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My Thoughts / My Surgical Pratice

Implementation of virtual focus groups for qualitative data collection in a global pandemic

The outbreak of the novel coronavirus disease 2019 (COVID-19) has emerged as a global health threat. COVID-19 has now infected over 20 million people and claimed more than 600,000 lives around the world.[1] These effects have had major repercussions on the healthcare system and revealed ethical dilemmas on resource allocation,[2] anti-Asian sentiment[3] and disproportionally higher mortality rates among African-Americans.[4] The conduct of patient-centered research, particularly those that require face-to-face interactions such as qualitative research, has also been significantly challenged. Focus groups are an important part of qualitative research and is a well-established method for collecting data to explore participants' opinions, experiences, and perspectives.[5] The hallmark of focus groups is to produce data and insights from a group interaction that would be less pronounced in an interview setting. Focus groups are traditionally organized as in-person discussions of a given topic with 6–8 participants and guided by an in-person moderator with audio-recordings for content analysis. Qualitative research is effective for exploring and understanding patient's perceived attitudes, beliefs and emotions regarding illness and healthcare experiences and its use has increased in surgical research.[6]

As COVID-19 has forced social distancing, discouraged indoor meetings and reduced financial resources, the ability to conduct in-person focus groups has been questioned. Protocols for recruiting, consenting and working with participants, for example, have all been previously based on assumed in-person interactions.[6] The uncertainty of the duration of this pandemic and the requirements of safety for patients and moderators has forced a decision to adapt these protocols to this new environment or to cease all research activities. With the advent of technologies such a virtual and internet-based meeting platforms, an opportunity now exists to widen the boundaries for conducting qualitative research including with focus groups.

According to the U.S. Census Bureau, 89% of American households have a computer with internet access capability.[7] The widespread adoption of technology now supports the potential conduct of virtual focus groups, which may benefit participants with geographical barriers to in-person participation. Early work with remote participants dispersed across Australia suggested that virtual focus groups using web-based video chat platform may be a potential tool to collect qualitative data.[8] Similar work in Sweden has also shown that focus group discussions held online are a feasible mode of qualitative data collection.[9] In the United States, these methods have mostly been described in asynchronous chat formats and virtual focus groups have been limited to small, non-minority and clinically narrow patient populations.[10] The feasibility of conducting virtual focus groups for minority participants and especially those after surgery remain unknown. In this manuscript, we aim to share our experience with the development and implementation of virtual focus groups for a minority surgical population. We will detail the steps for initiating virtual focus groups, describe how the recruitment/training process differs from in-person focus groups and review its advantages and disadvantages.

Setup and implementation

Before the recruitment process can begin, several adaptations must be made to transition from in-person focus groups to virtual focus groups (Fig. 1). First, the research team must decide which online platform will be used to host the virtual meetings. Our team decided to use Zoom (Zoom Video Communications, Inc., San Jose, CA), due its widespread use since the beginning of the pandemic. Based on its broad appeal, our team believed it likely that many participants would be familiar with this tool when approached by our recruitment team. Additionally, given the user-friendly design of the platform, we believed that first-time users could also be easily taught to use the program. Our institution also supports the use of Zoom, providing a professional license which allows unlimited meeting time, HIPAA compliant accounts and technology support. Secondly, adaptations for Institutional Review Board (IRB)-related processes must be made to assure protection of participants in research. This includes modifications of the consent forms, scripts and interview guides to specify that the meeting would be held virtually and that identities would be protected. Finally, written materials that are normally distributed during in-person focus groups for discussions must be prepared differently for virtual group participants. In our experience, this involved mailing material ahead of time for participant reviews and creating PDF files for screen share during the virtual focus groups.

