

LETTER OF INTEREST

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The Nevada Department of Public Safety - Office of Traffic Safety (OTS) awards federal and state funds to state, local, and non-profit organizations desiring to partner in solving Nevada traffic safety problems. Funds are awarded for use in reducing deaths and serious injuries caused by motor vehicle crashes, through the implementation of programs that address driver behavior and/or improve roadway safety or data collection. Funding for this grant opportunity is provided by the National Traffic Safety Administration (NHTSA) and the Nevada Department of Transportation (NDOT) through the Office of Traffic Safety.

We would like to inform the Nevada Office of Traffic Safety of our interest in applying for traffic safety program funding for Fiscal Year 2027.

NEW RENEWAL RENEWAL w / new program features *

Name of

Organization: Clark County Fire Department

Address: 4425 W. Tropicana Road

Contact Person Rebekah Henderson* Telephone (702) 455-8420*

Email rebekah.henderson@clarkcountynv.gov*

Information about Organization:

The Clark County Fire Department (CCFD) is Nevada's largest fire department, serving unincorporated Clark County and the Las Vegas Valley since 1953. CCFD provides fire, emergency medical, rescue, and disaster response services to over 1 million residents and 40 million visitors annually. CCFD's bureaus support a coordinated, data-driven approach to emergency response, prevention, and risk reduction. CCFD operates 43 stations with nearly 1,000 staff, responding to 122,000 emergencies each year, including vehicle and traffic incidents. CCFD is the only Southern Nevada Department piloting prehospital whole-blood administration, partnering with University Medical Center, the Southern Nevada Health District, and a blood provider. Given its high call volume, large geographic coverage area, and significant involvement in roadway incident response, CCFD is uniquely positioned to implement and support traffic safety initiatives to reduce injuries and fatalities from motor vehicle crashes.

Project Description:

*CCFD requests \$250,000 to expand its prehospital whole-blood transfusion program to reduce deaths from motor vehicle crashes. Hemorrhage is a leading cause of preventable death after crashes. Each minute's delay in transfusion increases mortality by 2%. This initiative will improve post-crash survivability and advance traffic safety in the County. Prehospital whole blood transfusion has proven highly effective for trauma patients, stabilizing them sooner and increasing survival before hospital arrival. Funding will support training, supplies and equipment to increase the number of CCFD members able to give whole blood in the field, enhancing rapid, evidence-based trauma care countywide. From October 2026 to September 2027, CCFD will train more personnel in safe blood administration and data collection to monitor outcomes and improve EMS best practices. This initiative will advance prehospital trauma care, reduce preventable deaths from crashes and support regional trauma coordination.**

Impact on Nevada Traffic Safety:

*Uncontrolled hemorrhage is recognized as the most preventable cause of death following trauma. Many lives could be saved with this early intervention. Between 2020 and 2024, unincorporated Clark County experienced 85,806 reported crashes, resulting in 742 fatalities and 1,649 serious injuries. CCFD is largely the first on scene, but blood transfusions before the hospital are rare. Prehospital whole blood allows earlier, targeted treatment, stabilizes patients and reduces deaths. Early whole blood after crashes improves survival. FARS indicates that over 40% of adult and pediatric fatalities are still alive at the time of initial EMS contact during critical motor vehicle crashes. Evidence from both military and civilian trauma systems demonstrates that early whole-blood transfusion saves lives, but barriers such as funding and training limit its use. Expanding CCFD's program closes this gap and enhances trauma response, reducing preventable deaths and improving traffic safety in Nevada.**

Estimated funding needed: \$250,000.00*

You will receive a response to your letter within five business days. Approval or disapproval of your submission is solely at the discretion of the Office of Traffic Safety and does not constitute approval of funding.

Grantee Assessment

Please complete all required fields.

Grantee Assessment

Grantee - Pre-Award Risk Assessment

Agency Name:

Clark County Fire Department

Grant Title:

TS-2027-Clark County Fire Department-1005

Type of Organization: City

County

For Profit

Law Enforcement

Non Profit

State

Tribal

UEI:

YMYGLLUDPL61

ENTITY RISK

1. Has the agency had at least 3 years experience with federal grants? * Yes

No

2. Is this your organizations first year as an OTS subrecipient? * Yes

No

3. Did the entity receive a single audit last year? * Yes

No

SYSTEMIC CHANGES

4. Has agency's Project Director remained unchanged during the last year? * Yes

No

5. Has the agency's fiscal department remained unchanged during the previous year? * Yes

No

6. Is the agency's accounting system the same as the previous year? * Yes

No

CAPABILITIES

7. Are there procedures in place to separate duties and approvals? * Yes

No

8. Are revenues and expenditures tracked separately? * Yes

No

9. Are procedures in place to ensure funds are not commingled? * Yes

No

10. Is agency staff familiar with the OMB Circular and Federal grant requirements? * Yes

No

INFORMATION NOT SCORED

What other funding is received? *

Government general fund, Federal, State grants, Private grants, Government grants

(i.e., government general funds, grant funds, donations, etc.)

What type of accounting system is used?

Accrual system

NOTES

Grantor Assessment

GRANTOR ASSESSMENT

Grantor - Pre-Award Risk Assessment

Agency Name:

Grant Title:

Is entity on SAM list? * Yes No

Conduct check through SAM - System for Award Management <https://www.sam.gov/SAM/>

Is entity on State Debarment list? * Yes No

State Debarment List reviewed at <http://dhcfp.nv.gov/Providers/PWPSExclusions/>

ENTITY RISK

- | | | | |
|---|-------|-------|--|
| 1. Has the entity had federal or state grants similar to this award in the last year? * | Yes | No | |
| 2. Did the entity receive a monitoring visit from OTS last year? * | Yes | No | |
| 3. Was the single audit and/or monitoring report without findings? * | Yes | No | |
| (If no, were finding major or minor? This may signify medium or high risk) | Major | Minor | |
| 4. Does the entity have adequate and qualified staff to comply with the terms of the agreement? * | Yes | No | |

HISTORY

If previously funded by OTS, review the report history to determine timely and accurate submissions of the following:

- | | | | |
|--|-----|----|-----|
| 5. Fiscal claims * | Yes | No | N/A |
| 6. Progress reports * | Yes | No | N/A |
| 7. Was reasonable progress made towards performance goals for prior funded awards? * | Yes | No | N/A |
| 8. Change orders * | Yes | No | N/A |
| 9. Is the previous year's project final evaluation positive with no major issues? * | Yes | No | N/A |

NOTES

Pre-Award Risk Assessment Summary

Pre-Award Risk Assessment Summary

Grantor - Pre-Award Risk Assessment

Agency Name:

Grant Title:

Type of Organization: City County For Profit Law Enforcement
 Non Profit State Tribal

UE#:

Is entity on SAM list? Yes No

Conduct check through SAM - System for Award Management <https://www.sam.gov/SAM/>

