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Optimizing Best Telehealth Practices among Advanced Practice Registered Nurses

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requirements for the degree

DOCTOR OF NURSING PRACTICE

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Abstract

Optimizing best clinical telehealth practices among APRNs

Abstract Title: Optimizing best clinical telehealth practices among APRNs through a survey that gauges their preparedness in core competencies and their recommendations.

Background: In April 2020, about half of all Medicare primary care visits were done through telehealth due to the COVID-19 pandemic. Telehealth evoked a strong positive response among patients, which created a new niche in healthcare. To effectively leverage its value, one of its key goals is the promotion of best clinical practices (Agrawal, 2020). However, very little information was found about programs that address NP training in telehealth. There are no standard competencies to date, and telehealth among APRNs has been mostly through experiential learning (Sharma, 2019). Therefore, a study geared toward the promotion of best telehealth practices is necessary to optimize its value.

Problem Statement: There is a need to develop and expand telehealth training among APRN students to improve telehealth clinical practice. If not addressed, this will deter the optimization of the value of telehealth. Research has shown that the lack of standardized core competencies and the limited research on APRNs' telehealth training led to the necessity of advancing telehealth competencies. Perhaps, a study that investigates the level of preparedness among the APRNs, the core competencies used, and their recommendations will upgrade telehealth training and promote best clinical practices in the field.

EBP Model/Frameworks: This project initiative will utilize the data-driven policy framework by Weinke and Shin (2004). The data derived from this study will intensify the need to develop, restructure and find best practices in telemedicine training among APRNs. It will provide further fuel to telemedicine's evolution in the academic sectors in developing core competencies and

assessing and monitoring readiness responses among APRN students. Data can support crafting policies in order to strengthen and sustain telemedicine training as a health care safety net.

Methodology: This will be a retrospective review of non-identified survey data. The survey data will be conducted among APRN students, new graduates, and licensed professionals to evaluate telehealth best practices. The context of the questionnaire is derived from the core competencies used in training virtual practitioners, proposed by Sharma et al. (2019). It gauged the level of preparedness among APRNs for each competency and solicited recommendations for cultivating best practices in each field. The data set includes twenty-seven domains and six non-identified demographic fields.

Results: Based on the survey, 64.7% of the participants received telehealth training either in school or at their workplace. The domain which is often not addressed or discussed in school is on billing, licensing, and insurance, and likewise this domain is also where APRN students also feel the most pain in addition to topics on screen share and troubleshooting technological problems. Recommendations for best practices in telehealth include: more training and practice, and incorporating telehealth curriculum

Clinical Importance/Conclusion: This study will charge openness among institutions who have implemented telemedicine training to share experiences, stimulate research on best practices, and develop standard core competencies to be implemented in the curricula. The evidence will support in lobbying integration of telemedicine in APRN education and launching medical virtualism accreditation and certification.

Background

The advent of the COVID-19 pandemic propelled telehealth into the mainstream of healthcare delivery. In April 2020, about half of all Medicare primary care visits were done through telehealth due to the COVID-19 pandemic (Agrawal et al., 2020). According to the American Hospital Association, telehealth use has increased significantly with 76% of US hospitals utilizing some form of its services (Camhi et al.,). For instance, Kaiser Permanente experienced a large-scale reversal in the number of in-person versus telehealth visits. Before the outbreak, the institution had 85% in-person visits and 15% telehealth appointments, but as of May 2020, 20% of visits are in-office, and 80% are telehealth consultations (The Joint Commission, 2020). Initially, issues with reimbursement and licensure requirements impeded the comprehensive application of telehealth; however, recent legislative actions have mitigated these concerns. To date, 35 states have implemented parity laws, which connote the liability of health insurers to reimburse providers for their telehealth services, therefore denoting inadequate training of medical professionals as the main barrier in preventing the full enactment of telehealth (Camhi et al.,).

