



Published in final edited form as:

*Int J Qual Methods*. 2023 ; 22: . doi:10.1177/16094069231164938.

## Applying Rapid Qualitative Analysis for Health Equity: Lessons Learned Using “EARS” With Latino Communities

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### Abstract

Qualitative research amplifies the voices of marginalized communities and thus plays a critical role in shaping our understanding of health inequities and their social determinants. Traditional qualitative approaches, such as grounded theory or thematic analysis, require extensive training and are time- and labor-intensive; as such, they may not be adequately suited to address health equity issues that require a swift response. Rapid qualitative analysis (RQA) is an action-oriented approach to qualitative data analysis that may be used when findings are needed to quickly inform practice. RQA capitalizes on using a team to summarize key points from qualitative data into matrices to explore relevant themes efficiently and systematically. In this paper, we provide case examples from our work applying RQA to health equity research with Latino communities to

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#### Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

#### Ethical Approval

The featured studies were approved by either the University of Miami Institutional Review Board (Approval nos. 20181006 and 20160415), or the George Washington University - Office of Research Integrity (Approval no. NCR202910). Study 20181006 involved a waiver of signed consent; prior to enrollment in the study, participants marked a checkbox indicating, “Yes, I consent to participate.” For Study 20160415, all participants provided written informed consent prior to enrollment in the study. For Study NCR202910, all participants provided verbal consent prior to enrollment in the study.

address community needs, such as responses to public health emergencies and the development of service delivery and technology interventions for infectious and chronic diseases. We draw from our collective experiences to share lessons learned and provide the following specific recommendations (“EARS”) to researchers interested in applying RQA for health equity research: (1) **Employ** RQA to address rapidly evolving, urgent, health equity challenges; (2) **Assure** quality and rigor throughout the RQA process; (3) **Respond** to barriers and problem-solve as needed; and (4) **Strengthen** community relationships before, during, and after using RQA. Overall, we advocate for the use of RQA to promote health equity due to its ability to integrate the vital perspectives of marginalized communities and efficiently respond to their needs.

## Keywords

rapid qualitative analysis; health equity; Latino

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## Introduction

The U.S. Department of Health and Human Services and *Healthy People 2030* define health equity as “the attainment of the highest level of health for all people,” achieved by “valuing everyone equally with focused and ongoing societal efforts to address avoidable inequalities, historical and contemporary injustices, and the elimination of health and health care disparities” (Office of Disease Prevention and Health Promotion, n. d.). Focusing on health equity represents an important paradigm shift away from the traditional emphasis on health disparities, or health differences associated with disadvantage in social, economic, and/or environmental domains (Srinivasan & Williams, 2014). Healthy equity refers to social justice in health and emphasizes the need to focus on solutions for achieving the best possible health for all people (Braveman, 2014; Braveman & Gruskin, 2003).

Research plays a critical role in the pursuit of health equity. Beyond documenting health disparities and advancing our understanding of their corresponding social-ecological determinants, research informs the development and evaluation of evidence-based interventions and policies. Importantly, it also furthers our understanding of implementation factors, processes, and strategies, with several scholars recently advocating for the need to include an equity focus at the outset of all implementation research and practice activities (Baumann & Cabassa, 2020; Brownson et al., 2021; Kerkhoff et al., 2022). Given its ability to engage and amplify the voices of marginalized communities, qualitative research is an especially important methodologic tool for advancing health equity (Griffith et al., 2017). As noted by Shelton and colleagues (2021), qualitative methods provide a rich and nuanced understanding of complex, multi-level contextual factors that create and reinforce health inequities. They are also especially well-suited for formulating actionable solutions together with community stakeholders and understanding intervention and implementation successes and failures (Shelton et al., 2021).

Despite the numerous advantages of qualitative research, traditional qualitative approaches (e.g., grounded theory, phenomenology, thematic analysis), require extensive training and are time- and labor-intensive. These approaches may thus not be adequately suited to

address healthy equity issues that require a swift response. Rapid qualitative analysis (RQA) has emerged as an alternative (and at times complement) to traditional qualitative approaches as an action-oriented approach that prioritizes the efficient delivery of information to guide decision-making (Beebe, 2014; Hamilton & Finley, 2019; Johnson & Vindrola-Padros, 2017; Taylor et al., 2018; Vindrola-Padros et al., 2021; Vindrola-Padros & Vindrola-Padros, 2018; Watkins, 2017). Although there are different RQA approaches, each of which has its own unique procedures (e.g., rapid assessment procedures (RAP), rapid and rigorous qualitative data analysis (RADaR technique), rapid ethnographic assessments (REA)), they generally consist of using a team to summarize key points from qualitative data into more manageable matrices to explore relevant themes efficiently and systematically (Averill, 2002; Miles et al., 2014). For example, the steps described by Hamilton involve developing brief summary documents to summarize key points from interviews, transferring the information into matrices to view data across all participants and all domains of interest, and using a matrix analysis approach to explore relevant themes (Hamilton, 2013; Hamilton & Finley, 2019).