Similar to in-person focus groups, the recruitment of virtual focus groups starts with a list of potential participants. The recruitment calls, however, must include additional eligibility screener questions inquiring about access to technology. Once the patient agreed to participate, a consent form was then sent using DocuSign (DocuSign Inc., San Francisco, CA). Use of DocuSign has grown steadily in recent years, but the pandemic has led to an acceleration of these type of applications for remote signing and tracking. Similar to Zoom, our institution also supports this technology,

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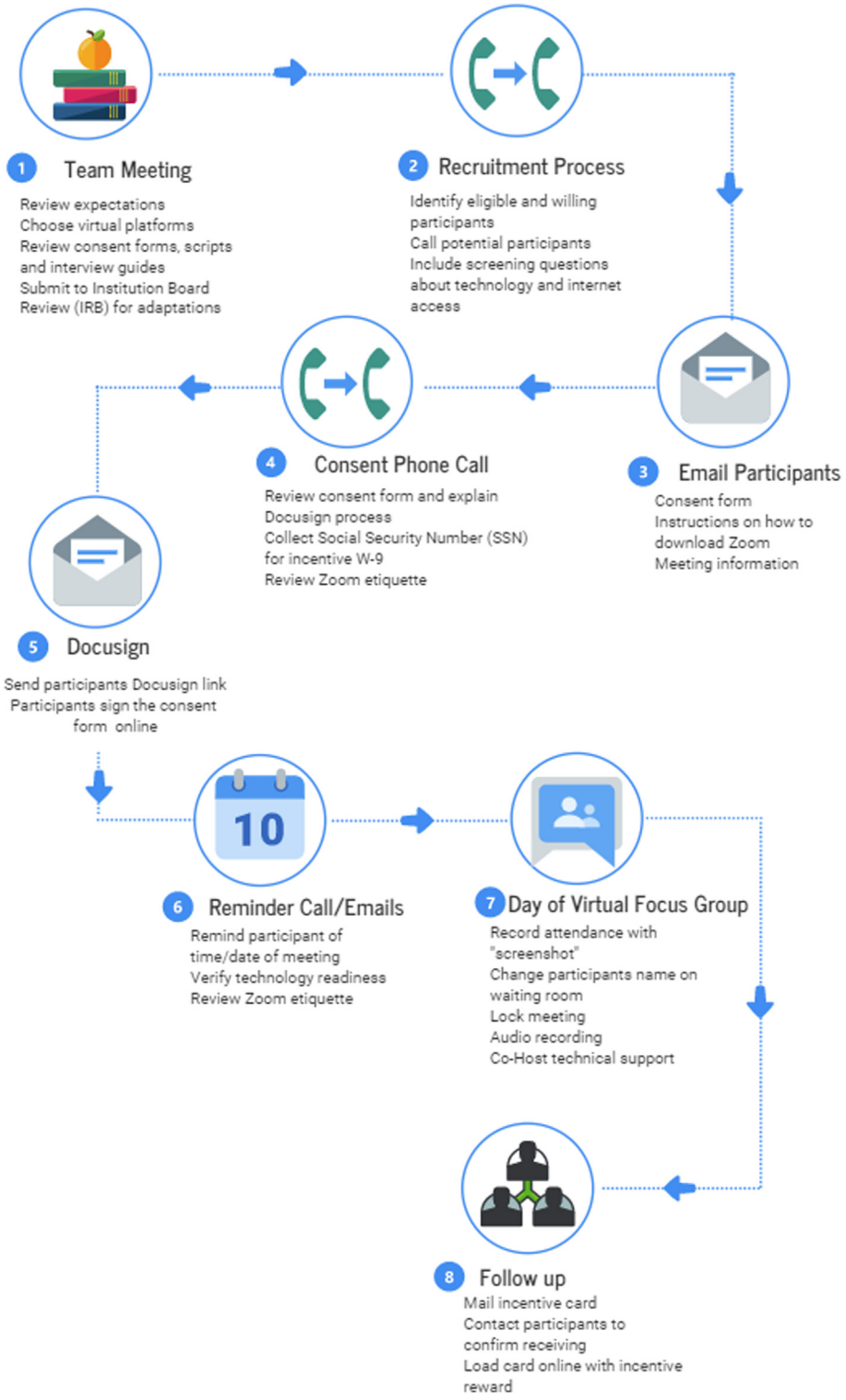

Fig. 1. Setup of virtual focus groups.

allowing consent forms to be sent in a HIPAA compliant manner. Follow-up calls were then made to review the consent form and to provide additional information regarding the use of Zoom and the date of the meeting. We highlight the comparison between processes for in-person groups and virtual groups in Table 1.

For security reasons, all meetings were password protected and a unique invitation was sent to participants individually. At the time of the meeting, all attendees were first sent to a waiting room with a co-host. In the waiting room, the participant identity was confirmed, and their screen name was changed, allowing for confidentiality between participants. Policies for providing incentives to study participants also needed to be adapted. Our institution

requires participants to complete and return a W-9 tax form in order to receive gift card incentives. The electronic W-9s were filed by the study coordinator once the participant shared their personal information in the virtual break room.

