Emergency Medicine Foundation
and
Fisher & Paykel Healthcare

Pre-Hospital Noninvasive Respiratory Support

Request for Proposal

Please read these instructions carefully. Applications that do not follow these instructions with regards to type size, length, format, and supporting documentation will be summarily rejected. No extension of the deadline will be granted.

Before submitting your application, please be sure that the following items have been addressed:

- Information page is included as the first page of the application packet and is fully completed (sample attached)
- Type size is 11 pt. font, single-spaced and margins are one- half (.5) inch
- Evidence of IRB approval, or at least evidence of submission to IRB, from each institution, is included in application packet (for multi-centered studies, approval from or evidence of submission to IRB/AUC for all sites is required)
- Clearly stated research hypothesis
- Statement of Conditions is signed by **Principal Investigator** and **Institutional Official** and is included in application packet (see below)
- Letter of support from Emergency Medicine Chair is included in application packet
- Letter of support from each co-investigator is included in application packet
- Other grant support for all investigators is included in application packet
- Submission via the on-line application system is required. Late applications will not be considered. Submit application at https://emfoundation.aibs-scores.org

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Pre-Hospital Noninvasive Respiratory Support

Letter of Intent Deadline	**October 31, 2025, by 6:00 pm EST**
Application Deadline	**December 12, 2025, by 6:00 pm EST**
Notification of Award	June 2026
Funding Period	July 2026 – June 2027
Funding Amount	$100,000
Number of Awards	One

BACKGROUND

High Flow Therapy as First-Line Respiratory Support in the Emergency Department

Acute respiratory failure (ARF) is very common in the emergency department (ED), which often presents as undifferentiated breathlessness or dyspnea (Hutchinson 2017). Patients with severe respiratory complaints account for about 12% of emergency department (ED) visits (McCaig 2002; Weiss 2014), a significant number of hospital admissions, and a high mortality rate. Those that require mechanical ventilation account for 12% of all hospital costs. Noninvasive respiratory support (NIRS) strategies are commonly used to treat patients with ARF with the goal of improving dyspnea and gas exchange and the intent of avoiding mechanical ventilation.

NIRS modalities include non-invasive mechanical ventilation including continuous or bilevel positive airway pressure (CPAP or BiPAP), or nasal high flow therapy (NHF). Clinical trials, and subsequent guidelines, have traditionally involved phenotyping patients by differentiating the etiology into exacerbations of chronic obstructive pulmonary disease (COPD), acute decompensated heart failure (ADHF), or acute hypoxemic respiratory failure (AHRF), with the NIRS modality chosen based on the underlying phenotype. However, studies generally show equipoise between the two NIRS modalities as the initial strategy for patients (Mosier, 2024).

Patients with ARF often arrive by emergency medical services (EMS) transport, and prehospital management provides a significant opportunity to potentially improve patient outcomes (Fessler 2006). Given that most patients are undifferentiated at the onset of respiratory failure, definitive phenotyping prior to intervention is unrealistic. Thus, prehospital management of patients with acute respiratory failure represents a significant knowledge gap.

The complexities and cost, however, make it premature to embark upon an interventional trial of NHF in the prehospital environment without a better foundational understanding of the prehospital patient population and care landscape. The scope of the problem of ARF in this environment, current practice including rates of endotracheal intubation, NIV support, and high flow traditional nasal cannula use in terms of patient burden, geographic distribution, and patient outcomes remains limited. Additionally, identification of etiology and capacity to differentiate patients in the prehospital environment that might benefit from NHF therapy in this environment remains unknown, and the potential inclusion and / or exclusion criteria such for future work remains poorly defined.

To address these gaps, in this direct grant, we are seeking to better define the landscape of prehospital acute respiratory failure. We are seeking proposals that 1. Estimate the number of patients transported by emergency medical services for respiratory distress and/or acute respiratory failure that might benefit from nasal high flow therapy; 2. Understand the geographic and EMS service characteristics and the burden of disease; and 3. Determine etiologies and outcomes of transported patients.