Is entity on State Debarment list? Yes No

State Debarment List reviewed at <http://dhcfp.nv.gov/Providers/PIVPSExclusions/>

ENTITY RISK

- 1. Has the entity had federal or state grants similar to this award in the last year? Yes No
- 2. Has the entity had at least 3 years experience with federal grants? Yes No
- 3. Did the entity receive a single audit last year? Yes No
- 4. Did the entity receive a monitoring visit from OTS last year? Yes No
- 5. Was the single audit and/or monitoring report without findings? Yes No
 (If no, were the findings major or minor? This may signify medium or high risk) Major Minor
- 6. Does the entity have adequate and qualified staff to comply with the terms of the agreement? Yes No

SYSTEMIC CHANGES

- 7. Has the entity's Project Director remained unchanged during the last year? Yes No
- 8. Has the entity's fiscal department remained unchanged during the previous year? Yes No
- 9. Is the applicant's accounting system the same as the previous year? Yes No

HISTORY

If previously funded by OTS, review the report history to determine timely and accurate submissions of the following:

- 10. Fiscal claims Yes No N/A
- 11. Progress reports Yes No N/A
- 12. Was reasonable progress made towards performance goals for prior funded awards? Yes No N/A
- 13. Change orders Yes No N/A
- 14. Is the previous year's project final evaluation positive with no major issues? Yes No N/A

CAPABILITIES

- 15. Are there procedures in place to separate duties and approvals? Yes No
- 16. Are revenues and expenditures tracked separately? Yes No
- 17. Are procedures in place to ensure funds are not commingled? Yes No
- 18. Is entity staff familiar with the OMB Circular and Federal grant requirements? Yes No

INFORMATION NOT SCORED

What other funding is received? * *Government general fund, Federal, State grants, Private grants, Government grants (i.e., government general funds, grant funds, donations, etc.)*

What type of accounting system is used? *Accrual system*

NOTES / SUMMARY

Grantees will be placed in one of the following risk areas:		# of NO's	Total NO's	
LOW	Grantee is considered low risk for monitoring issues	0-6	0	
MEDIUM	Grantee is considered medium risk for monitoring issues	7-11	0	
HIGH	Grantee is considered high risk for monitoring issues	12-18	0	
Risk Actions		LOW	MEDIUM	HIGH
Standard monitoring - including phone calls, emails and onsite meeting with grantee		X	X	X

Review of progress reports	X	X	X
Require 100% documentation for reimbursement	X	X	X
Delay award pending results of single audit or actions taken		X	X
Schedule onsite monitoring reviews of project operations, management, and financial records and systems with grantee more often than once a year		X	X
Provide additional training and technical assistance on program related matter		X	X

Agency Information Sheet

Refer to Grants Administration Manual under My Training Material above for more information.

Instructions:

Please complete this page, then click the Save button.

Required fields are marked with an *.

Agency Information Sheet

Amount of Request: \$250,000.00*

Applicant Agency Information

Physical Address

Agency: Clark County Fire Department

Mailing Address

Street Address

575 E. Flamingo Road

*

City Las Vegas*

State Nevada*

Zip Code 89119* 6950*

PO Box

Organization Type

Local Government

Seatbelt Policy *Seatbelt.Cell phone policy.docx**

Cellphone Use Policy *Seatbelt.Cell phone policy.docx**

Non-Profit?* Yes No

Does this agency (City/County/Municipality) receive \$750,000 or more of federal financial assistance in the current year?*

Yes No

Please attach link to the most recent audit *CCFD Fiscal-Year-2025-(Full-Report).pdf*

Mailing Addresses

Mailing Addresses:

Nevada Department of Public Safety

Office of Traffic Safety

107 Jacobsen Way

Carson City, NV 89701

Federal Tax ID#: 88-6000028

State Vendor #: T81026920

Nevada Department of Public Safety

Office of Traffic Safety

4615 W. Sunset Road

Las Vegas, NV 89118

UEI Number: YMYGLUDPL61

Project Description *

The Clark County Fire Department (CCFD) is requesting \$250,000 to expand a traffic safety-focused prehospital whole-blood transfusion program aimed at reducing fatalities and serious injuries from motor vehicle crashes in Clark County.

Funding will support training, supplies, equipment and deployment of blood transfusion capability at crash scenes to improve post-crash survival. By reducing time to lifesaving intervention, this project directly supports Nevada's Strategic Highway Safety Plan, and Safe Systems Approach by improving post-crash care and reducing roadway fatalities.

Contacts

It is the organization's responsibility to ensure this information is kept current and staff roles are assigned in e-Grants.

Authorizing Official ("approving authority" signature needed for all purchases, budgeting, and/or management directives)

Name: *Billy Samuels**

Title: *Fire Chief*

Phone: *(702) 455-7311**

Fax:

Email: *bsamuels@clarkcountynv.gov**

Signature Authority:*

Yes

No

Project Director (Grant manager for the project, the one who will do most of the work, hands-on)

Name: *Daylon Woolbright**

Title: *Assistant Fire Chief*

Phone: *(702) 455-1618**

Fax:

Email: *daylon.woolbright@clarkcountynv.gov**

Signature Authority: Yes

No

Fiscal Officer (Agency's accountant, fiscal officer, the one who "pays the bills")

Name: *Rebekah Henderson**

Title: *Management Analyst*

Phone: *(702) 455-8420**

Fax:

Email: *rebekah.henderson@clarkcountynv.gov**

Signature Authority: Yes

No

Primary Contact for this Project: Authorizing Official Project Director Fiscal Officer

Project Purpose

Instructions:

Please complete this page, then click the **Save** button.

Required fields are marked with an *.

Project Purpose

Problem Statement and Data that Supports the Problem *

Traumatic injury remains a major cause of death in the United States, with uncontrolled hemorrhage recognized as a possible preventable cause of death following trauma, particularly in motor vehicle collisions. In Clark County, this issue is especially critical due to rapid population growth, high tourism volume, and an extensive roadway system that contributes to a high incidence of traffic-related injuries and fatalities. As a major destination with millions of visitors annually, the region experiences increased traffic density, unfamiliar drivers, and higher-risk driving behaviors, all of which contribute to the frequency and severity of crashes. These factors place an ongoing strain on the local emergency response system and highlight the need for enhanced prehospital interventions.

Between 2020 and 2024, unincorporated Clark County experienced 85,806 reported crashes, resulting in 742 fatalities and 1,649 serious injuries. This five-year total shows a substantial and persistent traffic safety burden, averaging more than 17,000 crashes, 148 deaths, and 330 serious injuries each year. Thousands more sustain moderate injuries requiring emergency medical care and transport, further taxing EMS and hospital resources. These statistics show the need for targeted investments in proven safety measures to reduce severe and fatal crashes. Many deaths occur within the first hours after injury and are preventable with timely, appropriate intervention.

