NAU NORTHERN ARIZONA UNIVERSITY

Center for Health Equity Research

SOUTHWEST HEALTH EQUITY RESEARCH COLLABORATIVE (SHERC) CALL FOR PILOT PROPOSALS (TRACKS I AND II)

2020 Funding Cycle

Proposal Deadline:

Friday, January 11, 2019, 5:00pm

SHERC GOALS

The primary goals of SHERC are to

(1) enhance institutional research capacity at NAU within the areas of basic biomedical, behavioral, and/or clinical research;

(2) enable all levels of investigators to become more successful in obtaining competitive extramural support, especially from NIH, particularly on diseases, public health conditions, and access to care issues that disproportionately impact minority and other health disparity populations;

(3) foster environments conducive to career enhancement with a special emphasis on development of new and early career investigators;

(4) enhance the quality of all scientific inquiry and promote research on minority health and health disparities; and

(5) establish sustainable relationships with community-based organizations that will partner with NAU.

Funding

Track I, Preliminary Studies Awards will provide up to $30,000 for one year or $60,000 for two years ($30,000 each year), depending upon the scope/aims of the project. The funding cycle will run from **July 1, 2019 – June 30, 2020** for a one year project, and **July 1, 2019 – June 30, 2021** for a two year project.

Track II, Resubmission Awards will provide up to $30,000 for one year for projects described in previously submitted proposals that have undergone external review but require revision and resubmission. The funding cycle will run from **July 1, 2019 – June 30, 2020**.

Eligibility

The PPP (Tracks I and II) are open to senior post-doctoral or fellowship level scholars or assistant professor faculty who are both (1) NAU regular, benefit eligible, employees, and (2) eligible to serve as Principal Investigators/Project Directors on extramural grants. An investigator (as PI) will be required to have at least 30% release time for research and scholarship defined in their *Statement of Expectations* (SOE). For Co-I's, the review committee will look at level of effort proposed for their role, and what other current and pending support they have. An investigator (as PI) may submit only one proposal per round, and may be included as co-investigator on only one active SHERC project per round. An investigator (as PI) may not hold more than one type of pilot project (Tracks I or II) or SHERC research project during any one funding year. For reporting purposes, each award will have only one PI of record.

NIH Clinical Trial Definition

A research study in which **one or more human subjects** are **prospectively assigned to one or more interventions** (which may include placebo or other control) to **evaluate the effects of those interventions** on **health-related biomedical or behavioral outcomes**.

More information available at:
https://grants.nih.gov/policy/clinical-trials/definition.htm (including decision tree, case studies and FAQs)

Scored Review Criteria

1. Significance.

Does the project address an important problem or a critical barrier to progress in the field? Is there a strong scientific premise for the project? If the aims of the project are achieved, how will scientific knowledge, technical capability, and/or clinical practice be improved? How will successful completion of the aims change the concepts, methods, technologies, treatments, services, or preventative interventions that drive this field?

https://grants.nih.gov/grants/peer/critiques/rpg_D.htm

Significance

- **In addition, for applications involving clinical trials:**
  Are the scientific rationale and need for a clinical trial to test the proposed hypothesis or intervention well supported by preliminary data, clinical and/or preclinical studies, or information in the literature or knowledge of biological mechanisms? For trials focusing on clinical or public health endpoints, is this clinical trial necessary for testing the safety, efficacy or effectiveness of an intervention that could lead to a change in clinical practice, community behaviors or health care policy? For trials focusing on mechanistic, behavioral, physiological, biochemical, or other biomedical endpoints, is this trial needed to advance scientific understanding?

Scored Review Criteria

2. Investigator(s).
Are the PD/PIs, collaborators, and other researchers well suited to the project? If Early Stage Investigators or those in the early stages of independent careers, do they have appropriate experience and training? If established, have they demonstrated an ongoing record of accomplishments that have advanced their field(s)? If the project is collaborative or multi-PD/PI, do the investigators have complementary and integrated expertise; are their leadership approach, governance and organizational structure appropriate for the project?