References

Hutchinson A, Pickering A, Williams P, Bland J, Johnson M. Breathlessness and presentation to the emergency department: a survey and clinical record review. BMC Pulm. Med. 2017; 17: 53.

Stolmeijer R, Bouma H, Zijlstra J, Drost-de Klerck A, ter Maaten J, Ligtenberg J. A systematic review of the effects of hyperoxia in acutely ill patients: should we aim for less? Biomed. Res. Int. 2018; 2018: 7841295.

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Wunsch H, Linde-Zwirble W, Angus D, et al: The epidemiology of mechanical ventilation use in the United States. Crit Care Med 2010; 38: pp. 1947-1953

Weiss AJ, Wier LM, Stocks C, et al. Overview of Emergency Department Visits in the United States, 2011. Agency for Healthcare Research & Quality. 2014.

Behrendt C.F. (2000). Acute respiratory failure in the United States: Inc C.F. (2000). Acute respiratory failure in the United States: Inc idence and 31 - day survival. day survival. Chest, Volume 118, Number 4, p 1100 Chest, Volume 118, Number 4, p 1100 - 1105.

Mosier, Jarrod M. https://onlinelibrary.wiley.com/doi/full/10.1002/emp2.13118

Fessler MB, Welsh CH. Mechanical ventilation: invasive and noninvasive. In: Current Diagnosis & Treatment in Pulmonary Medicine, Hanley ME, Welsh CH (Eds), McGraw-Hill, New York 2006.

Doshi P, Whittle JS, Bublewicz M, Kearney J, Ashe T, Graham R, Salazar S, Ellis TW Jr, Maynard D, Dennis R, Tillotson A, Hill M, Granado M, Gordon N, Dunlap C, Spivey S, Miller TL. High-Velocity Nasal Insufflation in the Treatment of Respiratory Failure: A Randomized Clinical Trial. Ann Emerg Med. 2018 Jul;72(1):73-83.

High-flow nasal cannula for adult acute hypoxemic respiratory failure in the ED setting.
Long B, Liang SY, Lentz S.Am J Emerg Med. 2021 Nov;49:352-359. doi: 10.1016/j.ajem.2021.06.074. Epub 2021 Jul 3.PMID: 34246166 Free PMC article. Review.

Predictors of failure of high flow nasal cannula failure in acute hypoxemic respiratory failure due to COVID-19.
Garner O, Dongarwar D, Salihu HM, Barrantes Perez JH, Abraham J, McBride C, Mathew S, Antony P, Collins K, Richards KL, Howard CM.Respir Med. 2021 Aug-Sep;185:106474. doi: 10.1016/j.rmed.2021.106474. Epub 2021 May 20.PMID: 34044293 Free PMC article.

RESEARCH QUESTION AND TOPIC

Question: What is the national scope, etiology, and outcomes of pre-hospital respiratory distress and/or failure that could potentially be eligible for non-invasive high flow therapy?

Research Topic and Intended Outcomes: Determine the estimated number of pre-hospital patients (managed by EMS) requiring a high level of oxygen and / or noninvasive respiratory support (NIV or NHF). Determine baseline patient characteristics, triage level, pre-hospital interventions, pre-hospital and/or ED/hospital outcomes, and admitting ICDs and/or DRGs as appropriate. [Please see the attached, recently published, works by Graves, et al (10)]. Describe characteristics of patients receiving non-invasive pre-hospital respiratory

support and/or high levels of supplemental oxygen, potentially including but not limited to EMS service characteristics, transport times, geographic distribution, and etiologies of respiratory distress.

Background and rationale: Prior to the Covid-19 pandemic initiation and utilization of nasal high flow was focused to the critical care areas of the hospital (2). Nasal high flow became a significant therapeutic intervention during the pandemic for the treatment of Covid pneumonia (1). Retrospective research noted a decrease in the escalation of care evidenced by decreased intubations and in some cases mortality (1).

