

Reflections on the Development of a Nationwide Community-Engaged Resource Center During the COVID-19 Pandemic

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Abstract

RADx-UP, or Rapid Acceleration of Diagnostics – Underserved Populations, is a research initiative bringing together community partners and academic teams created through the National Institutes of Health. The program aims to understand factors associated with disparities in COVID-19 testing and vaccination in vulnerable populations across the United States. Multiple strategies were employed within the RADx-UP consortium to improve access to information and resource sharing, including the development of an online engagement resource center. The RADx-UP Engagement Resource Center offers a database of community-engaged COVID-19 materials and other projects, including an Image Bank of community-generated photos and lay-friendly research briefs. Focus groups were held to gather and incorporate community feedback into the Engagement Resource Center programming. This paper aims to reflect on the use of a community-engaged online resource center to develop and disseminate trusted public health resources using a health-equity lens across a nationwide consortium of stakeholders during a novel pandemic. The RADx-UP Engagement Resource Center can offer an example of how trusted resources related to public health and health equity can be disseminated on a large scale to both community and academic audiences, as well as how community feedback can be incorporated into related programming in future health crises.

Introduction

The COVID-19 pandemic disproportionately affected historically marginalized populations including racial and ethnic minoritized populations, immigrants and undocumented people, socioeconomically disadvantaged people, justice-involved people, rural populations, older adults, and other groups who are consistently underserved by the current U.S. healthcare system (Woolf et al., 2021; Okonkwo et al., 2021). In response to these inequities, the National Institutes of Health (NIH) created the RADx-UP, or Rapid Acceleration of Diagnostics –Underserved Populations initiative. RADx-UP is a consortium of 138 research projects and 94 Community Collaboration Grants funded by the National Institutes for Research (NIH) addressing disparities in COVID-19 testing in vulnerable communities across the United States, including U.S. territories and Tribal Nations. RADx-UP research has been conducted in collaboration with communities across 53 U.S. states, territories, and the District of Columbia. Across these states, over 448,000 COVID-19 tests have been conducted, over 440,000 research participants have been enrolled, and 283 research articles have been published.

The RADx-UP Coordination and Data Collection Center (CDCC) is composed of central support staff from the Duke Clinical Research Institute (DCRI), Community-Campus Partnerships for Health (CCPH), and the University of North Carolina at Chapel Hill Center for Health Equity Research (UNC CHER). The role of the CDCC is to provide project teams with support in implementing their research protocols, collecting data, and employing participatory methods. The CDCC is made up of four core teams: Testing, Data, Administrative, and the Community Engagement Core (CEC), which in particular aims to support projects that strengthen community-engagement efforts (RADx-UP, 2023a).

The RADx-UP Engagement Resource Center (ERC), one of the primary domains of the CEC, is a repository developed within RADx-UP that compiles and organizes valued RADx-UP resources and external resources to be disseminated to projects and the broader scientific and lay communities (RADx-UP, 2023c). Given its reach and responsiveness to expressed community needs, the ERC can serve as a model to facilitate knowledge sharing amidst future public health emergencies. The purpose of this paper is to reflect

on the development of the ERC and share lessons that can be applied to the development of other digital resource sharing platforms to address other emergent needs.

Background

Digital Resource Centers

Utilizing digital platforms to disseminate research and community expertise has received little recognition in academic spaces. Digital dissemination creates avenues for easy-to-access and continuously updated information (Lord et al., 2019), which, in the context of the RADx-UP consortium, allows for important community resources to be quickly and easily located and shared across projects—and therefore across the country—during the continuously changing COVID-19 public health emergency.

The aim of resource centers presented in the literature has been to elevate community-engaged best practices, or as Blanck et al. (2003) put it, to “engage participants . . . from community organizations not as ‘subjects’ of investigation, but instead as participants in the research process” as a way to better bridge academic researchers and communities and engage together in knowledge creation and dissemination (p. 54).