Moreover, telehealth has evoked a strong positive response among patients. It has created a new niche in health care and will go far beyond replacing the conventional clinical encounter. Consequently, best clinical practices should be promoted to effectively leverage its value (Agrawal, 2020). As the pandemic increases the demand and hastens to adopt virtual health care over training and development of standard protocols and competencies, a study geared toward the promotion of best telehealth practices is necessary to optimize its value. Although some medical schools have already invested in telemedicine training during the clerkship phase, there is still a limited literature involving best practices of incorporating telemedicine training into the curricula.

Nevertheless, medical schools are now looking into formal training for their undergraduate medical students. They realize that the preclinical years represent an important window of opportunity for telemedicine training and exposure (Waseh & Dicker, 2019). Recently, the American Medical Association (AMA) launched the “Accelerating Change in Medical Education Consortium,” which granted \$12.5 million to 32 medical schools for telehealth curricular development (Camhi, 2020). This unfolding of events has also led to probing nurse practitioners’ (NP) involvement and performance in telehealth. According to the literature, NPs have taken the lead in using virtual technology, especially in rural areas. This assertion confirms their vital role in achieving telehealth’s success. However, very little information was found about programs that address NP training. In fact, telehealth among APRNs has been mostly through experiential learning (Sharma, 2019). Due to the nascent nature of telehealth among APRNs, some nursing institutions have started to incorporate training after the fact. Still, the question remains about how confident and well prepared new APRN graduates and students are with the technology.

Evidence for the Project

Various nursing organizations, such as the National Org of NP Faculties (NONPF) and the American Association of Colleges of Nursing (AAOCN), now require telehealth as a competency for masters and doctoral nursing programs. Many nurse leaders believe that as telehealth advances into the health system, a telehealth curriculum can address the demands of quickly evolving dynamics in healthcare and help transition students to prepare for practice and become knowledgeable in the legal and ethical implications of caring for a patient through telehealth. Moreover, the Telehealth Nursing Special Interest Group also resonated the need of teaching telehealth principles even among prelicensure nursing programs. Cassidy et al. (2020) also pointed out that a successful implementation of a telehealth curriculum can improve medical care through

enhanced patient and provider communication, which includes the following components: prescribing medication, communicating patient results, scheduling appointments, managing chronic disease, and delivering healthcare education. However, in the US, less than 1/3 of 266 nursing schools are training students in telehealth.

Evidence Based Intervention

The study utilized the core competencies outlined by Sharma (2019), which provide a framework for defining the standard of care in telemedicine. These competencies are divided into three domains: digital communication and webside manner, scope and standards of care, and virtual clinical interactions. They are to be put forth in establishing training initiatives and developing proficiency for practicing physicians, medical students, and other clinicians using telemedicine as a medium for providing patient care (Sharma et al.,2019). In the article, the authors recommended that this set of competencies be included for national discussion among physicians and other HCPs when sharing their experiences and knowledge in national meetings, mini-courses, publications, and the press. They have expected that, along with other recommended competencies, it will pave the way for a formal investigation into the core competencies needed and ultimately develop a certification for telehealth (Sharma et al.,2019). A visual pain analog scale was also used to measure the level of discomfort, which has translated to the degree of preparedness among APRN students in using telehealth. As stated by Jollant (2019), psychological pain lies at the heart of the human experience; his article further validated the use of a simple visual analog as a reliable measure of psychological pain for clinical use.

Purpose of the Project

The overarching goal of this study has been to illuminate the need to standardize core competencies of telemedicine training in APRN education, encourage transparency among institutions that have incorporated telemedicine training involving best practices, and ultimately promote adoption of telemedicine curricula in order to increase the comfort level of students and new graduates. This study has also described how APRN students and recent graduates prepare for telemedicine use in the clinical setting and determine their level of comfort and readiness to venture into virtual healthcare delivery.