Investigators

- **In addition, for applications involving clinical trials:** With regard to the proposed leadership for the project, do the PD/PI(s) and key personnel have the expertise, experience, and ability to organize, manage and implement the proposed clinical trial and meet milestones and timelines? Do they have appropriate expertise in study coordination, data management and statistics? For a multicenter trial, is the organizational structure appropriate and does the application identify a core of potential center investigators and staffing for a coordinating center?

Scored Review Criteria

3. Innovation.
Does the application challenge and seek to shift current research or clinical practice paradigms by utilizing novel theoretical concepts, approaches or methodologies, instrumentation, or interventions? Are the concepts, approaches or methodologies, instrumentation, or interventions novel to one field of research or novel in a broad sense? Is a refinement, improvement, or new application of theoretical concepts, approaches or methodologies, instrumentation, or interventions proposed?

Innovation

- **In addition, for applications involving clinical trials:** Does the design/research plan include innovative elements, as appropriate, that enhance its sensitivity, potential for information or potential to advance scientific knowledge or clinical practice?

Scored Review Criteria

4. Approach.
Are the overall strategy, methodology, and analyses well-reasoned and appropriate to accomplish the specific aims of the project? Have the investigators presented strategies to ensure a robust and unbiased approach, as appropriate for the work proposed? Are potential problems, alternative strategies, and benchmarks for success presented? If the project is in the early stages of development, will the strategy establish feasibility and will particularly risky aspects be managed? Have the investigators presented adequate plans to address relevant biological variables.

Approach

- If the project involves human subjects and/or NIH-defined clinical research, are the plans to address 1) the protection of human subjects from research risks, and 2) the inclusion (or exclusion) of individuals on the basis of sex/gender, race, and ethnicity, as well as the inclusion (exclusion) of children, justified in terms of the scientific goals and research strategy proposed?

Scored Review Criteria

5. Environment.
Will the scientific environment in which the work will be done contribute to the probability of success? Are the institutional support, equipment and other physical resources available to the investigators adequate for the project proposed? Will the project benefit from unique features of the scientific environment, subject populations, or collaborative arrangements?

Environment

- **In addition, for applications involving clinical trials:**
If proposed, are the administrative, data coordinating, enrollment and laboratory/testing centers, appropriate for the trial proposed?

  Does the application adequately address the capability and ability to conduct the trial at the proposed site(s) or centers? Are the plans to add or drop enrollment centers, as needed, appropriate?

  If international site(s) is/are proposed, does the application adequately address the complexity of executing the clinical trial?

  If multi-sites/centers, is there evidence of the ability of the individual site or center to: (1) enroll the proposed numbers; (2) adhere to the protocol; (3) collect and transmit data in an accurate and timely fashion; and, (4) operate within the proposed organizational structure?

Community Engagement Core
Strategies for Significance, Engagement and Translation

