

# Experiences and Lessons Learned From the RADx-UP Consortium Community Engagement Projects

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In this study, we used emerging community engagement frameworks to describe the structure and outcomes of a large-scale, community-engaged, research-to-practice initiative, RADx-UP. Qualitative methods were used to analyze survey and meeting data from 2022 for RADx-UP projects. Most projects had diverse partners, achieved moderate levels of community engagement, and experienced positive outcomes. Challenges related to engagement readiness and partnership functioning. These findings demonstrate that community engagement is measurable and valuable. However, additional support is needed to achieve the highest engagement. (*Am J Public Health*. 2024;114(S5):S405–S409. <https://doi.org/10.2105/AJPH.2024.307615>)

**D**efined as partnering with those who could benefit from, apply, or be otherwise affected by the results of research, community-engaged research (CEnR) is a foundational principle of equitable and applicable research.<sup>1,2</sup> CEnR builds trust within the community, enhances the credibility of findings, and increases the likelihood that study results are useful to community members.<sup>3,4</sup> Community engagement also improves outcomes related to health behavior, health care access, and health literacy.<sup>5–7</sup>

Yet, these benefits do not accrue when CEnR strategies are misaligned with the philosophical principles of engagement. In addition, limited or undesirable outcomes result from the challenges of community engagement, such as differing priorities and skills of researchers and community members.<sup>8</sup>

## STUDY OBJECTIVE

In light of the promise and pitfalls of community engagement, there is a growing emphasis on promoting greater uptake of CEnR and optimizing CEnR approaches. However, there is considerable variation in the language used to characterize CEnR and information reported in CEnR studies, and few standardized tools exist for assessing CEnR.<sup>5</sup> Recent efforts to address this challenge involve frameworks that can be used to promote standardized measurement and reporting of CEnR to inform research and practice.<sup>9–11</sup>

The objective of this study was to contribute to the growing science and practice of community engagement by describing CEnR strategies and outcomes for the National Institutes of Health (NIH)–funded Rapid Acceleration of Diagnostics-Underserved

Populations (RADx-UP) large-scale CEnR-to-practice initiative. RADx-UP grantees were directed to partner with community organizations to conduct research and interventions related to COVID-19 testing disparities in underserved and vulnerable populations. In this study, we used emerging CEnR measurement frameworks to describe how RADx-UP projects operationalized community engagement and the resulting outcomes and challenges. Our goal was to understand and promote effective CEnR strategies, which we hope will ultimately lead to more inclusive, equitable, and applicable research.

## RESEARCH QUESTION

The research question guiding this study was “What lessons can be learned from RADx-UP projects’ community engagement strategies,

successes, and challenges that can be applied to the science and practice of CEnR?”

## **PARTICIPANTS, SAMPLE, GEOGRAPHIC LOCATION, SETTING, AND YEAR OF STUDY**

This study analyzes the 138 RADx-UP grants that were awarded to 77 universities across the country. Starting in 2020, these grants were awarded over three phases and involved clinical, social, ethical, and behavioral research and interventions related to COVID-19 testing disparities. The RADx-UP grant projects provide an opportunity to systematically compare a large number of CEnR and intervention efforts that were focused on the same goal but had the flexibility to define and operationalize community engagement as they saw fit.

## **METHODS**

Data for this study were drawn from a project survey and meeting notes collected via the RADx-UP Coordination and Data Collection Center. Survey data were available for 100% of RADx-UP projects. This study includes data from meeting discussions that occurred January through December 2022. Meeting discussion data were available for 94 projects (68%). The Patient-Centered Outcomes Research Institute’s Measuring What Matters for Advancing the Science and Practice of Engagement framework<sup>9</sup> and similar frameworks<sup>12,13</sup> guided our analyses of the data.

We conducted frequency distributions of two closed-ended survey questions about the characteristics of the projects’ priority populations to gain insight into the sociohistorical context of the projects. To gain insight into

partner diversity and representativeness reflected in the research or intervention teams, we categorized open-ended survey responses identifying partners involved in each project into organizational types. An open-ended survey question asking projects to describe the roles of their community partners and the meeting discussion data on project successes and challenges provided insight into projects’ engagement activities, quality, and outcomes. The study team analyzed these data using qualitative methods. To assess engagement activities, we systematically coded these data using a coding scheme based on a community engagement framework put forth by Sanders Thompson et al.<sup>10</sup> To assess engagement quality and outcomes, we applied codes to these data that were derived from the goals of the RADx-UP initiative and individual projects, cointerpretation sessions with RADx-UP Coordination and Data Collection Center staff and project teams (including community partners), and the literature on CEnR.

