



2023-2024 Duke AHEAD Grant Proposal
Due by January 26th (5:00 pm)

Title: Building Rapport in Telehealth Visits: Evidence-Based Education for Interprofessional Healthcare Clinicians and Students

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Focused question: What essential processes, knowledge, skills, attitudes (KSA), and qualities are required for health professions students and clinicians to build rapport with patients in telehealth videoconferencing visits (VV)? How can these competencies be effectively incorporated into existing curricula and professional development programs?

Background: While telehealth videoconferencing visits (VV) have quickly become an important vehicle for delivering healthcare, research on building rapport during VV is limited despite indications of its feasibility [1–4]. Current guidelines primarily focus on VV logistics, with less emphasis on building virtual interpersonal connections [5–8]. Despite evidence of effective rapport in VV, many professionals remain skeptical and uncertain about how to establish empathetic connections [9,10]. Further research is needed to understand how rapport-building strategies like nonverbal communication and active listening techniques can be adapted for VV. While telehealth training has been incorporated into programs for health professions students and resources are available for practicing clinicians, no evidence-based guidelines have been established for adapting the development of interpersonal relationships. Building upon previous descriptive studies, [1–4] this project aims to employ grounded theory to develop an interprofessional theory of VV rapport and an eDelphi study to create curriculum guidelines based on consensus among experts. This will provide a foundation for future curricular development for interprofessional students and clinicians across disciplines and close an important gap in our practice and pedagogical knowledge. A secondary aim of this project is to explore the use of video elicitation as a teaching strategy. Teaching relational care involves cognitive, psychomotor, and affective learning. While knowledge and skills are important, studies emphasize the significance of attitudes and caring

qualities in patient connections [11]. Patients can differentiate politeness from an authentic connection with a healthcare clinician [12]. Helping health professions students and clinicians develop attitudes and qualities to cultivate rapport is more difficult than providing information and teaching a behavioral skill. Developing these qualities in practicing clinicians, who must adapt established behaviors, is especially challenging.

While simulation and debriefing are effective in prelicensure programs [13], they are less feasible for established practitioners. Reviewing video recordings of actual patient encounters, however, has been a useful strategy for exploring and changing practice patterns [14–17]. When participants view video recordings of their own clinical interactions, it encourages them to discuss ideas not typically addressed. These scenarios often reveal tacit knowledge and skills acquired through experience, which are challenging to identify or articulate [15,18]. This technique, known as video elicitation, enhances research by encouraging reflection, enriching data collection, and offering insights for practice improvement [15]. Additionally, video elicitation enables real-time collaboration among researchers, participants, and educators, enhancing understanding of practice within its social context and narrowing the gap between research and practice [14,17,19].

Since VV platforms are well-suited for recording interactions, video elicitation has become a practical research and teaching strategy [20]. Incorporating video elicitation within a simulated experience for students or using real-time or standardized patient encounters for established clinicians could be an effective teaching strategy. The use of video elicitation as a teaching strategy aligns well with Knowles [21] andragogy principles on the learning needs of adult learners. The use of video elicitation can provide tangible evidence of a clinician's interpersonal challenges during VV, allowing them to self-identify how their behaviors could be adapted for this platform. Adult learners are motivated by learning skills they can apply to resolve problems in their current practice or that will improve their performance. Incorporating self-reflective practices into viewings of VV encounters could intrinsically motivate clinicians and be an effective strategy for changing their behaviors.

This project is strategically positioned to influence the development of Duke's telehealth curricula based on the project findings as it involves key stakeholders in the initial foundational research. By building an interprofessional research team who will guide the design process and actively participate in the research process, this project intentionally embodies the four main IPEC core competencies of values and ethics for interprofessional practice, roles and responsibilities, communication, and teams and teamwork [22]. Dissemination of findings, to ensure these guidelines inform education and practice nationally and internationally, will include manuscripts with planned submissions to the Journal of Research in Interprofessional Practice and Education and/or International Journal of Education and Practice and presentations at Duke AHEAD and national educational conference like the National League for Nursing Educational Summit.

Specific aims: The specific aims of Phase 1 of this study are to (1) explore the interpersonal connection between nurses and patients in ambulatory care telehealth videoconferencing visits and (2) develop a theory to guide practice. A secondary aim of this initial phase will be to begin exploring the potential of using video elicitation as a teaching strategy. In Phase 2, an eDephi study will be conducted to build consensus within an interprofessional group of experts on curriculum components including content, competencies, and teaching strategies to improve interpersonal connections in telehealth.