The Clark County Fire Department (CCFD), as the primary provider of advanced emergency medical services, is often first on scene within minutes of a motor vehicle collision. This places its personnel in a critical position to influence patient outcomes. Current response models emphasize rapid assessment, stabilization, and transport. However, survival for patients with severe hemorrhage is highly time dependent. Even short delays in definitive resuscitation can significantly increase mortality. Despite rapid EMS response times, a critical gap exists in prehospital trauma care due to limited blood transfusion capability before hospital arrival. This gap is especially impactful in a large jurisdiction like Clark County, where transport times to trauma centers can vary and may be prolonged by traffic or incident location.

Patients experiencing hemorrhagic shock, often from severe trauma like motor vehicle collisions, traditionally do not receive blood products until hospital arrival. During the prehospital phase, treatment has relied on intravenous (IV) fluids to maintain blood pressure. While IV fluids provide temporary circulatory support, they may dilute clotting factors and red blood cells, worsen coagulopathy, and fail to address oxygen delivery at the cellular level. This can worsen outcomes in patients with significant blood loss. This traditional approach does not align with current trauma resuscitation principles that emphasize early balanced blood product administration. Every one-minute delay in transfusion increases mortality by 2%.

Implementing a prehospital whole blood transfusion program allows earlier targeted resuscitation by delivering oxygen-carrying capacity and clotting components at the injury site. This approach stabilizes patients more effectively, supports perfusion, and reduces the risk of preventable death from hemorrhage. Early intervention in the prehospital setting can interrupt the progression of the lethal triad of trauma: hypothermia, acidosis, and coagulopathy, which is strongly linked to increased mortality in severely injured patients.

In traffic safety, where high-speed collisions often result in life-threatening hemorrhage, early administration of whole blood has been shown to improve survival rates and neurological outcomes. According to the National Highway Traffic Safety Administration (NHTSA), data from the Fatality Analysis Reporting System (FARS) indicate that over 40% of adult and pediatric fatalities are still alive at initial EMS contact during critical motor vehicle crashes. This represents a crucial window to provide life-saving interventions to patients who might otherwise not survive.

Studies further demonstrate that patients receiving prehospital blood products experience reduced 24-hour mortality and improved overall outcomes compared to those receiving crystalloid resuscitation alone. This is supported by research from Boston University, which found that even brief delays in transfusion, by as little as 14 minutes, significantly reduce the survival benefit of whole blood.

This project aligns with the Safe System Approach and statewide Strategic Highway Safety Plan priorities, particularly the emphasis on improving post-crash care to reduce fatalities. Enhancing prehospital capabilities directly addresses one of the most impactful phases in the continuum of traffic safety, post-crash response, where timely, evidence-based care can mean the difference between life and death.

By initiating definitive hemorrhage control in the field, this program supports traffic safety goals by reducing morbidity and mortality from roadway incidents, decreasing time to critical intervention, and improving patient outcomes after motor vehicle crashes. Improved survivability also reduces long-term disability, healthcare costs, and broader societal impacts of traumatic injury.

Emerging evidence from military and civilian trauma systems shows that early administration of low-titer O whole blood in the prehospital setting significantly improves survival, enhances hemodynamic stability, and reduces the need for large-volume transfusions later. Despite these benefits, barriers like funding, equipment needs, storage logistics, and specialized training have limited implementation in many EMS systems, including those serving Clark County.

Expanding the prehospital whole blood program within CCFD directly addresses this critical gap by enabling earlier intervention in the chain of survival, reducing time to transfusion, and improving outcomes for severely injured patients. By equipping first responders with the tools, protocols, and training necessary to deliver whole blood at the scene of injury, this program will significantly enhance the region's trauma response capability. It will also strengthen coordination with regional trauma centers and align with national best practices in prehospital care.

Ultimately, this initiative will have a measurable impact on Nevada traffic safety by reducing preventable deaths from motor vehicle collisions, improving survivability for victims of severe trauma, and strengthening the overall effectiveness, efficiency, and resilience of the emergency medical system.

This project includes the purchase and deployment of specialized medical equipment (blood storage coolers and a support vehicle). CCFD will ensure all required IT and equipment approvals are completed and documented in accordance with OTS requirements.

Using the Highway Safety Countermeasures Guide link below, reference the countermeasure title and number chosen to address the identified problem.*

Education, Prevention, & Intervention

Highway Safety Countermeasure Guide: [link](#)

Project Goals

Instructions:

Please complete this page, then click the Save button.

Required fields are marked with an *.

Project Goals

1. Define the goals of this project based on the problem ID *

The goal of this project is to develop, implement, and evaluate a comprehensive prehospital whole blood transfusion program within the Clark County Fire Department (CCFD) to improve outcomes for patients experiencing hemorrhagic shock, particularly those injured in motor vehicle collisions. This initiative is designed to address a critical gap in prehospital trauma care by enabling the early administration of whole blood at the point of injury, especially on traffic accidents thereby reducing preventable deaths and improving overall traffic safety.

The primary goal of this project is to establish a highly trained group of CCFD personnel capable of safely and effectively administering whole blood in the prehospital environment. During the initial phase of implementation, CCFD will train a targeted group of 10 personnel. By focusing on this group, the program ensures that trained personnel are positioned to both deliver patient care and provide oversight and guidance to others as the program expands. Additionally, this structure creates a foundation for future growth, as these trained will play a critical role in expanding training efforts to additional personnel within the department. As the program matures, the number of trained providers will increase, broadening the reach and impact of prehospital whole blood administration across the County.

Another key goal of this project is to implement a standardized and sustainable training program that ensures ongoing competency and proficiency among participating personnel. Training will be conducted on a bi-annual basis and will align with existing recertification cycles. This schedule ensures that providers maintain familiarity with protocols, reinforce critical skills, and remain up to date with evolving best practices in blood product administration.

A central goal of this project is to evaluate the effectiveness of the whole blood program through comprehensive data collection and analysis. Throughout the grant period, data will be systematically gathered to assess patient care outcomes, operational performance, and logistical efficiency. This evaluation process is critical to ensure that the program meets its intended objectives and provides measurable benefits to the community.

Another important goal of this project is to enhance operational processes associated with the delivery of whole blood. This includes developing and refining workflows that support rapid identification of eligible patients, efficient initiation of transfusion, and seamless integration of whole blood administration into existing treatment protocols. By improving operational efficiency, the program aims to reduce delays in care and ensure that patients receive timely and appropriate interventions.

An additional goal of this project is to support other agencies in the development and implementation of their own prehospital whole blood programs. As CCFD gains experience and expertise, it will be well-positioned to share knowledge and provide guidance to regional partners in adopting similar initiatives. This collaborative approach has the potential to expand the impact of the program beyond a single agency, contributing to broader improvements in trauma care across the region.