The increased utilization provided emergency department providers exposure to and experience with the use of nasal high flow. This has led to the amplified utilization for other patient groups presenting with mild to moderate respiratory distress (2). Critical care transport and prehospital emergency management services also increased utilization of nasal high flow during the pandemic and continue to utilize the therapy for transport (3,4,5).

Research has demonstrated the use of nasal high flow to decrease intubations and mortality with hypoxic patients compared to conventional oxygen or non-invasive ventilation. (6). Recent data demonstrate that NHF is noninferior to noninvasive positive-pressure ventilation (NIV) for the treatment of adult emergency department patients with respiratory failure from various causes (7). Specific to acute exacerbations of chronic obstructed pulmonary disease (AECOPD), there has been research that indicates nasal high flow is non-inferior to non-invasive, during the first 2 hours of use, in the decrease of PaCO2 (8). Based on these data, there may be an application of NHF in the pre-hospital setting that may lead to improved patient outcomes. In order to better whether additional interventional studies are indicated, a better understanding of the scope of the problem and potential impact of an intervention is needed.

References

1. Jarou ZJ, Beiser DG, Sharp WW, Chacko R, Goode D, Rubin DS, Kurian D, Dalton A, Estime SR, O'Connor M, Patel BK, Kress JP, Spiegel TF. Emergency Department-initiated High-flow Nasal Cannula for COVID-19 Respiratory Distress. West J Emerg Med. 2021 Jul 20;22(4):979-987. doi: 10.5811/westjem.2021.3.50116. PMID: 35354003; PMCID: PMC8328178.
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3. Séverin A, Ozguler A, Baer G, Baer M, Loeb T. Use of high-flow nasal cannula in out-of-hospital setting. Am J Emerg Med. 2022 Feb;52:260-261. doi: 10.1016/j.ajem.2021.04.008. Epub 2021 Apr 5. PMID: 33875318; PMCID: PMC8020627.
4. Kedzierewicz R, Derkenne C, Fraudin A, Vanhaecke P, Jouffroy R, Jost D, Prunet B. Logistical Challenge With Prehospital Use of High-Flow Nasal Oxygen Therapy in COVID-19-Induced Respiratory Distress: A Case Report. J Emerg Med. 2021 Jul;61(1):37-40. doi: 10.1016/j.jemermed.2021.03.006. Epub 2021 Mar 5. PMID: 33994257; PMCID: PMC7934666.
5. Reimer AP, Simpson B, Brown AS, Passalacqua M, Keary J, Hustey FM, Kralovic D. High-Flow Nasal Cannula in Transport: Process, Results, and Considerations. Air Med J. 2022 Jan-Feb;41(1):42-46. doi: 10.1016/j.amj.2021.09.008. Epub 2021 Oct 27. PMID: 35248341; PMCID: PMC8549608.
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Nasal Insufflation in the Treatment of Respiratory Failure: A Randomized Clinical Trial. Ann Emerg Med. 2018 Jul;72(1):73-83.
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10. Peters GA, Goldberg SA, Hayes JM, Cash RE. Patients who use emergency medical services have greater severity of illness or injury compared to those who present to the emergency department via other means: A retrospective cohort study. J Am Coll Emerg Physicians Open. 2023 Jul 31;4(4):e13017. doi: 10.1002/emp2.13017. PMID: 37529486; PMCID: PMC10388837.

EMS DATA AVAILABLITY

Applicants may use whatever dataset or methodologies best suited to conduct the project and test hypotheses. Each application will be examined based on its own merits and criteria.

However, to assist in conducting this research, the ESO data set may be made available for a set cost of data cleaning and provision (must be included in the study budget).

ESO is a large provider of out-of-hospital electronic health record (EHR) software in the United States. ESO's EHR system complies with the National EMS Information System (NEMSIS) standard, and enables the collection of dispatch, demographic, and clinical data from EMS encounters. Separate health data exchange software supports bi-directional data sharing and the linkage of emergency department (ED) and hospital information, including International Classification of Diseases (ICD-10) diagnoses, with the EHR.