In this paper, we provide case examples from our work applying RQA to health equity research with Latinos to address community needs, including responses to public health emergencies (i.e., COVID-19) and the development of service-delivery and technology interventions for infectious and chronic diseases (i.e., HIV, obesity) disproportionately represented in these populations. Latinos are the largest and youngest ethnic minority group in the United States, with data from the 2020 census indicating that just over 62 million Americans, or 19% of the nation's total population, identify as Hispanic or Latino (Jones et al., 2021). Importantly, Hispanics or Latinos are not a monolithic group. When described as an "ethnic group" in federal management data, Hispanics or Latinos include any person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture origin, regardless of race. Latinos have transnational experiences that intersect with their lived experiences in the United States and their countries of origin (Sauceda et al., 2019). Compared to non-Hispanic Whites (defined by the US Census Bureau as individuals who respond "No, not of Hispanic/Latino/Spanish origin" and report "White" as their race), U.S. Latinos have lower levels of educational attainment, higher levels of poverty, and are least likely to have health insurance compared to any other racial/ethnic group (US Department of Health and Human Services Office of Minority Health, 2021). They are also more likely to die from both infectious and chronic diseases like COVID-19 and cancer (American Cancer Society, 2021; Rodriguez-Diaz et al., 2020). It is thus critical to address health equity issues in Latino populations, as these disparities are largely driven by inequitable social and structural environments. Following our case examples, we share lessons learned and provide four specific recommendations for conducting RQA to advance health equity research.

## Case Examples

### Case Example 1: Public Health Emergency (ARH, ERW)

When the COVID-19 pandemic emerged as a major public health emergency, our team (including ARH and ERW) was in the early stages of a study to examine barriers and facilitators to accessing HIV prevention and behavioral health treatments among Latino

sexual minority men (i.e., gay, bisexual, or other Hispanic/Latino men who do not identify as heterosexual; LSMM) in South Florida (Harkness, Satyanarayana, et al., 2021). Our goal in identifying these determinants was to improve the reach of evidence-based HIV prevention and behavioral health treatments to LSMM because this population experiences significant HIV and behavioral health disparities (Centers for Disease Control and Prevention, 2020).

It became clear to our team early on that Latino and sexual minority communities were disproportionately affected by this new pandemic in terms of physical health, mental health, and other key outcomes. Based on our study's timeline, we were uniquely poised to examine the potential impacts of COVID-19 on LSMM and quickly developed a quantitative measure called the Pandemic Stress Index (Harkness et al., 2020). Although this measure provided us with some initial insights related to increased stress levels among LSMM (e.g., 64% reported increased anxiety, 59% reported increased depression; Harkness et al., 2021d), it was clear that our cross-sectional quantitative data told an incomplete story. To ensure that we amplified the needs, resilience, and distinct experiences of LSMM during the pandemic, we determined that a qualitative approach was needed.

We began our qualitative exploration by developing an interview guide and selecting three key domains to explore: (1) sexual behavior, (2) mental health and stress, and (3) impacts of behavioral and HIV-related health service delivery. Prior to COVID-19, our team had engaged in "traditional" qualitative research, which we were cognizant could take a protracted time from project development to dissemination of findings. Given the rapidly shifting landscape of the pandemic, and our hope to disseminate findings quickly to inform public health practice and subsequent research, we explored "non-traditional" qualitative methods. Our search led us to Hamilton and colleagues' approach to RQA (Hamilton, 2013; Hamilton & Finley, 2019), which was an ideal fit for our research goals.

Our first step in applying RQA was to assemble a team of scholars who expressed a commitment to see this project through from start to finish, with an expedited timeline. The team was large and diverse, and included individuals who were bilingual (English/Spanish) to ensure LSMM could participate in their preferred language. The PI of the study (ARH) viewed training videos in RQA, read manuscripts about how to apply the method, and consulted several of the other authors on this paper (SMS, CERD) to inform the approach. Further, the PI provided training to all team members (including ERW) in how to follow the interview guide, create summary documents for RQA (e.g., create non-interpretive summary of key points relevant to research question), assure quality through auditing other team members' summaries, and analyze and interpret interviews via matrices and thematic identification. This thorough training, including collaborative auditing systems, enhanced the rigor of our study. We were able to quickly recruit 20 LSMM (n = 10 living with HIV; n = 10 living without HIV) because we had conducted prior research and engagement activities with the community, and these individuals had provided their consent to be contacted for future research. We conducted recruitment remotely through social media and interviews with videoconferencing software to comply with early pandemic mitigation strategies.

As we conducted interviews, our team met weekly to review the prior week's interviews and conduct rapid analysis of the completed summaries. Because we had limited resources, we were unable to produce transcripts for our rapid analysis; and instead, summarized directly from the audio files. However, analysts were engaged in data collection, which enhanced the rigor of our study. We began summarizing interviews as soon as interviews were finished, allowing us to swiftly pivot from data collection to data analysis and interpretation. After summarizing the first 10 interviews, a subset of our team (three members and the PI) reviewed the findings and identified themes within each of our three domains. It became apparent that the richness and depth of participants' stories merited multiple manuscripts to fully share their insights.

