



## American Heart Association Health Equity Research Network (HERN) on the Prevention of Hypertension

### Key Dates

RFA Posted:	March 2021
Letter of Intent Deadline (via email):	April 23, 2021
Application Deadline:	May 18, 2021, 3 p.m. Central
AHA Peer Review:	Time May – June 2021
Notification of Awards:	late June 2021
Award Start Date:	Oct. 1, 2021

### Applicant Requirement

As a reminder, each **applicant for an AHA research award must be a current AHA professional member**. Join or renew when preparing an application in Proposal Central, online, or by phone at 301-223-2307 or 800-787-8984. Membership processing may take 3-5 days; **do not wait until the application deadline to renew or join**.

### Required Letter of Intent

Each Coordinating Center PI is required to send a letter of intent via email to [strategicawards@heart.org](mailto:strategicawards@heart.org) with the following information:

- Names and institutions of the Coordinating Center PI and each Project PI
- Network title and title of each proposed project

### Diversity and Inclusion

AHA strongly supports diversity and inclusion and encourages applications by women, underrepresented racial and ethnic groups in the sciences, military veterans, people with disabilities, members of the LGBTQ community, and those who have experienced varied and non-traditional career trajectories.

### Purpose

The American Heart Association (AHA) announces a Request for Applications (RFA) for the Health Equity Research Network (HERN) on Prevention of Hypertension.

Hypertension is the most critical risk factor contributing to cardiovascular mortality and morbidity. Whereas therapeutic treatment can significantly reduce the risk of subsequent complications, identification of those with hypertension remains inadequate, and in those who do receive therapy



adherence is insufficient. It is thus estimated that more than 80 million Americans have uncontrolled hypertension (National Health and Nutrition Examination Survey). Addressing uncontrolled hypertension and the resulting complications is a major long-term goal of AHA.

Many risk factors associated with development of hypertension are modifiable, offering the opportunity to prevent or delay the onset of hypertension. In addition, although treatment to lower levels of blood pressure to goal (<120/<80 mm Hg) in hypertensive individuals reduces cardiovascular disease risk, the reduction of risk is only partially restored to baseline level, and these individuals are still more likely to suffer a cardiovascular disease event than those who have not been hypertensive (J Am Heart Assoc 4:e002275, 2015). Thus, prevention of hypertension in the first place is of paramount importance to optimally reduce the burden of cardiovascular disease attributable to hypertension.

Hypertension is also a health equity issue; significant racial and ethnic disparities in both prevalence of hypertension and its management have been well documented (Prev Chron Dis 4:160478; 2017; Prev Med Reports 14:100850, 2019). Uncontrolled hypertension is particularly acute in communities of color (Am J Med Sci, 348:135, 2014; J Am Coll Cardiol, 71:109-118, 2018). As such, special attention will be targeted to mechanisms of prevention in populations who are underserved, who are known to be disproportionately impacted by hypertension, or both.

With this HERN, the AHA provides a mechanism to advance the science of prevention of hypertension with a focus on health equity. This is a key commitment that will be instrumental in achieving AHA's 2024 Impact Goal: to advance cardiovascular health for all, including identifying and removing barriers to health care access and quality by 2024.

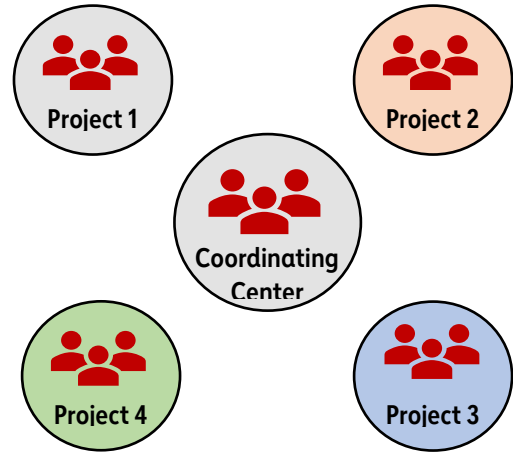
## NETWORK OVERVIEW AND STRUCTURE

**GENERAL OVERVIEW** – The Health Equity Research Network on Prevention of Hypertension will be a single network that will include multiple projects. An overall project plan will be developed by self-identified sites and submitted to AHA as a coordinated submission. Proposed projects will have a common fundamental theme that will assess an intervention or approach to prevention of hypertension in high-risk populations. **All aspects of the network application (each Project and the Coordinating Center) will be reviewed as a collective program.** The successful Network application will be one wherein each Project and the Coordinating Center are judged to be exemplary, and thus all components will be funded (i.e., either the entire network (with some possible budgetary adjustments) will be funded, or the entire network will not be funded).