Project Plan

This was a retrospective review of non-identified survey data. Data for this study were collected using an e-survey tool from Google Forms. The survey data was collected among APRN students, new graduates, and licensed professionals to evaluate telehealth best practices. Participants were provided with a comprehensive explanation of the study, including its purpose, benefits, and assurance of confidentiality and anonymity. A copy of the letter, sent via email, is located in Appendix A. The demographic portion of the survey is a self-report tool used to identify information related to the participant's age, gender, state, presenting status as an APRN (student, new graduate, or practicing APRN), and participation in telehealth class/training (if any). The questionnaire's context is derived from the core competencies used in training virtual practitioners, as proposed by Sharma et al. (2019), gauging the level of preparedness among APRNs for each competency and soliciting recommendations for cultivating best practices in each field. The data set includes 27 domains and six non-identified demographic fields. The last part of the survey asked each participant to recommend what constitutes the best practices in telehealth. Please refer to Appendix C for the time plan of this project.

Framework

The project initiative has utilized the data-driven policy framework by Weinke and Shin (2004). Its model is a four-stage process that used data findings and analysis to develop protocols and effect policy change. The first step was to recognize telehealth as an essential safety net during the COVID-19 pandemic which further identified concerns, such as no standardized core competencies of telehealth and APRN programs that do not have telehealth training as part of the curricula. Telemedicine among APRNs has been mostly through experiential learning, and the pandemic is driving the adoption of and demand for virtual health ahead of the training and standards maturation. Based on current data, over 70% of HCPs use telehealth tools to deliver patient care. NPs have taken the lead in telehealth, especially in rural areas, which made them very essential in telehealth's success. The question that remains is how confident and well-prepared the APRN new graduates and students are to use the technology. The study, further, has gauged the level of preparedness among APRNs based on the core competencies used in training virtual practitioners, proposed by Sharma et al. (2019). It examined their solicited recommendations for cultivating best practices and is expected to intensify the need to develop, restructure, and find best practices in telemedicine training among APRNs. It will accordingly fuel telemedicine's evolution in the academic sectors in developing core competencies and assessing and monitoring readiness responses among APRN students. The data derived from the study can support in crafting policies to strengthen and sustain telemedicine training as a health care safety net.

Results

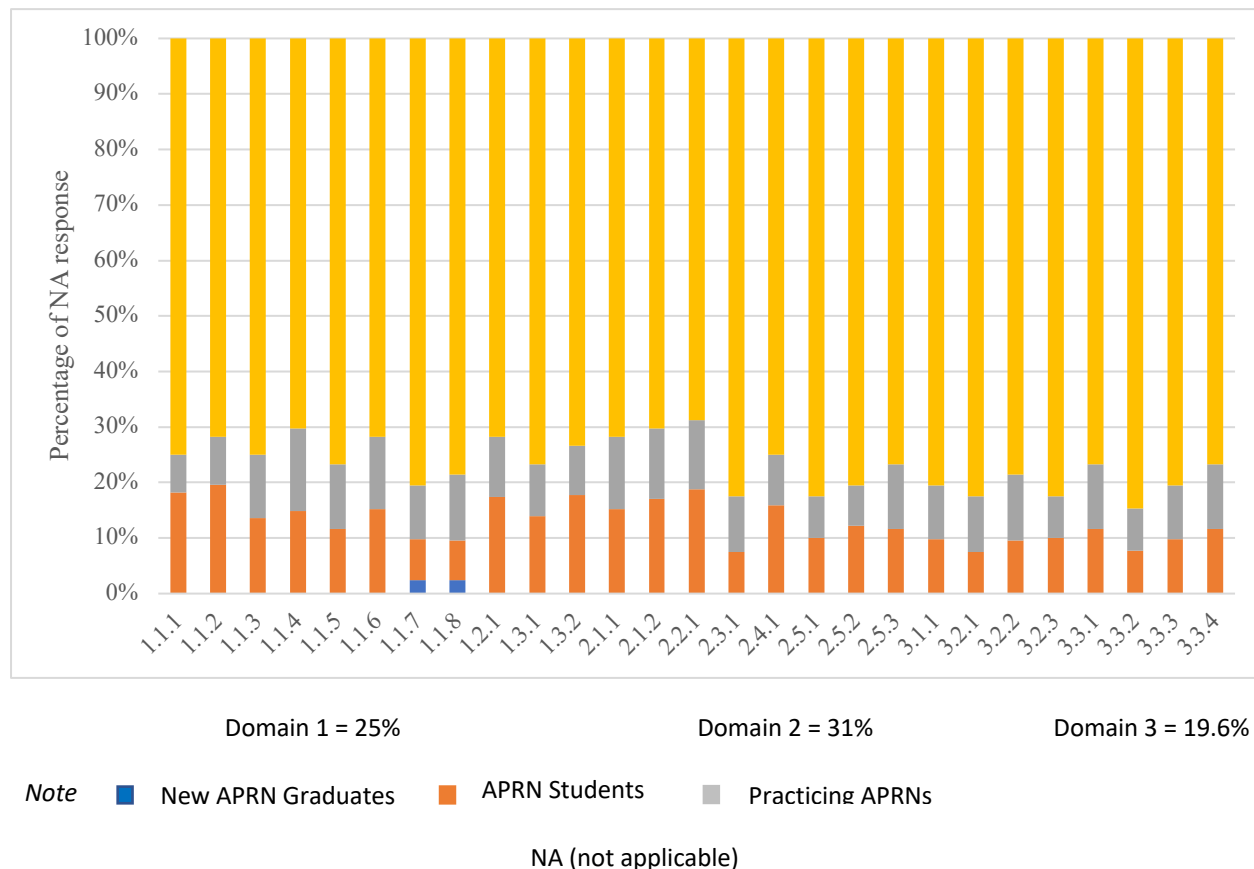
The survey was emailed to 120 prospective participants, wherein only 34 responded. The majority (67.6%) of those who participated were advanced practice registered nurses (APRN) students, 30% were practicing APRNs, and only 2.9% were recently graduated APRN students.