Each year, a standardized core dataset is built from the ESO Data Collaborative for research use and is made available in the second quarter of the following year. Access to this dataset is provided following a research proposal process and review from the Research Leadership Group. Agencies voluntarily consent to participate in the ESO Data Collaborative to allow use of their de¬-identified records for research and benchmarking purposes. Data elements are directly extracted from the EHR database.

The most recent 2023 research dataset includes data from 3,068 EMS agencies, fire departments, and hospitals and contains 13,957,073 EMS encounters (86% represent 911 responses). The majority of included EMS responses occurred In the South (50%) US Census region, followed by the Midwest (25%), West (17%) and Northeast (8%). Based on the CMS urban city categorizations, most encounters occurred in urbanized areas (81%). Approximately 26% of records with an EMS emergency response and patient transport has linked hospital outcome information through the HDE software, with representation from 29% of all agencies participating in the Data Collaborative.

ESO has datasets from 2018 onwards. 2024 data will be made available this spring. In addition to the EHR elements ESO enriches the dataset with CMS data (urbanicity, division, region, RUCA) and SDOH datasets such as the Child Opportunity Index, ADI and the Social Vulnerability Index, where available.

ELIGIBILITY

The principal investigator must have a primary faculty appointment in Emergency Medicine. The principal investigator will make all arrangements for conduct of the proposed research projects and assumes

responsibility for conducting the research projects and supervising the work of all associate investigators.

INSTITUTIONAL SUPPORT
The applicant is required to demonstrate that the project will be successfully completed at their institution. The applicant must demonstrate that access to a suitable caseload, patient population or database will be available for study during the funding period. **Research must be approved by the institutional review board (IRB), or its equivalent, and a copy of the approval or pending approval sent with this application. IRB approval must be documented prior to dispensation of EMF funds.**

The applicant must also submit a letter from the Chair/Director of Emergency Medicine stating that adequate funds and time will be available to the applicant to complete the proposed project.

EVALUATION OF APPLICATIONS
Each application will be reviewed by research scientists who are actively involved in emergency medicine research. Each application will be judged primarily on: (1) the significance of the project to emergency medicine, (2) the research strategy, (3) feasibility, and (4) innovation. The final funding decision will be made by the Emergency Medicine Foundation Board of Trustees and all decisions are final.

TERMS OF THE AWARD
The EMF/Fisher & Paykel Healthcare Grant funds will be disbursed semi-annually over the one-year cycle. Disbursement of payments will be contingent upon satisfactory progress reports.

Limitations on Awards
Funds may be used for materials and supplies and to provide salary support. Capital equipment expenditures (costing more than $5,000 and a life of over one year) must be justified in the budget. Payments will be made to the principal investigator's institution that will be responsible for administering the funds. The Emergency Medicine Foundation will not be responsible for institutional overhead, cost for publications, travel, renovations, or secretarial support. Detailed audited financial reports may be required. The EMF is not fiscally responsible for funds necessary for the project's completion.

Change of Status of Principal Investigator
If the principal investigator changes affiliations or ceases research in the field for which the award was made, the award will terminate, and the remaining balance will be returned to the Emergency Medicine Foundation.

Liability of the Emergency Medicine Foundation
The EMF assumes no financial liability if patient care responsibilities of any kind are undertaken by the program faculty or investigator. The principal investigator and his or her institution acknowledge that the EMF is not legally liable for the conduct of the institution, the principal investigator, the program faculty, or any associate investigators.

Patent Policy
The principal investigator and institution acknowledge that, though unlikely, if a patentable invention or discovery is conceived, or conceived and reduced to practice by EMF-supported personnel during the award year, the EMF must be apprised of the invention and the institution's plans for protecting such invention under existing institutional patent policy. The EMF will defer to institutional policies when they are in compliance with those of the Federal government. The EMF reserves the right where the organization has no patent policy, or policies not in compliance with those of the federal government, to claim rights and interests in the invention or discovery.