The overarching goal of this project is to improve patient outcomes across a range of medical emergencies, including traffic accidents, by reducing the time to definitive resuscitation for individuals experiencing hemorrhagic shock. By enabling the administration of whole blood in the prehospital setting, the program addresses a critical gap in care and provides a life-saving intervention during a crucial window. This approach aligns with modern trauma care principles and demonstrates a strong commitment to evidence-based practice. The program represents a significant advancement in the evolution of prehospital care, with the potential to save lives, reduce suffering, and enhance the overall health and safety of the community.

Project Objectives

Instructions:

Please complete this page, then click the **Save** button.

Required fields are marked with an *.

Project Objective(s)

1. Identify specific, measurable, achievable, relevant and time specific steps to achieve the goal. (i.e. to increase/to decrease from ____ to ____) *

The goal of the CCFD Whole Blood Program during the 12-month grant period is to expand and strengthen internal program capacity, enhance operational readiness, and continue data collection to evaluate program efficacy and patient outcomes. The key focus of this effort is to support improved traffic safety outcomes by reducing preventable deaths associated with severe hemorrhage following traffic-related incidents.

To achieve this goal, CCFD has identified the following specific, measurable, achievable, relevant, and time-bound objectives:

Acquire and deploy one dedicated training and support vehicle within 12 months to support the safe storage, transport, and administration of whole blood. This vehicle will allow for ongoing training without removing frontline apparatus from service, thereby maintaining operational readiness while expanding program capabilities.

To purchase and place into service two additional blood storage coolers within 12 months that are designed to maintain required temperature ranges for whole blood. This will ensure continuous availability of blood products, reduce service interruptions due to maintenance or equipment downtime, and maintain compliance with established safety standards.

Implement and deliver a minimum of two formal training courses within 12 months focused on prehospital whole blood administration. These courses will provide standardized education for personnel and reinforce best practices in storage, handling, and transfusion protocols.

To train at least 10 additional CCFD personnel in prehospital whole blood administration within 12 months, increasing the number of qualified providers and expanding the department's ability to deliver this life-saving intervention to a greater number of patients.

Continue systematic data collection and analysis throughout the 12-month period to evaluate program effectiveness, identify areas for improvement, and support evidence-based decision-making for future program expansion, including its impact on trauma incidents such as traffic collisions.

2. Include timeline. **Timeline:*

October 2026 – Grant awarded. Vehicle ordered. All materials will be ordered as soon as possible, so the training can begin right away. Meeting to begin to document the progress. Meetings will consist of members of the EMS program and the grant project director and fiscal officer.

November 2026 – Training to be held by the EMS instructor to teach members of CCFD how to administer the prehospital whole blood. Monthly evaluation meeting.

December 2026 – Monthly evaluation meeting.

January 2027 – Monthly evaluation meeting.

February 2027 – Monthly evaluation meeting. Training to be held by the EMS instructor to teach members of CCFD how to administer the prehospital whole blood

March 2027 – Monthly evaluation meeting.

April 2027 – Monthly evaluation meeting.

May 2027 – Monthly evaluation meeting. Training to be held by the EMS instructor to teach members of CCFD how to administer the prehospital whole blood

June 2027 – Monthly evaluation meeting.

July 2027 – Monthly evaluation meeting.

August 2027 – Monthly evaluation meeting. Training to be held by the EMS instructor to teach members of CCFD how to administer the prehospital whole blood

September 2027 – Close out the grant, meeting to discuss objectives and evaluate them.

3. Describe how your agency will continue to support this project to ensure longevity and effectiveness *

The Clark County Fire Department (CCFD) is committed to ensuring the long-term sustainability and effectiveness of the prehospital whole blood program beyond the grant funding period. This commitment is supported through the integration of the program into existing EMS operations, ongoing internal investment, and strong regional partnerships.

A key component of sustainability is the full integration of the whole blood program into CCFD's standard emergency medical services framework. Policies, protocols, and procedures developed during the grant period will become part of routine EMS operations, ensuring that prehospital blood administration remains a standard of care for eligible trauma patients, particularly those involved in motor vehicle crashes.

Training sustainability will be achieved through incorporation into CCFD's established training cycles. The department will continue to provide biannual training and competency validation, funded through internal budgets, to ensure personnel maintain proficiency and remain aligned with current evidence-based practices. By embedding training into existing certification and continuing education processes, the program will remain operational without reliance on future grant funding.

CCFD will also sustain the program through continued collaboration with regional healthcare partners, including local trauma centers and blood suppliers. These partnerships will support ongoing access to blood products, ensure compliance with regulatory standards, and strengthen coordination across the regional trauma system. Maintaining these relationships will be critical to ensuring consistent supply chain management and program reliability.

To further support long-term viability, CCFD will utilize internal personnel as trainers and program leaders, reducing dependence on external resources. Experienced personnel trained during the grant period will serve as instructors, mentors, and subject matter experts, enabling continued expansion and knowledge transfer within the department.

Finally, sustainability will be reinforced through a data-driven approach to program evaluation and justification. CCFD will continue to collect and analyze data related to program utilization, operational performance, and patient outcomes. These data will be used to demonstrate program effectiveness, support continuous quality improvement, and justify ongoing internal funding and potential future expansion.

Through operational integration, internal resource allocation, strategic partnerships, and performance-based evaluation, CCFD will ensure that the prehospital whole blood program remains sustainable, effective, and responsive to the ongoing need to reduce fatalities and serious injuries resulting from motor vehicle crashes.

4. Select counties where the project will be implemented

Clark County

Project Activities

Instructions:

Please complete this page, then click the **Save** button.

Required fields are marked with an *.

Project Activities

1. Describe the proven or innovative activities that will be undertaken, why they were chosen, how they will be carried out, by whom, and identify the month or quarter when the activities will be performed. Describe how activities tie to objectives.*

The primary activities supported by this grant will include structured training and ongoing program coordination meetings designed to ensure the successful implementation, evaluation, and sustainability of the prehospital whole blood program. These activities are essential to maintaining clinical excellence, operational readiness, and continuous quality improvement throughout the duration of the grant.

Monthly meetings will be conducted to evaluate progress toward the grant's objectives and to ensure accountability across all stakeholders. These meetings will be attended by the grant project director, fiscal officer, and key members of the EMS division. The purpose of these meetings is to review program performance metrics, assess compliance with established protocols, and identify any operational challenges or opportunities for improvement. Topics of discussion will include utilization rates, documentation accuracy, supply chain logistics, equipment functionality, and patient outcomes when applicable. These meetings will also serve as a forum to address barriers, implement corrective actions, and ensure alignment with best practices and regulatory standards. Detailed records of each meeting will be maintained to support transparency and reporting requirements associated with the grant.

Training is a critical component of this program and will be delivered by a qualified CCFD EMS Officer and Instructor team. The EMS Instructor holds certification as an International Board of Specialty Certification (IBSC) Critical Care Paramedic and Flight Paramedic, demonstrating advanced clinical expertise in high-acuity patient care. Additionally, the instructor has received specialized education from University Medical Center on proper documentation procedures following blood administration, ensuring compliance with hospital and regulatory requirements. The EMS Training Officer is certified as a Master Instructor through the Southern Nevada Health District, reflecting a high level of proficiency in adult education and instructional methodology.