**PROJECTS** - Each network application will include **a minimum of three and no more than five projects.** Each project will be at a distinct institution and each will be led by a Project Principal Investigator (PI). Each project must have the necessary research team, required infrastructure and ability to recruit and retain a diverse group of study participants.



**COORDINATING CENTER** – At the agreement of the Project PIs during development of the network application, one Project investigator will be designated the HERN Coordinating Center PI. The Coordinating Center PI is not required to also be a Project PI, but this individual will be at one of the institutions submitting a project application and have some scientific role in a project. The Coordinating Center PI will have an additional set of responsibilities to coordinate the efforts of the funded Projects, facilitate and manage communication among the HERN Project awardees, and establish collaborations and resource sharing as appropriate. The Coordinating Center PI will coordinate the dissemination of all findings resulting from this award mechanism. And whereas each site will have its own budget (see Award Details section below) and be separately awarded a grant from AHA, the Coordinating Center PI will be responsible for collation and submission of annual progress reports to AHA (see Interim Assessment section below).



### Representative types of projects responsive to this RFA

The AHA encourages applicant teams to submit innovative intervention projects that can prevent hypertension in a short timeframe. With the exception that studies must be conducted using human participants and must include interventions (as opposed to pure epidemiologic characterization), AHA is not advocating for a particular study topic or design. Below are examples of general themes; this list is not exhaustive and is not meant to direct applicants to a particular approach:

- Implementation and evaluation of pharmacotherapy to prevent the development of hypertension in African American and/or other populations for which significant health inequities exist;
- Implementation and evaluation of behavioral interventions (e.g., activity, diet and nutrition, stress reduction, etc.) in combination with accessible digital technologies in preventing hypertension in rural populations;
- The role of biomarkers in identifying individuals from underserved communities who are at the highest risk for developing hypertension;
- Implementation and evaluation of interventions that target health education or connectivity gaps (i.e., limited broadband internet access) on the prevention of hypertension for which significant health inequities exist.

A network may address a single topic using one or more study populations with possible inclusion of comparator study arms. Alternatively, a network may propose to address multiple topics that are closely aligned thematically. Regardless of the study approach, successful applications will clearly convey the ability to address an issue of prevention of hypertension in high-risk populations, and their study cohorts should be representative of a target high-risk population.



### Study Population(s)

- All proposed projects must include populations known to have an elevated incidence of hypertension and/or uncontrolled hypertension, or other inequities in health or health care that influence cardiovascular mortality and morbidity.
- The overall makeup of the study population for each Project (and the network) should include a significantly higher percentage of the targeted, underserved population than exists within the general population at large.

### Additional Expectations and Opportunities

- Each network application must include at least one project that incorporates the use of community-based participatory research (CBPR) into its research design.
- The use of technology in at least one of the projects (e.g., health applications, wearables/sensors, telehealth or telemedicine solutions) is strongly encouraged.
- In keeping with AHA's commitment to diversity and inclusion and in alignment with the goals of this initiative, applicants are highly encouraged to partner with an institution focused on educating or serving under-represented individuals and communities. Investigators from these partnering institutions should be included in a substantive manner (see Projects section below). Examples of potential institutional partners include:
  - An institution of higher learning focused on the education of Black/Hispanic/American Indian/non-White students, such as:
    - Historically Black College/University (HBCU) or Predominantly Black Institution
    - Hispanic-Serving Institution
    - Tribal College or University or Native American-Serving, Nontribal Institution
    - Alaskan Native- or Native Hawaiian/Pacific Islander-Serving Institution
    - Other majority-non-white institution of higher learning
  - A non-profit community hospital or other research/care institution:
    - serving a **majority non-white population** OR
    - located in a non-urban, non-suburban setting (area population <250,000) OR
    - serving an underrepresented population not listed above (e.g., a federally qualified health center (FQHC))

### AWARD DETAILS

**Duration:** Four years.



**Number of Awards:** AHA will fund one Health Equity Research Network comprised of 3-5 Projects and one Coordinating Center. Each institution that is part of the network will receive an award directly from the American Heart Association. The HERN awardees will be selected based on scientific merit and how each proposal aligns with the AHA's mission and goals.