Although rapid writing is not necessarily specified within RQA guidelines, early specification of intended products is recommended. Our team decided to take the approach of rapidly bringing our findings into written manuscripts to facilitate faster dissemination. Our first manuscript described how LSMM's sexual behavior shifted during the COVID-19 pandemic, in many cases reducing sex with casual partners to prevent acquisition and transmission of COVID-19 and others reporting increased sex and sexual satisfaction with primary partners due to having more time together (Harkness, Weinstein, Atuluru, Vidal et al., 2021). In the next manuscript, we described the ways that the pandemic negatively impacted LSMM's mental health (Harkness et al., 2021b). LSMM described both amplified and reduced minority stress (the extra stress that sexual minority men experience due to heterosexism), citing reduced stress due to less exposure to street harassment and increased stress due to disconnection from affirming communities. LSMM described adaptive coping, including relying on friends and family for support and helping others as protective to one's own mental health, all of which are potential leverage points for mental health interventions to help LSMM cope during disruptive events like COVID-19. Finally, our last manuscript articulated both the disruptions to HIV and behavioral health services that LSMM faced (sounding the alarm that COVID-19 may have amplified pre-existing disparities), but also the ways that they found the healthcare system helpfully innovated to meet their needs (Harkness, Weinstein, Atuluru, et al., 2022). Our RQA findings identified that innovations such as telehealth, mailed medication, extended prescriptions, and free public transportation are all potential ways to achieve health equity beyond the immediate impacts of COVID-19.

Across these manuscripts and using RQA, we were able to provide in depth information about how COVID-19 was uniquely impacting LSMM without the protracted time that qualitative research can often take to achieve its goals. Data collection for this project began in June 2020, and by September 2020 we had submitted our first manuscript. The papers were published from 2021 to 2022, and we also disseminated our findings earlier through conference presentations and local meetings. Notably, participants shared with interviewers that they appreciated the opportunity to share about their experiences during an acutely stressful period. Our rapid research has since laid the groundwork for subsequent research examining COVID-19 vaccine engagement among LSMM (Weinstein et al., 2022) and informed our development of an implementation strategy to facilitate LSMM's uptake of HIV-prevention and behavioral health treatment (Harkness, Weinstein, Lozano et al., 2022).

## Case Example 2: Healthcare Service Delivery (CERD)

In 2019, the U.S. government launched the *Ending the HIV Epidemic* Initiative to reduce the number of new HIV infections by at least 90% by 2030. As part of this initiative, resources have been made available to focus interventions and research in 57 jurisdictions where more than 50% of the new diagnoses occurred in 2016 and 2017 and states with a disproportionate occurrence of HIV in rural areas (HIV.gov, 2021). Latino populations are overrepresented among those affected by the HIV epidemic, particularly transgender people and gay, bisexual, and other men who have sex with men (Rodriguez-Diaz, Martinez et al., 2021).

Our research team (led by CERD) has nearly a decade of experience conducting community-based participatory HIV research with Latino populations. With the support of the NIH-funded DC Center for AIDS Research (DC CFAR), our team is conducting HIV implementation science research with Latino populations in Washington, DC and Puerto Rico. When restrictive public health measures were placed in response to the COVID-19 pandemic, we identified that the same socio-structural drivers for health inequities shaping the HIV epidemic among Latinos also influenced how COVID-19 was affecting Latino populations in the continental U.S. (Millett, 2020; Rodriguez-Diaz et al., 2020). Moreover, the public health responses to the COVID-19 pandemic impacted how other healthcare services were provided (Kintziger et al., 2021). It was not surprising that the response to the COVID-19 pandemic also disrupted the provision of HIV prevention and care services.

As a result, a group of scientists and community partners prioritized understanding the impact of COVID-19 on the provision of HIV services for Latino populations in Washington, DC and received subsequent NIH funding through the DC CFAR to explore these experiences. In collaboration with community partners, we designed a research protocol that could help to achieve our research goals and provide evidence to inform the provision of HIV services for Latino communities. Following good practices for community-academic partnerships (Drahota et al., 2016), we developed a research protocol, interview guide, and analysis and dissemination plans.

Inspired by the work of Harkness and colleagues (2021), we developed the research protocol considering the use of RQA. We provided thorough training to the bi-cultural and bilingual research team through webinars provided by researchers with experience using RQA and journal clubs. As part of the training, we practiced employing RQA using previously collected data as part of our HIV prevention implementation science projects. All team members participated in data analysis and interpretation.

We conducted interviews with 13 gay men, seven transgender women, and nine HIV providers serving Latinos in the Washington DC area from February to June 2021. Our RQA was conducted from March to August, and within 8 months of initiating data collection, we disseminated research findings. The data documented their experiences receiving and providing HIV services during the COVID-19 pandemic. Latino gay men and transgender women identified the technology divide, transportation, employment, and housing as significant factors that interplay with their ability to receive preventive services or adhere to HIV care recommendations. Similarly, healthcare providers noted the lack of readiness of



HIV organizations to respond to the public health emergency and the financial and health burden caused by having to work from home. Negative experiences in healthcare encounters and limited cultural competency in providing services were also identified. Participants indicated how healthcare, technology, economy, and discrimination are interconnected, and their collective negative impact on Latinos has become noticeable during the pandemic.