## **KEY FINDINGS**

We describe the community engagement context, activities, quality, and outcomes of the RADx-UP projects.

### **Engagement Context**

The sociohistorical context of RADx-UP projects was diverse. Project teams identified between one and eight priority populations, and most project teams identified two or more languages for their study or intervention population (Appendix Table A, available as a supplement to the online version of this article at <https://ajph.org>). Partner diversity of project teams was high. Project teams named up to 12 organizations with which they were currently

or intending to partner to execute their projects. These organizations spanned a wide array of sectors and areas of focus including community-based organizations, consulting firms, faith-based organizations, government agencies, safety net and non-safety net health care providers, and universities that did not receive a RADx-UP grant award (Appendix Table B).

### **Engagement Activities**

Most descriptions by projects of their community partner’s roles aligned with the middle levels of the community engagement continuum. Roughly equal numbers of partner role descriptions were consistent with collaboration (46), consultation (31), and cooperation (36) levels of engagement (Table 1). Few partner role descriptions were consistent with the lowest level of engagement, outreach and education (10), and the highest level of engagement, partnership (7).

### **Engagement Quality**

Meeting discussions contained examples of practices that were consistent with high-quality community engagement, such as high equity and inclusiveness of engagement (Appendix Table C). In addition, project teams often discussed the relational quality of their partnerships by noting when there were good working relationships, which suggests positive engagement experiences, partnership functioning, and group dynamics.

### **Engagement Outcomes**

The most common positive outcomes of community engagement present in meeting discussions were related to (1)

**TABLE 1— Levels of Community Engagement Reflected in Community Partner Roles**

Engagement Level	Examples of Partner Roles Aligned With This Engagement Level	No. (%)
Outreach and education	Support with reaching priority populations of interest, typically to provide education on COVID-19 or to lay the foundation for future engagement with community members	10 (7)
Consultation	Community advisory boards, councils, and committees	31 (22)
Cooperation	Involving collaborators in discrete aspects of the work, typically recruiting study or intervention participants and serving as testing and vaccination sites	36 (26)
Collaboration	Community partners who were coinvestigators on the grants	46 (33)
Partnership	History of partnership, formalized structures and processes for collaborative development and execution of projects, plans for sustaining the collaboration beyond the life cycle of the grant	7 (5)
Unable to determine from question response		9 (6)

expanding their footprint within communities by securing new partners and deepening existing relationships and (2) increased project enrollment (Table 2). Projects discussed adding partners who were connected with specific populations and receiving requests from community organizations to join the project as people began to see the value and credibility of the work. Many project teams attributed their enrollment success to strong community partnerships, at times providing data

demonstrating the impact (Appendix Table C).

Challenges to achieving positive outcomes primarily related to readiness for engagement and partnership functioning (Table 2). Project teams reported logistical challenges of collaborating across organizations with different policies, procedures, and capacity. There were also several descriptions of misalignment on the best approach to the project and a few discussions of these misalignments resulting in terminated partnerships.

### EVALUATION, TRANSFERABILITY, AND ADVERSE EFFECTS

The findings of this study suggest that recently developed frameworks for systematically studying CEnR align well with CEnR that is occurring in the field. Descriptions by projects' teams of their CEnR and interventions were easy to categorize by measurement concepts promoted to increase standardization of research on effective community

