaps in health care and serving as an agent of change to support innovation and value-added public-private partnerships.

We support projects and efforts that offer innovative approaches that can be evaluated for success; we are seeking projects that have the potential for large-scale social impact and replication; and we will assess the sustainability of the organization in which to invest with the goal to develop and support the growth of financially viable organizations.

Eligible applicants must meet the following requirements to be considered for funding:

- **Organizations must have a 501(c)(3) tax-exempt status under the Internal Revenue Service; or must be a governmental, educational or research institution with tax-exempt status.**
- **Program or research must be conducted in the state of South Carolina.**
- **Application proposal and budget must be based on your organization's Letter of Intent and any related discussions with Foundation staff.**
- **Funds cannot be used for capital campaigns, bricks and mortar projects; and/or any other expenses not approved by Foundation staff during the Letter of Intent phase.**
- **Grant funds must be used for direct expenses tied to project activities. No grant funds can be used for indirect expenses.**
- **Grants will not be awarded to individuals, religious groups, political campaigns, or activities that influence legislation, groups seeking funds to purchase tickets or tables at fundraising events, annual campaigns or membership drives, golf tournaments, raffles, contests or auction.**

Attachments

- 1. Completed grant budget, in Excel format provided.**
- 2. Document with any citations referenced in this application (including any data sources referenced).**
- 3. Copy of current IRS determination letter indicating 501 (c)(3) tax-exempt status.**
- 4. List of Board of Directors and officers, with affiliations, addresses and telephone numbers.**
- 5. Organizational operating budget.**
- 6. Copy of most recent audited financial statement.**

DO NOT attach / submit letters of support

Limit of Liability

Should your organization be selected to receive a full proposal grant, you will be required to sign the grant agreement limit of liability clause that states:

The Grantee shall hold harmless the BlueCross BlueShield of South Carolina Foundation from any damage or injury or loss arising in any manner out of the administration, planning, development, conduct or implementation of the program undertaken in conjunction with this grant or any other programs operated by or associated with the Grantee. The foregoing sentence shall not be considered an indemnification obligation, nevertheless, the Grantee would be required to reimburse the Foundation up to the amount of the grant funds dispersed to the Grantee by the Foundation in the event of any damage, injury or loss to the Foundation as referenced above.

Organization Information

General Information

Organization Name

Greenville County EMS

Legal Name

Greenville County Emergency Medical Services

Tax Exempt Status

Government Agencies

EIN / Tax ID

57-6000356

Address

301 University Ridge
Suite 1100

City

Greenville

State

SC

Zip Code

29601

Phone

9803955938

Web Address

<http://301 University Ridge>

Fiscal Agent

Fiscal Agent Address

Fiscal Agent City Fiscal Agent State

Fiscal Agent Zip Code

Fiscal Agent Tax Status

Fiscal Agent EIN

Organization Primary Contact

Prefix First Name

Dr. Tom

Last Name

Blackwell

Title Office Phone

Executive Director

Mobile Phone

9803955938

E-mail

thblackwell@greenvillecounty.org

Grant Contact:

Prefix First Name

Dr. Tom

Last Name

Blackwell

Title

Executive Director

Office Phone

864-457-7005

Mobile Phone

980-395-5938

E-mail

thblackwell@greenvillecounty.org

Organizational Capacity**Accomplishments**

Please share a few of the accomplishments of your organization in the past three years.

Greenville County EMS was the first system in the United States to initiate the treatment of sepsis in the field. Paramedics were trained to draw blood cultures, initiate antibiotics, and administer intravenous fluids prior to hospital arrival. Results were presented at a national conference and received best research award.

Our Community Paramedics were the first in South Carolina to administer immunizations as a public health initiative. They created the protocol for DHEC and this was adopted State-wide.

Our system initiated a pilot program for basic EMTs to administer nitrous oxide for pain control. This program was successful and has been adopted as an expanded EMT scope of practice in South Carolina.

Leadership at DHEC and the State Medical Control Board asked our clinical staff and medical director to assist with their rewriting of the State patient care protocols because of our comprehensive clinical guidelines.

To address workforce shortages, we established EMT (5) and paramedic (2) in-house training academies that offer cost-free EMS education to anyone in the community interested in pursuing a career in EMS.

Funding Sources

List your organization's primary supporters/funding sources, including the estimated percentage of support from each source:

Greenville County EMS is 100% financially supported by Greenville County Government. The 2-year budget is submitted by the County Administrator and approved by the County Council.

Annual Organizational Budget

What is your organization's annual operating budget?

26075166

Grant Overview**Request Information****Grant Title**

EMS Quality Improvement Enhancement

Grant Request Amount

How much are you requesting from the Foundation over the full term of the grant?

223501

Total Program Budget

What is the total estimated cost of this program including requested from the Foundation and other funding sources?