**Award Amount:** The maximum budget amount that may be awarded to the network is **\$20 million; this is inclusive of funds to support the Coordinating Center responsibilities, and indirect costs of 10% maximum for all Projects and the Coordinating Center.** The AHA reserves the right to determine the final award amount for competitive projects based on need and potential impact.

There is no requirement that all sites receive an equal allocation of the total available budget. However, **all sites must meaningfully contribute to the overall network outcomes.** As such, it is expected that all sites will have a reasonable portion of the total funds available to the network.

### **Appropriate Budget Items:**

All budgeted items must be justified explicitly in the application. Broad categories of allowable costs for both the Project Sites and the Coordinating Site include the following:

#### **Projects**

- Salary and fringe benefits for the Project PIs, collaborating investigator(s), and other participating research staff or trainees.
  - Each Project PI is expected to commit a minimum of 10% time.
- Non-salary project-related expenses, such as study medication (if proposed), supplies and consumables, funds to offset costs incurred by study participants, equipment, travel, and publication costs in accordance with institutional and AHA policies.
- Travel/meetings: PIs will use award dollars to pay for required face-to-face (as feasible), network-wide meetings and other meetings where HERN research is presented. It is anticipated that one or two face-to-face meetings will be held each year at which awardees will share results, discuss best practices, challenges to progress, developing opportunities, etc. Project PIs should anticipate hosting these meetings on a rotating basis; alternatively, a network may propose all meetings be held at the Coordinating Center. In that event, costs related to hosting should be included in the Coordinating Center's budget. More information about planned face-to-face meetings will be provided upon award. *(Note that in addition to these face-to-face meetings, the Coordinating Center plan should include frequently recurring virtual meetings).*
- Maximum of 10% institutional indirect costs may be claimed on the award.

#### **Coordinating Center**

- Salary and fringe benefits for the Coordinating Center PI, collaborating investigator(s), and other participating research staff or trainees.



- The Coordinating Center PI is expected to commit a minimum of 10% effort for responsibilities specifically associated with the Coordinating Center.
- NOTE: If one Individual serves as both a Project PI and the Coordinating Center PI, that individual will be expected to devote at least 20% effort to these responsibilities (i.e., at least 10% for role as the Project PI and at least 10% for role as Coordinating Site/Center PI).
- Non-salary expenses related to the activities of the Coordinating Center, such as supplies and consumables, tele- and web-based communications costs, equipment, travel, and publication costs in accordance with institutional and AHA policies.

Each PI will be responsible for overseeing the total budget for his/her award. The PIs and the institution assume an obligation to expend grant funds for the research purposes set forth in the application and in accordance with all regulations and policies governing the research programs of the American Heart Association.

In the event of potential performance issues at a particular site, the Coordinating Center PI, in consultation with the Oversight Advisory Committee and AHA staff, may request to rebudget across sites to ensure optimal progress of the network. Any potential rebudgeting would only occur with explicit, written approval of the American Heart Association.

## **RELEVANT POLICIES AND REQUIREMENTS**

### **Institutional Eligibility / Location of Work:**

AHA awards are limited to U.S.-based non-profit institutions, including medical, osteopathic and dental schools, veterinary schools, schools of public health, pharmacy schools, nursing schools, universities and colleges, public and voluntary hospitals and others that can demonstrate the ability to conduct the proposed research. Applications will not be accepted for work with funding to be administered through any federal institution or work to be performed by a federal employee, except for Veterans Administrations employees.

### **Eligibility of Project PIs and Coordinating Center PI**

- Must hold a doctoral-level degree.
- Must hold a faculty-rank position of any level. This award is not intended for trainees.

### **Human Subject Study Population(s):**

- This HERN is specifically focused on the prevention of hypertension as viewed through a health equity lens. Thus, all project proposals must include diverse populations in proposed studies.
- It is important to design studies that incorporate both realistic recruitment goals and sufficient statistical power to ensure valid results.



### Required Assurances:

- For all applications selected for funding, all institutional assurances (e.g., IRB) must be submitted to AHA prior to release of funds.