In particular, the COVID-19 pandemic has provided opportunities for digital platforms to provide guidance in accessing trusted and culturally relevant resources for vulnerable communities in response to growing needs, such as mental health support (Goodsmith et al., 2022). However, the literature does not provide evidence of wider dissemination of these platforms outside of a specific focal community, research center, or state, which indicates a potential gap in wider digital resource availability in the realm of public health. The ERC was created and executed with these gaps in mind and aimed to fulfill the need to support the RADx-UP consortium and disseminate resources that were accurate and supportive of academic and community needs during this unique moment in time.

The RADx-UP Engagement Resource Center

The RADx-UP ERC is a repository developed within RADx-UP that compiles and organizes valued RADx-UP and external resources to be disseminated to projects and the broader scientific and lay communities (RADx-UP, 2023c). The ERC was established specifically to collect and house resources on COVID-19 and best practices in community engagement, including

external materials from outside of the RADx-UP consortium, as well as those created internally by the CDCC and funded projects such as lay-friendly research briefs that illustrate RADx-UP published research in an accessible digital format.

The ERC allows RADx-UP research project teams to request services, such as the creation of a new resource or locating existing resources. Project teams have the ability to submit their own resources to the public-facing ERC website for other projects to utilize—including media, toolkits, articles, and outreach materials. Because the resource page is usable by the public, anyone can submit or request a resource using a form linked on the website, including those outside of RADx-UP. That being said, the ERC team’s first priority was to cater to the RADx-UP consortium through prioritizing its resources. The ERC also houses the RADx-UP Image Bank, a library of photos created and compiled by RADx-UP project teams to use in communication and recruitment materials that depict the diversity of participating communities, and showcase a variety of clinical and community-based settings and activities (RADx-UP, 2023b). The ERC also develops research briefs along with the RADx-UP Communications team and in collaboration with project teams and community partners. These serve as accessible, plain-language one-pagers describing RADx-UP published research.

Methods

The ERC includes three components: 1) resource page, 2) Image Bank, and 3) research briefs. Community engaged research strategies were used to ensure that community and academic partners had an opportunity to provide input and feedback to resources that were developed. These strategies are described under each component. A Community Consultation Studio model was employed as the primary method of evaluating and improving the quality of the ERC.

Resource Page

The primary aim of the ERC, as laid out in the RADx-UP CDCC research strategy, is to provide an online community engagement resource repository hosted on RADx-UP’s public website (see Figure 1). The ERC came to provide additional services in response to the needs of RADx-UP grant awardees.

The methods through which the ERC repository was built and populated include Community Consultation Studios (CCSs),

resource submissions, and requests submitted through a form linked on the website itself. RADx-UP grant awardees—including both academic and community partners—and CDCC staff have the opportunity to submit or request resources. Throughout the lifespan of RADx-UP, the majority of submissions have been from RADx-UP project teams, with community partners and CDCC staff submitting second most often. While the public can submit resources, they do so infrequently and these resources have been less likely to be relevant to ERC users. When resources are submitted, they are vetted based on a few criteria, including relevance to COVID-19 testing and/or health equity and reliability of source, and then posted to the resource page and promoted through communications outlets such as the RADx-UP email newsletter and X profile. More specifically, accepted resources fit into one of

the categories below:

- **Data:** Resources in this domain are used to standardize and create efficiency in data management, data governance, data curation, and data science.
- **Community Engagement:** Resources included here involve tools, strategies, and best practices for engaging a variety of stakeholders throughout all phases of the research process, from topic prioritization to dissemination of research results.
- **Testing:** Resources here include tools, processes, and/or documents that share emerging technologies in COVID-19-related diagnostics and disseminating diagnostic technology assessments.

