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8-1-2021

## Lessons Learned in Abruptly Switching from In-Person to Remote Data Collection in Light of the COVID-19 Pandemic

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### Recommended APA Citation

Walker, C. M., Williams, L. A., & Bowdre, T. (2021). Lessons Learned in Abruptly Switching from In-Person to Remote Data Collection in Light of the COVID-19 Pandemic. *The Qualitative Report*, 26(8), 2382-2389. <https://doi.org/10.46743/2160-3715/2021.4745>

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## Lessons Learned in Abruptly Switching from In-Person to Remote Data Collection in Light of the COVID-19 Pandemic

### Abstract

In light of the COVID-19 pandemic, a research study that utilized in-person focus groups to collect qualitative data was abruptly shifted to videoconference focus groups to minimize risk to subjects. Protocol amendments consisted of using an online scheduling tool to arrange focus groups by Zoom, providing electronic versions of consent forms and demographic surveys, and highlighting security features of the videoconference software. Lessons were learned from making an abrupt switch from in-person to remote focus groups. Making this type of shift is not simply a matter of switching for researcher convenience but includes determining the appropriateness of an abrupt switch for the research population of interest, fully understanding videoconference software best practices, decreasing focus group sizes, and increasing the incentive for participation.

### Keywords

ethnography videoconference, focus group, lessons learned

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### Acknowledgements

The authors would like to acknowledge Mr. Curtis Roby, Scientific Editor at The University of Tennessee Health Science Center/College of Nursing, for his editorial assistance.

# Lessons Learned in Abruptly Switching from In-Person to Remote Data Collection in Light of the COVID-19 Pandemic

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In light of the COVID-19 pandemic, a research study that utilized in-person focus groups to collect qualitative data was abruptly shifted to videoconference focus groups to minimize risk to subjects. Protocol amendments consisted of using an online scheduling tool to arrange focus groups by Zoom, providing electronic versions of consent forms and demographic surveys, and highlighting security features of the videoconference software. Lessons were learned from making an abrupt switch from in-person to remote focus groups. Making this type of shift is not simply a matter of switching for researcher convenience but includes determining the appropriateness of an abrupt switch for the research population of interest, fully understanding videoconference software best practices, decreasing focus group sizes, and increasing the incentive for participation.

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## Introduction

The severe acute respiratory syndrome coronavirus 2 (COVID-19) is a highly contagious virus that has contributed to 2.5 million deaths worldwide. Researchers across the globe have been required to modify or pause their research protocols and instead explore ways to keep participants and research personnel safe while conducting research during a pandemic to mitigate the further spread of COVID-19. One such avenue is shifting interview protocols from face-to-face to online videoconferencing.

According to the literature, the use of videoconference software for qualitative data collection is not a novel idea and has been considered attractive to researchers and participants due to its convenience, cost-effectiveness, and flexibility (Archibald et al., 2019; Hewson, 2008; Horrell et al., 2015). However, there is a dearth of literature involving the transition of protocols from in-person to remote focus groups while simultaneously conducting research. What factors should be considered before making this transition? What protocol modifications are needed? This paper aims to increase global awareness of factors to consider when making abrupt changes in protocol from in-person to remote data collection.

We developed and initiated a study pre-COVID-19 to better understand barriers to antiretroviral therapy adherence from the perspective of community health workers in HIV care. We completed one in-person focus group exploring this topic before modification of our protocol was required. To continue our research efforts and adhere to updated standards related to COVID-19, we revised our research protocol to replace in-person focus groups with remote focus groups. Using the literature to support the use of videoconferencing for collecting qualitative data during a pandemic, we briefly highlight our protocol amendments and feature lessons learned while shifting from actively conducting in-person focus groups to remote collection of qualitative data.

