



**Community-Campus
Partnerships for Health**
Promoting Health Equity & Social Justice

**Promising Practices:
Community Engagement in Research Funding Announcements
& Peer Review Criteria**

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Frequently Used Acronyms

CBPR	Community-Based Participatory Research
CBR	Community-Based Research
CCPH	Community-Campus Partnerships for Health
CE	Community Engagement
CEnR	Community-Engaged Research
CIHR	Canadian Institutes of Health Research
NIH	National Institutes of Health
PCORI	Patient-Centered Outcomes Research Institute
RFA	Request for Applications

I. INTRODUCTION

Research funding agencies can play a critical role in supporting community engagement in research. We sought to identify how funders can better incorporate community engagement (CE) in their funding announcements and application peer review criteria. We analyzed 44 requests for applications (RFAs) from 22 public and private funding agencies to identify exemplary examples that support CE in research. We examined the CE language contained in the RFAs as well as the funding mechanisms employed. This report summarizes our findings, highlights promising practices and makes recommendations that funders may wish to consider.

II. METHODS

We sought to identify and analyze RFAs that explicitly included CE, whether optional or required. We examined 44 RFAs from 22 public and private funding agencies (see list of funders in **Appendix A** and complete list of RFAs in **Appendix B**). RFAs with exemplary community engagement language were identified through a review of postings on the Community-based Participatory Research (CBPR) listserv operated by Community-Campus Partnerships for Health and a search of research funding announcements from the National Institutes of Health (NIH) and Environmental Protection Agency (EPA).

All RFAs were analyzed using NVivo qualitative analysis software to identify CE related themes and sub-themes within these typical RFA sections:

- Funding opportunity description
- Eligibility
- Application and submission instructions; and
- Review criteria

In addition, general RFA features that appeared to support or inhibit community engagement were identified.

III. FINDINGS

In presenting our findings below, we provide excerpts from RFAs that we believe are good examples. For additional language from the RFAs mentioned, as well as from all the RFAs we reviewed, please see **Appendix B**.

A. Funding Opportunity Description

This is typically the first section of the RFA, and provides an overview of the funding opportunity. This section describes the purpose, background information including definitions and research objectives of the RFA.

a. Definitions

We searched for definitions contained within the RFAs related to CE. We found definitions for community, stakeholder, community organization/community partner, partnerships, community engagement, community-engaged research (CEnR), and community-based participatory research (CBPR). We found varied definitions, and not all RFAs provided definitions.

Community

Among the definitions of “community” included in the RFAs reviewed, below are two examples that included sufficient detail for applicants to clearly describe the community involved in their applications.

Healthy Schools: Environmental Factors, Children’s Health and Performance, and Sustainable Building Practices¹² (EPA, 2013): Community is defined as a group of people with diverse characteristics who are linked by social ties, share common perspectives, and engage in joint action within similar geographical locations or

settings. Community is not only defined by a common geography; communities may also develop around a particular interest, issue, identity, or subject matter.

Five core elements that define community are:

- Locus (a sense of place) such as a city, town, village, tribes, neighborhood, workplace, etc.,
- Sharing common interests and perspectives,
- Joint action that bring people together,
- Social ties such as family and friends, and
- Diversity of people and perspectives (MacQueen, et al, 2001).

Partners in Research³⁶ (NIH, 2008): “Community” is an association of people who gather together to share a common interest and/or relevancy during a period of time. The term ‘community’ is seen as dynamic, depending on the reference and context. For example, different contexts and references for the term “community” may include communities that are geographic, cultural, interest-based or organizational in nature.

From definition developed by NIH Council of Public Representatives

Stakeholders and Knowledge Users

The term “stakeholder” appeared in many RFAs and seemed to be inclusive of individuals and organizations from community, academic, government, industry and other settings. PCORI’s definition, below, distinguishes stakeholder from community members, community organizations, patients and patient advocacy organizations. The term “knowledge-user” was used by a Canadian RFA to refer to non-academic stakeholders in research.

Addressing Disparities⁶ (PCORI, 2014): stakeholders (defined as clinicians and clinician societies, hospitals, and health systems; payers [insurance]; purchasers [business]; industry; researchers; policy makers; and training institutions).

Catalyst Grant: HIV/AIDS Community-Based Research² (Canadian Institutes of Health Research, 2014):

Knowledge-user is an individual:

- who is likely to be able to use the knowledge generated through research in order to make informed decisions about health policies, programs and/or practices;
- whose level of engagement in the research process may vary in intensity and complexity depending on the nature of the research and their information needs;
- who can be, but is not limited to, a practitioner, policy maker, educator, decision maker, health care administrator, community leader, or an individual in a health charity, patient group, private sector organization or a media outlet.

Community-based Organization

Some RFAs define “community-based organization” in order to clearly indicate what types of entities are considered to be community partners.

Research to Action Assessing and Addressing Community Exposures to Environmental Contaminants³⁵

(NIH/NIEHS/CDC, 2009): The term “community-based organization” (or CBO) is broadly defined. The CBO does not need to be a formally recognized organization, such as a non-profit organization, but should be an established community group(s) or network(s) with a common interest in a particular environmental health concern and that includes representatives of the community.

Community-Based Participatory Research (CBPR) Initiative in Reducing and Eliminating Health Disparities:

Planning Phase R24²⁹ (NIH, 2012): Community partner: community organization located or working directly with the participating community (e.g., faith-based organizations, community health centers, schools, community associations, etc.)

Partnerships

The first example provides guidance on how to develop a partnership. The second example required a partnership and provides explicit instructions on what constitutes a partnership.