Findings evidenced the systemic challenges experienced for the provision of HIV services to Latinos during the pandemic. The issues documented by the research participants required structural interventions to reduce or eliminate inequities. Because of our continued involvement with the Latino community and HIV service organizations, we summarized the research findings for the community using already-established platforms such as web-based meetings, community forums, and direct communication with stakeholders. We also shared findings with the HIV research community in Washington, DC using resources available through the DC CFAR (e.g., newsletters, seminars). As a result of our ability to rapidly provide evidence of the challenges experienced by Latino communities needing HIV services, there was scientific evidence to inform some institutional or systemic changes. Among these changes were the inclusion of at least one HIV service organization implementing comprehensive policies for employee safety in the workplace, an increase in the resources available to facilitate transportation for patients, and training to HIV care providers for the implementation of culturally appropriate services to Latinos disproportionately affected by HIV.

### **Case Example 3: Technology Development (SMS, VP)**

U.S. Latino youth have the highest prevalence of obesity (26%) relative to all other racial/ethnic groups (Fryar et al., 2020). Our team conducted a systematic review and meta-analysis of obesity prevention and treatment interventions among Latino youth aged 0–18 years old and found that few interventions targeting adolescents were primarily family-based despite the cultural relevance of familism (St. George et al., 2021). We also noted that only 4% of the >100 studies leveraged some form of technology (e.g., Internet, texts). These findings signaled a clear opportunity to increase digital lifestyle intervention research among Latinos, who are just as likely as non-Latino Whites to own smartphones (85%) and more likely (25% vs. 12%) to be smartphone-only Internet users (Perrin, 2021).

Following the IDEAS (Integrate, Design, Assess and Share) framework (Mumma et al., 2016) for developing effective digital interventions to change health behaviors, we (SMS, VP, and additional team members) co-designed an 8-module smartphone-delivered obesity prevention intervention, known as *Healthy Juntos*, with Latino parents and their 12–15-year-old adolescents at risk for obesity (St. George et al., under review). The intervention is grounded in family systems and behavioral theories, and its essential elements include family communication and positive parenting skills training (e.g., monitoring, reinforcement), behavioral skills training (e.g., goal-setting, self-monitoring through integration with Fitbit devices), and autonomy support (e.g., input/choice).

As part of our user-centered design process, we conducted three rounds of iterative qualitative data collection and used RQA to summarize our findings so that we could quickly provide our technology development partners with information relevant to building

our intervention prototype. Data collection began with preliminary focus groups and interviews with 20 parent-adolescent dyads to understand the ways in which they utilized technology for health and to elicit their suggestions for a digital lifestyle intervention. Based on their feedback, our team developed a series of paper and minimally functioning prototypes. In our second round of data collection, we asked 15 parent-adolescent dyads to “think aloud” while interacting with these prototypes to understand their navigation of the intervention, identify potential problems, and assess their interpretation of design elements. We recorded their suggestions for improving intervention content, comprehension, functionality, and aesthetics. Next, we worked with our technology development partners to develop a fully functioning prototype. We evaluated the prototype in a field trial with 10 parent-adolescent dyads; the field trial involved allowing participants to use the intervention for the full 8 weeks in their natural environment. Our third round of data collection involved interviewing participants from the field trial to understand their overall experience with each of the intervention features. We completed our RQA of 16 interviews in 3 weeks during this phase with a team of six research assistants. Based on participants’ feedback, we made numerous changes to our fully functioning prototype to reduce participant burden and increase usability (e.g., simplifying login procedures) and engagement (e.g., health coaches). We are now evaluating the feasibility, acceptability, and preliminary effects of the fully functioning intervention in a pilot randomized controlled trial.

Notably, bilingual team members conducted all qualitative data collection and participated in the RQA process described by Hamilton and colleagues (Hamilton, 2013; Hamilton & Finley, 2019). Having team members fluent in both English and Spanish conduct the analyses enhanced the rigor of our study and allowed us to summarize interview content more quickly from Spanish to English without the need for the intermediary step of translation to English. We created interview summary documents and transferred this information into our matrices, usually organized by intervention feature, so that we could easily identify the changes we needed to make to each component of the intervention. We developed separate matrices for parent and adolescent data so that we could easily identify feedback that was consistent (or unique) across groups. At each step, our team produced two final tables (one for parents, one for adolescents) that condensed data from all interviews into the feedback and recommendations we ultimately shared with our software partners. Given they were usually organized by intervention feature, these final tables helped to facilitate and streamline our communication with the software team. Refer to Figure 1 for a sample abbreviated matrix from this study.

## Lessons Learned and Recommendations

Drawing from our collective experiences conducting these studies, we share lessons learned and offer the following specific recommendations (“EARS;” Table 1) to researchers interested in applying RQA for health equity research: (1) **Employ** RQA to address rapidly evolving, urgent, health equity challenges; (2) **Assure** quality and rigor throughout the RQA process; (3) **Respond** to barriers and problem-solve as needed; and (4) **Strengthen** community relationships before, during, and after using RQA.



## Employ RQA to Address Rapidly Evolving, Urgent, Health Equity Challenges

It is important to link the needs of a project to the appropriate qualitative methodology. RQA is well-suited for rapidly evolving, urgent, health equity situations. Although rapid research has been employed by social scientists during complex health emergencies for decades, the 2013–2016 Ebola outbreak in West Africa marked a notable increase in the explicit use of “rapid” methods (Johnson & Vindrola-Padros, 2017). Following the Ebola epidemic, Johnson and Vindrola-Padros (2017) conducted a systematic review to understand the use of rapid qualitative methods in global health emergencies. The authors identified 22 articles published between 2003 and 2016 reporting on studies of natural disasters (e.g., hurricane, tsunami) or disease outbreaks (e.g., malaria, Ebola). Thirteen of the articles dealt with the Ebola outbreak in West Africa, highlighting the proliferation of this method during that time to assist with community-based response efforts. Overall, the authors found that rapid methods were helpful for identifying behaviors that influence health service use, context-specific local issues, and organizational level challenges to planning and implementing response efforts. They also highlighted the role of rapid qualitative methods in revealing societal tensions (e.g., racial, economic discrimination) that disproportionately impact marginalized populations before, during, and after public health emergencies.