**Interim Assessment:** Awardees must report progress on a minimum annual basis. Progress assessment may take the form of a required written report in addition to video conferencing, phone calls, and/or face-to-face visits. Reporting will be focused on achievement of stated milestones as indicated in the project timeline. AHA reserves the right to request additional updates, site visits, or reporting.

**Public Access:** The AHA's public access policy requires that all journal articles resulting from AHA funding be made freely available in PubMed Central (PMC) and attributed to a specific AHA award within 12 months of publication. It is the responsibility of the awardee to ensure journal articles are deposited into PMC.

**Open Data:** Any factual data that is needed for independent verification of research results must be made freely and publicly available in an AHA-approved repository within 12 months of the end of the funding period (and any no-cost extension).

**Other Data Sharing:** Awardees must also deposit all data collected through this funding mechanism to the AHA's Precision Medicine Platform (below). Supporting information needed to verify results, such as data dictionaries and codebooks, should also be deposited to adhere to the FAIR (Findable, Accessible, Interoperable and Reusable) Guiding Principles of Data Stewardship.

**Preregistration:** AHA requires clinical trials to preregister using ClinicalTrials.gov.

For more information on the above policies, see AHA's [Open Science Policy](#) webpage.

**Use of AHA's Precision Medicine Platform:** Applicants are encouraged to utilize **AHA's Precision Medicine Platform**, powered by Amazon Web Services.

- The PMP supports cloud computing in a secure and private workspace and enables investigators to collaborate and analyze data securely. Each Project will receive Amazon Web Services computational credits to offset the cost of using the platform. Because the credits do not cover all costs associated with use of the PMP, funded centers will incur a monthly usage charge that will need to be factored into the award budget. The approximate monthly charge will be \$100 for each month the platform is used.
- Data analysis is enabled in secure workspaces by a friendly web user interface that allows researchers to code in various languages, including R and Python and use statistical software including but not limited to SAS and R studio. The most up-to-date machine learning and artificial intelligence software available from Amazon Web Services is also included. For a full list of the analytical tools available, please see [precision.heart.org/workspace/about](https://precision.heart.org/workspace/about). Researchers are also able to upload their own tools.
- To learn more about the Precision Medicine Platform and how it can enable your research, please access the following videos. The first ([Learn more about the platform – video 1](#)) provides a high-



level overview, while the second ([Explore the capabilities of the platform – video 2](#)) provides more detail about accessing data and analytical tools, data storage, and sharing of data.

- The Platform is [HIPAA \(pdf\)](#) and [FedRAMP \(pdf\)](#) compliant.

**Other:** Proposals may not have scientific or budgetary overlap with other funded work. Any inventions, intellectual property, and patents resulting from this funding are governed by the AHA Patent, Intellectual Property and Technology Transfer Policy. The applicant/awardee and institution are responsible for compliance with all AHA research award policies and guidelines for the duration of any awards they may receive. Visit the Research Programs Awards Policies page for more information on this topic: [AHA Policies Governing All Research Awards](#)

**Application Submission:** Applications must be submitted using [ProposalCentral](#), AHA’s online submission portal.

For **Project applications**, the following uploads are required:

- Applicant/PI Biosketch (5 pages)
- Budget Justification (2 pages)
- Research Project Environment (2 pages)
- Research Plan (up to 12 pages) – See Peer Review Phase I below for the criteria against which the proposal will be evaluated.
- Literature Cited (4 pages)
- Coordinating Center Vision and Approach to foster Synergy and Collaboration (obtain from Coordinating Center PI)
- Summary for Non-scientists/Lay Summary - The lay summary is not a document to be uploaded, rather it is entered through form fields in ProposalCentral. We list it here, so the applicant may be aware that this is required.

For the **Coordinating Center application**, the following uploads are required:

- Applicant/PI Biosketch (5 pages)
- Budget Justification (2 pages)
- Infrastructure to support Coordinating Center (2 pages)
- Coordinating Center Vision and Approach to foster Synergy and Collaboration (up to 8 pages)
- Coordinating Center PI Qualifications (2 pages)
- Literature Cited (4 pages)
- Summary for Non-scientists/Lay Summary -- The lay summary is not a document to be uploaded, rather it is entered through form fields in ProposalCentral. We list it here, so the applicant may be aware that this is required.