223501

Grant Start Date

6/1/2023

Grant End Date

2/28/2024

Is this a new program for your organization?

yes

If no, how long has this program been in existence?**Grant Information****Grant Summary**

Please provide a 2-3 sentence, high level overview of the proposed grant.

Greenville County EMS is requesting grant funding to purchase an electronic quality improvement program and associated components to improve our ability to monitor patient care, identify areas for improvement, and immediately capture patient safety concerns. The program, called FirstWatch and FirstPass, provides automated, real-time data analytics, alerting, and performance improvement support for EMS and other public safety systems. The program follows the Institute for Healthcare Improvement's care bundles that are comprised of component and composite models that capture and analyze clinical performance measures based on the system's medical director's treatment protocols. Ultimately the program facilitates meaningful and measurable improvement strategies and processes that ultimately improves the delivery of quality prehospital patient care at all levels of the organization.

Grant Description

Describe your grant program. What does your program aim to accomplish and what will your organization or partner organizations do to achieve the desired goals?

The traditional approach to quality improvement in EMS is labor intensive, time consuming, and leaves less time to actually improve patient care. FirstWatch (system framework) and FirstPass (quality improvement component) is a clinical quality measurement and protocol monitoring tool that incorporates electronic data capture programs designed to extract clinical information and key performance indicators from patient care reports. Supervisors, quality improvement staff, and the medical director are able to receive immediate alerts when protocol deviations, incomplete care bundles from the evidence-based patient care protocols, or patient safety issues arise. The program also supports real-time review of patient care reports to ensure that all information fields are complete for revenue cycle compliance. While traditional EMS quality improvement models require days to weeks for collection and reviewing patient care data, FirstPass only takes minutes to review an entire patient experience from 9-1-1 call to transfer at the hospital. Such immediate automation enables managers to actually spend more time improving or augmenting the delivery of care rather than performing the time-consuming collection, entry, analysis, and reporting functions. Immediate information and notifications further enhances a supervisor's ability to inquire about specific calls recently completed so as to provide the prehospital clinicians with timely feedback during their shift if needed, thus facilitating another process for ensuring patient safety.

While standard patient care bundles are designed to measure predefined quality metrics, FirstPass allows for the addition of other indicators specific to system needs or concerns. Examples of bundles include Acute Coronary Syndromes/ST-Segment Elevation Myocardial Infarction (STEMI), Stroke,

Trauma, Airway Management, Cardiac Arrest, and Billing. Additional bundles might include Pain Management, High Risk/Low Frequency Events (Pediatric Intubation), or Non-Transports or Refusals of Care calls. Operational performance related to clinical care such as response times and scene times are also tracked and reported. All key performance indicators are presented on dashboards to facilitate the evaluation of system trends on an ongoing basis.

Greenville County EMS has two full-time Quality Improvement Specialists who review selected key performance indicators and a percentage of other calls as needed or directed. The time required to review records, abstract data, plot and analyze results, and report findings is extraordinary and leaves little time to actually observe trends in care delivery or to begin other reviews that may be novel approaches to care delivery. The automaticity of the FirstPass system clearly improves the analyst's ability to cease the clerical functions and to concentrate on more meaningful activities that affect the providers, patients, and safety concerns should they arise.

The FirstPass program follows the Institute for Healthcare Improvement's quality and process improvement model and has taken years to develop into the highly acclaimed product it is. As the largest and busiest EMS system in South Carolina, Greenville County EMS and the patients served would greatly benefit from the incorporation of this valuable tool to improve care delivery, clinician performance, and to consistently receive timely information on patient safety, quality measures, and overall system performance.

Health Issue

Please describe how this health issue affects the economically vulnerable citizens of South Carolina. How will the efforts of this grant improve the health of the state/communities served?

Current research illustrates the multiple disparities in healthcare, specifically related to economic status, race, ethnicity, gender, and other factors. Poverty rates for Black and Hispanic populations in Greenville County are three times that of Caucasian residents and Caucasian students reach educational benchmarks at higher rates than those of color. The United Way's 2020 Greenville County Community Needs Assessment reported that Greenville County has approximately 55,000 residents experiencing poverty, with a third being children. Barriers encountered include nutrition and healthy dietary choices, mental health challenges with finite resource availability, and transportation access. Greenville County homeless shelters cared for over 2000 individuals and Greenville County Schools identified over 1000 homeless students during the 2018-2019 school year.

FirstPass is capable of segmenting an EMS system's clinical performance based on documented vulnerabilities. Targeting these disparities equips the system to use quality improvement principles to close identified gaps in order to provide equitable, high-quality care to everyone regardless of background. Care provision for impoverished populations, e.g. pain management in minorities which is a national concern, can be analyzed easily and corrections made with this system to ensure consistent quality care across the spectrum.