Together, the instructor and training officer have utilized their combined over 30 years of paramedic experience, along with an extensive review of peer-reviewed literature and national best practices, to develop a comprehensive 8-hour training program focused on prehospital whole blood administration. This curriculum is designed to ensure that all participating personnel are competent, confident, and capable of safely delivering this life-saving intervention in the field.

The training program is divided into two components: an online didactic portion and an in-person practical session. The online component, approximately three hours in length, introduces learners to an overview of the equipment required. This portion also provides detailed instruction on proper equipment setup, storage considerations, and troubleshooting.

The in-person component focuses on hands-on skill development and application. Participants will engage in practical exercises that simulate real-world scenarios, allowing them to practice the safe administration of whole blood under controlled conditions. This portion of the training also includes in-depth education on hematology, damage control resuscitation, and the critical role of early blood administration in improving patient outcomes. Emphasis is placed on adherence to protocols, team communication, and patient safety.

Training will be conducted on a quarterly basis to ensure a growing number of CCFD personnel are trained and proficient in prehospital whole blood administration. Ongoing refresher training and competency validation will also be incorporated to maintain skill retention and adapt to any updates in clinical guidelines or operational procedures. Collectively, these training and meeting activities will support the effective implementation, continuous evaluation, and long-term success of the program.

Project Evaluation

Instructions:

Please complete this page, then click the Save button.

Required fields are marked with an *.

Project Evaluation

(How you will measure the success of this project)

1. Identify if this is an Outcome Evaluation and how each objective and the activities will be evaluated to determine progress so that it answers the question "Did the project achieve what it intended";

OR

Identify if it is a Process Evaluation and describe how the project will be evaluated to determine if it is being implemented as intended. Also describe who will evaluate the project and what their proficiency level is.*

The prehospital whole blood program will be evaluated as a process evaluation, with continuous monitoring throughout the duration of the 12-month grant period to ensure the program is being implemented as intended. This approach allows for real-time assessment and adjustment, ensuring that any necessary modifications can be made early to improve effectiveness, efficiency, and compliance with established protocols. By evaluating the program during implementation, CCFD will be able to identify strengths, address challenges, and make data-driven decisions to optimize performance and outcomes.

The evaluation will focus on determining whether the program is being carried out according to design, including adherence to training standards, operational procedures, and clinical protocols for the administration of whole blood in the prehospital environment. This includes assessing whether personnel are properly trained, equipment is utilized correctly, and whole blood is administered in appropriate clinical situations.

Data will be collected throughout the grant period to evaluate patient care, operational performance, and logistical processes associated with whole blood delivery. Primary data sources will include EMS patient care records and the Computer-Aided Dispatch (CAD) system, which will provide detailed information on response times, patient assessments, interventions performed, and clinical outcomes. Additional internal tracking methods may be utilized to monitor blood product usage, storage conditions, inventory rotation, and potential waste.

Key performance indicators will include time from patient contact to transfusion, adherence to established protocols, frequency and appropriateness of whole blood administration, and operational readiness of equipped units. Training compliance and competency validation will also be monitored to ensure that all participating personnel maintain the necessary skills and knowledge to safely administer whole blood.

The evaluation process will be conducted by CCFD leadership, including EMS Training staff, operational managers, and Medical Director. These individuals possess the clinical expertise, operational experience, and oversight authority necessary to effectively evaluate program performance. The Medical Director will provide clinical oversight and ensure that all patient care aligns with current medical standards and evidence-based practices. EMS Training staff will evaluate training effectiveness and competency, while operational managers will assess system performance and logistical efficiency.

Regular reviews of collected data will be conducted to identify trends, measure compliance, and evaluate overall program implementation. Findings will be used to guide continuous quality improvement efforts, including adjustments to training, protocols, and operational procedures as needed. This iterative evaluation process ensures that the program remains responsive, effective, and aligned with its intended goals.

By utilizing a structured process evaluation with ongoing data collection and expert oversight, CCFD will ensure that the prehospital whole blood program is implemented successfully, operates efficiently, and maintains a high standard of patient care throughout the grant period.

2. Include baseline data to indicate progress.*

In the first four months of active implementation, the CCFD prehospital whole blood program trained 19 personnel and administered whole blood on eight occasions. These administrations included three stabbings, two motor vehicle collisions, two hemorrhagic emergencies, and one gunshot wound, demonstrating early utilization in high-acuity patients requiring rapid intervention.

At present, the program operates with a single blood storage cooler and one dedicated EMS vehicle for transport. This limited capacity has resulted in periods when the program is unavailable. The blood storage cooler has been out of service for three of the 106 operational days due to maintenance, and the dedicated EMS transport unit has been unavailable for approximately 65 hours during the same period.

This data establish a baseline level of program use and highlight a key operational limitation: reliance on a single cooler and transport unit creates unavoidable service gaps when equipment is down. Additional equipment is necessary to ensure continuous availability, reduce downtime, and support consistent delivery of prehospital whole blood to critically injured patients.

3. If the organization will be coordinating with other agencies, list the agencies & their role in the project.*

The Clark County Fire Department (CCFD) will serve as the lead agency for the expansion, implementation, and long-term sustainability of the prehospital whole blood program. The majority of program operations, including training, protocol development, quality assurance, and day-to-day management, will be conducted internally. CCFD has already established internal capacity to support this initiative, including an EMS Training Instructor who has completed a formal train-the-trainer program specific to prehospital whole blood administration. The EMS Training Instructor has completed a course from the University Medical Center on how to properly complete all paperwork after administering prehospital whole blood. He then researched and created an 8-hour training that everyone who is going to administer the prehospital whole blood must complete. The training is certified by the Southern Nevada Health District and all participants who complete the class are awarded continuing education units. The class consists of 3 hours of online training where the participant must learn about all of the equipment necessary to perform the blood transfusions and then a 5-hour in-person practical course where they learn how to properly administer the blood and run the equipment. This allows the department to independently train and maintain competency among its personnel, ensuring program consistency and long-term sustainability without reliance on external training resources.

While the program will be primarily managed in-house, CCFD will coordinate local hospitals, including Sunrise Hospital and University Medical Center of Southern Nevada, and local blood suppliers, including American Red Cross and Vitalant, to procure and maintain a reliable supply of whole blood. These organizations will play a key role in the collection, testing, storage, and distribution of blood products, as well as ensuring compliance with all regulatory and safety standards. Coordination with these partners will support proper inventory management, reduce waste, and ensure that blood products are consistently available for emergency use.

Although external partners will play an important supportive role, CCFD will maintain full responsibility for program execution, including training delivery, operational deployment, data collection, and performance evaluation. This structure allows for efficient program management while utilizing the expertise and resources of regional healthcare partners. By combining strong internal leadership with strategic external collaboration, CCFD will ensure the successful implementation and sustainability of the prehospital whole blood program while maintaining high standards of patient care.