Samantha Sabo and Nicky Teufel-Shone

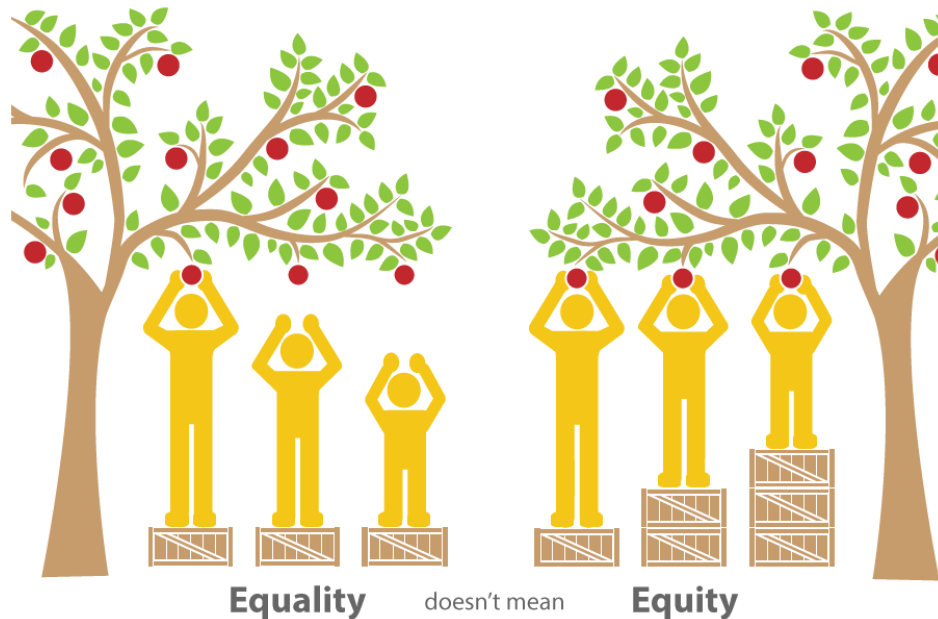Leads - Community Engagement Core

Julie Baldwin & Diane Stearns

Co-Principal Investigators

Southwest Health Equity Research Collaborative

What is Health Equity?

"Health equity" is the ***assurance of the conditions*** for optimal health for all people

Source: Saskatoon Health Region

Achieving health equity requires:

- Valuing all individuals and populations equally
- Recognizing and rectifying historical injustices
- Providing resources according to need
- Health disparities will be eliminated when health equity is achieved

Jones, C. (2014). Systems of Power, Axes of Inequality: Parallels, Intersections, Braiding the Strands. *Medical Care*, *52*(10 (Suppl 3)), S71–S75.

Strategies for achieving health equity ?

**To change opportunity structures**
- Understand the importance of history
- Challenge the narrow focus on the individual
- Expose the "myth of meritocracy"
- Examine successful strategies from outside the US
- Acknowledge existence of systems and structures
- View systems and structures as modifiable
- Break down barriers to opportunity
- Build bridges to opportunity
- Transform consumers to citizens
- Intervene on decision making processes

To value all people equally
    Break out of bubbles to experience our common humanity

Jones, C. (2014). Systems of Power, Axes of Inequality: Parallels, Intersections, Braiding the Strands. *Medical Care*, *52*(10 (Suppl 3)), S71–S75.

Health Equity involves. Every Person. **Every Sector.**
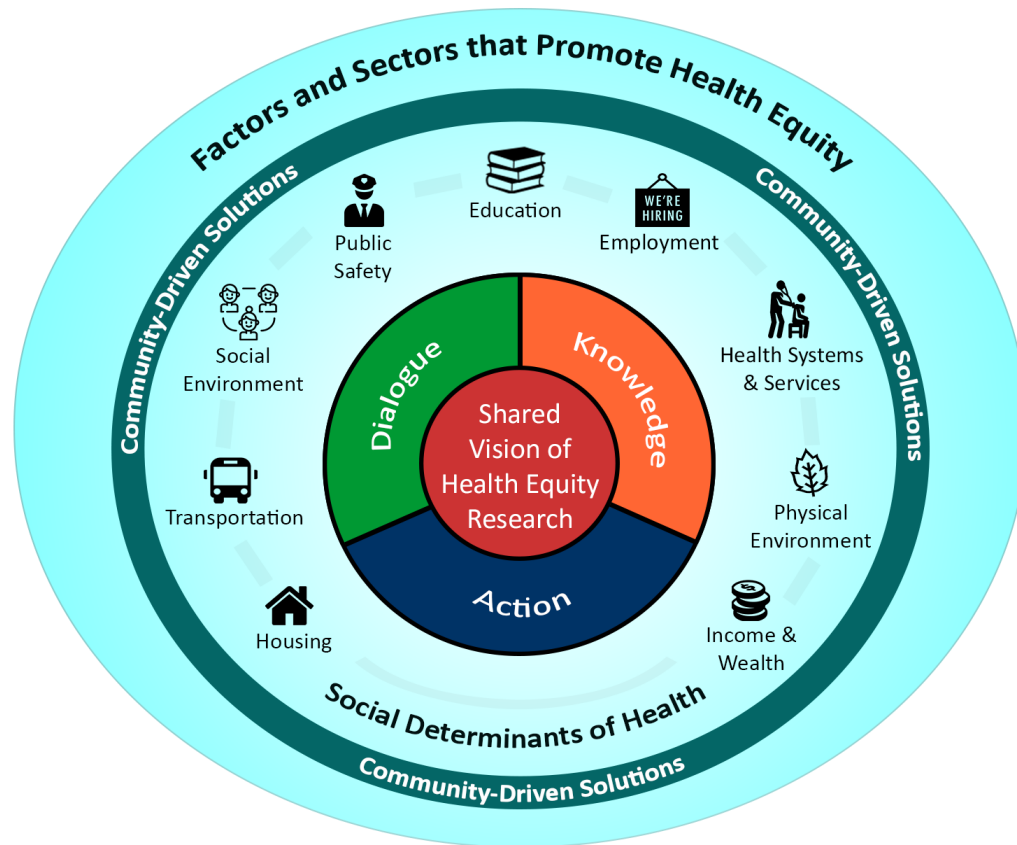
SHERC-
Community Engagement Core
Theoretical Framework