As illustrated by two of our case examples, RQA is inherently a community/population-centered approach that can be used to understand a community’s priorities and respond to their needs rapidly during evolving, urgent, health equity situations such as the COVID-19 pandemic. This sense of urgency for addressing health equity issues may come directly from the community and may signal a call for scientists to help generate solutions rather than exhaustively describe the problem. Based on our experiences, RQA provides a rigorous approach to rapidly collecting, analyzing, and disseminating data. It is important to acknowledge that the benefit of applying RQA to facilitate solutions in our communities may be challenged by traditional, if not archaic, requirements of publishers and funders for the use of qualitative methodologies in research. These challenges may include using traditional methods for qualitative data analysis rather than emerging evidence-based practices and overemphasizing nebulous concepts of saturation rather than more nuanced concepts such as information power to determine the number of research participants in qualitative studies (Dworkin, 2012; Hennink & Kaiser, 2022; Malterud et al., 2016). We invite journals, funders, and colleagues to consider RQA as equally rigorous in the overall toolbox of qualitative methods; just as with other qualitative methods, RQA is a tool that can be used rigorously when the situation calls for it. This understanding will be beneficial for science, communities, and health equity.

We also invite readers to consider less obvious “rapidly evolving” health equity situations than disease outbreaks, as illustrated by our third case example related to the development of a technology-based lifestyle intervention. In the case of digital health, although commercially available health applications are brought to market substantially more quickly than research-funded health applications, they often fail to incorporate evidence-based behavior change strategies (Schoffman et al., 2013). As noted by Arigo and colleagues (2019), current research methods do not necessarily match the needs of digital intervention tools. RQA may be applied as part of a user-centered design process to accelerate the pace

at which feedback from underrepresented end users is delivered to software developers to iteratively generate and continuously re-evaluate a product. In fact, RQA may be conceptualized as an appropriate methodologic tool for making timely adjustments to interventions, particularly those designed for marginalized populations (Lehavot et al., 2017).

### **Assure Quality and Rigor Throughout the RQA Process**

Standards of rigor and “trustworthiness” in qualitative research require immersion into the data, including time-intensive activities such as repeated reading of transcripts, listening to audio files, and reviewing notes (Morrow, 2005). Although these time-intensive immersive activities have traditionally been equated with rigor in qualitative research, RQA requires a balance between rigor and efficiency. Despite its rapid nature, a high quality RQA has standards that determine the rigor of the analysis. In fact, Taylor and colleagues (2018) found that RQA yields significant overlap in study findings compared to traditional thematic analysis but takes substantially less time. Carefully following one of several established RQA guidelines (e.g., Hamilton RQA, RaDAR) can facilitate rigorous yet efficient analyses. The “rapid” part of RQA does not come from “cutting corners;” rather, the length of time to produce results is reduced by using strategic tools to enhance the quality and rigor of the process. Below we provide suggestions for enhancing quality and rigor in RQA.

### **Establish a Large and Diverse Study Team Prior to Data Collection.**

A key (and sometimes undervalued) strategy for enriching the quality of all research, but in particular RQA, is to create a research team that is committed to the research and communities served, reflective of the communities the research seeks to understand, and large enough to cover the current needs of the team and any emerging priorities. A team composed of members who have differing cultural and linguistic backgrounds (e.g., speak multiple languages, have lived experience with specific cultural factors or contexts) can help engage participants in RQA interviews and potentially facilitate rapport-building necessary to conduct effective qualitative research. Furthermore, a diversity of perspectives and lived experiences within the research team can reduce gaps in knowledge and experience in data collection and analyses by offering the opportunity to see the data through different lenses (Mathijssen et al., 2021). This means reflexivity, another component of trustworthiness in qualitative research, cannot be sacrificed in RQA; research teams engaged in RQA still need to allow enough time to reflect on how their lived experiences and identities may be shaping their interpretations of the data. Finally, by having a large and/or flexible team, team members can “sub in” as needed if their colleagues have other commitments that pull them away from the project, especially during crises or if study staff are volunteers.

### **Provide Thorough Training for all Team Members.**

Like other qualitative approaches, RQA requires thorough training prior data collection. With RQA, training from the outset of the study is key to ensure that all team members understand how to implement innovative aspects of RQA that may be new to even experienced qualitative researchers. It is imperative that team members are trained not only on core components of qualitative data collection (e.g., rapport-building, using reflections and summaries, confidentiality, data safety) but also on specific techniques that are unique

to RQA such as completing interview summaries and employing matrix analyses to extract themes from the interview summaries (see Harkness, Weinstein, Atuluru, Vidal et al., 2021 for a more in-depth account of a training approach). Similarly, ensuring all team members fully understand the goals of the study will facilitate consistency in both the quality and quantity of information gathered in study interviews. Finally, being aware of team members' prior experience with qualitative research, and with RQA specifically as well as the topic of study, will allow research teams to tailor the training to the level of experience of the team.

