

# A Qualitative Analysis of Community Participants' Experiences with a Virtual Interprofessional Team Visit (vIPTV) with Healthcare Students

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## Abstract

Healthcare students must develop essential interprofessional skills to provide efficient, safe, and effective patient-centered care. To ensure students receive the proper training to develop these skills, an interprofessional team visit (IPTV) program was established at a large urban university in 2011. The program involved teams of students from nine disciplines conducting home visits with community participants to provide patient-centered care and educational resources. During the COVID-19 pandemic, the IPTV program transitioned to a virtual delivery first piloted in 2020. The aims of this study were to evaluate the community participants' experiences with virtual IPTV (vIPTV), identify benefits and challenges related to transitioning from in-person to virtual delivery, and utilize participants' feedback to improve the IPTV program. Focus groups with 39 total participants were conducted in seven different sessions during December 2021 and January 2022. Qualitative analysis of the data showed that participants value the IPTV program, had positive experiences with the virtual delivery, and desire personalized interactions. Community participant's feedback can enhance virtual educational experiences for healthcare students' training.

## Keywords

interprofessional education, technology, community engagement, patient feedback

## Introduction

Interprofessional education (IPE) is essential to the development of a collaborative practice-ready healthcare workforce to provide optimal healthcare services and improve outcomes.<sup>1</sup> Therefore, fifteen professional healthcare organizations adopted the interprofessional education collaborative (IPEC) core competencies for interprofessional collaborative practice.<sup>2</sup> In 2011, an Interprofessional Team Visit (IPTV) was established at a large urban university. The IPTV program began with medical and pharmacy students and has expanded to include 7 additional disciplines: athletic training, dentistry, nursing, occupational therapy, physical therapy, physician assistant, and social work. Healthcare students, in teams of 3–4, conducted in-home visits with a community participant that is 50 years or older. During the visit, each student conducted a health-related assessment with the participant, for example, a comprehensive medication review, range of motion, balance and fall risk screenings. Then, the students communicated as a team in order to

provide appropriate educational resources related to the community participants' healthcare concerns. The IPTV program has been shown to be a valuable experience to students and community participants.<sup>3,4</sup>

Healthcare students learn in a variety of environments such as classrooms, simulation, and clinical settings.<sup>5</sup> The COVID-19 pandemic disrupted traditional pathways in healthcare and higher education and many technology

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adaptations were necessary. However, technology allowed for continued positive virtual learning experiences for students and community participants.<sup>6</sup> To continue the IPTV program safely and comply with accreditation standards, the program was transitioned to a virtual interprofessional team visit (vIPTV). In the post-pandemic era, it is vital to adopt continuous adjustments to healthcare education to enhance the use of technology in facilitating virtual “face to face” encounters.

The literature evaluating virtual IPE experiences with community participants is limited. The aims of this study were to evaluate the community participants’ experience with vIPTV, identify benefits and challenges related to the transition from an in-person IPTV to a vIPTV, and utilize participants’ feedback to improve the IPTV program.

## Methods

This qualitative study was conducted at an urban state university and approved by the Institutional Review Board (#099410B3X). During September through November of 2021, teams consisting of three to four healthcare students met with a community participant, 50 years or older, to conduct a face-to-face vIPTV on a virtual platform. Participants were recruited at community events and through friend/family referral and provided with written informed consent. Following the vIPTV, participants were invited to complete a Qualtrics survey to identify interest in participating in focus groups. Interested participants were contacted by program faculty via email and assigned, based on availability, to one of seven focus groups that were conducted in December 2021 and January 2022. Program faculty facilitated the virtual focus groups that consisted of four to seven participants in each group. The focus group questions were developed by program faculty: (a) Why did you participate in the vIPTV? (b) What went well and what were obstacles of the vIPTV? (c) For those who participated in the IPTV program (in-person) previously, what would you like to see done differently with the virtual delivery?

Each focus group session was about 60 minutes and recorded on the virtual platform. Study investigators transcribed participant responses verbatim from the recordings and worked in two-person teams to generate coding and theme searching. Study investigators met several times as a group to review and discuss initial codes and themes to generate consensus. An inductive thematic analysis was used to evaluate the focus group responses utilizing six phases: (a) familiarize yourself with the data; (b) generate initial codes; (c) search for themes; (d) review themes; (e) define and name themes; and (f) produce the report.<sup>7</sup>