In addition, FirstPass also performs biosurveillance activities. In collaboration with public health, FirstPass can monitor the environment to capture early indicators of a threat including man-made attacks or a naturally occurring event like SARS, flu epidemic, or food poisoning. Laboratory or pharmacy data takes days to weeks to identify patterns, but data from 9-1-1 calls and EMS patient care reports can be monitored and trends immediately reported. Triggers can be set to automatically send alerts when pre-established criteria is met so that information can be communicated to other public safety entities who in turn can effectively communicate information to disenfranchised communities who may not have access to information-sharing systems.

Replication/Innovation

Has this program or method been implemented in other geographic areas or populations? If so, what was the result of these previous efforts? If this is a new or innovative strategy, please tell us why this approach would be most effective for the population served.

The FirstWatch and FirstPass programs are used by over 500 EMS agencies across the United States and Canada to assess and improve their clinical performance at both a system and individual provider level. Many of these systems have earned state-level quality recognition based on the Malcolm Baldrige Award Criteria. FirstPass projects have been presented in scientific sessions at the American Public Health Association and the National Association of EMS Physicians conferences. High performance EMS systems, defined as those who demonstrate excellent operational and clinical performance, all incorporate FirstPass for their quality improvement processes.

Since inception, FirstWatch and FirstPass has processed more than 44 million patient care records from over 27 report vendors, and performed more than 1.4 billion tests for protocol deviation.

Measuring Success

What data (qualitative and/or quantitative) is your organization collecting to help you understand the success of this program? How are you using this data to improve the effectiveness of your work

related to this program? How will you monitor implementation of your program?

The FirstPass system collects and analyzes quantitative data for hundreds of customized bundles of care and the individual tests that make up these bundles. For example, one bundle of care for patients with cardiac chest pain includes the acquisition of a 12-lead electrocardiogram within ten minutes of patient contact; nitroglycerine administered if the blood pressure is over 100 mmHg and the patient is not taking contraindicated medications; aspirin administered within ten minutes of arrival or allergy to aspirin documented; patients considered to be having a STEMI are treated as such and a STEMI activation is called to the receiving hospital; oxygen administration if the saturation was less than 94%; and whether the crew was on-scene for less than fifteen minutes. The percentage of cases that were handled in compliance with the complete care bundle is tracked and displayed using statistical process control charts showing weekly or monthly time performance. Further, each individual bundle component is also tracked and displayed on control charts. The FirstWatch system has been used to support research statistics for studies relating to substance use disorder and cardiac arrest resuscitation improvement. From a qualitative perspective, collecting user feedback to fine-tune and enhance the system will be encouraged.

Community Buy-in

How were community members or intended beneficiaries engaged to develop this program? Were local coalitions involved in identifying the need or benefit of this program? How will community members continue to be engaged throughout this program?

Greenville County EMS has established an EMS Emergency Medical Advisory Committee comprised of four physicians from each of the two competing healthcare systems. Physician specialties involve some facet of prehospital care, e.g. Emergency Medicine, Trauma Surgery, Cardiology, and Pediatrics. All members of the committee were given a presentation on FirstWatch and FirstPass and all unanimously voted to adopt this program to improve operational and clinical performance. Each committee member understands and appreciates the time and labor involved in collecting and compiling data when requests for information are made. As such, requests are often limited and system metrics reviewed typically remain the same. With FirstPass, the automation of data capture, processing, and reporting will allow for a more tactical and strategic review of overall system performance.

Projected Total Number Reached

The number of people that will be affected or will benefit from this program, over the entire length of the grant request
550000

Total Number Reached Calculation

Please describe how you estimated the total number reached.

The United State Census Bureau estimated that the population of Greenville County was 533,834 in 2021 and increased 1.85% in 2022 to 550,000.

Percent of Number Reached that are Economically Vulnerable

11

Geographical Area Served by this grant

Indicate which county / counties will be served by this grant.

Greenville County

Description of Target Population

Please describe the individuals or communities being served by this grant.

Greenville County EMS is the sole provider for all 9-1-1 requests for emergency medical treatment and hospital transport in the county; therefore, the entire population of residents and visitors will be potentially impacted by this program. Greenville County consists of 6 municipalities including the Cities of Greenville, Fountain Inn, Travelers Rest, Mauldin, Simpsonville, and Greer. The county population is estimated to be 569,355 in 2025 which represents an increase of 1.47%. The most recent estimate for the annualized visitor volume to Greenville County was 5,000,000.

Results & Timeline

Expected Results

Please complete the section below with the expected results of the grant. Include at least 2 and up to 5. These results are data your organization will use to measure the impact of your program.

If approved, these results will be used for reporting throughout the grant to track progress.