## **Background**

### **The Use of Technology to Support Remote Research**

Researchers have commonly used in-person interviews as the “gold standard” of collecting qualitative data as this method allows for natural interactions between participants and researchers (Irani, 2019). Researchers use a unique set of skills for interviewing, including the ability to establish rapport with and elicit emotions from participants to obtain the rich data desired (Mirick & Wladkowski, 2019; Novick, 2008). Interacting face-to-face typically facilitates the relationship between researcher and participant (Sedgwick & Spiers, 2009). However, in light of the COVID-19 pandemic, the feasibility of in-person data collection has declined exponentially. Fear of contracting the virus and travel restrictions brought on by the pandemic affect participants’ ability and willingness to gather in common physical and geographic locations (Gray et al., 2020; Memish et al., 2020), prompting an increase in or immediate change from in-person to remote collection of research data. As a result, remote research may become the new standard.

The use of videoconferencing platforms for qualitative data collection requires knowledge and skills that may have been previously unexplored by researchers. There is a growing list of videoconferencing software and tools, and researchers must consider several factors before selecting one for use with their research project including ease of use, level of comfort, cost, and features (Gray et al., 2020; Memish et al., 2020). Understanding digital technology and tools is particularly important when making an unanticipated change from in-person to remote interviews because although the basics of qualitative research remain unchanged, shifting to a digital platform requires “new tools, workflows, and creative thinking” (Micheli, 2020). For example, it is important to ascertain participants’ internet use capability prior to data collection, which can be done through digital surveys. In addition, understanding how to use technology such as Miro, an online visual collaboration for teamwork, may be innovative and efficient in capturing rich remote qualitative data (Castellanos et al., 2020).

Videoconferencing applications are often free and can be accessed through a computer, tablet device, or smartphone applications from most geographic locations. In addition, many videoconferencing programs allow real-time interaction between a group of individuals (Moylan et al., 2015). With increased internet use, reliable internet connections have become more secure and readily available, making connecting to a videoconferencing application less cumbersome than in previous years (Mirick & Wladkowski, 2019). Also, location flexibility removes scheduling conflicts associated with work and home responsibilities that often impede participation in research studies (Mirick & Wladkowski). For the researcher, videoconferencing makes sessions more cost-effective, easier to schedule, and eliminates the limitation of physical location (Archibald et al., 2019; Krouwel et al., 2019).

### **Protocol Amendments**

Protocol amendments consisted of using an online scheduling tool to arrange focus groups by Zoom, providing electronic versions of consent forms and demographic surveys, and highlighting security features of the videoconference software.

### **Arranging Focus Group Sessions**

The original research study protocol consisted of sending an introductory email to the director of community health worker programs in the Southern part of the United States to be forwarded to employees. The original in-person focus group was conducted in the employment

setting because it is a familiar environment in which community health workers would meet for team-based meetings. This setting was chosen to maintain a certain level of comfort and promote opportunities to speak freely and honestly, as occurs with team-based meetings in similar settings. An amendment to the protocol consisted of using an online scheduling tool to arrange focus groups by Zoom, an application designed for hosting videoconferences. Participants were given options to conduct the focus group with their colleagues during lunch breaks from their individual offices or during evening and weekend hours from their homes.

### **Administering Consent Forms and Demographic Surveys**

The original research study protocol consisted of administering hardcopies of the consent form and demographic survey to each research participant before beginning the in-person focus group. Once a convenient date and time for the videoconference focus group was determined through the use of the online scheduling tool, an amendment to the protocol consisted of notifying research participants of the need to electronically sign a consent form and complete a demographic survey. A link was provided by e-mail to access these forms, and participants were asked to complete both forms prior to the date of the scheduled videoconference focus group.