Community Collaboration, Cycle 20¹ (CA Breast Cancer Research Program, 2014): Community-Researcher collaborations take time and a willingness to share power and compromise. The process involves community-researcher collaboration at all levels of the research process, including considering and developing the research question, designing the methodology, conducting the research, analyzing the results, and disseminating the findings. These types of collaborations are inherently “cross-cultural” and the differences between how academia and the nonprofit sectors function can be significant. If you are a research scientist, contact breast cancer organizations or community members with whom you have worked or who might be interested in research topics in your area of expertise. Read local community papers, go to community events and get to know the community and what the community’s concerns are. Once you have narrowed down your search, interview potential partners to determine their interest, experience, and potential fit as a partner. Be clear about why you are interested in the project you want to create and what you hope to do with the research results. Talk about how you see the research project benefiting each of the partners, the partner’s institutions, the community, and the field of breast cancer research. Make sure that your goals are compatible. Talk through how others will be involved in your project—who will the co-principal investigators be? Will members of the “lay” or grassroots community participate in leadership or decision making roles? If a community organization is involved, how will the board, staff, and Executive Director be involved in the project? CBCRP’s own evaluations show that greater inclusiveness of community members and the nonprofit organizations can help the research project succeed. Begin planning early on for how you will achieve equitable distribution of all phases of the project: Developing the research question, developing the research plan, carrying out the research, conducting the data analysis process, analyzing the results, and disseminating the findings.

Research to Action- Assessing and Addressing Community Exposures to Environmental Contaminants³⁵ (NIEHS/NIOSH/CDC, 2009): All projects must include at least one research scientist in environmental or occupational health sciences in addition to at least one member of a community-based organization (CBO) that works directly and regularly with the affected community. The partnership between the research scientist and CBO should be equitable and draw upon the unique strengths that each brings to the partnership. All members of the partnership are responsible for ensuring research findings are translated appropriately into public health action and that project evaluation is implemented across the study period. Because participation of the affected community is essential for both the identification of environmental/occupational health risks to be studied and development of research and translation plans, it is expected that means for incorporating equitable input from both scientists and community members throughout the entire research process should be established prior to submission of the application and explained within. By fostering partnerships between and among community residents/organizations and researchers in the research process, vital information about the linkages between exposures and disease can be used to promote health and reduce the risk of disease across the populations at highest risk.

Community Engagement

When RFAs defined CE, this was often specifically in the context of research. In some cases, such as the first example below, the definition reflects a community-based participatory research approach in which community members participate in all aspects of the research process, but without actually naming it CBPR. In some cases, such as the second example below, the definition goes beyond simply describing CE in research to elaborating on its benefits.

Research to Action Assessing and Addressing Community Exposures to Environmental Contaminants R01²⁷ (NIH, 2012): *Community engagement* connotes full participation of community members in:

- Development of the research questions and research design
- Identification of exposures of concern to that community, suitable cohorts and specific needs of subpopulations; the translation and dissemination of study results
- Development and implementation of an environmental action plan; AND
- Development of methods for evaluating the success of the project.

Community Partnerships to Advance Research R01³ (NIH/NINR, 2014):

Community engagement in research lies on continuum that reflects level of involvement of community members, or representatives, of community populations, in research.

Continuum ranges from community consent to research, to full participation and shared leadership of community members in research design and eventual dissemination and implementation.

Community-engaged research methods result in more meaningful academic community-individual collaborations, sustainable interventions and improved health of individuals and communities.

Community-engaged Research

Some RFAs defined community-engaged research as an approach to research that occurs along a continuum.

Healthy Schools: Environmental Factors, Children's Health and Performance, and Sustainable Building Practices¹² (EPA, 2013):

Framework or orientation for conducting research that supports the premise that people ought to be involved in the decisions, as well as the cultivation of information those decisions are guided by, that affect their lives.

May incorporate both qualitative and quantitative methodologies and can be applied to a range of topics including environmental science and engineering, public health, and social sciences.

Not a uniform approach, but can occur along a continuum in a variety of forms, from outreach, through more shared leadership/participatory research approaches to community-driven/community-led research.

Community-based Participatory Research (CBPR)

The specific approach to community-engaged research most often singled out in the RFAs reviewed was CBPR. Barbara Israel's definition of CBPR (1998) was commonly cited.

Science for Sustainable and Healthy Tribes¹⁶ (EPA, 2013): CBPR is defined as a collaborative process of research involving researchers and, in this case, tribal community-based organizations. The process of scientific inquiry is such that community members, persons affected by the health condition, disability or issue under study, or other key stakeholders in the community's health, have the opportunity to participate in every phase of the work.

CBPR promotes a holistic approach to protecting the environment that involves diverse stakeholders who develop a plan aimed at meeting environmental, economic and social goals in a sustainable manner for a defined geographic area. It is critical to obtaining community knowledge, and enables the identification of variables that might otherwise have been missed. CBPR in health offers a collaborative research method that involves the commitment to balance the power dynamic by equally engaging all partners throughout the research process. The goal is to acknowledge and integrate each user or groups of interest as partners.

Children's Environmental Health and Disease Prevention Research Centers²⁴ (EPA, 2012): Community-Based Participatory Research (CBPR) methods/approaches are encouraged. This is a process of scientific inquiry such that community members, persons affected by the health condition, disability or issue under study, or other key stakeholders in the community have the opportunity to be full participants in each phase of the work (from conception to design, implementation, analysis, interpretation, conclusions, and communication of results). CBPR is characterized by substantial community input in the development of the project.

Community-Based Participatory Research (CBPR) Initiative in Reducing and Eliminating Health Disparities:

Planning Phase²⁹ (NIH, 2012): Community-based participatory research is defined as scientific inquiry conducted in communities and in partnership with researchers. The process of scientific inquiry is such that community members, persons affected by the health condition, or other key stakeholders in the community's health have the opportunity to be full participants in each phase of the research (from conception-design-conduct-analysis-interpretation-conclusions-communication of results). CBPR is characterized by substantial community input in the development of the grant application. The benefits of the CBPR are numerous and include the creation of bridges between scientists and communities that facilitate the transfer of knowledge and skills. CBPR results in the creation of culturally-appropriate and effective interventions that improve a community's health and well-being when done successfully. The ultimate outcome of CBPR is to foster sustainable efforts at the community level that will accelerate the translation of research advances to health disparity populations and eliminate health disparities.

b. Evaluation

Some RFAs included language pertaining to how applicants might propose to evaluate their CE and community partnerships. The two examples highlighted below included robust evaluation plans for measuring partnerships and partnership progress.