Drawn from :
Robert Wood Johnson – Culture of
Health

Some Health Equity Research involves Community

- **Community-based research:** the community is the setting or place of the research
  - Emphasis is often on the contextual factors of the community
  - Community is not involved in decision making and/or research; may be hired to collect data
- **Community-based participatory research (CBPR):** the community is engaged as a participating social and cultural entity that makes decisions and shares in the decision making and responsibility for the research

CBPR is often used in Health Equity Research

- CBPR is an **approach**, way of doing research, not a set of methods
- CBPR **provides a venue for communities** to:
  - Identify their own health problems or concerns
  - Identify local assets that can be leveraged or address problems with minimal reliance on approaches that can not be sustained
- CBPR requires **investment in partnership** building
- CBPR **may not be relevant or feasible** in all types of health equity research but the focus on addressing community needs using sustainable strategies is key to explaining the **significance** of health equity research

Significance Grant Sections

SIGNIFICANCE

The impact that **something** will have on some other thing **and** the positive impact your research contribution will have on **something** that is of importance to the NIH Institute/Center you are targeting.

Our **SOMETHING**

Is **HEALTH EQUITY**.

Is **NIMHD**.

Is **RCMI**.

Is **SHERC.**

National Institute of Minority Health and Health Disparities (NIMHD)– Research Centers in Minority Institutions Program (RCMI)

The RCMI program supports NIMHD's vision to **advance the science of minority health and health disparities research** by enabling all investigators within the program the opportunity to engage in rigorous, mentored research experiences focused on diseases that disproportionately affect **minority** and other **health disparity populations.**

Overall Scientific Premise

Made up of two levels:

1. The foundation of knowledge on which your entire application is built.

2. The foundation of knowledge that underlies each of your aims.

And involves :

1. A critical and succinct review of the literature

2. A discussion of the strengths and weaknesses of literature you cite, your own publications and any of your preliminary data.

3. **Choosing** publications wisely – those that are most reliable AND inclusion of 'authoritative' sources support if they exist. (i.e. look to NIH parent Purpose and Background sections)

Overall Scientific Premise

Detailed outline:

- **Detail** the existence of the gap/lack you plan to address – using references and if possible statistics.

- **Offer** objective evidence which validates your assertion that there is a critical or urgent need to fill the gap/address the lack that you will target.

- **Clearly frame and define** why continued existence of the need would represent and important problem (i.e., what the negative consequences of not meeting the need would be.)

IV. Significance of the Expected Research Contribution

This section should outline the **credible and tangible benefits** your research contribution will have on the NIMHD-RCMI vision and SHERC specifically, including the community under study: (see Chapter 10)

Begin this section with a clear statement :

Upon completion of this research we expect the contribution of this research to be ….

Follow it with a powerful statement :

This contribution is expected to be significant because ….

References & Resources

Robert Wood John – Culture of Health https://www.rwjf.org/en/how-we-work/building-a-culture-of-health.html

Community Campus Partnerships for Health – CBPR training and reading

https://www.ccphealth.org/resources/

NIMHD – RCMI

https://www.nimhd.nih.gov/programs/extramural/coe/rcmi.html0

Southwest Health Equity Research Collaborative
Research Infrastructure Core

Research Infrastructure Core (RIC)

Robert T Trotter, II

Paul G Flikkema

RIC AIMS, Goals, Objectives

- Goal: Research Infrastructure Core – Provide innovative methodological, laboratory, statistical, and informatics support for SHERC investigators to maximize the quality and productivity of the research projects proposed and pilot projects funded. This core will assist investigators with study design and implementation, data collection and quality, data analysis, and security.