Helpful hint: All results should contain a number or percent change

Expected Results 1

A set of pertinent, high volume call types, and potential risk prehospital patient care bundles will be identified, defined, and programmed into the FirstPass system. Following this, bundle data will be retrieved, reported, and analyzed. Once initiated, this sample set will be fine-tuned as familiarity and competency with the program improves with time.

Expected Results 2

Additional care bundles of importance due to regularity of these call types will be identified with defined and reasonable composite indicators listed. These will then be programmed into FirstPass for data analysis and review processes to commence.

Expected Results 3

Data from all bundles entered will be evaluated per the program to now identify trends in care delivery. This information will be provided to the educational team to tailor future continuing education programs that address gaps or applaud good performance as part of the quality improvement-education feedback loop. Patient care trends, positive and negative, will be provided to the medical director for recommendations and to the Emergency Medical Advisory Committee for further feedback and discussion.

Expected Results 4

Greenville County EMS would like to propose a future partnership with BlueCross BlueShield of South Carolina to work collaboratively on improving patient care prior to hospital arrival. Goals would include establishing evidence-based clinical pathways that may be offered to and adopted by EMS systems throughout South Carolina as best practices that improve morbidity, mortality, and decrease downstream hospital and rehabilitation costs. Data from FirstWatch would be used to build these recommended guidelines and models.

Expected Results 5

Grant Timeline

Provide a timeline for key activities over the requested term of the grant. This information will be used in future reporting to understand progress to date.

Project Timeline

Month 1: Procurement and installation of the FirstWatch/FirstPass system, initiate Quality Improvement staff training, bundles to be tested will be identified.

Month 2: System programming and testing to ensure compliance and functionality, user competency, troubleshooting. Continue to identify bundles to be tested.

Month 3: Continued programming and improving user competency. Begin collecting and analyzing reports from identified and programmed bundles.

Month 4 Troubleshooting and any issues identified to be resolved with the vendor.

Month 5 and 6: Full system trial implementation with medical director oversight.

Month 7: Presentation for initial data to EMS Emergency Medical Advisory Committee for comments or suggestions.

Month 8: Full go-live system implementation with ongoing and consistent data collection, evaluation and analysis, reporting, discussion, recommendations, and continuing clinician education. Would begin collaboration and partnership discussions with BlueCross BlueShield of South Carolina.

Key People and Collaborating Partners

Key People and Partners

Collaborating Partners

Will your organization collaborate with other organizations on this grant? If so, with whom and how will you partner, for what purposes, and how will this partnership contribute to the success of this grant?

Greenville County EMS will partner with both healthcare systems in the county, Bon Secours St. Francis Health System and Prisma Health, who are recipients of patients transported by EMS. Each will be notified of the project and encouraged to provide feedback on patient care trends so these can be considered for further evaluation. Members of the EMS Emergency Medical Advisory Committee and Physician Executives from both health systems will receive regular EMS system reports produced from the program to ensure complete transparency on care delivery by Greenville County EMS clinicians.

Additional partners include the 31 fire departments in the county that provide first responder services for selected calls where early medical intervention is required. Of the 31, 18 are DHEC-EMT Certified Rapid Responder Agencies.

Use of Funds

Use of Funds

Complete the grant budget form, and upload on the attachment tab.

Proposed Use of Funds

Please use this section to provide additional context and narrative to support the budget excel document you will submit as an attachment.

Greenville County EMS will use awarded funds to purchase the FirstWatch software that monitors and extracts data from all electronic patient care records. This primary data source module includes the system license required by our current reporting software, annual support and maintenance, installation, configuration, data source integration, and project management. Greenville County EMS also requires a secondary data source package that includes system licensing through the current computer-aided dispatch (CAD) software, annual support and maintenance, and integration. Additional components include the Performance Plus Module, Interactive Data Visualization Module, Academy Analytics, FirstPass Clinical Quality Improvement Module, Live/Historical Workload Report, Triggers & Report Development, and Demand Analysis Module. The primary and secondary data source packages and additional components will be purchased for \$207,001 and \$16,500 will be used for the integration required. The total request of this project is \$223,501.

Additional Support for Program

Is your organization applying for or receiving other funding sources for this program? Provide a brief summary of other anticipated sources of financial support for this project, including any restrictions placed on other sources of funding.

Greenville County will provide labor costs for personnel using the program and will continue to financially support the project in subsequent years for ongoing licensing and user fees that are required.

Attachments

Title	File Name
Citations	Citation Referenced in Greenville County EMS Grant Application.pdf
IRS determination letter	County of Greenville IRS Determination Letter - Tax Status.pdf
Board of Directors	Listing of Board Members and Affiliations.pdf
Most recent audited financial statement	2022 Financial Report.pdf
Organizational Operating Budget	104160 - EMS - FY2023 Budget.pdf
Grant Budget	Single Year Budget.xlsx

Files attached to this form may be deleted 120 days after submission.