Research to Action Assessing and Addressing Community Exposures to Environmental Contaminants²⁷
(NIH/NIEHS, 2012):

This RFA requests a summary plan for evaluating the project's processes and outcomes and refers to the NIEHS Evaluation Metrics Manual (**see section VI, Resources**), which contains measures for evaluating these components

- Community-research partnerships
- Translation and dissemination of research findings
- Education and training
- Capacity building

Examples of potential evaluation measures that applicants could include:

- #, type and /or location of interactions among partners
- #, cost, content and/or level of community involvement in development and dissemination of education and training information
- # of people (community members, researchers, health care providers) trained to use a specific approach or tool

Community Approaches to Reducing Sexually Transmitted Disease¹⁰ (CDC, 2013): Evaluation of community engagement and partnership

CE process (examples)

- # members from priority population attending Community Advisory Board (CAB) meetings, satisfaction, perceived power
- # interventions/strategies addressing social determinants of health impacting health equity within affected communities

Partnership process (examples)

- Multi-sector partner participation rate
- % of partners engaged in community and intervention activities

CE outcomes (examples)

- Community priorities and effective community-designed interventions are identified, implemented and evaluated using partner resources and influence

- Improved availability and accessibility of sexual health education, training, and resources for STI, HIV, and viral hepatitis prevention and control

Partnership outcomes (examples)

- New stable partnerships are formed
- Extent of environmental change

c. Dissemination/Translation

Carrying CE through to the dissemination and translation phases of the research provides a visible and tangible mechanism for demonstrating how research makes a difference in communities.

Children's Environmental Health and Disease Prevention Research Centers²⁴ (EPA/NIEHS, 2012): The Children's Centers are required to translate and apply their research findings into information for the affected communities, general public, policy-makers and health care professionals with the ultimate goal of protecting children.

CBPR Initiative in Reducing and Eliminating Health Disparities Dissemination Phase²⁸ (NIH/NIMHD, 2012):

Because of the emphasis on community capacity-building and empowerment, plans for dissemination must extend beyond publishing manuscripts in peer-reviewed journals to include plans to disseminate information in an appropriate and culturally-congruent manner to health disparity communities. The dissemination plan must include a strategy to effectively disseminate information and knowledge in a culturally-congruent manner to the health disparity community (or similar communities) that were targeted during the NIMHD CBPR Intervention phase.

Catalyst Grant: HIV/AIDS Community-Based Research² (Canadian Institutes of Health Research, 2014):

Knowledge translation (integrated) is a way of doing research that involves decision makers/knowledge-users - usually as members of the research team - in all stages of the research process. Knowledge translation is a dynamic and iterative process that includes synthesis, dissemination, exchange and ethically sound application of knowledge to improve the health of Canadians, provide more effective health services and products and strengthen the health care system.

B. Eligibility Requirements of Applicant Organization

Nearly all RFAs allow non-profits as well as institutions to apply. RFAs focused on education/fellowships were the exception, often requiring the applicant to be an academic institution. There were general eligibility requirements across multiple RFAs that support community engagement. These included project director/principal investigator (PD/PI) qualifications and allowing for multiple PIs.

PD/PI

Nearly all RFAs allow any person with the capacity to serve in the PI role, and do not require a PhD or other advanced degree. For instance, NIH states "Any individual with the skills, knowledge, and resources necessary to carry out the proposed research" may be considered as the PD/PI and further states "Individuals from underrepresented racial and ethnic groups as well as individuals with disabilities" are encouraged to apply. It is not known, however, how community-based PIs, including those without doctoral level degrees, fare in the peer review process.

Multiple PDs/Pis

NIH adopted a multiple PD/PI policy that allows for multiple PDs/Pis in most of its RFAs. EPA also allowed for multiple PIs, however one PI must be designated as the main contact. This mechanism can support partnerships, for instance, by allowing a PI from an academic institution and a PI from a community partner organization. In particular, the "Multiple PD/PI Leadership Plan" requires applicants to consider their partnership approach by delineating roles of each PD/PI, governance, organizational structure, communication plan, decision-making process, budget distribution and conflict resolution procedures.

RFAs can further support CE by specifying qualifications of eligible applicants and research teams that align with CE. For example, RFAs may require the applicant to be from the affected community or have partnerships with organizations that serve the affected community, and may permit or require multiple PIs. One RFA (the second example below) further supported CE by indicating a minimum percentage of the budget that must be allocated to the community partner organization.

CBPR Initiative in Reducing and Eliminating Health Disparities: Planning Phase²⁹ (NIH/NIMHD, 2012): Eligible individuals [to serve as a PI] must have experience working with health disparity populations as evidenced by previous community activities and/or evidence of previous partnerships with community-based organizations.

Although a single institution or organization must be the applicant, one or more partners or multi-institutional arrangement (consortium) is required. Such an arrangement must include: a) Community partner: community organization located or working directly with the participating community (e.g., faith-based organizations, community health centers, schools, community associations, etc.) b) Scientific research partner: institutions or organizations having research scientists.

All projects must include at least one research scientist in environmental or occupational health sciences in addition to at least one member of a CBO that works directly and regularly with the affected community. Since the projects are situated in the community, well-established community-based or faith-based organizations are encouraged to consider their capacity to serve as the primary applicant organization or submit applications using a multiple principle-investigator (PI) model in which the research scientist and member of the CBO serve as co-PIs of the project.

Native American Research Centers for Health 4³⁸ (NIH/IHS, 2005): Only American Indian/Alaska Native (AI/AN) organizations may be the lead applicant:

- Federally recognized Indian Tribe
- Tribally sanctioned non-profit Tribal organization
- Non-profit national or area Indian health board
- Consortium of two or more of those Tribes, Tribal organizations, or health boards

The proposed NARCH must be a working partnership of the AI/AN organization and of the research-intensive institution.

A minimum of 30% of the grant funds must remain with that AI/AN organization.

C. Application and Submission Information

This section of the RFA describes the application and submission requirements, and review criteria typically relate to what is outlined in this section.

a. General

There were general features across many RFAs that support community engagement. These included:

Alternate submission mechanism

While applicants for federal research grants are encouraged to submit applications online using the website Grants.gov, most federal research RFAs allow the ability to submit in alternate formats, such as paper format, for those without the technical capability to submit electronically.