Budget

Instructions:

Please complete this page, then click the Save button.

Required fields are marked with an *.

Budget

Amount Requested:	\$250,000.00		
Category	Federal Funds	Match 25%	Project Total
Personnel		\$62,500.00	\$62,500.00
Travel			\$0.00
Contract Services			\$0.00
Equipment**	\$250,000.00		\$250,000.00
Other Direct Costs			\$0.00
Indirect Costs			\$0.00
Program Income			\$0.00
Total Expenses	\$250,000.00	\$62,500.00	\$312,500.00

Check if equipment requested in the Category: Equipment and/or Other Direct Costs.

**Equipment means tangible personal property (including information technology systems) having a useful life of more than one year and a per-unit acquisition cost which equals or exceeds the lesser of: (a) \$10,000; or (b) The recipient's or subrecipient's capitalization threshold for financial statement purposes. Note: Items that do not meet the equipment definition will be entered under Other Direct Costs.

Provide the best estimates possible for each line item requested with a breakdown of costs . Describe any anticipated program income, indirect costs, and what will be used to fulfill the match requirement. *

CCFD is requesting funding to support the training, expansion, and long-term sustainability of its prehospital whole blood program. This investment will enable the department to increase the number of trained personnel, enhance provider competency, and expand the program's operational reach to better serve patients experiencing traumatic hemorrhage. The following represents the best estimates for the resources required to support these training and expansion efforts, based on current market pricing and vendor quotes:

- Blood Cooler— Storage (2 units): \$15,000 each for a total of \$30,000. These units provide temperature-controlled storage with continuous monitoring and battery capability to maintain whole blood for up to 72 hours in compliance with FDA standards.*
- Blood Cooler— Portable (2 units): \$9,500 each for a total of \$19,000. Lightweight units designed for field deployment, allowing personnel to safely transport blood products from apparatus to the patient in complex or remote environments.*
- Code 3 Response Vehicle with Equipment (1 unit): \$150,000 total. A vehicle similar to a Ford F-250 with a camper shell, equipped with emergency lights and sirens, and modified with storage systems and a pull-out tray to safely transport blood products and associated medical equipment. The vehicle will also include traffic safety equipment such as road flares to enhance scene safety*
- Vascular Access Simulators (6 units): \$1,800 each for a total of \$10,800. Intraosseous infusion training limbs used to develop and maintain proficiency in vascular access and fluid administration.*
- Fluid Warmers (2 units): \$6,595 each for a total of \$13,190. Devices used to warm blood products to appropriate infusion temperatures, reducing the risk of hypothermia in trauma patients.*
- Fluid Warmer Disposable Units (36 units): \$160 each for a total of \$5,760. Single-use components required for each patient's encounter and training evolution.*
- Standards for Emergency Prehospital and Scheduled Out-of-Hospital Transfusions Portal (1 subscription): \$160 total. Provides access to current national standards, protocols, and best practices.*
- Additional Blood Administration Supplies: \$10,000 total. Includes pressure infuser bags, Y-tubing, blood administration sets, and other consumables necessary for both operational use and training.*
- Batteries and Chargers (4 units): \$2,100 each for a total of \$8,400. To support continuous operation of battery-powered equipment, ensuring readiness and reliability.*

Total Project Cost: \$250,000

Program Income and Indirect Costs:

This program is not expected to generate any program income. No indirect costs are included in this request. All funds will be applied directly to equipment and operational readiness.

Match Requirement:

CCFD will meet the required 25% match (\$62,500) through in-kind contributions from EMS Captains and assigned personnel involved in the whole blood program. These contributions will include time spent on training, certification, recertification, scenario-based exercises, program development, and maintaining operational readiness on equipped units.

All personnel hours will be carefully documented and valued using established hourly pay rates to ensure accurate accounting. These contributions will meet or exceed the required match and demonstrate the department's substantial commitment to the program.

Equipment Request

Traffic Safety Project Equipment Request

IMPORTANT: READ ALL INFORMATION CAREFULLY BEFORE COMPLETING FORM.

General Information: Your proposed grant project may include a request to purchase equipment. NHTSA defines equipment as: tangible property having a useful life of more than one year and purchase cost of \$10,000 or greater. Equipment purchases are subject to Buy America requirements, inventory and disposition requirements, and proportional cost share requirements. Your OTS program manager can provide more information and guidance.

Equipment may only be purchased as part of an approved project that demonstrates the need for equipment in order to achieve its intended outcomes and must demonstrate a direct correlation between the equipment and reduction in traffic fatalities or serious injuries. The project must be based upon identification of a specific safety problem.

A funding proposal should never start with the words “*We want to purchase XX item to help us do the following....*”. Instead, an actual safety project or program must be developed and if equipment is necessary or recommended to implement the project a description of the current safety issue, how the equipment will be used, and how its effectiveness will be measured. It is not sufficient to state that it is believed there is a problem or the scope of a problem is unknown and the equipment will identify if and what problem exists. For example, “*We believe a lot of people speed on our roads and want to purchase a speed sensing trailer to warn them to slowdown.*” Instead, your project should state the following: “*Using XX data (citation, crash, radar, other) we have identified XX section of road as having high incidents of unsafe speeding, crashes, near misses, etc. Using enforcement, community education, and speed sensing equipment we will reduce speeding and aggressive driving on this roadway. We will establish a baseline of data by analyzing existing information or conducting a manned survey or by deploying a speed sensing trailer that collects data. This data will be used to develop and conduct a speed enforcement and community education program. Following the enforcement the trailer will once again be used to affirm reduction in unsafe traffic behaviors.*”

There are many types of traffic safety projects that can benefit from use of equipment. **Please remember that equipment can only be purchased when it is a component of a multi-faceted program.** Your OTS program manager can help you build a project based on information that identifies what type of countermeasure is likely to improve safety and can help you meet eligibility requirements for equipment purchases.

Please use the attached worksheet to record information about your project and your equipment request. You will submit the worksheet with your approved Letter of Interest or Grant Application in eGrants.

Entity Name: Clark County Fire Department **Project Number:** TS-2027-Clark County Fire Department-1005

1. What specific safety problem is your grant project addressing?

The specific traffic safety problem this grant project addresses is the high number of fatalities and serious injuries resulting from traffic-related incidents in unincorporated Clark County. Between 2020 and 2024, the area recorded 85,806 reported crashes, including 742 fatalities and 1,649 serious injuries. This five-year data reflects a significant and ongoing safety concern, with annual averages exceeding 17,000 crashes, 148 deaths, and 330 serious injuries.

In addition to these severe outcomes, thousands of individuals sustain moderate injuries each year that require emergency medical treatment and transport, placing continued strain on EMS and hospital systems. These trends underscore the need for targeted, evidence-based interventions that not only aim to prevent crashes but also reduce the severity of injuries and improve survivability when crashes do occur.