SUPPORT FACILITIES
The applicant must submit letters of support if the proposed project uses facilities not routinely available to or directly under the supervision of the sponsoring program.

PUBLICATIONS
All discoveries resulting from work supported in part by the Foundation should be made available to the public and scientific community through scientific and/or public policy channels such as national meetings and peer-reviewed publications. Manuscripts accepted for publication must acknowledge the support of the Emergency Medicine Foundation. Two electronic reprints of each publication will be forwarded to the Emergency Medicine Foundation.

PROGRESS REPORTS AND MONEY MANAGEMENT
The principal investigator will submit six-month progress reports and a final progress report within thirty days of the conclusion of the award. Additional reports may be required. Failure to provide the reports will delay transmission of funds. Furthermore, failure to provide interim and final reports to the Foundation may negatively impact your institution's ability to apply for future EMF awards. EMF will maintain the copyright of all such reports. Progress reports must include an accounting report using Generally Accepted Accounting Procedures showing the distribution of funds with a signature from an institutional official (e.g., accountant, grants manager, administrator from the Office of Sponsored Research). The EMF reserves the right to withhold release of interim funds if >25% of the previous cycle remains unspent. The EMF allows up to 25% of funds to be carried over from one cycle to the next.

SURVEYS
The principal investigator and the institution will be surveyed periodically following completion of the award regarding career paths, subsequent grants/contracts obtained, and publications. The principal investigator and the institution will be expected to respond to these surveys as the Foundation will rely on such information to support continuation of the award program.

ABSTRACT PRESENTATION – ACEP RESEARCH FORUM
Awardees are required to present their work at the American College of Emergency Physicians (ACEP) Scientific Assembly/Research Forum immediately following the completion of the award. At the time of submission, abstracts must not have been accepted for publication in any journal. Also, abstracts may not be presented at any U.S. nationwide emergency medicine meeting or major international emergency medicine meeting prior to the ACEP Scientific Assembly. Presentation at non-emergency medicine meetings is allowed after presentation at ACEP. Funds cannot be requested to cover the travel cost nor registration to Research Forum.

GRANTEE WORKSHOP
Grantees are expected to attend a grantee workshop. The workshop is designed to bring together EMF grant recipients to present their progress and discuss any problems they may be facing. Senior researchers and faculty will be available to help solve problems, such as enrollment efforts, managing staff and life-work balance. NIH program officers participate in this workshop to discuss funding opportunities, provide research career advice and network with the grantees. Travel expenses will be reimbursed by the Emergency Medicine Foundation.

CONTACT INFORMATION
Please address questions to Cynthia Singh, MS, Deputy Executive Director at csingh@acep.org.

LETTER OF INTENT INSTRUCTIONS
Deadline is October 31, 2025, by 6:00 pm EST

Provide the following:

- Grant Category (EMF/Fisher & Paykel Healthcare)
- Project Title
- Principal Investigator Name
- Co-Principal Investigator (if applicable)
- Mentor Name (if applicable)
- PI Title/Position
- PI Institution
- PI Email
- Project Summary (one-half page limit)
- Submit to: https://emfoundation.aibs-scores.org

APPLICATION INSTRUCTIONS

Do **not** submit an incomplete application. **An application will be considered incomplete if it is illegible, if it fails to follow instructions, or if the material presented is insufficient to permit an adequate review.** Unless specifically required by these instructions (e.g. human subjects certification, vertebrate animals verification) do **not** send supplementary material.

The application consists of the following sections:

1. COVER PAGE
Name the **one** person responsible to the applicant organization for the scientific and technical direction of the project. Choose a title that is descriptive and specifically appropriate, rather than general. List the mentor and any associate investigators. (See sample below)

2. ABSTRACT (limit 1 page)
The abstract should succinctly describe every aspect of the proposed project. Include rationale, research hypothesis, specific aims, study design, study population, setting, intervention(s), outcome measures, data analysis, and significance.