Cost-sharing

Requiring cost-sharing is a significant barrier for community organizations who do not have additional resources to offer services at no charge. RFAs that do not require cost-sharing as an eligibility criteria support the ability for community organizations to be part of the research team.

Just in Time

Due to the lengthy time between application submission and award, community organizations may experience board or staff changes that require re-obtaining approval from new leadership once a grant is awarded. Just in time concepts allow the ability to wait until just prior to award to submit additional information or finalize the budget. This ensures the project details are finalized and approved by those who will actually be implementing the project.

b. Separate Awards for Community and Institution Partners

While rare among the RFAs we reviewed, having separate awards for the community and institutional partner has the capacity to greatly enhance equity in partnerships. Two NIH grants using this arrangement include the Partners in Research Program RO3³⁶ (2008) and the NCI Feasibility Studies for Collaborative Interaction for Minority Institution Cancer Center Partnership P20³⁴ (2009). Money equates to power and holding each organization accountable for their own role in the partnership eliminates a major source of conflict. The benefits of such an arrangement can include: equitable partnership, leadership for the grant and distribution of resources; PI for each organization; no subcontract and related power dynamics of one partner monitoring the other. However, a disadvantage arises if either partner (academic or community) backs out, essentially terminating the entire project. Careful consideration and evidence of a solid partnership is needed to ensure success using this mechanism.

For the NIH Partners in Research Program³⁶, the application was submitted by one organization on behalf of both partners; however, the application was disaggregated into two separate but administratively linked awards, with each partner serving as PI and receiving a separate Notice of Award with full facilities and administrative rate. The RFA also required applicants to describe administrative plans for the management of the research project. For the NIH NCI Feasibility Studies for Collaborative Interaction for Minority Institution Cancer Center Partnership³⁴, separate applications were submitted by each partner, and the linked applications were reviewed together receiving one score.

c. Multi-phase Applications

The typical research timeline does not allow for sufficient time for partnership development. As one mechanism to overcome this challenge, some funding agencies have designed a multi-phase approach to the RFAs. In this model, separate, sequential RFAs are issued for each phase of the work. The NIH NIHMD CBPR Initiative in Reducing and Eliminating Health Disparities R24^{28,29,37} (2012, 2007 and 2012) is an excellent example with separate RFAs issued for each of three phases: planning, implementation and dissemination. Other examples include the NIMH Community-Based Participatory Research³³ with a two-phased approach, an initial R21 research partnership planning stage and an RO1 research implementation phase. Similarly, the CA Breast Cancer Research Program¹ offered a pilot (planning/development) and full (implementation) award, as well as the EPA Community Action For A Renewed Environment (CARE) Program³¹ used a two phase approach. Another benefit of this approach is that it may clarify the review process, where it will be clear to the reviewers for a planning grant that the research question is yet to be formulated.

d. Requiring a CEnR/CBPR Plan

Requiring a community engagement plan for the application submission was another strategy used by a few RFAs to specify CE requirements and ensure applicants explicitly addressed them. Three examples are provided below.

Healthy Schools: Environmental Factors, Children's Health and Performance, and Sustainable Building Practices¹² (EPA, 2013): A 5-page CEnR plan:

- Identify the role of school and/or community members in the proposed research plan and justify the level of community engagement (i.e., the degree of community input or engagement in the conceptualization, design, methods, data collection, analyses, or dissemination of research).

- Focus on research issues related to the research questions stated in Specific Research Areas of Interest/Expected Outputs and Outcomes that are of significance to the school/school district and/or the community that is interested in the proposed work.
- Describe how this research will enhance the capacity of the community/school district to engage in the research and scientific process.
- Include resources for partnership development (e.g., to hire community liaisons, to enlist environmental educators, or to provide participant support costs for community involvement).
- If a host organization (any organization/institution other than the applicant) is used to facilitate community participation, partnerships, or environmental education, evaluate the organization's mission and practices concerning community partnerships and/or education (e.g., how the staff has or can develop skills to sustain community participation).
- Articulate the strategy, objectives, activities, timing, and delivery methods for disseminating research findings and/or educational resources to the school and identified community as well as the scientific community.
- Provide evidence of community support such as a letter of support from community-based organizations, school districts, principals, PTAs, etc.
- Evidence of a productive working relationship between the community and researchers is a necessary component. This active engagement should be described fully in the application. However, if a partnership between the community and researchers has not been formed prior to the initiation of the grant, the applicant must provide information on past successful community partnership experiences and/or describe any trainings or courses they have taken on the topic of community engagement. Responsiveness to this criterion will need to be apparent to the peer reviewers, so the applicant must clearly define the approach they will take to incorporate community engagement.
- Each project must demonstrate meaningful and active participation of relevant stakeholders that may have concerns about children's environmental health and/or academic performance. Applicants are encouraged to consider a variety of mechanisms for community engagement, including, but not limited to: formation of a community advisory board or community outreach committee.

Science for Sustainable and Healthy Tribes¹⁶ (EPA, 2013): Tribal CBPR plan:

- Focus on research issues of significance to the tribe or a tribal community that is interested in the proposed work.
- Identify the role of tribal community members in the proposed research plan to integrate traditional ecological knowledge (i.e., the degree of tribal input or engagement in the conceptualization, design, methods, analyses, or dissemination of research products).
- Describe how this research will effectively enhance the capacity of the tribe or tribal community to engage in the research and scientific process.
- Describe resources for partnership development (e.g., to hire tribal community liaisons or to provide participant support costs for tribal involvement) and/or demonstrate equitable collaboration with tribes, tribal consortia, or Tribal Colleges and Universities.
- If a host organization (any organization/institution other than the applicant's) is used to facilitate tribal participation or partnerships, evaluate the organization's mission and practices concerning tribal partnerships (e.g., how the staff has or can develop skills to sustain effective, culturally appropriate tribal participation).
- Describe how research findings will be disseminated to the identified tribal community (ies), as well as the scientific community, using effective, culturally appropriate and acceptable methods.
- Describe tribal community support and interaction.
- Describe methods or strategies by which tribes can protect and determine use of sensitive or protected TEK (traditional ecological knowledge), and opportunities for tribal determination of information that can be shared, where appropriate.