A critical component of this problem is that many traffic-related fatalities occur within the first hours following injury and are often preventable with timely, appropriate medical intervention. Delays in delivering advanced trauma care, particularly for patients experiencing severe hemorrhage, contribute significantly to these outcomes. Addressing this gap early, prehospital care is essential to improving survival rates and reducing preventable deaths associated with motor vehicle crashes.

2. How have you identified this safety problem? What data/information are you basing this problem identification on?

The identified traffic safety problem is based on a comprehensive review of local and state data sources, including crash data, EMS response records, and trauma system outcomes. Crash data from unincorporated Clark County between 2020 and 2024 demonstrates a consistently high number of motor vehicle collisions, with 85,806 reported crashes, resulting in 742 fatalities and 1,649 serious injuries. These figures confirm a sustained and significant burden of traffic-related injury and death within the jurisdiction.

In addition to crash data, internal Clark County Fire Department EMS records were reviewed to assess call volume, injury severity, and treatment trends associated with motor vehicle incidents. This data indicates a high frequency of trauma responses involving significant hemorrhage, particularly in high-speed collisions and incidents requiring prolonged extrication or transport.

Further validation is drawn from regional trauma system data and national research, which consistently identify uncontrolled hemorrhage as a leading cause of preventable death in trauma patients. Analysis of patient outcomes and timelines of care demonstrates that many fatalities occur within the early phases of injury, prior to definitive hospital intervention, highlighting a critical window where prehospital care can significantly influence survival.

Program-specific data from the department's existing prehospital whole blood initiative also supports the need for expansion. Initial implementation has demonstrated both utilization and operational limitations, including restricted availability due to equipment constraints and a limited number of trained personnel.

By combining crash statistics, EMS response data, and established trauma research, the department has clearly identified a gap in early, field-based intervention for hemorrhagic shock resulting from traffic collisions. This data-driven approach supports the need for expanded capabilities to improve patient outcomes and reduce preventable fatalities.

3. What activities will be conducted that address the identified safety problem?

To address the identified safety problem of preventable deaths resulting from traffic-related hemorrhage, Clark County Fire Department will implement a combination of targeted training and ongoing program coordination activities to expand and sustain its prehospital whole blood program. A primary activity will be the delivery of structured training designed to increase the number of personnel capable of administering whole blood in the field. This training will be conducted quarterly and will include both an online didactic component and an in-person, hands-on skills session. The didactic portion will provide foundational knowledge on equipment use, storage requirements, and clinical indications, while the in-person component will focus on scenario-based training that simulates real-world motor vehicle collision incidents. These scenarios will emphasize rapid assessment, proper administration techniques, team communication, and adherence to established protocols. Additional refresher training and competency validation will be conducted regularly to ensure skill retention and alignment with current clinical guidelines.

These training activities directly support earlier and more effective intervention for patients experiencing hemorrhagic shock following traffic collisions, increasing the likelihood of survival during the critical prehospital phase of care.

In addition to training, monthly program coordination meetings will be conducted to monitor performance and guide continuous improvement efforts. These meetings will include the grant project director, fiscal officer, and EMS leadership, and will focus on evaluating key performance indicators such as number of personnel trained, frequency of whole blood administration, time to transfusion, and patient outcomes when available. The meetings will also address equipment readiness, supply availability, documentation accuracy, and protocol compliance.

This ongoing evaluation process will allow the department to identify operational challenges, implement corrective actions, and ensure the program remains effective and responsive to the needs identified through crash and EMS data. Documentation of these meetings will support accountability and grant reporting requirements.

Collectively, these activities are designed to expand access to timely, life-saving blood transfusion in the prehospital setting, reduce delays in care, and ultimately decrease the number of fatalities and serious injuries associated with traffic-related traumatic hemorrhage.

4. How will you establish a pre-activities baseline of data/information?

A pre-activity baseline will be established using a combination of internal program data, EMS response records, and operational tracking metrics from Clark County Fire Department's existing prehospital whole blood program.

Baseline data will include the current number of CCFD personnel trained and authorized to administer whole blood, which will be used to establish a measurable benchmark for workforce capacity. In addition, the department will document the current frequency of prehospital whole blood administration during traffic-related incidents, including total uses over the previous 12-month period.

Operational readiness will also be evaluated by tracking the amount of time whole blood units, storage coolers, and assigned apparatus are out of service due to maintenance, equipment limitations, or training-related downtime. This information will help quantify existing gaps in availability and program reliability prior to implementation of grant-funded activities.

Further baseline metrics will include response and treatment indicators, such as estimated time from patient contact to blood administration when applicable, as well as general EMS call volume related to motor vehicle collisions involving serious injury. Where available, patient outcome data associated with hemorrhagic shock will also be reviewed in coordination with receiving hospitals or trauma system partners.

All baseline data will be collected and analyzed prior to the start of grant-funded activities and will serve as the foundation for comparison throughout the 12-month performance period. This approach will allow the department to measure improvements in training capacity, operational availability, response efficiency, and utilization of prehospital whole blood, all of which are directly tied to reducing preventable deaths and serious injuries from traffic-related incidents.

5. How will you measure the post-activities date/information to determine the effect?

To measure post-activity data and determine the overall effect of the prehospital whole blood program, CCFD will conduct a comprehensive outcome evaluation at the conclusion of the 12-month grant period, supported by continuous data collection throughout implementation. This evaluation will compare post-implementation data against the established pre-activity baseline to assess improvements in clinical care, operational efficiency, and program capacity.

Post-activity data will be gathered from the same primary sources used during the process evaluation, including EMS patient care reports and the Computer-Aided Dispatch (CAD) system. This ensures consistency and reliability in measuring change over time. Additional internal tracking systems will provide detailed information on blood product utilization, storage integrity, inventory management, and waste reduction.

Key outcome measures will include an increase in the number of personnel trained and competent in whole blood administration, as well as an increase in the number of frontline units equipped and capable of carrying whole blood. Program growth will also be evaluated by examining the frequency of whole blood administration and comparing it to baseline figures to determine expanded access and utilization.

Clinical effectiveness will be assessed by analyzing patient-centered metrics such as time from patient contact to transfusion, improvements in hemodynamic stability following administration, and overall patient outcomes when available. While recognizing the challenges of tracking long-term outcomes in the prehospital setting, CCFD will coordinate with receiving facilities when possible, to obtain feedback on patient status and survivability trends associated with early transfusion.

Operational impact will be measured by evaluating reductions in unit out-of-service time related to blood pick-up or exchange, improved response readiness of equipped units, and increased geographic coverage of whole blood availability across the system. Efficiency gains in blood product handling, including proper storage, reduced wastage, and successful inventory rotation, will also be key indicators of program effectiveness.