### **Conducting High-Quality and Secure Research by Videoconference**

The in-person focus group was conducted in a secure conference room in the community health workers' employment setting and was audio recorded by the strategic placement of digital voice recorders to capture clear, high-quality audio files. At the completion of the in-person focus group, data were then uploaded to an encrypted and password-protected computer. For the focus groups by videoconference, we implemented security features through Zoom to ensure the security and confidentiality of the sessions. Security features included:

1. Enabling the "waiting room" function: This function allowed the interview host to admit participants at the host's discretion. Only research participants who completed the consent form and demographic survey were allowed into the interview session from the waiting room. This function also prevented uninvited guests from entering the interview.
2. Password protecting the interview: Research participants were provided with a password that was required to enter the focus group interview.
3. Locking the meeting: Once all expected participants arrived to the interview, this function allowed the host to lock the interview and prevent others from joining  
(Zoom Video Communications, n.d.a.).

Prior to making these protocol amendments, we submitted and received approval from the university IRB. To address data security, we included a statement highlighting Zoom's ability to securely record and provide storage of encrypted interview data in the software's cloud. In addition, we used digital voice recorders for back-up data collection to capture clear, high-quality audio files. Audio files from the digital voice recorders were uploaded to an encrypted and password-protected computer. The recorded video file was downloaded from Zoom's cloud storage to an encrypted and password-protected computer.

## Lessons Learned

### The Appropriateness of Making the Switch

In our research study, all community health workers interviewed by videoconference were already working remotely in light of the COVID-19 pandemic and had internet access through a computer, phone, or tablet device. They were also familiar with the Zoom videoconference platform as they had used it or something similar for remote team-based meetings. As a result, they were familiar with speaking and interacting in a remote environment. They were able to complete surveys and sign consent forms electronically and did not report any computer/technology literacy problems. This will not be the case for all remote research participants making it important to identify needs that can be addressed prior to conducting remote research or determining whether this form of data collection is suitable for the population of interest.

Determining internet access for research participants is rarely problematic, however, issues arise when participants are not familiar with operating in an “e-world.” Downloading software and using camera functions and volume controls are simple tasks to the technologically savvy. However, to many, use of these technology tools can be daunting. Completing research documents such as electronic consent forms and demographic surveys may be even more difficult for participants who are not familiar with technology. Researchers can send reminder e-mails and set firm deadlines for the completion of these documents, but what if research participants do not routinely check their e-mail accounts? While it may be fairly easy for participants to connect to a remote focus group using Zoom software on a cellular device as application use is becoming the standard, but depending on the level of difficulty, it may not be as easy to navigate e-mails, electronic consent forms and demographic surveys.

Due to the nature of our research participants’ employment and familiarity with deadlines, particularly while working remotely, firm deadlines were not difficult for participants to meet. However, this must be considered in the context of research participants who may not be accustomed to routinely checking e-mails and adhering to firm deadlines compared to working professionals who have adjusted to working remotely. If researchers are able to successfully organize and conduct focus groups by videoconference but have found difficulty in other areas such as the electronic completion of documents, alternate methods such as phone calls should be considered to collect this information.

### Utilizing Videoconference Software and Exploring Best Practices

In our review of the literature, we found that participants should not only be provided with instructions on downloading videoconference software, but they should also be queried about their experience with the software to have a general idea of their knowledge and comfort level associated with it (Archibald et al., 2019). As a result of this finding, we sent an e-mail to research participants one day before the scheduled interview and asked the following questions:

#### **Have you ever used Zoom before?**

**If you answered no**, have you downloaded the app for Friday? How are you planning to connect to Zoom on Friday? By cell phone? Computer? Tablet?

**If you answered yes**, have you ever had any problems with Zoom? How are you planning to connect to Zoom on Friday? By cell phone? Computer? Tablet?

We anticipated that participants had used Zoom technology for participation in team-based work meetings. However, suppose participants are not familiar with Zoom. In that case, researchers should consider sending similar questions at least one week in advance and have a plan in place to address prior issues with the software or any current concerns. Adding a question such as, “Do you have any concerns with using Zoom for the focus group interview, and if so, what are your concerns?” may help to build rapport between the researcher and the participant prior to the focus group, as they work together to identify and address concerns. We also found that participants should be given an opportunity to participate in a Zoom trial session to test equipment and identify any connectivity issues ahead of the scheduled interview (Archibald et al., 2019).