Catalyst Grant: HIV/AIDS Community-Based Research² (Canadian Institutes of Health Research, 2014): "CBR Principles Summary" must demonstrate in a maximum of one page, the level of partnership with relevant community stakeholders as well as a clear description of community involvement in the identification of the research question, development, implementation and possible knowledge translation activities of the project.

e. Community Involvement Consideration

Some RFAs included a requirement for some community involvement. Beginning in late 2012, EPA RFAs included template language when human subjects are involved in the research, requiring applicants to respond to the following question as part of the Human Subjects Research Statement: "If the research will take place in a community setting, describe the procedures in place for defining the community, obtaining its involvement in the research, and establishing and maintaining trust." However, only the Human Subjects Review Official is required to review the Human Subjects Research Statement. While the peer reviewers may comment on the Human Subjects Research Statement, it is optional for them.

As another example, PCORI's spring 2014 Addressing Disparities RFA⁶ included an expectation that applicants indicate how relevant stakeholders will be involved in study activities, and towards this end, developed a Patient and Family Engagement Rubric (see **section VI, Resources**) to guide both applicants and merit reviewers. PCORI also required applicants to adhere to their Methodology Standards Associated with Patient-Centeredness and to the PCOR Engagement Principles.

The CIHR RFA² offered further examples of ways to require the applicant to discuss community involvement. This RFA stated:

- The Research Proposal must address the objectives of this funding opportunity and describe the likely significance of the project for the involved community;
- Each proposal must describe how the grant will address the objectives described under "Objectives and Relevant Research Areas" most notably the responsiveness to the principles of CBR as defined in that section;
- Signed letters of support from the community are accepted and encouraged.

f. Responsiveness Criteria

Responsiveness criteria represent the first point of elimination among applications. If an application does not meet responsiveness criteria, it is automatically out of consideration and does not move onto the peer review process. While a requirement for community engagement could be inserted here, it could preclude the ability to evaluate the quality of community engagement included in the application. Therefore, applications with weak CE could pass if further evaluation of the CE is not done additionally through the peer review process. Examples of responsiveness criteria, such as requiring a partnership, are shown below.

CBPR Initiative in Reducing and Eliminating Health Disparities: Dissemination Phase²⁸ (NIH/NIMHD, 2012):

- Partnership or multi-institutional arrangement that includes a community-based organization or related entity and a scientific research partner
- Identification of a community representative as key personnel with a minimum of 3 person months per calendar year or equivalent effort for academic calendars or other appointments (compensated or contributed)
- Letters of Support and/or Memorandum of Agreement or Memorandum of Understanding from each partnering organization delineating their roles and responsibilities
- Evidence of an established Community Advisory Board consisting of both scientific and community representation.

CBPR Initiative in Reducing and Eliminating Health Disparities: Intervention Research Phase³⁷ (NIH/NIMHD, 2007): To be responsive to this FOA, eligible institutions/organizations must have experience working with minority and health disparity populations in the United States. These institutions/organizations must demonstrate history and/or evidence of partnerships between community-based organizations and academic research institutions. Evidence of partnerships may include current or previous research collaborations. A Memorandum of Agreement (MOA) or Memorandum of Understanding (MOU) should clearly delineate the roles and responsibilities of the collaborating individuals and organizations/institutions.

Research to Action- Assessing and Addressing Community Exposures to Environmental Contaminants³⁵ (NIH/NIEHS/CDC, 2009): All projects must include at least one research scientist in environmental health sciences or occupational health sciences and a member of a community-based organization (CBO) that works directly and regularly with the affected community to be considered responsive. The partnership between the research scientist and CBO should be equitable and draw upon the unique strengths that each brings to the partnership. Applications that do not include at least one research scientist in environmental health sciences or occupational health sciences and a member of a community-based organization (CBO) will be considered non-responsive.

D. Review Process and Criteria

The qualifications of reviewers and the review criteria they are required to follow represent the most important elements in determining how RFAs are evaluated and whether community engagement is systematically considered.

a. Review Panel Composition

The composition of the review panel is important. Some RFAs explicitly state whether they include external non-scientific reviewers. For example, the EPA National Center for Environmental Research (NCER) RFAs state “the individual external peer reviewers include non-EPA scientists, engineers, social scientists, and/or economists who are accomplished in their respective disciplines and proficient in the technical subjects they are reviewing.”

b. Review Criteria

While some RFAs included description of community engagement and community-engaged research in the funding opportunity description, few carried this through to the evaluation of community engagement in the peer review criteria. Examples below that include consideration of community engagement in the peer review criteria include the Environmental Protection Agency^{12,16,31}, Canadian Institutes of Health Research², NIH Partners in Research³⁶, NIHMD^{28,28,37}, American Cancer Society⁹ and PCORI⁶.

Healthy Schools: Environmental Factors, Children’s Health and Performance, and Sustainable Building Practices¹² (EPA, 2013)

- Demonstration that the focus is on research issues of significance to a school/school district and/or community that is interested in the proposed work.
- Identifies the role(s) of community members in the research plan and justifies level of community engagement.
- Describes the ability of the research to enhance community capacity to engage in the research and scientific process.
- Describes how research findings will be disseminated to the identified community (ies), as well as the scientific community.
- Evaluates the applicant’s assessment of a host organization’s mission and practices concerning community partnerships (e.g., how the staff has or can develop skills to sustain effective community participation).
Note: Applicable if a host organization (any organization/institution other than the applicant’s) is used to facilitate community participation or partnerships.

- Describes community support and interaction.
- Describes past successful community partnership experiences and or describes any trainings or courses applicant(s) has taken on the topic of community engagement.

Science for Sustainable and Healthy Tribes¹⁶ (EPA, 2013):

- Demonstration that the focus is on research issues of significance to a tribe or a tribal community that is interested in the proposed work.
- Identifies the role(s) of tribal community members and integrates traditional ecological knowledge in the research plan.
- Describes the ability of the research to enhance tribal community capacity to engage in the research and scientific process.
- Describes how research findings will be disseminated to the identified tribal community (ies), as well as the scientific community, using effective, culturally appropriate and acceptable methods.
- Evaluates the applicant's assessment of a host organization's mission and practices concerning tribal partnerships (e.g., how the staff has or can develop skills to sustain effective, culturally appropriate tribal participation). Note: Applicable if a host organization (any organization/institution other than the applicant's) is used to facilitate tribal participation or partnerships.
- Describes tribal community support and interaction.