Providing training comes with the assumption that the PI or project lead already has expertise in the method being applied. In all our cases, PIs had to rapidly learn RQA to apply it in a context that required a rapid response. Strategies we used to quickly acquire this knowledge which included leveraging publicly available resources (e.g., online trainings from Dr Hamilton), reviewing published RQA guidelines, integrating these into the study flow, and consulting with peers on their understanding and application of RQA. None of the PIs had received any formal training in RQA, which may be a gap in qualitative training given the increasing relevance of this method but also suggests the utility of publicly available resources and peer consultation. To train our respective teams, we used a combination of didactic and hands-on exercises. Specifically, we had team members also watch the online training videos and discuss key points as a group, including any study-specific guidance on expectations for the completion of interview summaries and matrices. Hands-on practice involved team members extracting information from the same select interviews and meeting to review the information summarized (e.g., appropriate level of detail).

### **Develop a Collaborative Auditing/Feedback System that Includes all Team Members.**

Another strategy for facilitating rigor in RQA is to develop a system in which each completed interview summary is audited by another team member before the PI completes a final review. Interview summary audits focus on two goals: (1) ensuring that relevant information central to the research questions is reflected in the summary, and (2) ensuring that the interview summary does not include information that is not relevant to the research questions or goes beyond summarizing the interview (e.g., interpreting). A quality interview summary facilitates rapid results because it prevents the team from having to return to the original recording or transcript multiple times to clarify key points. By creating this three-tiered inclusive and iterative feedback system for auditing interview summaries, RQA researchers can not only promote collaboration between team members, but also enhance the rigor and quality of the RQA by having multiple team members review each interview summary.

### **Engage Interviewers in Both the Data Collection and Analysis.**

Ideally, in a RQA, interviewers are involved in both the data collection and analyses. Interviewers carry with them a unique "first-hand experience" because they carried out the interviews themselves; therefore, leveraging this unique knowledge can facilitate theme and quotation identification. Having a consistent team throughout can also enhance the degree to which team members engage in reflexivity (i.e., understanding of the important intersecting contextual relationship between participants and interviewers) which in turn, increases the

rigor and credibility of the findings (Dodgson, 2019). Team members being involved in the entire process can also prevent issues of having to train new team members due to turnover.

### **Follow an Established RQA Approach Closely.**

There are now several guides for conducting a rigorous and efficient RQA, which may meet the needs of different researchers and projects. For example, Hamilton's RQA approach has online training videos which show how to employ this technique effectively (Hamilton, 2013; 2020). RaDAR has published guidelines that show step by step how to complete the entire process. Similarly, Nevedal et al. (2021) have published guidance on how to apply a Consolidated Framework for Implementation Research (CFIR)-focused RQA for implementation science research, with an accompanying online tutorial (Nevedal & Reardon, 2021). Given the number of published and publicly available strategies for using RQA, it is advisable to use these resources to promote rigor and efficiency.

### **Respond to Barriers and Problem Solve as Needed**

Although RQA is a novel way to approach community-driven qualitative research, there are several challenges that may arise when applying and disseminating information gathered using RQA. As described prior, one of the greatest strengths of RQA is that it can be effectively employed in rapidly evolving contexts. However, this strength can also be challenging due to the fast-paced work necessitated by this approach (Hamilton & Finley, 2019). Having a large team is one way of addressing this challenge to completing RQA in the planned time frame.

Similarly, research teams must be flexible should changes to data collection and analytic procedures (e.g., interview guide, data collection modality, timing) be required due to the evolving nature of the context. Although researchers may not be able to anticipate when adaptations will be needed, developing a research team culture that is founded on open and frequent communication is key. Researchers can work to foster a team that is flexible and adaptable by conducting a comprehensive staff training, generating a straightforward summary template, and assigning specific delineated roles between team members (e.g., one person in charge of the matrix compilation), so to avoid the hurdle with formatting differences and variance in data condensation styles.

Another barrier that commonly arises when implementing RQA relates to the availability of funding opportunities to conduct such research. Due to academia's prioritization of quantitative methods over qualitative methods, funding mechanisms at the national level that specifically support qualitative research are few and far between, especially compared with those focused on quantitative research (Carey & Swanson, 2003). Therefore, acquiring funds to conduct RQA, specifically in rapidly emerging situations in which a grant may not already be procured, can pose significant challenges for researchers looking to intentionally engage with communities in a more equitable way. Strategies for overcoming this barrier could include funding agencies providing small, rapid grant mechanisms to support RQA in urgent situations, reviewers being informed about innovative qualitative methods like RQA to ensure they are evaluated fairly, and shifting more broadly toward funding community-based participatory research that leverages communityengaged approaches like RQA.

Finally, conducting high quality, comprehensive RQAs is an intense process that has the potential to lead to burnout for individuals engaged with the process. As we have noted, RQAs are best employed in the context of rapidly evolving settings that are often centered around competing priorities. Therefore, PIs need to establish a culture of self-care and stress management, making space for team members to be both committed to the RQA while also recognizing their humanity and the stressors that these urgent situations can create for team members themselves. Although there are multiple strategies for managing this stress, some possible strategies include switching off tasks (e.g., taking a break from summaries), establishing periods of rest and reflection in which team members can practice self-care, taking stock of the “bigger picture” and how the team’s work is contributing to the greater good, and learning skills for anxiety management and burnout prevention.