## Results

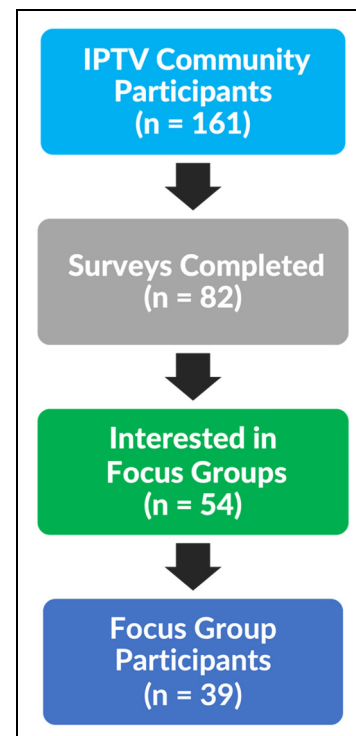
A total of 161 participants were invited to complete the vIPTV program survey and 39 focus group participants were identified (Figure 1). The average age was 76 years

old, 79% (31) female, 85% (33) Caucasian, and 15% (6) African American. The results are summarized in Table 1 and the following themes were constructed (a) Participants’ values of the IPTV program, (b) vIPTV benefits and challenges, and (c) positive “face-to-face” interactions.

Community participants valued the vIPTV program, found it mutually beneficial, and emphasized “giving back” to healthcare students’ education. They stated the program allowed them to shape future healthcare workers and enhance communication skills. Participants provided positive feedback regarding the vIPTV during the pandemic and allowed for flexibility, comfort, and telehealth skill development. Participants emphasized the importance of communication and human connections through provider interactions, hands-on assessments, building strong rapport utilizing technology and virtual experiences. Some favored the in-person visits due to more meaningful connections with the students and ability to capture non-verbal communication cues easily missed through virtual platforms. Community participants provided suggestions for improving the vIPTV program which included access to the visit questions ahead of time to enhance their preparedness, and a contingency plan in case of virtual platform technical difficulties.

## Discussion

This study demonstrates that with the necessary transition to a vIPTV due to the COVID-19 pandemic, community participants found the vIPTV program valuable and gave positive



**Figure 1.** Focus Group Recruitment.

**Table 1.** Participant Feedback Regarding Virtual Interprofessional Team Visit.

Questions	Example responses	Codes	Themes
(1) Why did you participate in the virtual IPTV?	<p>“Well, I enjoy the students because they’re from... different [diverse] backgrounds...hopefully, they can learn something from me, as I am learning things from them” (Participant 42).</p> <p>“If I were to describe this program to a friend trying to recruit them, I would say that it’s an hour of your time that’s very well spent, it’s an opportunity to help shape the healthcare workers of tomorrow and help them to develop...a sensitivity and an awareness, that [is] an opportunity [to] really help shape tomorrow’s healthcare worker” (Participant 36).</p> <p>“I really enjoy meeting the students and helping them on their pathway” (Participant 29).</p> <p>“I’ve told friends it’s an opportunity to share some of our life experience and what life is like for us now as seniors with young people” (Participant 24)</p> <p>“I want to make sure [that] if I have to get PT, which now I’m in for the long haul...that they’re going to do a good job, that they know their skill, they know their evaluations skills, they know their handling skills...they also know how to communicate” (Participant 13)</p> <p>“I enjoyed the email that they sent me afterwards, with the information, [it] was very good, nice supportive links” (Participant 4).</p>	<p>Mutually beneficial Collaboration Giving back Resourceful</p>	<p>Participants’ Values of the IPTV program</p>
(2) What went well with the virtual visit?	<p>“I would think it would be really critical for the students to have both experiences..., being able to interact in the virtual space is really important and timely right now, but you also get a flavor in visiting people’s homes, ... what their environment [is], how that impacts their health and well-being as well, and I would think that that perspective would be invaluable for someone learning how to be part of the medical team” (Participant 36).</p> <p>“My husband lives in Scotland...and I did one of my visits, while I was over there. I would have had to not do that segment that year if I hadn’t had this opportunity” (Participant 27).</p> <p>“Scheduling was so much easier because I think the students, mostly are working at home anyway, so it wasn’t a matter of there being...classes and...having to block out days, there was a lot more flexibility for them and for me in the scheduling and rather than going back and forth a lot, it was kind of done lickity split” (Participant 27).</p> <p>“It was virtually seamless between the in-home and the virtual, it went very smoothly. They were all prepared...we were receptive and it was a good experience”(Participant 30)</p> <p>“It was just nice to be in the comfort of your own home, you didn’t have to worry about going out” (Participant 42).</p> <p>“The fact that their screens were on, and they seemed really engaged, I thought it was very helpful, made it more of a discussion in a more reciprocal kind of thing” (Participant 36).</p>	<p>Flexibility &amp; convenience, Hybrid format Comfort Skilled in both telehealth &amp; in-person</p>	<p>viPTV Benefits</p>
(3) Were there any barriers or	<p>“I did not have a positive response because people had problems doing Zoom” (Participant 16)</p>	<p>Visit preparation</p>	<p>viPTV Challenges</p>

(continued)

Table 1. (continued)