3. TABLE OF CONTENTS

4. RESEARCH STRATEGY (limit 12 pages)
Please use the following subheadings:
Specific Aims (limit 1 page)

- State concisely the goals of the proposed research and summarize the expected outcome(s), including the impact that the results of the proposed research will exert on the research field(s) involved.
- List succinctly the specific objectives of the research proposed, e.g., to test a stated hypothesis, create a novel design, solve a specific problem, challenge an existing paradigm or clinical practice, address a critical barrier to progress in the field, or develop new technology.

Significance

- Explain the impact of the condition on the health of individuals and populations or the practice of emergency medicine.
- Explain how the potential for the study to improve healthcare and outcomes or the practice of emergency medicine.

- Describe how the concepts, methods, technologies, treatments, services, or preventative interventions that drive this field will be changed if the proposed aims are achieved.

Innovation

- Explain any refinements, improvements, or new applications of theoretical concepts, approaches or methodologies, instrumentation, or interventions.

Approach

- Describe overall strategy, methodology, and analyses to be used to accomplish specific aims of project.
- Discuss potential problems, alternative strategies, and benchmarks for success anticipated to achieve the aims.
- If the project is in the early stages of development, describe any strategy to establish feasibility, and address the management of any high-risk aspects of the proposed work.
- Preliminary Studies. Include information on Preliminary Studies. Discuss the PD/PI's preliminary studies, data, and or experience pertinent to this application. Preliminary data can be an essential part of a research grant application and help to establish the likelihood of success of the proposed project.

5. PERSONAL STATEMENT (limit 1 page)

The applicant should compose and submit a personal statement that addresses:

a. the applicant's interest in the topic and this project
b. the applicant's perception of his/her role in the project
c. any additional pertinent experience or interests the applicant wishes the committee to consider

6. ROLE OF PARTICIPANTS (limit 1 page)

List the principal investigator, co-investigator, mentor and others involved in the research. Include a brief description of how and to what extent each will be involved in the proposed project.

7. BIOGRAPHICAL SKETCHES

Use the NIH Biographical Sketch Format Page available on the internet at https://grants.nih.gov/grants/forms/biosketch.htm Information is requested for the applicant, mentor and any associate investigators who will be involved with the projects.

10. RESOURCES AND ENVIRONMENT

Describe the research facilities (laboratory space, clinical population, etc.) available for fellowship training. If computer access or statistical support is available, it should be described in this section.

11. BUDGET

Use the NIH Form Detailed Budget for Initial Budget Period available at www.grants.nih.gov/grants/funding/phs398/phs398.html# Provide a budget narrative to indicate how the money will be spent. Justify all major expenditures. Use the current NIH salary cap. Institutional overhead is not allowed.

12. OTHER SUPPORT

List all current and pending intramural and extramural research funding for the applicant, mentor and co-investigators. For each item indicate the grant identification number, grant type, PI, funding source, annual direct costs, funding period, percent effort, grant title, and brief description of project. For all items indicate whether there is any scientific or budgetary overlap with the current proposal.

13. ETHICS (limit 4 pages)

Human subjects. For all research involving human subjects, a part of the peer review process will include careful consideration of protections from research risks, as well as the appropriate inclusion of women, minorities, and children. The EMF Scientific Review Committee (SRC) will assess the adequacy of safeguards of the rights and welfare of research participants, and the appropriate inclusion of women,

minorities, and children, based on the information in the application. This evaluation will be factored into the overall score. The information on the protection of human subjects that you are required to provide in this section is identical to information that you will be required to provide for IRB at your own institution and are required by most Federal agencies. This section must address the following items. These can be copied and pasted directly into your application.