- The Southwest Heath Equity Research Collaborative (SHERC) Research Infrastructure Core (RIC) is responsible for supporting SHERC and affiliated personnel

  - to acquire, develop, implement and disseminate cutting-edge interdisciplinary research methods and emerging technologies for all SHERC projects, programs, and all consortium partners (Years 1-5).

  - The RIC will provide coordinated research design, methodological expertise, informatics, and statistical support for the primary and secondary goals of each of the SHERC cores and projects (Years 1-5).

  - The RIC will also provide research infrastructure support to faculty and community partners engaged in health equity collaborative research (Years 1-5).

RIC Action Areas

- Research Methodological and Operational Expertise

- Equipment for Multi-Disciplinary Research Infrastructure Expansion

- Workshops, Methods Training, Courses

- Culturally Sensitive Lab Renovation

RIC Faculty for Methodological and Operational Research Support

- **Viacheslav Fofanov** – database design, data collection, data entry, and coding

- **Lisa Hardy** – Community Based Participatory Research (CBPR) design

- **Steven Barger** – study and experiment design, validity and reliability of instruments

- **Meghan Warren** – research design, secondary data analysis. epidemiology

- **Heidi Wayment** – community psychology/behavioral health research design

- **Francisco Villa** – NAU-Yuma, under-represented populations

- **Abolfazl Razi** – machine learning, stochastic modeling, social network modeling

- **Jarrett Barber** – statistical research design, Bayesian computational processes

- **Monica Lininger** – evaluation, measurement, research methods, and applied statistics

RIC Survey on SHERC Needs

Questions addressed

- expertise gaps
- methodological and design support needs
- Workshop needs
- methodological training opportunities multidisciplinary equipment
- areas of expertise covered
- health disparities research priorities

59% (23/49) completed the survey, including SHERC and CHER affiliates

RIC Survey on SHERC Needs:
Responses on Training

Research Related Workshops
- o Advanced statistical methods (e.g., structural equation modeling, latent growth analysis)
- o Research design (from idea to methodology)
- o Advanced Epidemiology Workshop
- o Advanced Statistics Workshops
- o A workshop on R (integrated development environment software) for beginners
- o Workshops on recent advances in the field would be always beneficial.
- o Community based research design relative to small population with strategies for maintaining scientific rigor
- o Community-based clinical and cluster trial research designs

Training Needs
- o Needs assessment training
- o Working with large data sets
- o Identifying ideal study endpoints
- o Grant writing
- o Exposure to NIH and other funding agencies
- o Training in social network analysis
- o Exposure to professional development related to program evaluation, applied research, and psychometrics that is specifically targeted towards application in health equity
- o Database Management using Microsoft Access
- o Research seminars about ongoing projects are fantastic
- o Funding to attend NIH/NSF workshops is essential in developing competitive grant proposals
- o Data visualization training of very large data sets

Workshops Planned

- Epidemiology and Data Mining of available data bases

- Community Engaged Research Design (CBPR, RARE, CHER)

- Spatial and Temporal Statistics and Research Design

- Sampling, and Statistical Design

- Data Mining and Biostatistics

- Mixed Methods Research Design

RIC Overview

The Research Infrastructure Core (RIC) is responsible for supporting SHERC projects, programs and affiliated investigators to acquire, develop, implement and disseminate cutting-edge interdisciplinary research methods and emerging technologies. The RIC faculty and staff provide coordinated research design, methodological expertise, informatics, and statistical support for the primary and secondary goals of each of the SHERC cores and projects. The RIC will also provide research infrastructure support to other NAU faculty and community partners engaged in health equity collaborative research.

The RIC structure includes:

- Faculty with a broad range of research design, methodological, and analytical expertise who assist SHERC Research Projects, Pilot Projects, and external funding proposals

- A monthly workshop series

- An advanced methods dissemination program

- An ongoing assessment of key multi-disciplinary lab/field equipment needs

Please see our site for request forms and additional information:

nau.edu/sherc/research-infrastructure/

E-mail: RICNAU@nau.edu

Call: 928-523-4926