Questions	Example responses	Codes	Themes
obstacles that you faced during your virtual visit?	<p>“It’s nice to know in advance what questions might be asked, so that you can think about it before you get there and have a little bit of an agenda” (Participant 4).</p> <p>“You don’t really get to know your patient by video...the subtle clues, the colors of the skin...are they fidgety with their feet” (Participant 1)</p> <p>“To be prepared at times for technology malfunction, you know it doesn’t always go as perfectly as we would like” (Participant 28)</p> <p>“I think it’s a good idea to have the students in the home environment of the person that they’re interviewing. I think it makes for a more meaningful experience” (Participant 15).</p>	Technology Expectations	
(4) How did the virtual visit compare to the previous in-person visit?	<p>“I would vote for in-person, I think that [as] human beings...we need as much of that as we can get” (Participant 24).</p> <p>“When you’re in the virtual...you cut to the chase, you get down to business” (Participant 36).</p> <p>“[It’s] benefiting me that I have contact with...real life people that I don’t have to physically see” (Participant 22).</p> <p>“I enjoyed it when they came to my home” (Participant 26)</p> <p>“[The] virtual visit [was] equally effective, particularly [with] those scheduled [in-person] in the winter semester, weather was not a factor” (Participant 28).</p> <p>“It’s been nice for me; I’ve only done the virtual, but it’s allowed me to do it from Windsor [ON, CA] and to be included in the program” (Participant 4).</p> <p>“I was able to be in Scotland...my husband lives in Scotland...and I did one of my visits while I was over there” (Participant 27).</p>	Communication Human connection Provider interactions	Positive “Face-to-Face” Interactions

feedback regarding virtual experiences and technology use to engage with healthcare students. Additionally, strengths of this study are that it included IPE, the role of technology in healthcare, and community participants. Winship et al discusses a similar interprofessional care coordination program that rapidly transitioned to a telephonic-based program that allowed for the IPE experience to successfully continue for the learners and to serve the community participants.<sup>8</sup> One benefit this study highlighted is the connection between healthcare students and participants. Similarly, participants in our study valued the significance of connection with the students and to conduct the visit virtually using a video telehealth platform.

Considering the role technology played in our study, another strength is that participants in various geographical locations could participate in vIPTV, and students could provide care to participants virtually within local communities, nation-wide, and internationally. The vIPTV program and other programs have demonstrated the importance of providing students an educational experience delivering

health care services through telehealth platforms, which may be required of them as practicing clinicians.<sup>6,8</sup>

Older adults value interpersonal communication among their healthcare providers<sup>9</sup> and participants in our study highlighted the importance of interpersonal communication. Research shows people are more comfortable with telehealth and receiving care from home.<sup>10</sup> Older adults had a positive attitude toward technology use in healthcare, but still preferred face-to-face interactions with healthcare professionals in-person.<sup>11</sup> Community participants in the vIPTV program reported challenges with difficulty to get to know students on video due to non-verbal communication cues and reported meeting virtually felt less meaningful compared to in-person visits. Participants preferred to have questions they would be asked in advance in order to better prepare. Knowing these challenges, the vIPTV program faculty can leverage technology for virtual healthcare educational experiences that fosters the development of interpersonal communication skills.

Study investigators made enhancements to the vIPTV program based on participant responses below and

removed physical assessments, such as physical therapy exercises, that are difficult to perform virtually and improving healthcare students' ability to develop patient-provider telehealth rapport.

This study reinforces the importance of continuous improvement with the IPTV program including the virtual transition. Following this study, the following changes were made (a) providing participants with clear expectations of the visit and the questions they will be asked to better prepare (b) removing the discipline specific assessments and (c) changing the format of the visit to a team-based interview.

## Limitations

Several limitations exist that restricts the generalizability of the research to a greater population. The participant sample was one of convenience, four different faculty investigators facilitated the focus groups, standardized questions were not piloted prior to delivery and sessions were transcribed by different student co-investigators. The study methods may have produced biased results, as the participants who volunteered for the focus groups may have been more comfortable with the use of technology or had more positive experiences and may not be reflective of the all of the perspectives nor the general population.

## Conclusion

Community participants value the vIPTV program and interacting with healthcare students through a safe, flexible, and convenient virtual format during the pandemic. Additionally, community participants' feedback can improve virtual educational experiences such as vIPTV.

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## Authors' Note

The data from this study are available upon request from the corresponding author.

## Declaration of Conflicting Interest

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

## Ethical Approval

This study was approved by the Wayne State University Institutional Review Board.

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## Statement of Human and Animal Rights


All procedures in this study were conducted in accordance with the Wayne State University Institutional Review Board's (IRB# 099410B3X) approved protocols.

## Statement of Informed Consent

Written informed consent was obtained from the patients for their anonymized information to be published in this article.

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