The applicant should include specific measures on how protected health information (as defined by the Human Health Services) will be handled in accordance with the Privacy Rule of the Health Insurance Portability Accountability Act (HIPAA).

1. RISKS TO THE SUBJECTS

a. Human Subjects Involvement and Characteristics

Describe the proposed involvement of human subjects in the work outlined in the Research Design and Methods section. Describe the characteristics of the subject population, including their anticipated number, age range, and health status. Identify the criteria for inclusion or exclusion of any subpopulation. Explain the rationale for the involvement of special classes of subjects, such as fetuses, neonates, pregnant women, children, prisoners, institutionalized individuals, or others who may be considered vulnerable populations. Note that 'prisoners' includes all subjects involuntarily incarcerated (for example, in detention centers) as well as subjects who become incarcerated after the study begins. List any collaborating sites where human subjects research will be performed and describe the role of those sites in performing the proposed research.

b. Sources of Materials

Describe the research material obtained from living human subjects in the form of specimens, records, or data.
Describe any data that will be recorded on the human subjects involved in the project.
Describe the linkages to subjects and indicate who will have access to subject identities.
Provide information about how the specimens, records, or data are collected and whether material or data will be collected specifically for your proposed research project.

c. Potential Risks

Describe the potential risks to subjects (physical, psychological, social, legal, or other), and assess their likelihood and seriousness to the subjects.
Where appropriate, describe alternative treatments and procedures, including the risks and benefits of the alternative treatments and procedures to participants in the proposed research.

2. ADEQUACY OF PROTECTION AGAINST RISKS

a. Recruitment and Informed Consent

Describe plans for the recruitment of subjects (where appropriate) and the process for obtaining informed consent. If the proposed studies will include children, describe the process for meeting requirements for parental permission and child assent.
Include a description of the circumstances under which consent will be sought and obtained, who will seek it, the nature of the information to be provided to prospective subjects, and the method of documenting consent. Informed consent document(s) need not be submitted to the PHS agencies unless requested.

b. Protection Against Risk

Describe planned procedures for protecting against or minimizing potential risks, including risks to confidentiality, and assess their likely effectiveness. Where appropriate, discuss plans for ensuring necessary medical or professional intervention in the event of adverse effects to the subjects. Studies that involve clinical trials (biomedical and behavioral intervention studies) must include a description of the plan for data and safety monitoring of the research and adverse event reporting to ensure the safety of subjects.

3. POTENTIAL BENEFITS OF THE PROPOSED RESEARCH TO THE SUBJECTS AND OTHERS

Discuss the potential benefits of the research to the subjects and others.
Discuss why the risks to subjects are reasonable in relation to the anticipated benefits to subjects and others.

4. IMPORTANCE OF THE KNOWLEDGE TO BE GAINED

Discuss the importance of the knowledge gained or to be gained as a result of the proposed research.
Discuss why the risks to subjects are reasonable in relation to the importance of the knowledge that reasonably may be expected to result.

5. DATA AND SAFETY MONITORING PLAN (if applicable)

If your research includes a clinical trial, create a heading entitled "Data and Safety Monitoring Plan." Provide a general description of a monitoring plan that you plan to establish as the overall framework for data and safety monitoring.

Vertebrate Animals. For all applications involving vertebrate animals, the applicant must address the following five items. These five points may be copied and pasted directly into the application.

1. Provide a detailed description of the proposed use of the animals in the work outlined in the Research Design and Methods section. Identify the species, strains, ages, sex, and numbers of animals to be used in the proposed work.
2. Justify the use of animals, the choice of species, and the numbers to be used. If animals are in short supply, costly, or to be used in large numbers, provide an additional rationale for their selection and numbers.
3. Provide information on the veterinary care of the animals involved including the name of the supervising veterinarian. Include information from the Association for Assessment and Accreditation of Laboratory Animal Care International: the name of the accredited parent organization (e.g., University of X) and the certificate number and date of last inspection.
4. Describe the procedures for ensuring that discomfort, distress, pain, and injury will be limited to that which is unavoidable in the conduct of scientifically sound research. Describe the use of analgesic, anesthetic, and tranquilizing drugs and/or comfortable restraining devices, where appropriate, to minimize discomfort, distress, pain, and injury.
5. Describe any method of euthanasia to be used and the reasons for its selection. State whether this method is consistent with the recommendations of the Panel on Euthanasia of the American Veterinary Medical Association. If not, present a justification for not following the recommendations