The ERC has specific criteria for accepting resources, though a resource does not have to check every box in order to be posted. The following

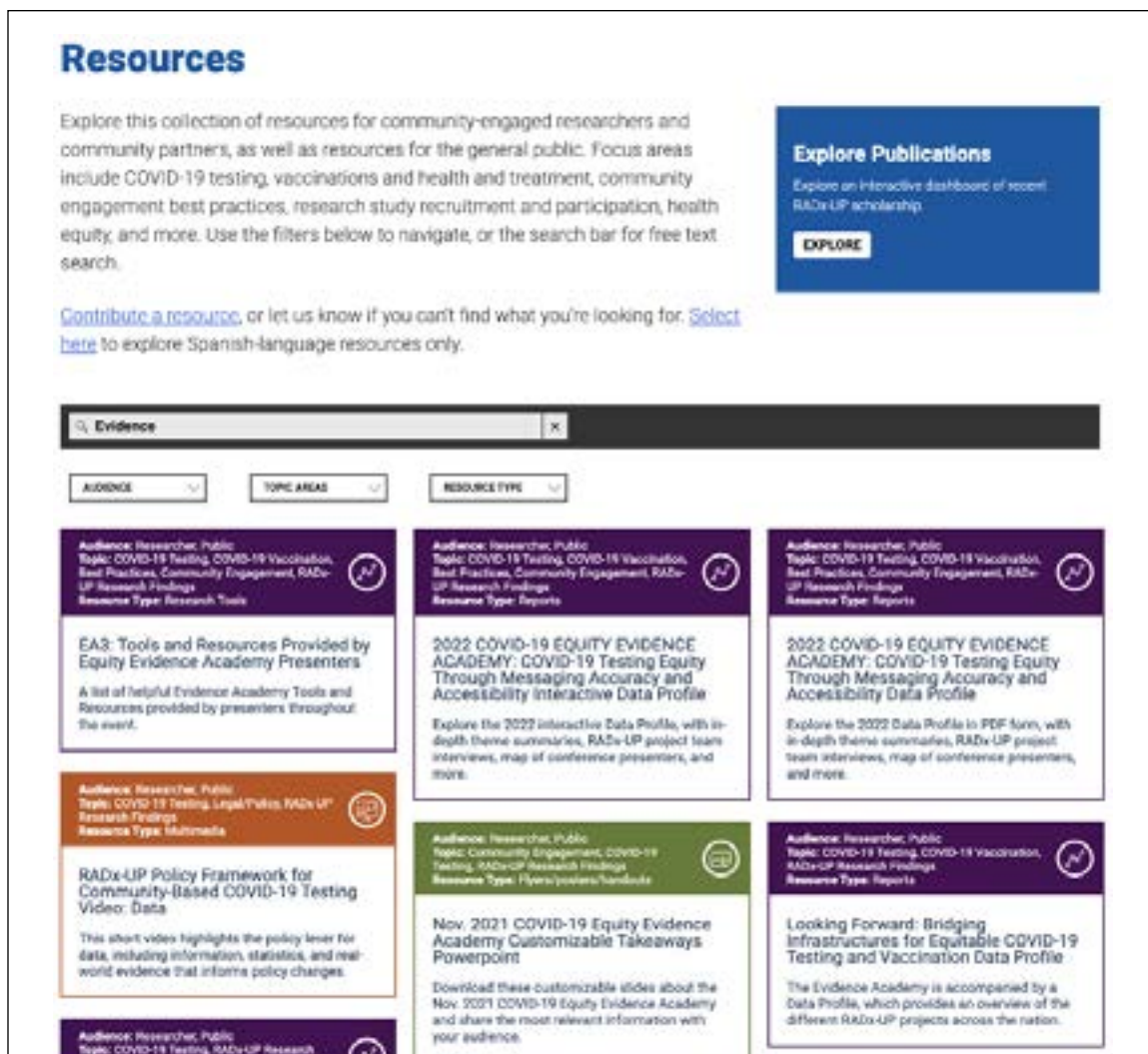


Figure 1. RADx-UP Resource Page

questions help to guide the ERC team in curating priority resources:

- Does the resource's author currently participate in the RADx-UP initiative?
- Is the resource currently hosted on the RADx-UP Engagement Resource Library?
- Does this resource align with the goals of the Engagement Resource Library?
- Is the resource a process, template, guideline, or sharing of best practices?
- Does the resource have a reference?