Compliance with clinical protocols and training standards will continue to be assessed as a post-implementation to ensure that program expansion does not compromise quality or safety. High adherence rates will indicate successful integration of the program into routine operations.

CCFD leadership, including EMS Training staff, and operational managers will conduct a final analysis of all data collected. This analysis will identify measurable improvements, determine whether program goals and objectives were achieved, and evaluate the return on investment of grant-funded resources.

Findings from the post-activity evaluation will be used to inform future decision-making, support program sustainability, and guide potential expansion. By comparing pre- and post-implementation data and analyzing key performance indicators, CCFD will be able to clearly demonstrate the program's impact on patient care, system performance, and overall readiness to respond to life-threatening hemorrhage emergencies.

6. Describe the equipment needed to perform these activities (Type and Quantity):

The equipment requested is necessary to support the operational delivery, training, and sustainability of Clark County Fire Department's prehospital whole blood program, which is designed to improve outcomes in patients experiencing traumatic hemorrhage from motor vehicle crashes. The department is requesting two (2) primary blood storage coolers capable of continuous temperature monitoring and regulation. These units must maintain blood at appropriate storage temperatures for up to 72 hours, be battery powered, and meet applicable FDA guidelines for blood transport. Each unit must have the capacity to store multiple 500 mL units of whole blood to ensure adequate supply during extended or high-acuity incidents.

In addition, two (2) lightweight, portable blood coolers are requested to enhance operational flexibility. These units will be used to transport blood from apparatus to the patient in scenarios where access is limited, such as complex vehicle extrications, remote locations, or incidents requiring extended patient contact. The combination of primary and portable coolers ensures continuity of operations and eliminates service gaps caused by maintenance or equipment downtime.

The project also includes the request for one (1) response vehicle (Code 3 capable), similar to a Ford F-250 with a camper shell configuration. This vehicle will be equipped with emergency lights and sirens and outfitted with modifications to safely store and transport blood products and associated medical equipment. Features will include secure storage compartments and a pull-out tray system to facilitate efficient loading, unloading, and deployment of equipment during emergency responses and training evolutions.

To support safe administration of blood products, the department is requesting two (2) blood warmers, along with approximately thirty-six (36) single-use disposable warmer kits. Blood warmers are required to bring stored blood to appropriate infusion temperatures prior to administration, reducing the risk of hypothermia in trauma patients. Disposable components are necessary for each patient's use and for training scenarios.

To ensure proper training and skill maintenance, the department is requesting six (6) intraosseous infusion training simulators (training limbs with vascular access capability). These simulators will allow personnel to practice vascular access and fluid administration techniques in a controlled environment, supporting both initial certification and ongoing competency.

Additionally, the department is requesting access to the "Standards for Emergency Prehospital and Scheduled Out-of-Hospital Transfusions" resource portal to ensure training and program protocols remain aligned with current best practices and national guidelines.

To support training without impacting operational readiness, the department will purchase additional consumable medical supplies, including pressure infuser bags, Y-tubing, and blood administration sets. These items will be dedicated for training use to preserve operational supplies for patient care.

Finally, two additional sets of batteries and charging units are requested to ensure all equipment remains in continuous service, supporting uninterrupted program availability.

Collectively, this equipment provides the necessary infrastructure to reliably store, transport, administer, and train personnel in the use of prehospital whole blood, directly supporting improved response capability and patient outcomes in traffic-related traumatic hemorrhage.

7. Describe how the equipment will be used:

The equipment requested will be used to support the full operational lifecycle of Clark County Fire Department's prehospital whole blood program, including storage, transport, administration, and training.

Primary blood storage coolers will be deployed on designated frontline units and used to safely store whole blood at regulated temperatures in accordance with FDA guidelines. These coolers will ensure that blood products are immediately available at the point of response, eliminating delays associated with retrieving blood from fixed locations and enabling rapid initiation of transfusion in patients experiencing traumatic hemorrhage.

Portable blood coolers will be used to transport blood from the apparatus directly to the patient's side during emergency incidents. This is especially critical in complex or extended operations such as vehicle extrications, remote responses, or scenes where patient access is delayed. These units allow providers to maintain proper storage conditions while delivering blood to the point of care, ensuring continuity and readiness in dynamic environments.

The response vehicle will be utilized to transport blood products, equipment, and personnel to emergency scenes, training locations, and interagency coordination events. It will serve as a dedicated platform to support the program, ensuring rapid deployment, proper storage, and efficient movement of equipment without taking frontline suppression or transport units out of service.

Blood warmers will be used during patient care to safely bring stored blood to appropriate infusion temperatures prior to administration. This is essential in trauma patients, as it helps prevent hypothermia and supports improved clinical outcomes. Disposable warmer kits will be used for each patient encounter and during training to ensure proper function and infection control.

Intraosseous infusion training simulators and associated consumable medical supplies will be used to train personnel in vascular access and blood administration techniques. These tools will support both initial certification and ongoing competency-based training, allowing providers to develop and maintain the skills necessary to safely administer whole blood in the prehospital setting.

The Standards for Emergency Prehospital and Scheduled Out-of-Hospital Transfusions resource portal will be used by program leadership and training staff to guide protocol development, ensure alignment with current best practices, and support continuous quality improvement.

Additional batteries and charging units will be used to maintain uninterrupted operation of all electronic equipment, always ensuring readiness.

Collectively, this equipment will be used to ensure that whole blood is readily available, safely handled, and effectively administered in the field, while also supporting comprehensive training and long-term program sustainability. This directly enhances the department's ability to provide timely, life-saving interventions for patients suffering from traumatic hemorrhage as a result of traffic-related incidents.

Please review and complete the checklist below:**8. The purchase price of the requested equipment is \$10,000 or greater***

Yes

9. The estimated total purchase cost:

\$142,600

10. A quote for the equipment is attached.

Quote Attachment

Yes

Quote - truck.cooler.pdf

11. The Equipment is Buy America compliant.

Yes

12. The equipment will be dedicated wholly or in part to traffic safety activities.

Yes

The grant project will address the following traffic safety issue(s) (Check Box):

- | | | | | | |
|--------------------------|----------------------------|--------------------------|---------------------------------|-------------------------------------|--|
| <input type="checkbox"/> | Speed/Aggressive Driving | <input type="checkbox"/> | Data Collection/Traffic Records | <input checked="" type="checkbox"/> | Emergency Medical Services Young Drivers/Old Drivers |
| <input type="checkbox"/> | Distracted/Drowsy Driving | <input type="checkbox"/> | Impaired Driving | <input type="checkbox"/> | Vulnerable Road Users |
| <input type="checkbox"/> | Seatbelt/Child Safety Seat | <input type="checkbox"/> | Other: (Please Describe) | <input type="checkbox"/> | Roadside Safety |

* Equipment price includes any accessories required to make the equipment operational.

Miscellaneous Attachments

Instructions:

Please complete this page, then click the **Save** button.

Miscellaneous Attachments

Attachment Description

Attachment