### **Strengthen Community Relationships Before, During and After Using RQA**

Health equity can only be achieved with the participation of community members in decision-making at every step of the process – from the conceptualization of the project, in the design of data collection instruments, in data analysis, and dissemination of findings. Therefore, a successful RQA necessitates established community partnerships. Initiating community partnerships in the moment of a crisis or urgent situation is likely to be unsuccessful as trust has not yet been established. This may occur in contexts where pre-existing forms of distrust (e.g., toward medical scientists) drives skepticism about public health issues (Priniski & Holyoak, 2022). As illustrated by our first two case examples, community engagement was fundamental to capture the urgent needs of participants during the COVID-19 pandemic and integrate RQA in a culturally congruent manner. We were able to successfully manage research projects under adverse circumstances because our community partners and collaborators supported our projects and consequently, we presented useful data to inform relatively quick responses. Due to our well-established collaborations with Latino communities, we were able to provide evidence that described disparities, but also went on to provide actionable recommendations for achieving equity. This was made possible by engaging and integrating members of the community into our research projects, including analysis and interpretation, and by leveraging our pre-established partnerships built on trust. We learned that participating in research was a way for participants to break “social isolation” and share thoughts about their lived experiences during the COVID-19 pandemic.

Community-centered research requires time and commitment from scientists. However, these are highly valuable investments we can make in general and in particular when communities need quick responses. Communities are supporting researchers to do a better job when addressing health inequities, and with their engagement, they are changing the landscape of the work we do and how it is done. For example, community members involved in research have assumed critical roles with respect to determining research priorities, developing and reviewing protocols, ensuring ethics in research, and ensuring the representation of communities underrepresented in research (Ellis, 2021). Community-centered research is not for all scientists but is certainly an approach that is helping us innovate (Rodriguez-Diaz, Davis et al., 2021).

## Limitations

As with all other qualitative approaches, RQA has its own set of limitations and challenges. Researchers must consider whether RQA is appropriate to address their research questions and/or community needs and determine if they have the infrastructure (e.g., large, diverse team; existing community relationships) to employ RQA. A limitation to utilizing this approach potentially involves circumventing steps involved in traditional qualitative analysis (e.g., eliminating transcription, coding, member checking) and thus, potentially not achieving the same level of “depth.” Importantly, steps such as transcription are not necessarily requirements of RQA, and as noted by Vindrola-Padros and Johnson (2020), researchers may glean insights from coding directly from video or audio recordings (e.g., pauses in speech) and reduce interpretative bias involved in the process of generating transcripts (e.g., when transcripts are generated by third parties who lack contact with the community). Similarly, researchers may reconceptualize some of these steps in RQA, such as having a standing community advisory board to provide feedback on findings in lieu of traditional member checking. Despite the limitations and challenges, RQA is time- and resource-efficient, and as illustrated by our case examples, may be conducted with quality and rigor to address rapidly evolving, urgent, health equity challenges.

## Summary and Conclusions

Given the growing urgency to address health equity issues nationally and globally, there is a need for efficient, rigorous methodologic tools that can be employed by researchers to swiftly respond to community needs. Qualitative research is ideal for amplifying the voices of marginalized communities, but among its critiques is that it is time- and labor-intensive. RQA is an alternative to traditional qualitative approaches that involves summarizing key points into matrices and using a matrix analysis to explore relevant themes quickly. In our own work with Latino communities, we have applied RQA to understand the needs of sexual and gender minorities during the COVID-19 pandemic and in developing a technology-based obesity prevention intervention for families. We advocate for the use of RQA to further health equity research and recommend that it be employed to address rapidly evolving, urgent, health equity challenges. Beyond closely following an established RQA approach, we provide strategies for assuring quality and rigor throughout the RQA process, including the use of a large and diverse study team, thorough training for all team members, a collaborative auditing and feedback system, and the involvement of interviewers in data collection and analysis. We additionally highlight the importance of responding to barriers and problem-solving as needed, and strengthening community relationships before, during, and after using RQA. Health equity cannot wait for science; rather, science must adapt to aid in promoting the best possible health for all people.

## Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: Sara M. St. George was supported by National Heart, Lung, and Blood Institute grant K01 HL133521. Audrey Harkness was supported by National Institute on Minority Health and Health Disparities grant K23MD015690, with project support from the Miami Center for AIDS Research (funded by NIAID, P30 AI073961) and the Center for Latino Health Research Opportunities (funded by NIMHD, U54 MD002266). Carlos E. Rodriguez-Diaz was supported by the District of Columbia Center for AIDS Research, an NIH funded program



(P30AI117970), which is supported by the following NIH CoFunding and Participating Institutes and Centers: NIAID, NCI, NICHD, NHLBI, NIDA, NIMH, NIA, NIDDK, NIMHD, NIDCR, NINR, FIC and OAR. Alison Hamilton was supported by VA Health Services & Development (RCS 21–135, SDR 10–012) and VA Quality Enhancement Research Initiative (QUE 20–028) as well as NHLBI U01HL142109 and NIMH P30MH058107–25S2. The content is solely the responsibility of the authors and does not necessarily represent the official views of the NIH.