Once all the attendees joined, the meeting was locked, providing an extra layer of security. Although all attendees were instructed to participate with their cameras turned on, the meetings were recorded using audio only, which preserves the identity of the participants while still allowing for acceptable data collection for qualitative analyses. The moderator then proceeded with the group, asking the appropriated questions and following the interview guide. After reaching the end of the questions, the co-host ended the meeting to all participants and the incentive was mailed to them on the following day.

Moderator reflections

The UAB Minority Health and Health Disparities Research Center (MHRC) was involved with all virtual focus groups at our institution. The MHRC has extensive experience conducting and moderating in-person focus groups but none with virtual focus groups prior to the pandemic. At first, the proposed transition to virtual groups generated concerns over the quality of discussion content that could be collected virtually. Existing literature, however, suggests that similar themes and quality of data are obtained in both online chat and in-person focus group discussions.[11] While our group did not directly compare the quality of virtual focus group discussions to in-person focus group discussions, our moderators did not perceive that any less information was shared in the virtual format when compared to their prior experiences. After conducting six virtual groups, our moderators felt that overall participants were more relaxed online, more eager to share their experiences, and more engaged during the meetings.

The role of the primary moderator in facilitating the virtual focus group is similar to their role in leading in-person focus groups. It is the moderator who sets the context, drives the discussion and engages the participants in an interactive conversation. The moderator also creates the tone of the discussion, enabling all the participants to feel comfortable and involved. However, as potential technical and logistical issues are expected with virtual platforms, a co-moderator was required who had several new responsibilities. For traditional in-person focus groups, the co-moderator typically provides in-room logistical support such as signing-in late arrivals, taking notes and distributing incentives. For virtual focus groups, the co-moderator has the new responsibilities of admitting and organizing patients in the virtual waiting room, muting participants who may be unintentionally distracting others and resolving technical problems during the meeting. Therefore, in the virtual setting, the co-moderator acts as technology support for potential problems during the session. Additional issues may also arise with the quality of the video and the audio, which varied based on the internet quality, the device used to connect and the environment surrounding the participant. To minimize this issue, participants were informed of "Zoom etiquette**."** This included reminding participants to be alone in a room during the meeting, to disconnect other devices from the Wi-Fi and to avoid outside distractions.

Advantages of virtual focus groups

Many advantages exist with virtual focus groups. First, individuals may be more likely to participate because virtual focus groups are flexible and participants are able to join from the comfort of their home without commuting. Additionally, an increasing percentage of the population now work from home and with alternative working hours. Virtual focus groups have an advantage because sessions could be scheduled later in the evenings when all participants were free from other commitments. Second, our moderators reflected that participants are more relaxed in their own homes, and thus are more involved in the focus group discussion. We feel that this has resulted in deeper content and substance from each focus group. Third, while in-person focus groups were previously limited to patients who lived within a 30-mile radius of our institution and have a source of transportation, virtual focus groups are newly accessible to participants from any geographic location, participants who do not have access to transportation and participants with busy schedules. In this way, virtual focus groups have allowed for a greatly expanded pool of potential participants. This also allows research teams to recruit patients from locations that may have otherwise been left out of the traditional recruitment process. This is a particularly important consideration when seeking input from vulnerable populations on issues such as health disparities and access to care.

Disadvantages of virtual focus groups

Several challenges and disadvantages also exist with virtual focus groups. First, some patients are not technologically experienced and may not be used to checking links and messages delivered electronically (e.g., email). As communication and consent processes are moved to internet-based protocols, participants who were not technologically literate required extra attention

Table 1
Design, recruitment, training, and implementation before and after virtual focus groups.