To make the process of participating in a focus group by videoconference more convenient for our research participants, we asked them to log in 30-45 minutes prior to the scheduled interview to test personal equipment and identify connectivity issues. We also informed them that after testing their equipment, they could leave the session and return at the scheduled start time of the focus group. We did not anticipate early logins due to our perceived understanding of their familiarity with videoconference software, but several participants logged in early and simultaneously. The simultaneous logins made troubleshooting difficult, and participants who identified themselves as “Zoom saavy” experienced issues, nonetheless. Therefore, it is recommended that researchers schedule individual login times with all participants to address technological issues. It is also recommended that the researcher or a member of the research team be well versed in using the videoconference software to troubleshoot issues in a timely manner (Archibald et al., 2019).

In addition, researchers should review the videoconference platform’s best practices to assist with hosting a successful session. We have used Zoom for several team-based meetings but were unaware of the various security features or useful tips until we explored the resources offered by the company. Reviewing video tutorials and blog entries related to improving virtual presentation skills, enhancing productivity, and understanding meeting controls (Zoom Video Communications, n.d.b.) were very helpful in conducting a successful videoconference focus group. In addition, the *Online Event Best Practices Guide*, a brief, one-page instructional aid developed by the makers of Zoom, was helpful, as it offered pre-event, live-event, and post-event best practices to support videoconference events (Zoom Video Communications, n.d.b). Although this guide was not specific to research-related focus groups, several components such as managing webcam aesthetics and planning a rehearsal to review technology were still useful in ensuring the success of this research modality. It is anticipated that with the frequent and continued use of videoconference software, companies such as Zoom will have more frequent updates to improve usability. Researchers should frequently explore these updates and utilize them as needed for remote research.

## **Research participants and incentives**

Additional lessons learned include limiting the number of research participants when using videoconference software and increasing any incentives for online participation. We found that limiting the number of participants to 3 or 4 was beneficial because it allowed for substantial contribution from each participant while adhering to the allotted time frame. Although one hour was enough time to conduct our focus group interview by videoconference, researchers should consider the additional factors that could interfere with the allotted time, such as reminding participants to mute or unmute their microphones, minimizing background noise, and increasing volume of speech. We found that asking participants to mute and unmute their devices caused several interruptions during the focus group, so participants should be reminded about this function at the start of and periodically throughout the focus group to avoid

multiple interruptions and distractions. The same approach should apply for reducing background noise. The volume of speech should also be assessed during the trial session to avoid relaying this information during the recorded focus group. Interruptions and distractions are often inevitable when using videoconferencing to communicate, making this yet another reason to keep the remote focus groups small.

We increased the incentive for videoconference focus groups when compared to in-person focus groups to account for the additional time required to complete the demographic surveys and consent forms online, download Zoom software, answer prep questions related to the software, and log in early for troubleshooting assistance. This is a highly recommended suggestion to account for the additional time and effort needed to participate.

## Conclusion

Research shows that videoconferencing is a convenient, cost-effective, and often user-friendly method of securely conducting research (Archibald et al., 2019; Krouwel et al., 2019). Its ability to facilitate real-time interaction among researchers and participants promotes informal exchange and helps build rapport, making it an ideal venue for the collection of rich qualitative data. In addition, the easy accessibility and flexibility offered through use of video technology make research participation less cumbersome than in-person sessions. These positive aspects of videoconferencing make its use significantly beneficial to both researchers and participants, especially in light of the COVID-19 pandemic and the need to minimize risks to subjects.