Community Action For A Renewed Environment (CARE) Program³¹ (EPA, 2011): Proposals evaluated based on applicant's organizational capacity and ability to organize and run an effective collaborative partnership and work with any other appropriate partners. Proposal must identify all parties in the partnership necessary to identify sources of toxic pollutants and environmental concerns, set priorities, and bring about solutions, including the process through which organizations will work together. Any gaps in membership representation (e.g., community organizations, personnel or residents not now participating), and how those gaps will be addressed, should be described. Proposals with detailed letters of specific commitment from partnership members and those from multiple stakeholders representing different types of interests, may be scored higher than proposals of general support and those representing a few types of interests.

Catalyst Grant: HIV/AIDS Community-Based Research² (Canadian Institutes of Health Research, 2014):

- Impact of the proposed research on Canadian communities is clearly demonstrated.
- If applying to the Aboriginal Stream there must be a significant focus of the project on Aboriginal populations and a clear demonstration of a relationship with a First Nations, Métis or Inuit community or organization.
- The likely significance of the potential partnerships and research for the involved community - Aboriginal and/or non-Aboriginal
- The anticipated impact of the proposed research on Canadian communities is demonstrated
- The partnership element and involvement of the community as partners is clearly highlighted (whether it exists, in development or has the potential for). Information on community involvement and partnership could include:
 - A clear description of the community and community-based organization involved in the project
 - Extent, nature and cultural relevance of community involvement in the identification of the project focus, implementation and knowledge translation activities.
 - Overall experience and skills of the investigative team including their community-based research experience

Partners in Research³⁶ (NIH, 2008):

- Do proposed plans ensure that there will be sufficient coordination and communication between the academic and community investigators? Is there appropriate involvement of both investigators throughout the project, including planning? Are the administrative plans for the management of the research project appropriate, including plans for resolving conflicts? Is there an effective plan to evaluate the results of the research and to develop future research and/or interventions?
- Does the application demonstrate true collaboration representing the differing perspectives and expertise of the multiple PIs?
- 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 and organizational support?
- Impact: Is the proposed research likely to lead to improved public understanding of basic and/or clinical biomedical and behavioral research? Is the proposed project likely to result in strategies for promoting collaboration between scientists and the community to improve the health of the public? Is the proposed project likely to identify conditions (e.g., settings and approaches) that will enhance the effectiveness of the activities to be studied? Is the proposed project likely to enhance public understanding of NIH?
- Collaboration: Is there evidence of prior partnering activities and documentation of the commitment of the institutions to this partnership? Is there evidence that the planning, organization, structure, and design of the proposed research reflect a genuine collaboration between the partners? Is there an appropriate plan for distribution of the requested funds between the partnering institutions?

CBPR Initiative in Reducing and Eliminating Health Disparities: Dissemination Phase²⁸ (NIH, 2012):

- Applications must demonstrate how the community will be involved in every aspect of the project. Because the ultimate goal of the NIMHD CBPR Initiative is to foster efforts at the community level that will accelerate the translation of research advances to health disparity populations, it is crucial that the application demonstrates the potential of the intervention to be accepted and adopted by the implementing organization as well as the targeted health disparity community.
- What is the likelihood that the project will reduce health disparities via increased knowledge and/or social change resulting from community partnerships?
- If the project is collaborative or multi-PD(s)/PI(s), do the investigators have complementary and integrated expertise; are their leadership approach, governance and organizational structure appropriate for the project? Does the investigative team have experience and successful outcomes in prior CBPR efforts? Are the community partners representative of the targeted community and do they have the potential to facilitate the community's adoption of the intervention?
- Will innovative ideas and methods evolve from the community's involvement in the dissemination and implementation process? Will community input generate innovative approaches to overcoming dissemination and implementation challenges with health disparity populations?
- Will the strategy for community involvement enhance the implementing organization's ability to disseminate and implement the intervention? Is the intervention cost-effective? Is there a discussion of possible limitations of the study design and/or the CBPR approach and plans to address these concerns?
- Will the project benefit from unique features of the scientific environment, subject populations, or collaborative arrangements? Will the proposed study take advantage of the unique features and assets of the community environment? Is there evidence of institutional and community support through letters or prior collaborations?
- Translation Potential-Will the proposed project and plans for community involvement foster the community's acceptance and adoption of the intervention? What is the potential that the intervention will have real-world effectiveness and can be sustained at the community level? Are adequate supports and resources (including community compensations) in place to ensure that community partnerships will be sustained throughout the project? Will the proposed CBPR approach enhance the potential for successful dissemination, implementation, and long-term sustainability?

Pilot and exploratory studies using community-based participatory research (CBPR) to achieve cancer health equity⁹ (American Cancer Society, 2013):

- Each committee generally has between 12 and 25 members who are leaders in their areas of expertise, plus up to three “stakeholders.”
- If aims are realized how will the results of this study impact cancer health equity, cancer disparities, social change, and/or policy?
- How is this research relevant to persons at risk for, or living with, cancer and their family members, caregivers and friends and community?
- How has innovation been enhanced by community engagement?
- Do team members have the complementary skills and qualifications needed for successful implementation and analysis of the proposed research? Has the research team previously collaborated on research or publications? If not, are members of the proposed study team appropriate to carry out the research?
- Is there evidence of value-added team members as a result of this academic-community partnership? Is it apparent that community partner(s) were sufficiently involved throughout the research planning and will be involved in tangible ways in the implementation process? Is there convincing evidence of previous collaboration of this academic-community partnership? If the partnership is new, how will the collective assets of both partners facilitate the success of this study and provide the foundation for future collaboration?
- Do community partners have meaningful involvement in study implementation?
- How will this study mutually benefit partners? Are there meaningful plans for sustainability and future collaboration with sufficient clarity? This may include enhancing the capacity of the community partner(s), e.g., grant seeking and writing activities, enhancing communities’ ability to access information, advocacy skills.