Based on the survey, 64.7% of the participants received telehealth training either in school or at their workplace. Some respondents who received training in school provided the following comments in addition to their answers:

- It was not official training.
- It was integrated into various lectures and on simulation (sim) days.
- Only half an hour was allotted to it in school.

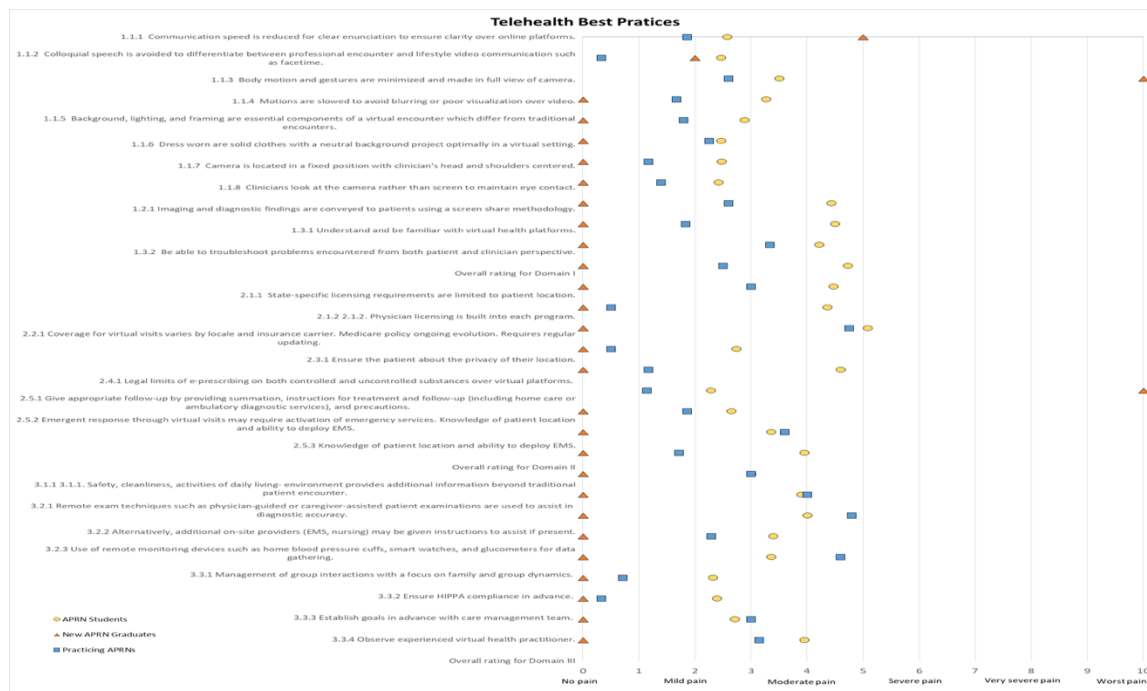
From the outset of the pandemic, telehealth cases have been incorporated into sim activities toward the latter part of the fall semester. Still, there is no distinct curriculum for a telemedicine class that explains the various comments presented earlier. Since clinical placements have been limited, sims allow students to gain telehealth experience outside the clinical setting. Students who participate in telehealth sims can practice skills in a low-risk, highly educational environment. A recent meta-analysis identified sims as an effective teaching method because, compared to live clinical sessions, simulated clinic visits improve student performances (Cassidy et al., 2020). Moreover, 8% of those who received training obtained it from their workplace. Still, an effective rate of 48% regarded the question as “not applicable” to them because the school did not have a separate curriculum for telemedicine. It has to be noted that the email survey provided the participants an option to choose “NA” if a particular component was not addressed or discussed, mainly because there is no distinct telehealth class in school.