In the event a researcher is considering an abrupt switch from in-person to remote focus groups, there are several factors that should be considered. Making this type of switch is not simply a matter of switching for researcher convenience but includes determining the appropriateness of an abrupt switch for the research population of interest, fully understanding videoconference software best practices, potentially decreasing focus group sizes to allow for substantial contributions and increasing the incentive for participation. Lessons learned in this paper can help facilitate the successful use of videoconferencing technology for the collection of qualitative interview data when in-person meetings are no longer a viable or desirable option and an abrupt switch to remote research is considered.

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### Author Note

Crystal Walker joined the faculty of the UTHSC College of Nursing in January of 2016. She earned her bachelor's degree in Biology from the University of Mississippi in 2009, and she is a three-time graduate of UTHSC: She earned her Master's of Science in nursing as a clinical nurse leader in 2011, Ph.D. in nursing in 2015, and DNP as a family nurse practitioner in 2016. She worked as an oncology nurse in the inpatient setting from 2011 to 2014, and her background in oncology supported her research interest as she focuses on the prevention of anal cancer in people living with HIV. She is interested in HIV primary care, the prevention of lower genital tract diseases, and sexual health. She currently practices as an advanced practice nurse at Regional One Health in the Adult Special Care Clinic, a patient-centered comprehensive clinic for adults living with HIV, and her primary area of teaching includes health assessment in the baccalaureate and doctoral nursing programs. She is a member of the Association of Nurses in AIDS Care, American Nurses Association, Tennessee Nurses Association, Sigma Theta Tau International Honor Society of Nursing, and The UTHSC College of Nursing Alumni Board. Please direct correspondence to [cmarti47@uthsc.edu](mailto:cmarti47@uthsc.edu).

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in Nursing Science from the University of Tennessee Health Science Center in 2015. Her research interests have focused on health disparities, minority health, and mental health in male caregivers within the context of chronic illness. She has completed both mixed method and qualitative research projects involving burden, depression, and perceived health in male caregivers of persons with end stage renal disease and stroke survivors, respectively. Dr. Williams has practiced in numerous facets of the nursing profession throughout her 23-year career, developing expertise in medical-surgical and psychiatric nursing. Her teaching responsibilities include providing both clinical and didactic instruction within the undergraduate program and didactic instruction in the graduate program. Her areas of teaching include Professional Issues and Transition to Professional Nursing, Mental Health, Adult Health, and Healthcare Economics. She is a member of Sigma Theta Tau International Honor Society of Nursing, the American Heart Association/American Stroke Association, the Southern Nurses Research Society, and the American Psychiatric Nurses Association. Please direct correspondence to [lwilli97@uthsc.edu](mailto:lwilli97@uthsc.edu).

Dr. Trimika Bowdre joined the UTHSC College of Nursing in 2005 as a Public Health Nursing Program Coordinator and later joined the faculty in 2017 as an Assistant Professor. She earned a Bachelor of Science degree from Xavier University of Louisiana, a master's degree in Public Health—Health Policy and Administration from the University of Southern Mississippi, and a Ph.D. in Public Health-Community Health and Health Promotion from Walden University. Her research interests are HIV, health disparities, and the older adult population. Dr. Bowdre has worked in numerous areas of the public health profession throughout her 21-year career, from the public health department, leading the HIV/AIDS Education and Community Development- Health Planning Sections to administering public health nursing grants in the academic realm. Her primary area of teaching is epidemiology in the Doctor of Nursing Practice (DNP) program. She is a member of the American Public Health Association and The National Society of Leadership and Success. Please direct correspondence to [tbowdre@uthsc.edu](mailto:tbowdre@uthsc.edu).

**Acknowledgements:** The authors would like to acknowledge Mr. Curtis Roby, Scientific Editor at The University of Tennessee Health Science Center/College of Nursing, for his editorial assistance.

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#### Article Citation

Walker, C. M., Williams, L. A., & Bowdre, T. L. (2021). Lessons learned in abruptly switching from in-person to remote data Collection in light of the COVID-19 pandemic. *The Qualitative Report*, 26(8), 2382-2389. <https://doi.org/10.46743/2160-3715/2021.4745>

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