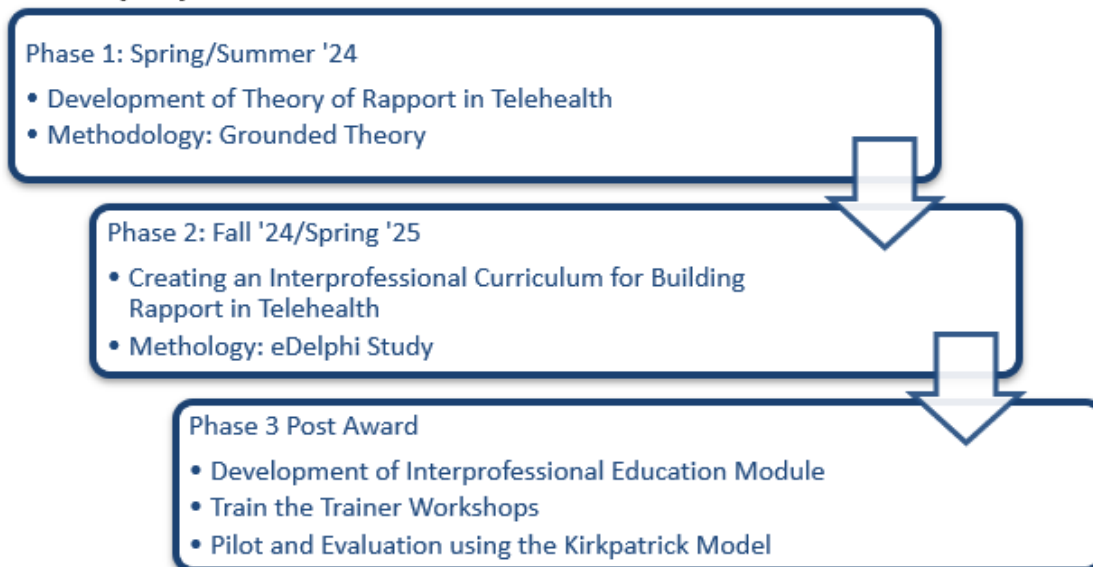
Methods: Nurse-patient VV recordings and interviews will be analyzed in Phase 1. Guided by Charmaz’s [23] constructivist grounded theory, this inductive and iterative approach is well suited for exploring interpersonal processes, including verbal and non-verbal dynamics, and building a conceptual model for interpersonal connection during VV [23–25]. Video elicitation will be used in interviews to deepen understanding of the interpersonal processes.

Interprofessional educators on the research team will assist in refining the theory, ensuring its applicability to curricula across various healthcare disciplines.

In Phase 2, consensus will be built on curricula components for a future educational module on rapport building by conducting an eDelphi study. The Delphi method is an effective approach for achieving consensus on topics with limited evidence and in areas where practice standards are uncertain [26]. The method is iterative and structured, using interviews and/or surveys to gather information from experts over multiple rounds until consensus is achieved. Experts remain anonymous to one another to prevent domination by any one individual. After each survey round, data is summarized and returned to the experts indicating both their original responses and the group-level responses. This allows each expert an opportunity to revise their response after considering feedback from the group. Rounds are repeated, usually between 2-4 times until an acceptable level of consensus is reached. The web-based Delphi technique (eDelphi) is increasingly utilized as a cost-effective method, facilitating easy and efficient participation from geographically diverse experts [27].

Completion of Phases 1 and 2 will establish the evidenced-based foundation for an Interprofessional Educational Module on building rapport in VV. This module will undergo development, piloting, and evaluation using the New World Kirkpatrick Model [28] in Fall 2025/Spring 2026 (post-award). Figure 1 illustrates an overview of the project.

Figure 1
Overview of Project



Outcomes and measures:

Demographic information will be collected from both nurse and patient participants in Phase 1, as well as from experts in Phase 2. Additionally, interviewed nurse participants will provide insights on their perceptions of video elicitation during the interview process. A Qualtrics survey with four open ended questions will be sent to their Duke email immediately after and one-month post-interview.

Data management and analysis:

Each phase of the project entails both data collection and analysis.