Given the breadth of communities across the U.S. participating in RADx-UP research, the ERC team made a concerted effort to include culturally tailored materials that spoke to as many of these communities as possible. This was done by assessing the inventory of resources by population represented and identifying gaps. The team would then make calls for specific kinds of resources through other CDCC staff and the RADx-UP newsletter, including those sharing best practices working with Tribal Nations, migrant communities, and others. The ERC also attempted to include resources in a variety of languages, including Spanish and Marshallese.

When resources are requested, the form submitter is asked to describe the topic and type of resource they are looking for. The ERC team will then conduct a search to locate such resources, provide the submitter with options, and post the most relevant resources to the page so that others may benefit. In some cases, appropriate resources could not be identified and the ERC team created specifically tailored resources that fit the requester's needs. One example is a resource to disseminate information on COVID-19 and pregnancy (RADx-UP, 2021).

Image Bank

The RADx-UP Image Bank is a collection of photos that capture the diversity (geographic, racial/ethnic, gender, age, etc.) of the RADx-UP consortium and portray a variety of clinical and community-based settings and activities. These images are intended for RADx-UP affiliates to use in communications, outreach, recruitment, and dissemination materials. Photos in the Image Bank derive from professional photography shoots that were conducted in 2022 at selected RADx-UP project sites as well as community submissions from RADx-UP project teams, community partners, participants, and CDCC staff. The ERC launched the Image Bank project in response to feedback that the communities served by RADx-UP—including communities of color, low-income communities, etc.—were often not represented in stock photography, which the CDCC had been using for its communications.

To build the Image Bank, CDCC staff and project representatives hired seven photographers local to the seven communities that hosted professional photo shoots, and consented and compensated 122 individuals to appear in photos, ultimately generating a total of 1,222 unique photographs for use by the consortium.

The ERC team worked closely with project teams and community partners to build this resource, which now the whole RADx-UP consortium can access and use royalty-free. Project teams in the seven abovementioned communities selected their own photographers, preferencing ones who live in the communities they serve and reflect similar identities. This was a conscious choice, as the alternative was to pay a large company to do this work whose photographers would have limited knowledge of the context. Additionally, the the ERC team saw this as an opportunity to



Figure 2. Example of an Image Bank Photo in a "Clinical Setting." Photo credit: Glenford Nunez



Figure 3. Example of an Image Bank Photo in a "Community Setting." Photo credit: Lance Omar Thurman

materially invest in the communities represented in the Image Bank. We also worked with community partners in each project site, who were compensated for their efforts, to coordinate photo shoots, recruit “models,” and collect participant information for compensation. Consents were provided in six languages so that language was not a barrier to participation.

Research Briefs

To address persistent concerns that communities don’t always receive the benefits of or appropriate information on new research findings (McDavitt et al., 2016; Chen et al., 2010), additional strategies for community dissemination of findings were developed by RADx-UP CDCC staff. The ERC came to offer research briefs to RADx-UP projects with published findings in response to the evolving need to support the consortium in disseminating research findings beyond scientific publication, back to the communities in which research was conducted. In collaboration with the CDCC’s Communications team, the ERC created 1–2 page summaries of individual research publications written in plain language in order to be legible to those with varied scientific literacy. The briefs were also translated into Spanish (and other languages as requested) for additional accessibility (see Figure 4).



Figure 4. Example of a Research Brief

Community Consultation Studios

Design: The ERC’s Community Consultation Studios (CCSs) were adapted from the Vanderbilt Community Engagement Studio Model in order to gather and implement regular feedback on the design and utility on the resource page and other ERC services offered to RADx-UP projects (Israel et al., n.d.) . This was done in the spirit of using participatory methods to build services that respond to the needs of direct users. A total of five CCSs were held in 2021 and 2022 (see Table 1).

At the beginning of the RADx-UP grant, the ERC website included an initial set of resources submitted by both members of the CDCC and RADx-UP projects. The ERC team held a series of three CCSs to solicit feedback from project teams, including academic and community partners. The first was on March 8, 2021, with academic partners only, the second was on March 18, 2021, with community partners only, and the third was a combined session held on May 26, 2021.