Addressing Disparities⁶ (PCORI, 2014):

- The proposal has the potential to lead to meaningful improvement in the quality and efficiency of care and to improvements in outcomes that are important to patients.
- Has it been identified as important by patient, caregiver, or clinician groups?
- The proposal demonstrates patient-centeredness at every stage of the research.
- Is the research focused on questions that affect outcomes of interest to patients and their caregivers?
- The proposal demonstrates that people representing the population of interest and other relevant stakeholders are engaged in ways that are appropriate and necessary in a given research context.
- Are patients and other stakeholders engaged in:
 - Formulating research questions
 - Defining essential characteristics of study participants, comparators, and outcomes Identifying and selecting outcomes that the population of interest notices and cares about and that inform decision making relevant to the research topic;
 - Monitoring study conduct and progress
 - Designing/suggesting plans for dissemination and implementation activities
- Are the roles and the decision making authority of all research partners clearly stated?
- Does the proposal demonstrate the principles of reciprocal relationships, co-learning, partnership, trust, transparency, and honesty?

IV. OTHER NOVEL APPROACHES

Methodology RFAs

NIH released several RFAs listed below that specifically focus on CEnR methodology. One focused on developing measures and measurement tools for effective CE and CEnR, the second focused on development of true partnerships.

Innovative Measurement Tools for Community Engaged Research Efforts^{20,21} (NIH/NINR, 2013): Develop innovative measurement for community-engaged research efforts, measuring effective engagement, innovative tools that measure public trust, collaboration, and empowerment.

Partners in Research³⁶ (NIH, 2008): This program is designed to address directly the practical questions surrounding the development of true partnerships between the research community and the public, innovative activities designed to improve public understanding of biomedical and behavioral science, develop strategies for promoting collaboration between scientists and the community to improve the health of the public.

V. PROMISING PRACTICES AND RECOMMENDATIONS

Our RFA analysis revealed these promising practices and recommendations that research funders might consider:

Clearly defined terms: The RFA analysis revealed several examples of definitions for community, community organization, stakeholders, CEnR, CBPR, and translation. In particular, identification of stakeholders could inform the level of community involvement to include within an RFA. The Community Toolbox (<http://ctb.ku.edu/en/table-of-contents/participation/encouraging-involvement/identify-stakeholders/main>) contains a succinct definition capturing stakeholders beyond directly impacted community members.

CE plan: For projects where CE is important, a CE plan should be required. An example to consider is the CIHR RFA, which includes elements critical for CE in a simplified one-page version, requesting a clear description of community involvement in the identification of the research question, development, implementation and translation activities of the project.

CE peer review criteria and panel: Evaluation of the level of community engagement should not only be specified in the application and submission instructions but needs to be included within the review criteria. All eligible grant applications are reviewed based on the criteria included in the RFA, and all peer reviewers are instructed to consider an application's merit based solely on the criteria listed in the RFA. For fellowships RFAs, recommendation letters could be accepted from the community in addition to academic faculty. In addition, more community reviewers or those with experience in community-engaged research should be represented on the review panel in order to effectively evaluate CE.

Eligibility: Funders could use eligibility requirements to encourage CE, such as requiring a partnership or having the applicant come from or have experience working in the community in which the proposed research will be conducted. Eligibility might specify a community-based organization to be the applicant, a minimum FTE and/or grant funds that must remain with the community-based organization, or require funding for the community partner to attend annual grantee meetings.

Multiple PI leadership plan: In addition to allowing for multiple PIs, funders could request a multiple leadership plan delineating roles of each PI, governance, organizational structure, communication plan, decision-making process, budget distribution and conflict resolution procedures.

Multi-phase RFAs: To alleviate the difficulty posed by the short timeframe within grants to develop partnerships and implement the research, funders might consider issuing a multi-phase RFA. Separate RFAs could be issued for the planning/partnership development, implementation and dissemination phases. This might also clarify the review of CBPR projects, where the research question may not be finalized until after the planning phase.

Separate awards: For partnership projects, funders could consider issuing separate awards to each partner, with each partner serving as PI of their grant and each able to obtain the full facilities and administrative rate.

However, care should be taken in the evaluation of such projects to ensure the partnership is well established and stable.

Consider methodology RFA: Funders could consider issuing an RFA focused on innovative methodologies related to CEnR.

VI. RESOURCES

NIEHS Evaluation Metrics Manual (<http://www.niehs.nih.gov/research/supported/dert/programs/peph/metrics/>)

PCORI Patient and Family Engagement Rubric (<http://www.pcori.org/assets/2014/02/PCORI-Patient-and-Family-Engagement-Rubric.pdf>)

Ahmed SM and Palermo AS. Community Engagement in Research: Frameworks for Education and Peer Review, Am J Public Health. 2010;100: 1380–1387.

Dmitry Khodyakov D, Stockdale S, Jones A, Mango J, Jones F and Lizaola E. On Measuring Community Participation in Research, Health Educ Behav. 2013: 346-54

VII. APPENDICES

Appendix A: List of Funders Reviewed

- Agency for Healthcare Research and Quality
- American Cancer Society - Midwest Division
- California Breast Cancer Research Program
- Canadian Institutes of Health Research (CIHR)
- Centers for Disease Control and Prevention (CDC)
- Environmental Protection Agency (EPA)
- Indian Health Service
- National Science Foundation
- National Institutes of Health (NIH)
 - National Cancer Institute (NCI)
 - National Heart, Lung, and Blood Institute
 - National Institute of Dental and Craniofacial Research
 - National Institute on Aging
 - National Institute of General Medical Sciences
 - National Institute of Mental Health (NIMH)
 - National Institute of Nursing Research (NINR)
 - National Institute on Minority Health and Health Disparities (NIMHD)
 - National Institute on Environmental Health Sciences (NIEHS)
 - National Institute of Occupational Safety and Health
- Northwest Health Foundation
- Patient Centered Outcomes Research Institute (PCORI)
- Substance Abuse and Mental Health Services Administration, Center for Mental Health Services
- University of California, Los Angeles

