

Request for Information (RFI): National Heart Lung and Blood Institute (NHLBI)
Strategic Vision Refresh
Notice Number: NOT-HL-23-118

December 12, 2023

The American College of Emergency Physicians (ACEP) and Society for Academic Emergency Medicine (SAEM) are jointly responding to this Request for Information: [National Heart Lung and Blood Institute \(NHLBI\) Strategic Vision Refresh \(NOT-HL-23-118\)](#). ACEP and SAEM support the National Institutes of Health (NIH) in their continual refresh process of their institutional goals and objectives given the rapid pace of health-related research. The NIH seeks input on strategic objectives as well as additional compelling research questions or challenges that need to be addressed given NHLBI focus areas. Since the Emergency Department (ED) acts as a critical entry point for most patients with exacerbations of heart, lung and blood conditions, we highlight the following areas in which research in Emergency Medicine should be prioritized in the updated NHLBI Strategic Vision.

1. Harnessing data science and new technologies to drive scientific discovery and precision health

With regards to harnessing data science and new technologies, ACEP has been active in the creation of nationally representative big-data collections through its Emergency Medicine Data Institute (EMDI) including its component Clinical Emergency Data Registry (CEDR). CEDR includes data from more than 100 million visits to 1,100 EDs across the nation. ACEP has leveraged this data to provide real-world effectiveness data, including through a recently completed contract with the CDC to supplement the National Hospital Care Survey (NHCS) data on hospital utilization and through research related to ED utilization during the COVID-19 pandemic. We propose that the NHLBI recognize the **great promise as well as associated challenges of integrating data from multiple health networks**, and prioritize the **standardization and harmonization of data terminology to leverage these vast datasets** to rapidly answer important, real-world clinical questions related to treatment effectiveness.

In addition, SAEM hosted a consensus conference in May 2023 focused on developing a research agenda around precision medicine and its use in the emergency department. Several key domains from this conference are relevant to heart, lung and blood disease and would be considered compelling questions and critical challenges to overcome, including those within: **Biomedical Ethics, Data Science, Healthcare Delivery and Access to Care, Health Professions Education, Informatics, Omics, Population Health and Social EM, Sex and Gender, and Technology and Digital Tools**. We encourage NHLBI to support the important work in these areas that directly impact patients with heart, lung and blood diseases. The summary of the consensus conference findings will be published in *Academic Emergency Medicine* in the coming weeks.

2. Using novel approaches for **addressing health disparities** and tackling their biological underpinnings for heart, lung, blood diseases, and sleep disorders

The ED serves as the primary healthcare access point for many patients who are otherwise unable to obtain healthcare. As a result, emergency medicine serves as leader in understanding and providing care responsive to social determinants of health and health disparities. In the [2021 SAEM Consensus Conference: From Bedside to Policy: Advancing Social Emergency Medicine and Population Health Through Research, Collaboration, and Education](#), experts in emergency care and social determinants of health examined ED-based interventions for social risk and need and identified initial research gaps and priorities using a literature review, topic expert feedback, and consensus-building. Research gaps and priorities were further refined based on moderated, scripted discussions and survey feedback during the 2021 SAEM Consensus Conference. Using these methods, we derived priorities based on three identified gaps in ED-based social risks and needs interventions: **1) assessment of ED-based interventions; 2) intervention implementation in the ED environment; and 3) intercommunication between patients, EDs, and medical and social systems.** Each of these areas, if studied, will lead to important information on how to address health disparities first identified in the emergency department and how those interventions can improve health – specifically for those patients with heart, lung, and blood diseases that may otherwise be at risk without ED intervention and appropriate follow-up care.

3. Addressing and reducing the impact of "place" (geography, climate, rural/urban, neighborhood) on heart, lung, blood, and sleep health

In order to adequately address and reduce the impact of “place” on patient care, we must take into account the effects of racism in healthcare for people in each “place” where care is provided. NHLBI should tackle the critical challenges within the healthcare system that lead to the systemic disparities that exist. In the [2022 SAEM Consensus Conference on Diversity, Equity, and Inclusion: Developing an Emergency Medicine Research Agenda for Addressing Racism Through Healthcare Research](#), we identified the key research areas in which further exploration is needed in order to fully understand the impacts of racism on patients and to address the healthcare disparities in care due to this. Specifically, we encourage NHLBI to incorporate into their focus areas: **Remedies for Bias and Systematic Racism, Biases in Heuristics and Clinical Care, and Racism in Study Design.**

More information and suggested research foci around social determinants of health screening in the emergency department can be found in the [2021 SAEM Consensus Conference Proceedings: Research Priorities for Implementing Emergency Department Screening for Social Risks and Needs](#), as well as the [2022 SAEM Consensus Conference on Diversity, Equity, and Inclusion: Developing an Emergency Medicine Research Agenda for Addressing Racism Through Healthcare Research](#).

In addition to identifying and addressing disparities in emergency medical practice and outcome for patients, we propose two other focal points. Firstly, a focus on disparities in **pre-hospital care**, in particular geographic and ethnographic differences in the provision of EMS services. Second, we request focus on disparities related to **emergency utilization**, and how these patterns may change with time. These disparities relate also to the NHLBI focus area regarding the impact of “place” on patient health.

4. Leveraging the power of **community and patient engagement**

Incorporation of community and patient engagement has been a cornerstone of research within emergency medicine, as exemplified by the ACEP-supported Emergency Department Sickle Cell Care Coalition. Sickle cell disease care in the Emergency Department has been a valuable target for community outreach efforts and education to improve patient outcomes, and we recommend enhancing these efforts within the mission of the NHLBI for other diseases seen through the Emergency Department. Community and patient engagement also form a core principle for clinical trials utilizing Exception From Informed Consent (EFIC). These trials are highly relevant both to emergency care research and in particular to NHLBI’s mission as it relates to advancements in care for sudden cardiac arrest. We strongly support a broadened framework for other emergency care conditions where the process of informed consent is limited by patient acuity and patient distress, such as acute decompensated heart failure or chronic obstructive pulmonary disease (COPD) exacerbation. We encourage a strengthened focus of NHLBI’s vision to include advancing the science of therapies for acute decompensations of these conditions as seen in an Emergency Medicine context.

5. Supporting women's health through the lifespan

With respect to the focus of supporting women’s health and studies of sex and gender in health, we advise NHLBI to foster additional work to eliminate disparities in the recognition and treatment of women with emergent cardiac conditions, including the care of acute coronary syndrome and cardiac arrest. We propose that the NIH consider how to specifically engage communities to improve outcomes in emergency care for conditions with gender-based treatment imbalance. Critical challenges include emphasizing studies which enrich the infrastructure for collaboration between community organizations and academic researchers to eliminate these disparities. Such a focus may include improving lay-response to cardiac arrest prior to arrival of trained pre-hospital personnel as well as increasing funding for studies of sex and gender differences in best practices for community training and response.

The NHLBI Strategic Vision serves as a guide for researchers to focus their research questions and recognize the barriers for additional study which exist in our field. Research in Emergency Medicine is key to improving the care of conditions which affect the heart, lung, and blood. These research questions and barriers relate directly to



NHLBI Strategic Objectives and would support its ongoing mission, and we believe that they are critical to include in the updated document.

In conclusion, ACEP and SAEM thank the NHLBI for the opportunity to respond to its request for information on its strategic vision refresh. We strongly believe in the importance of research in each of these domains to improve overall health for all individuals so that they can live longer and more fulfilling lives.