For additional instructions related to required application materials, visit <https://professional.heart.org/-/media/phd-files/research/hern-media-folder/hern-required-document-instructions.pdf?la=en>

*Applicants for all funding mechanisms are prohibited from contacting AHA peer reviewers. This is a form of scientific misconduct and will result in removal of the application from funding consideration and institutional notification of misconduct.*

## PEER REVIEW

Peer Review is a two-phase process. In Phase I, individual projects and the broad approach to coordination of the network will be assessed by a convened panel of experts, based on the criteria described below.

Network applications that advance past Phase I will undergo a separate, Phase II review. In this review, invited Network teams will present via videoconference to a convened expert panel. Phase II review will focus predominantly on the overall network as a whole, and how the various projects can collectively enhance the likelihood of significantly advancing opportunities for preventing hypertension.

### Phase I Review

Each **Project** within a Network application and the Coordinating Center plan will be scored individually according to the criteria below. An overall composite score will be derived based on the individual scores.

**Projects** – Potential impact of the project on research in the field of the hypertension prevention; strengths of applicant investigators (qualifications, expertise and productivity); potential for collaboration or synergy of projects; scientific content; background; preliminary studies; detailed specific aims; approach detail; analytical plan; sample size; data management; significance; innovation; individual project scientific merit; and total project coordination (within and among projects). Projects will be rated on the following areas:

- **Approach:** Are the conceptual framework, design, methods and analyses adequately developed, well-integrated, well-reasoned and feasible (as determined by preliminary data) and appropriate to the aims of the project? Does the applicant acknowledge potential problem areas and consider alternative tactics?

*As all projects will include human subject participants, applicants must explain how relevant biological variables, such as sex, are factored into the research design, analysis and reporting. Furthermore, strong justification from the scientific literature, preliminary data, or other relevant considerations, must be provided for applications proposing to study only one sex.*

- **Innovation:** Is the project original and innovative? For example: Does the project challenge existing paradigms and address an innovative hypothesis or critical barrier to progress in the field? Does the project develop or employ novel concepts, approaches, methodologies, tools or technologies for this area?
- **Investigator(s):** Is the investigator(s) appropriately trained and well-suited to carry out this work? Is the work proposed appropriate to the experience level of the principal investigator and other



researchers? Does the investigative team bring complementary and integrated expertise to the project (if applicable)? AHA is committed to facilitating diversity in the biomedical research enterprise. Consistent with this, AHA anticipates successful applicant teams will be those that are diverse with regard to gender and race and ethnicity.

- **Significance:** Does this study address an important problem related to prevention of hypertension? If the aims of the application are achieved, how will scientific knowledge or clinical practice be advanced? What will be the effect of these studies on the concepts, methods and technologies that drive this field?
- **Environment:** Does the scientific environment in which the work will be done contribute to the probability of success? Do the proposed studies benefit from unique features of the scientific environment, or subject populations, or employ useful collaborative arrangements? Is there evidence of institutional support?
- **Impact:** How does the project relate to and support the mission of the AHA, *to be a relentless force for a world of longer, healthier lives*, and AHA's 2024 Impact Goal, *to advance cardiovascular health for all, including identifying and removing barriers to health care access and quality by 2024*?
- **Synergy:** How does this project enhance the entire network application? i.e., does this project enhance the likelihood that the collective network outcomes will exceed outcomes of the individual sum of its distinct components?
- **Summary for Non-Scientists:** How well does this lay summary convey to a non-scientific audience the purpose and importance of the research? The following attributes will be assessed:
  - How well written is the lay summary in explaining to a non-scientist audience the research proposed and its importance?
  - Does the Lay Summary adequately explain the major health problem being addressed by this study?
  - Does it provide specific questions and how the projects will address them?
  - Does it provide information on the overall impact of this work and the potential advances in the field?
  - Does it relay how the proposal supports the mission of the AHA?

**Coordinating Center:** A detailed and cohesive plan for coordination amongst the projects will be critical for success of the network. This plan will be assessed based on the following criteria:

- **Approach:** Has the Coordinating Center PI developed a plan that will optimize the synergies and collaborative opportunities across the network? Will the delineated plan ensure clear, consistent and frequent communication with and between the project sites? Does the applicant acknowledge potential problem areas and have a plan to mitigate those should they arise?
- **Innovation:** In addition to the expectation of innovation in the proposed projects, is the Coordinating Center PI proposing to utilize innovative approaches and tools to ensure effective engagement with

and optimal performance of Project sites? Does the project develop or employ novel concepts, approaches, methodologies, tools or technologies for this area?