The ERC team recruited participants for the initial three CCSs by sending communications out to the full consortium and asking them to complete a form if they were interested in attending. For later sessions, these same participants were invited back, an invitation was put in the newsletter, and the team also did targeted outreach to invite community and academic partners engaged in other CDCC activities, such as working groups.

For all three initial sessions, attendees were asked to review the page ahead of time and were also given a resource page demonstration during the CCS. The focus of the first two sessions was to allow the separate stakeholder groups to give feedback on the design and utility of the page, and the focus of the last was to report back to all participants about the changes made based on what they shared and collect any additional feedback. Community partners were compensated for their time at a rate of \$150/hour for each session they attended.

After the initial three CCSs, the ERC operations team held two additional sessions approximately six months apart to continue to make sure the page, and eventually additional services offered by the ERC, met the needs of users. One session was held on December 1, 2021, in which there were special focus to solicit feedback on gaps in the resource page content, as well as to probe how the ERC can help with scholarship dissemination. In July of 2022, the focus was discussing the ERC’s Image Bank and research briefs, which were developed based on feedback from community

Date of CCS	Participants	Purpose
March 8, 2021	Research teams	Overall design and content feedback
March 18, 2021	Community partners	Overall design and content feedback
May 26, 2021	Community partners and research teams	Review of changes made, discuss outstanding feedback
December 1, 2021	Community partners and research teams	General feedback, as well as specifics about research dissemination and community partner engagement
July 12, 2022	Community partners and research teams	General feedback, as well as specifics about the Image Bank and research briefs

Table 1. Details of Each Community Consultation Studio

partners in previous CSS sessions. For both of these later sessions, feedback was still collected on the content and design of the resource page, and both academic and community partners were invited to participate.

Report-Back and Implementation

Following each CCS, feedback was summarized and shared back with participants, who were able to make corrections if needed.

The ERC team implemented the feedback garnered through the CCS process through an “ERC improvement plan,” which included summarized feedback and next steps, plans to address the feedback through changes to the resource page and other services, as well as any explanations as to why changes weren’t able to be made. Table 2 offers an abridged example version of the improvement plan developed following the CCS held in December of 2021.

One piece of feedback that was consistent across CCS sessions was the need to communicate more effectively about the availability of support through the ERC. Many RADx-UP project team members and community partners were unaware of the ERC. The team addressed this in several ways. One was the creation of “ERC Ambassadors,” who were placed in each of the RADx-UP CDCC’s “cores” (Data Core, Testing Core, Community Engagement Core, and Administration Core), and received training on the scope and purpose of the ERC and its services and were equipped

with materials such as flyers and slide decks to disseminate this information. The team did this in order to maximize reach and capitalize on the different touchpoints the cores have with users. ERC Ambassadors convene quarterly to share about needs they hear as well as resources in development by project teams that could be disseminated through the ERC.

To further address the awareness gap, the ERC team shared information on services through the RADx-UP email newsletter, the public RADx-UP website, and through RADx-UP Engagement Impact Teams, who meet with each project team monthly.

Discussion

Lessons Learned

This digital engagement resource center is novel in a number of ways. It spans across institutions, across the country, and has an expansive reach among multiple stakeholders such as a large grantor like NIH, the general public, and the consortium of public health researchers and community partners. The expansiveness of this tool is unique to RADx-UP, as resource centers in the literature have focused primarily on a specific project, institution, or center such as a hospital, university, region, or community. It is also unique in its level of community involvement in the development and dissemination of the center itself, and of the resources specifically made for the center.