**TABLE 2— Common Community Engagement Successes and Challenges**

Outcome Type	Examples of Positive Outcomes	Examples of Challenges to Positive Outcomes
Partner outcomes	<ul style="list-style-type: none"> <li>Building collective capacity via team trainings</li> <li>Adding new partners or deepening existing partner relationships</li> <li>Planning to sustain partnerships beyond grant periods</li> </ul>	<ul style="list-style-type: none"> <li>Delays associated with executing subcontracts and data-use agreements with community partners</li> <li>Budget constraints that resulted in insufficient resources for community engagement</li> <li>Coordination across multiple organizations (e.g., scheduling meetings)</li> <li>Limited capacity to collaborate (e.g., staff and organizational infrastructure)</li> <li>Partnerships that dissolved</li> </ul>
Research outcomes: near-term	<ul style="list-style-type: none"> <li>Collective design of data-collection processes and tools</li> <li>Collaborative adaptation and ongoing discovery in the context of the real-world challenges of the COVID-19 public health emergency</li> <li>Joint presentations and publications to disseminate findings</li> <li>Development of community dashboards tracking COVID-19 metrics</li> </ul>	<ul style="list-style-type: none"> <li>Disagreement on best approach to study design that resulted in inconsistent fidelity to project protocol</li> </ul>
Research outcomes: long-term	<ul style="list-style-type: none"> <li>Identify, understand, and address COVID-19 testing and vaccination hesitancy among community members</li> <li>Mechanisms for the most up-to-date scientific expertise on COVID-19 to quickly reach community members</li> <li>Increased testing and vaccination because of community partners' recruitment activities and willingness to serve as study or intervention sites</li> </ul>	<ul style="list-style-type: none"> <li>Dissemination strategies that deliver more value for researchers than community partners (e.g., peer-reviewed publications and presentations)</li> </ul>

engagement. One lesson learned from this study that can be applied to the science of CEnR is that organization types that are commonly grouped into nonspecific “other” categories in partnership frameworks featured prominently in projects’ research and intervention efforts, suggesting that they should be stand-alone categories. These include universities and colleges that did not receive grant awards, consulting firms, and faith-based organizations. In addition, RADx-UP projects partnered with a wide variety of clinical organizations, some of which primarily served low-income populations and others that did not. This distinction may have implications for engagement strategies, capacities, and outcomes. Additional attention to measurement concepts intended to characterize the diversity and representativeness of organizations that participate in CEnR and interventions may be valuable.

Regarding the practice of CEnR, the findings of this study suggest that capacity building could enhance the quality and outcomes of CEnR and intervention efforts. Very few projects characterized their community engagement work in a way that was consistent with the highest levels of engagement. It could be that projects did not have enough time to grow their engagement strategies into true partnerships or that the challenges they experienced made it difficult to achieve the highest level of engagement. Continuous learning about, and support for, tactical strategies that enable systemic partnership may be necessary for CEnR and interventions to achieve the greatest impact and sustainability.

## SCALABILITY

These findings are applicable to a range of initiatives aimed at promoting CEnR

and interventions. Funders could incorporate similar data collection methods into grant requirements to assess progress along the engagement continuum and utilize these findings to inform the resources and support that they provide to promote increased engagement.

## PUBLIC HEALTH SIGNIFICANCE

The results of this study demonstrate that community engagement strategies can be systematically measured and are valuable and feasible. However, it is difficult to achieve the highest levels of engagement: true partnership. To improve the equity and applicability of research, CEnR efforts should consider incorporating continuous learning and tactical support for implementing engagement strategies that promote true partnership. Examples of these strategies include

- Readiness assessments that bring forth complementary and conflicting organizational priorities, policies, and procedures so that collaborative problem-solving can occur;
- Budget development that promotes efficient, collective use of resources across partners;
- Consensus-building techniques to help teams develop studies and interventions that are desirable and feasible from multiple perspectives;
- Effective governance, communication, and management structures. *AJPH*

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## PUBLICATION INFORMATION

Full Citation: Farrar B, Middleton A, Thompson L, et al. Experiences and lessons learned from the RADx-UP consortium community engagement projects. *Am J Public Health*. 2024;114(S5):S405–S409.

Acceptance Date: January 26, 2024.

DOI: <https://doi.org/10.2105/AJPH.2024.307615>

## CONTRIBUTORS

B. Farrar conceptualized the study design, conducted data analysis, and led the writing and revision of the article. A. Middleton and A. Akiwumi helped to conceptualize ideas, conducted data analysis, interpreted findings, and provided critical review of article drafts. L. Thompson helped to conceptualize ideas, interpreted findings, wrote sections of the article, and provided critical review of article drafts. I. V. Gallo, P. Munoz, and M. A. Nuño helped to conceptualize ideas and interpret findings, and reviewed drafts of the article. M. Alaniz conducted data analysis.

## ACKNOWLEDGMENTS

Research reported in this Rapid Acceleration of Diagnostics-Underserved Populations (RADx-UP) publication was supported by the National Institutes of Health under award U24MD016258.

**Note.** The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

## CONFLICTS OF INTEREST

The authors have no potential or actual conflicts of interest from funding or affiliation-related activities to disclose.

## HUMAN PARTICIPANT PROTECTION

This study was deemed exempt by the American Institutes for Research institutional review board.

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