14. LITERATURE CITED

15. APPENDIX

Include letters of support from the department chairs and associate investigators (required). Include proof of IRB approval or submission. Copies of questionnaires and relevant testing forms should also be included as appendices. No page numbering is necessary for Appendix. Do not use appendix to circumvent page limitations for research plans. Do not include experimental methods, protocols or figures that should be incorporated within the research project description.

16. SIGNED STATEMENT OF CONDITIONS (see below)

Principal Investigator (*Last, first, middle*): _____

Table of Contents

Cover Page Sample

Full Name with Titles: _____

Name of Institution: _____

Grant Category: _____

Project Title: _____

Amount Requesting: _____

Mentor, if applicable: _____

Principal Investigator *(Last, first, middle)* _____

STATEMENT OF CONDITIONS GOVERNING THE EMERGENCY MEDICINE FOUNDATION GRANT

It is understood that any Emergency Medicine Foundation Research Grant approved by the Emergency Medicine Foundation will be made with the following conditions:

1. Institutional overhead is not allowed.
2. The principal investigator's institution is organized for humanitarian purposes and is not a profit-making organization.
3. All reports of work achieved with this grant will acknowledge the support of the Emergency Medicine Foundation and any co-sponsors.
4. Any discovery that arises from work supported by the Emergency Medicine Foundation will be submitted for publication. Two electronic reprints of each electronic publication will be forwarded to the Emergency Medicine Foundation.
5. Independent progress reports by the applicant will be submitted to the Emergency Medicine Foundation mid-project, and within thirty days of completion of the funding period. Additional reports may be required. The Emergency Medicine Foundation will maintain the copyright of all such reports.
6. Participation in the Emergency Medicine Foundation Grantee Workshop is expected. The Emergency Medicine Foundation will reimburse travel expenses.
7. Grantees must submit the abstract of the funded project to the ACEP Research Forum at the end of the project. Research Forum is held each year during the American College of Emergency Physicians Scientific Assembly. Grant funds may not be used for registration nor travel.
8. If the named principal investigator leaves the institution or terminates research in the designated field, all remaining funds revert to the Emergency Medicine Foundation. If unused funds exist at the completion of the project, all remaining funds revert to the Emergency Medicine Foundation.
9. Patent rights will conform to institutional standards. If none exist, the Emergency Medicine Foundation reserves the right to protect such interests.
10. No research proposal will be funded unless the Principal Investigator and the Institutional Official of the sponsoring institution affirm:
    a. That the investigation(s) proposed in this application are endorsed by the Animal and/or Human Subjects Committee or other designated body of the preceptor's institution, and
    b. That any research involving human subjects conforms with the principles of the Helsinki Code of the World Medical Association, and
    c. Research involving animals or human subjects must be approved by the institutional review board (IRB), or its equivalent, and a copy of the approval or pending approval sent with this application. IRB approval must be documented prior to dispensation of Emergency Medicine Foundation funds.
    d. That research involving vertebrate animals will conform with the "Guiding Principles in the Care and Use of Animals" as approved by the Council of the American Physiological Society.
    e. Research involving vertebrate animals must have approval from the Institutional Animal Care and Use Committee.

_____	_____	_____	
Date	Signature of Principal Investigator	Type Name of Principal Investigator	
_____	_____	_____	
Date	Signature of Mentor, if applicable	Type Name of Mentor, if applicable	
_____	_____	_____	
Date	Signature of Institutional Official	Type Name of Institutional Official	