Feedback	Addressed By	Responsible	Status
Would like to see community-friendly information on testing (when to get tested, testing when vaccinated, rationale for testing when individual is low risk/community rates are low, etc.)	Collaborate with CCPH to identify community-friendly materials Search and pull out from existing resources to highlight in newsletter	ERC	Done (see RADx-UP, 2021a) and (RADx-UP, 2022) Done
Would like to see legal information for employers, information on vaccine mandates, etc.	Find and link resource from another organization	ERC	On hold, concern about maintaining with shifting guidance
Would like to see best practices from RADx-UP projects	Addressed by research brief development (see RADx-Up, 2021b)	ERC	Ongoing
The page could include more graphics. Perhaps a thumbnail for each resource. Resources could be divided up/identified by format. Categorize based on the type of product (reports, publications, etc.).	See (RADx-Up, 2023c)	Communications team	Done
Disseminate both traditional research products and other best practices, learnings, and community knowledge.	Addressed by research briefs, non-scholarly product dissemination plan	ERC/ Communications team	Ongoing

Table 2. Example of an ERC Improvement Plan

The most important lesson from the process of building and executing the Engagement Resource Center for the RADx-UP consortium was the need for a participatory process to meet the needs of a large variety of stakeholders across the United States. The team integrated the feedback of project teams and community partners from various geographical locations, study designs, populations, and language needs, which ultimately informed both the content and design. This was important because there was a window into the different priorities of users.

Additionally, it was important to not only collect feedback, but create a process to integrate it with transparency and accountability. For this reason, the team sent feedback summaries out after each Community Consultation Studio as well as improvement plans developed in direct response to user feedback.

One example of how the ERC integrated feedback with accountability was with regards to research briefs. Project teams expressed feedback after the initial creation of these summaries that the ERC could do more to make the language in them accessible to a broader audience. They expressed that they valued research briefs as a tool for dissemination and promotion of their work, but felt as if they did not effectively achieve the goal of communicating research results back to community participants. In response, the team consulted with Community-Campus Partnerships for Health, who have expertise in translating academic research for a lay audience, and integrated them into the research brief development process as reviewers.

Another example of how the ERC team integrated feedback is the creation of the RADx-UP Image Bank based on an expressed need for accessible, diverse, and community-centered images for use in a variety of project-related communications. However, it was difficult to capture evaluation metrics, including the number of photos downloaded and used, how they were used, and how they impacted individual project outcomes. Without this evaluative process, it was not clear if there are certain kinds of photos that project teams found more compelling than others. Additionally, the team encountered challenges around developing appropriate identity markers for tagging photographs that respected privacy and consent of participants appearing in photos. With more time allotted for feedback, a future endeavor to replicate the Image Bank process could account for some of these gaps.

The ERC team also found it useful to clearly define the scope of content to include in the resource page and to avoid replication of other websites and repositories. As academic and community-partner submitted resources, it became necessary to be explicit about what niche our resource center was filling and what kind of resources were appropriate. In response, the scope was narrowed to include only resources that were about or contributed to health equity as it relates to COVID-19. While the team interpreted this fairly broadly, this definition helped to avoid duplicating the work of other resource centers and uplift content that was directly applicable to the work being done at project sites.

The RADx-UP Communications team, located within the Administrative Core of the CDCC, played a pivotal role in actualizing the work identified by the ERC team via stakeholder engagement. The team learned the importance of utilizing the expertise of those with experience in marketing and web design to help us communicate effectively about opportunities to provide input and implement changes to the site with users in mind. The Communications team was also critical in the development of research briefs due to their expertise in translating research into lay language.

While the methods of collection, development, and dissemination of materials and programs discussed in this paper were unique to the COVID-19 crisis, the tools described here could be adapted to accommodate needs for other ongoing public health challenges. In order to replicate this process, there are a number of recommendations that could be useful to implement for future resource center development.

Recommendations for Replication

The processes and principles used to build the ERC could easily be employed to scale and replicate a similar resource center on topics other than health equity and COVID-19. Stakeholders found it to be a useful tool amidst a public health crisis and the team would recommend a similar design for other emergent health events, when the dissemination of accurate and concise guidance is more important than ever.