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Participant	Experience	Usage	Changes	Impact	Fitbit
<b>Adolescent 01</b>	<ul style="list-style-type: none"> <li>• “Pretty fun”</li> <li>• Favorite features: <i>Semana Healthy</i> videos, and workouts</li> <li>• Did not like to log food</li> </ul>	<ul style="list-style-type: none"> <li>• Sat down with mom to talk about it</li> <li>• Logged in at night or during the weekends at home</li> </ul>	<ul style="list-style-type: none"> <li>• Make a display with an easier flow of information</li> <li>• Send more reminder messages to log in</li> </ul>	<ul style="list-style-type: none"> <li>• Improved communication</li> <li>• Both motivated each other</li> <li>• Healthier family habits</li> </ul>	<ul style="list-style-type: none"> <li>• Liked Fitbit congratulations messages</li> <li>• Liked to use the alarm</li> </ul>
<b>Adolescent 02</b>	<ul style="list-style-type: none"> <li>• Overall positive experience</li> <li>• Learned a lot about healthy behaviors</li> </ul>	<ul style="list-style-type: none"> <li>• Watched videos on weekends</li> <li>• Sometimes accessed content together with mom and dad</li> </ul>	<ul style="list-style-type: none"> <li>• Send reminders twice (am and pm).</li> <li>• Make program longer (12 wks vs 8) and with more videos and content</li> </ul>	<ul style="list-style-type: none"> <li>• Learned to eat a healthier</li> <li>• Got closer with mom</li> </ul>	<ul style="list-style-type: none"> <li>• Liked a lot</li> <li>• It was fun</li> <li>• Good reminder as it helped keep track of activities, calories, and steps</li> </ul>
<b>Parent 01</b>	<ul style="list-style-type: none"> <li>• “Interesting”</li> <li>• Favorite feature: <i>Parenting Radio</i></li> <li>• Did not like having to access the app with link</li> </ul>	<ul style="list-style-type: none"> <li>• Logged in together during the weekends</li> </ul>	<ul style="list-style-type: none"> <li>• Make progress bars larger</li> <li>• Send more reminder messages</li> <li>• Release videos slowly vs. all at once</li> </ul>	<ul style="list-style-type: none"> <li>• More mindful about the importance of food and physical activity on health</li> <li>• Improved communication</li> </ul>	<ul style="list-style-type: none"> <li>• Provided motivation to keep adding steps to both her and adolescent weekly step goal</li> </ul>
<b>Parent 02</b>	<ul style="list-style-type: none"> <li>• Described as good</li> <li>• Felt the program had “too many things to do”</li> <li>• Used all the recourses provided</li> </ul>	<ul style="list-style-type: none"> <li>• Logged in mostly every day during job break (45 min) or during the weekends</li> </ul>	<ul style="list-style-type: none"> <li>• Add more reminders after 4-5 pm</li> <li>• Add teens to coaching sessions</li> </ul>	<ul style="list-style-type: none"> <li>• Spending time together doing workouts brought them closer to each other</li> </ul>	<ul style="list-style-type: none"> <li>• Great motivation to accomplish step goal</li> </ul>

**Figure 1.**  
Sample abbreviated matrix from case example 3.

**Table 1.**

**Summary of “EARS” for Rapid Qualitative Analysis (RQA).**

EARS Recommendation	Summary
Employ RQA to address rapidly evolving, urgent, health equity challenges	<ul style="list-style-type: none"> <li>• Use RQA during public health emergencies (e.g., natural disasters, disease outbreaks) and other less obvious, “rapidly evolving” health equity situations (e.g., making timely adjustments to interventions)</li> <li>• Use RQA to help reveal societal tensions that disproportionately impact marginalized populations</li> <li>• Use RQA to understand a community’s priorities and respond to their needs in a timely fashion</li> </ul>
Assure quality and rigor throughout the RQA process	<ul style="list-style-type: none"> <li>• Establish trustworthiness through reflexivity</li> <li>• Follow an established RQA approach (e.g., Hamilton RQA, RaDAR)</li> <li>• Establish a team committed to the project and achieving equity, including team members with shared lived experiences to reduce gaps in knowledge and experience</li> <li>• Provide thorough training to all team members; provide all team members (at multiple levels of experience and training) opportunities to be involved in the RQA</li> </ul>
Respond to barriers and problem solve as needed	<ul style="list-style-type: none"> <li>• Use a large team to address the fast-paced work necessitated by RQA</li> <li>• Foster a spirit of flexibility/adaptability among team members to address potential changes that emerge throughout the data collection and analysis process</li> <li>• Seek out small, rapid grant mechanisms to support RQA in urgent situations</li> <li>• Share RQA methods with colleagues to ensure RQA methods are evaluated fairly in grant reviews</li> <li>• Establish a culture of self-care and stress management for team members to prevent potential burnout</li> </ul>
Strengthen community relationships before, during and after using RQA	<ul style="list-style-type: none"> <li>• Leverage pre-established community collaborations to build on trust</li> <li>• Engage and integrate community members in decision making at every step of the process - from the conceptualization of the research project, in the design of data collection instruments, in data analysis, and dissemination of findings</li> </ul>