- **Investigator(s):** Is the Coordinating Center PI experienced in leading collaborative initiatives, or has he/she/they demonstrated strong potential to do so? Has he/she/they demonstrated the ability to manage large-scale, multi-site initiatives? Does he/she/they demonstrate the ability to foster communications between distinct teams of investigators? AHA is committed to facilitating diversity in the biomedical research enterprise. Consistent with this, AHA anticipates successful applicant teams will be those that are diverse with regard to gender and/or race and ethnicity.
- **Significance:** Does this study address an important problem related to prevention of hypertension? If the aims of the network are achieved, what is the likelihood of advances in clinical practice or policies regarding prevention of hypertension? What will be the effect of these studies on the concepts, methods and technologies that drive this field?
- **Environment and Infrastructure:** Does the scientific environment and available infrastructure contribute to the probability of success? Is there evidence of institutional support?
- **Summary for Non-Scientists:** How well does this lay summary convey to a non-scientific audience the purpose and importance of the research? The following attributes will be assessed:
  - How well written is the lay summary in explaining to a non-scientist audience the research proposed and its importance?
  - Does the Lay Summary adequately explain the major health problem being addressed by this study?
  - Does it provide specific questions and how the projects will address them?
  - Does it provide information on the overall impact of this work and the potential advances in the field?
  - Does it relay how the proposal supports the mission of the AHA?

***Only projects that demonstrate synergy and a strong coordination plan, in addition to exemplary science, will move forward to Phase II.***

## Phase II Review

As noted above, Phase II review will have as a particular focus assessment of how the projects will work together to achieve optimal outcomes. As such, the plan for coordination and collaboration across the network will be a key aspect of this review, and application scoring will be based on the following criteria:

- **Synergy** – A clear vision of scientific direction is expected. A HERN should be viewed as a group of interrelated research projects, each of which is not only individually scientifically meritorious, but also complements the other projects and contributes to an integrating theme. Describe the rationale for the total program. Explain the strategy of achieving the objectives of the overall program and how each individual project relates to the strategy. Describe the synergies and interactions among projects and their investigators.

- **Collaboration** – History of collaboration, as well as the ability and commitment to collaborate with other institutions, investigators and within the applicant institution as well as within the awarded Network. Defined and detailed process for collaboration with other sites in addition to within and among the proposed projects; plans to actively participate in a collaborative and diverse network. Evidence of formal training in leadership skills with an emphasis on collaborative leadership of diverse teams will be favorably reviewed. What collaborations do you envision between investigators working on individual projects?
- **Network Team (Coordinating Center PI and Project PIs and Co-Is)** – Qualifications of the Coordinating Center PI to provide scientific and administrative leadership for the Network; experience leading complex multi-site, collaborative and inclusive initiatives; documented evidence of willingness to collaborate with others outside their institution to share ideas, science, etc. to progress the field of research as outlined in the RFA; qualifications of Project PIs and Co-investigators; diversity of the research team; experience in the field of study outlined by the RFA; training experience. *AHA is committed to facilitating diversity in the biomedical research enterprise. Consistent with this, AHA anticipates successful applicant teams will be those that are diverse with regard to gender, race and/or ethnicity, sexual and/or gender minority groups, and individuals with disabilities.*
- **Project teams** – Qualifications of each PI to provide scientific and administrative leadership for their respective projects; demonstrated commitment of each Project PI, and experience with studies in the field outlined by the RFA; qualifications and experience of named Co- investigators and Project team members; diversity of the Project research teams.
- **Environment** – Institutional commitment, resources and facilities to sustain the Network; institutional resources available to complete the project; analytical resources available to the project.

#### **Timeline for Peer Review Phases**

The two phases of Peer Review will be conducted separately, approximately 1-2 weeks apart. Network teams will not be present for Phase 1 reviews but will be required to participate in Phase II. **Applicant teams should be prepared to be available via videoconference for Phase II review for the week of June 21<sup>st</sup>. AHA will share exact times with network teams as soon as is feasible.**

Please direct inquiries to [strategicawards@heart.org](mailto:strategicawards@heart.org)