A few process elements the ERC team recommends are:

- Use the ERC model as a strategy to counter prevalent health misinformation
- Engage partners early and integrate a variety of expertise
- Collect feedback with clear channels for

communication and accountability

- Be ready and willing to create new resources if a gap is identified
- Value community-generated products with equal weight as traditional research products when rapid dissemination and community relevance are the priorities
- A few design elements for the resource page itself that the ERC team recommends are:
 - Searchability: The ability to search for relevant resources by key words as well as by tags for resource type, topic, audience, etc.
 - Color coding by resource type
 - Clearly tagging resources by language

Challenges

One challenge identified early on in the process is that the project team members and community partners who engage with the ERC are a self-selected sample of the RADx-UP consortium. Though they are compensated for their time, one must recognize that it takes effort and resources to provide feedback that not everyone is able to contribute on top of their existing work. Many of the people who attended community consultation studios also attend RADx-UP Working Groups and other opportunities for engagement, so it is possible that the feedback received is only representative of users who engage often and have flexibility to join additional meetings.

Additionally, it was a challenge to determine the reach and use of the ERC. The team would periodically pull analytics from the website that could offer some information about use, including number of clicks on each resource and average time spent on the page, but it was difficult to know specifically if and how resources were being used.

Another challenge the team expects to face is maintaining the ERC after the RADx-UP grant concludes in 2025. It is difficult to predict what staffing will look like going forward and the team may not be able to sustain efforts such as fielding resource requests and submissions and ensuring ongoing relevance and accuracy of content as COVID-19 guidance evolves. For this reason, the ERC will likely be unable to expand upon its current reach and resources will need to be housed on another platform after RADx-UP funding has ended. The RADx-UP team plans to preserve knowledge and products that have emerged from this grant through a “legacy project” and the ERC will no doubt be immortalized as a part of this.

Conclusion

The COVID-19 pandemic demanded fast, reliable, and culturally relevant tools and information sharing at an unprecedented scale. The RADx-UP consortium aimed to address this need in a number of innovative ways, including the development of the RADx-UP Engagement Resource Center.

The ERC offered the RADx-UP consortium opportunities to disseminate research and community-generated products and best practices in multiple languages (English, Spanish, Marshallese) that could be used in real time, without the lag involved in disseminating through strictly peer-reviewed products. The ERC also offered the consortium a reliable way to document progress over time in addressing problems and gaps related to COVID-19. This allowed for convenient communications across stakeholder groups using materials and images that resonate with diverse communities, particularly those most affected by the pandemic. Additionally, the use of community-engaged methods allowed the ERC to directly respond to needs expressed by RADx-UP project teams and community partners in order to disseminate the most relevant materials on a large scale.

The RADx-UP consortium hopes that the ERC will continue to be publicly available beyond the RADx-UP funding period, as COVID-19 continues to affect communities and new information emerges. The ERC is an important archive of COVID-19 information and resources, and the ERC infrastructure is a strong example of a nationwide, public-facing digital resource center that can serve as a model for future large-scale health crises.

References

- Blanck, P., Ritchie, H., Schmeling, J., & Klein, D. (2003). Technology for independence: A community-based resource center. *Behavioral Sciences & The Law*, 21(1), 51–62. <http://doi.org/10.1002/bsl.522>
- Chen, P. G., Diaz, N., Lucas, G., & Rosenthal, M. S. (2010). Dissemination of results in community-based participatory research. *American Journal of Preventative Medicine*, 39(4), 372–378. <https://doi.org/10.1016/j.amepre.2010.05.021>

Goodsmith, N., Moore, E. M., Siddiq, H., Barceló, N. E., Ulloa-Flores, E., Loera, G., Jones, F., Aguilar-Gaxiola, S., Wells, K., & Arevian, A. (2022). Community-partnered development of a digital mental health resource website to support diverse communities during the COVID-19 pandemic. *Journal of Health Care for the Poor and Underserved*, 33(1), 506–516. <https://doi.org/10.1353/hpu.2022.0039>