Phase 1. Data will be concurrently collected and analyzed using constant comparison during each round. The number of video recordings and interviews will depend on data richness and identified gaps during analysis. New participants may be interviewed and/or second interviews conducted with previous interviewees. Coding line by line of the transcript while watching the video recording will ensure coding incorporates verbal and non-verbal data, and identifies actions, behaviors, and processes. As the analysis progresses, codes will be categorized, and in the final stage theoretical codes that explore causes, contexts, consequences, and conditions will be used to facilitate theory building [23,25]. The research coordinator (PK) and primary investigator (JDG) will conduct the initial analysis. The remaining team members will assist in the theoretical stage to support theory creation that is applicable to interprofessional telehealth education.

Phase 2. An initial set of curriculum components (content, competencies, and teaching methods) based on Phase 1 findings will be used to create open-ended questions for 15 experts in Round 1 virtual interviews. Experts will be selected who have experience conducting research or curriculum for telehealth and/or have participated in telehealth advisory panels. Efforts will be made to ensure that experts have the freedom to articulate their views without direction [26]. In Round 2, experts will complete a Qualtrics survey. Questions will be based on analysis of Round 1 data and will request experts identify how strongly they agree with statements using a 4-point Likert scale (to avoid participants selecting a neutral opinion). This process will be repeated in subsequent rounds until a satisfactory consensus is achieved. Beginning in Round 3, participants will be shown descriptive statistical summaries of each item and how they scored the item in the previous round. This process will facilitate consensus [26]. Response and attrition rates, and simple statistical summaries will be identified for each round. Consensus will be determined based on the percentage of agreement between the experts. Although curricula to teach rapport building in VV may not require complete agreement, rapport is an important indicator of quality care, therefore consensus will be considered sufficient when an item is agreed upon by at least 75% of the experts on the panel.

IRB Status: Plan to submit

Challenges:

Recruitment and retention are key challenges in both phases. Phase 1 requires a diverse participant pool for robust data collection, with incentives like gift cards to enhance participation. Interviews and member checking are crucial for validity. In Phase 2, retaining experts across multiple data collection rounds is essential for the eDelphi study's success. Initial interviews and completion stipends will encourage expert involvement in curriculum development. These strategies, supported by literature, are vital for study integrity [26].

Strengths:

The study's interdisciplinary team is a major asset, enhancing the research's breadth and depth. Advanced planning and a post-award plan to develop an interprofessional educational model, aligning with existing telehealth curricula, motivate the team and ensure applicability of findings.

Works Cited:

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Resource needs and budget:

Funding will be available for a 12-month period. Please fill in the table below and provide justification/description for each item below. Also, where requested, please provide an estimate of the time/effort you will expend on this project. PI support may not total more than 25% of the requested funds. Administrative support is available through “consultant costs.”

	Description	Estimated Cost:
PI Support (no more than 25% of total funds requested)	In kind	\$0.00

Consultant costs		\$0.00
Equipment		\$0.00
Computer		\$0.00
Supplies		\$0.00
Travel	Conference registration and travel for two conferences	\$2,000.00
Other Expenses	-Open Access Fees for two publications (International Journal of Education and Practice and Journal of Research in Interprofessional Practice and Education -Gift cards for interview participants (\$50/interview) x 34=\$1,700.00 -Stipend for IPE Experts in Delphi Study (\$200/expert) x 15=\$3,000.00	-\$2,400.00 -\$1,700.00 -\$3,000.00
Total Costs for proposed project:		\$9,100.00

Budget Justification

Travel. The requested \$2,000.00 will support travel, accommodation, and conference fees for team presentations at two professional meetings. This allocation is vital for disseminating our project's findings and facilitating valuable engagement with the professional community.

Publication Fees. We plan to publish our research in the *Journal of Research in Interprofessional Practice and Education* (<https://jripe.org/index.php/journal/about/submissions>) and the *International Journal of Education and Practice* (<https://www.conscientiabeam.com/journal/61>). A sum of \$2,400.00 is sought to offset open access publication fees, ensuring broader accessibility of our findings and supporting equitable scholarly publishing practices.

Other Expenses: The total allocation for Other Expenses is \$4,700.00, a crucial component for participant engagement and successful study execution. This includes:

- (1) Gift Cards for Phase 1 Participants:** \$1,700.00 is designated for \$50 gift cards per interview for nurse and patient participants, with an estimated 34 interviews planned. This approach is designed to boost participation, reduce attrition, and aid in member checking and data depth.
- (2) Stipends for Phase 2 eDephi Experts:** \$3,000.00 is budgeted to offer a \$200 stipend to each of the 15 experts upon completion of the study. These stipends are vital for ensuring sustained expert involvement and valuable contributions throughout the study.