Appendix B: List of RFAs Reviewed

	Funding Agency	Year	RFA Title	RFA #
1.	CA Breast Cancer Research Program	2014	Community Collaboration, Cycle 20	
2.	Canadian Institutes of Health Research (CIHR) Institute of Infection and Immunity, Institute of Aboriginal Peoples' Health	2014	Catalyst Grant: HIV/AIDS Community-Based Research	
3.	NIH National Institute of Nursing Research (NINR)	2014	Community Partnerships to Advance Research (CPAR) R01	PA-14-142
4.	NIH NINR	2014	Community Partnerships to Advance Research (CPAR) R15	PA-14-140
5.	NIH NINR	2014	Community Partnerships to Advance Research (CPAR) R21	PA-14-141
6.	PCORI	2014	PCORI Funding Announcement: Addressing Disparities	
7.	AHRQ	2013	Patient-Centered Outcomes Research (PCOR) Mentored Clinical Investigator Award K08	PA-13-180
8.	AHRQ	2013	Patient-Centered Outcomes Research (PCOR) Mentored Research Scientist Development Award K01	PA-13-181
9.	American Cancer Society - Midwest Division	2013	Pilot and exploratory studies using community-based participatory research (CBPR) to achieve cancer health equity	
10.	CDC	2013	Community Approaches to Reducing Sexually Transmitted Disease	CDC-RFA-PS14-1406
11.	EPA	2013	11th Annual P3 Awards: A National Student Design Competition for Sustainability Focusing on People, Prosperity and the Planet	EPA-G2014-P3-Q1,Q2,Q3,Q4
12.	EPA	2013	Healthy Schools: Environmental Factors, Children's Health and Performance, and Sustainable Building Practices	EPA-G2013-STAR-H1
13.	EPA	2013	National Center for Innovation in Small Drinking Water Systems	EPA-G2013-STAR-G1
14.	EPA	2013	New Methods in 21st Century Exposure Science	EPA-G2013-STAR-K1
15.	EPA	2013	SBIR Phase 1	SOL-NC-13-00012
16.	EPA	2013	Science for Sustainable and Healthy Tribes	EPA-G2013-STAR-X1,X2,Y1,Y2
17.	EPA	2013	Susceptibility and Variability in Human Response to Chemical Exposure	EPA-G2013-STAR-J1
18.	National Science Foundation	2013	Partnerships for Innovation: Building Innovation Capacity	NSF 12-578
19.	NIH	2013	Short Courses on Innovative Methodologies in the Behavioral and Social Sciences R25	RFA-OD-13-009
20.	NIH NINR	2013	Innovative Measurement Tools for Community Engaged Research Efforts R01	PA-13-209
21.	NIH NINR	2013	Innovative Measurement Tools for Community Engaged Research Efforts R21	PA-12-212
22.	Northwest Health Foundation	2013	Kaiser Permanente Community Fund	
23.	UCLA	2013	UCLA Healthy-by-Default REACH PROJECT	
24.	EPA	2012	Children's Environmental Health and Disease Prevention Research Centers P01	RFA-ES-12-001
25.	EPA	2012	Fall 2013 EPA Greater Research Opportunities (GRO) Fellowships For Undergraduate Environmental Study	EPA-F2013U-GRO-P1,P2,P3,P4,Q1,Q2
26.	EPA	2012	Fall 2013 EPA Science to Achieve Results (STAR) Fellowships for Graduate Environmental Study	EPA-F2013-STAR-A1,A2,A3,B1,B2,B3,C1,C2,C3,D1,D2,E1,E2,E3,F1,F2,F3,F4,F5
27.	NIH National Institute of Environmental Health Sciences (NIEHS), NINR	2012	Research to Action: Assessing and Addressing Community Exposures to Environmental Contaminants (R01)	PA-12-153
28.	NIH National Institute on Minority Health & Health Disparities (NIMHD)	2012	Community-Based Participatory Research (CBPR) Initiative in Reducing and Eliminating Health Disparities: Dissemination Phase R24	RFA-MD-12-006
29.	NIH NIMHD	2012	Community-Based Participatory Research (CBPR) Initiative in	RFA-MD-12-006

			Reducing and Eliminating Health Disparities: Planning Phase R24	
30.	Northwest Health Foundation	2012	Healthy Eating, Active Living (HEAL) Community Engagement Grants	
31.	EPA	2011	Community Action For A Renewed Environment (CARE) Program	EPA-OSWER-IPCO-10-04
32.	NIH National Institute of General Medical Sciences (NIGMS), Indian Health Service (IHS), AHRQ	2010	Native American Research Centers for Health, NARCH-V	HHS-2010-IHS-NARCH-0001
33.	NIH National Institute of Mental Health (NIMH)	2010	Community-Based Participatory Research at NIMH R01	PAR-07-133
34.	NIH National Cancer Institute	2009	Feasibility Studies for Collaborative Interaction for Minority Institution/Cancer Center Partnership P20	PAR-07-230
35.	NIH NIEHS NIOSH, CDC	2009	R21 Research to Action- Assessing and Addressing Community Exposures to Environmental Contaminants	RFA-ES-09-001
36.	NIH	2008	NIH Partners in Research Program R03	RFA-OD-07-001
37.	NIH NIMHD	2007	Community-Based Participatory Research (CBPR) Initiative in Reducing and Eliminating Health Disparities: Intervention Research Phase R24	RFA-MD-07-003
38.	NIH NIGMS, IHS, AHRQ	2005	Native American Research Centers for Health, NARCH-4	HHS-2005-IHS-NARCH-0001
39.	NIH National Cancer Institute	2004	Community networks to reduce cancer health disparities - UO1	RFA-CA-05-012
40.	NIH National Heart, Lung, and Blood Institute	2004	Community-responsive interventions to reduce cardiovascular risk in American Indians and Alaska Natives	RFA-HL-04-023
41.	NIH NIMH, SAMHSA Center for Mental Health Services	2004	Reducing mental illness stigma and discrimination	PAR-04-112
42.	NIH NIMHD	2004	Excellence in partnerships for community outreach, research on health disparities and training	RFA-MD-04-002
43.	NIH National Institute of Dental and Craniofacial Research, National Institute on Aging	2003	Oral health of special needs and older populations	PA-07-151
44.	NIH NINR	2002	Community-partnered interventions to reduce health disparities	PA-02-134

Appendix C: Additional Language from the RFAs Reviewed

See excel file posted at <http://ccph.info>