	In-Person	Virtual
Design	•6–8 participants per group •Moderators + co-moderator •Predetermined interview guide	•3–4 participants per group •Moderator + co-moderator/tech support •Predetermined interview guide
Recruitment	•Participants contacted from list of surgical patients •Consent explained and signed at time of the session	•Participants contacted from list of surgical patients •Consent explained over phone and sent via email •Must confirm internet and email access
Training	•Minimal participant training •Review rules with participants at time of focus group	•"Zoom Etiquette" training •Instructions to join virtual focus group sent ahead of time •May require family member assistance with joining virtual focus group
Implementation	•Anonymous names chosen at beginning of the focus group •Written material used during focus groups distributed for discussion and feedback	•Anonymous names chosen with each individual while other participants in virtual waiting room •Written material used during focus groups mailed to participants ahead of time and shared on screen share for discussion and feedback •Co-moderator acts as tech support managing wait room, change names, mute individuals

from our research coordinators, often needing additional phone calls and reminders. Second, virtual groups put a new burden on participants as they are responsible for verifying that Zoom is working on their device. This can delay the start of the focus groups and may have also contributed to the loss of some potential study participants. Third, while we typically aim for 6–8 participants for in-person groups, we decided to limit the target size of the virtual groups to 3–4. This decision was made due to the potential need to troubleshoot technological issues for participants, novelty of the process to our team and uncertainly on how interactions would proceed with too many participants on a virtual platform. Fourth, out of the 23 patients who agreed to participate, 5 (21.7%) participants failed to join the Zoom group due to unforeseen technological issues or difficulty remembering and keeping virtual appointments. Compared to traditional numbers of 6–8 participants per group, this ultimately resulted in smaller focus group sizes although the qualitative data gathered was satisfactory and many participants joined who would not have traditionally participated due to travel distances. Lastly, the technological requirements for online meetings may have also impacted on our ability to recruit older patients and patients who do not have reliable internet access. Despite the increased pool of potential participants, older patients and male patients were less likely to join and participate in our virtual focus groups when compared to in-person focus groups (17.6 vs. 39.5% male and 52.1 vs 57.9 years).[6] This is an important consideration in determining the generalizability of findings from these groups.

Early results

Our group has had promising results from the use of virtual focus groups. Overall, 23 patients agreed to participate, of which 17 (73.9%) participated in 6 focus group sessions (Table 2). Fourteen participants (82.4%) were women, while 3 (17.6%) were men. Nine participants (52.9%) were younger than age 34, and no participants were older than age 64. Six participants (35.3%) graduated high school or obtained their GED as their maximum level of education. One participant (5.9%) had limited health literacy, 5 (29.4%) had marginal, and 11 (64.7%) had adequate health literacy as measured using the Brief Health Literacy Screening Tool (BRIEF).[12] Participants came from all areas of Alabama with an average home distance of 105.1 miles from our institution. Eleven participants (64.7%) lived farther than 30 miles from our institution, with one participant living 580 miles away. Of note, a home distance greater than 30 miles from our institution would have excluded these patients from in-person focus group participation due to travel challenges. Overall, our moderators reflected that participants were eager to participate and gave positive feedback about their experience with the virtual format. Our group was satisfied with the content of the discussion and is now moving forward with the qualitative analysis of the transcripts and planning for future virtual focus groups.

Future directions

Virtual focus groups are a promising alternative to in-person focus groups. In our experience, virtual groups are feasible and provide substantial data for qualitative research. Technologies can be leveraged and adapted to ensure that qualitative research continues during the COVID-19 pandemic. The MHRC, which has long conducted in-person focus groups at our institution, is now expanding this new model to other research teams with 25 additional virtual focus groups planned in 2020. Additionally, our team has adapted this model to key informant interviews, which we now administer via similar virtual platforms. While limitations exist, virtual focus groups provide an important and novel method for conducting qualitative research.

Table 2
Virtual focus group participant demographics.

Sex	
Female	14 (82.4)
Male	3 (17.6)
Age	
18–24	1 (5.9)
25–34	8 (47.1)
35–44	3 (17.6)
45–54	2 (11.8)
55–64	3 (17.6)
Max Education	
High School Grad or GED	6 (35.3)
College 1–3 years	6 (35.3)
College Grad	5 (29.4)
Annual Household Income	
$20,000-$39,999	6 (35.3)
$40,000-$69,999	1 (5.9)
$70,000-$99,999	1 (5.9)
Prefer not to say	9 (52.3)
Insurance	
Private	14 (82.4)
Medicaid	2 (11.8)
Uninsured	1 (5.9)
HL	
Limited	1 (5.9)
Marginal	5 (29.4)
Adequate	11 (64.7)
Live > 30 miles from institution	11 participants
Average living distance from institution	105.1 miles

Disclosures

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