Israel, T., Farrow, H., Joosten, Y., & Vaughn, Y. (n.d.) *Community Engagement Studio Toolkit 2.0*. Meharry-Vanderbilt Community Engaged Research Core, Vanderbilt Institute for Clinical and Translational Research. https://www.meharry-vanderbilt.org/sites/vumc.org/meharry-vanderbilt/files/public_files/CESToolkit%202.0.pdf

Lord, S. E., Seavey, K. M., Oren, S. D., Budney, A. J., & Marsch, L. A. (2019). Digital presence of a research center as a research dissemination platform: Reach and resources. *JMIR Mental Health*, 6(4), e11686. <https://doi.org/10.2196/11686>

McDavitt, B., Bogart, L. M., Mutchler, M. G., Wagner, G. J., Green, H. D. Jr., Lawrence, S. J., Mutepe, K. D., & Nogg, K. A. (2016). Dissemination as dialogue: Building trust and sharing research findings through community engagement. *Preventing Chronic Disease*, 13, 150473. <http://doi.org/10.5888/pcd13.150473>

Okonkwo, N. E., Aguwa, U. T., Jang, M., Barré, I. A., Page, K. R., Sullivan, P. S., Beyrer, C. & Baral, S. (2021). COVID-19 and the US response: Accelerating health inequities. *BMJ Evidence-Based Medicine*, 26(4), 176–179. <https://doi.org/10.1136/bmjebm-2020-111426>

RADx-UP. (Updated 2023a, June). *About RADx-UP*. [radx-up.org. https://radx-up.org/about](https://radx-up.org/about)

RADx-UP. (Updated 2023b, June). *RADx-UP Image Bank*. [radx-up.org. https://myhome.radx-up.org/image-bank](https://myhome.radx-up.org/image-bank)

RADx-UP. (Updated 2023c, June). *Resources*. [radx-up.org. https://radx-up.org/resources](https://radx-up.org/resources)

RADx-UP. (2022). The Vaccine Equity Cooperative. [radx-up.org. https://radx-up.org/resource-type/communications-and-outreach/the-vaccine-equity-cooperative](https://radx-up.org/resource-type/communications-and-outreach/the-vaccine-equity-cooperative)

RADx-UP. (2021, December). *Pregnancy and COVID-19 testing and vaccination (English)*. [radx-up.org. https://radx-up.org/resource-type/flyers-posters-handouts/pregnancy-and-covid-19-testing-and-vaccination-english](https://radx-up.org/resource-type/flyers-posters-handouts/pregnancy-and-covid-19-testing-and-vaccination-english)

RADx-UP. (2021a). National COVID-19 Resiliency Network (NCRN) Community Health Worker Tool Kit. [radx-up.org. https://radx-up.org/resource-type/communications-and-outreach/national-covid-19-resiliency-network-ncrn](https://radx-up.org/resource-type/communications-and-outreach/national-covid-19-resiliency-network-ncrn)

RADx-UP. (2021b). SARS-CoV-2 screening testing in schools for children with intellectual and developmental disabilities. [radx-up.org. https://radx-up.org/resource-type/research-briefs/sars-cov-2-screening-testing-in-schools-for-children-with-intellectual-and-developmental-disabilities](https://radx-up.org/resource-type/research-briefs/sars-cov-2-screening-testing-in-schools-for-children-with-intellectual-and-developmental-disabilities)

Wolf, S. H., Masters, R. K., & Aron, L. Y. (2021). Effect of the COVID-19 pandemic in 2020 on life expectancy across populations in the USA and other high-income countries: Simulations of provisional mortality data. *The BMJ*, 373, n1343. <https://doi.org/10.1136/bmj.n1343>

Acknowledgements

The authors would like to thank the RADx-UP consortium, community consultation studio participants, Image Bank participants, and research brief research teams and CDCC staff for their essential efforts in contributing to the success of the RADx-UP ERC and associated programs.

The consortium received Duke Institutional Review Board (IRB) approval for the RADx-UP CDCC (IRB# Pro00106873). Research reported in this RADx Underserved Populations (RADx-UP) publication was supported by the National Institutes of Health under Award Number U24MD016258. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

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