Figure 1. The Weighted Percent Average of Respondents with Not Applicable (NA) as a Response for each Domain



The weighted averages of those who answered NA for each domain as shown in Figure 1 are as follows: 25% for field 1, and 31% and 19.6%, respectively, for domains 2 and 3. Domain 2, which focused on billing, licensing, and insurance, was not rated most of the time, considering that most of the respondents were still students. Among the components that received higher marks of NA answers are the following: 1.1.4 motions are slowed to avoid blurring or poor visualization over the video, 2.1.2 billing and insurance, and 2.2.1 coverage for virtual visits. Based on the recommended telemedicine protocol, the aforementioned areas need to be developed and integrated into a teaching plan for a telemedicine class for APRNs and other providers to receive optimal telehealth training.

Figure 2. The Weighted Percent Average of Each Domain's Ratings



On Figure 2, the weighted average of each domain's ratings was plotted on the graph, showing that APRN students experienced mild to severe pain while practicing APRNs felt no pain to moderate pain. Still, a significant amount of the components was not rated. Practicing APRNs mostly obtained telehealth experience from their workplace and acquired experiential learning attributed to their comfort level in some of the features. It is also shown in the graph that one respondent who just graduated from the APRN program experienced having no pain to worst. The graph illustrated further that a cluster of APRN students felt the most pain in domains 1 and 2 for topics on a screen share and troubleshooting tech problems and licensure, billing, and insurance, respectively. Practicing APRNs felt moderate pain on remote exam techniques. The results implied that teaching on these areas needs to be refined to mitigate pain among APRNs. The importance of advancing telehealth education among APRNs cannot be stressed since they are the primary

users of virtual health technology. When asked what constitutes best practice in telehealth and to give specific recommendations for preparing NPs for virtual healthcare delivery, 62% responded to this question (appendix F). About 28% answered more training and practice, and 4% recommended making a curriculum for telemedicine. The Telehealth Nursing Special Interest Group recommended that a telehealth curriculum be implemented among prelicensure and graduate nursing programs. It is needed so future family NPs can provide effective patient care through telehealth services and become sound health professionals in this field (Cassidy et al., 2020).

Limitations and Recommendations

Several limitations were identified during the study. Only 28% responded to the survey and the reasons the others chose not to respond are undetermined. The study sample was limited to USD's APRN alumni, students, and new graduates who had some telehealth experience hours integrated into their sim days. The study outcome would not represent APRN programs whose curricula do not include the telehealth background. However, the study can be replicated to include other APRN schools to validate the need to optimize telehealth best practices. The survey was also long and detailed, which probably contributed to the non-return rate. Some participants were confused about how to use the visual analog pain scale (0-10) to rate their discomfort with each component. It is recommended to modify the questionnaire (which is derived from the core competencies used to train virtual practitioners) into a condensed and succinct text and to use another self-performance scale to gauge the comfort level, limiting it to 5 choices, with 0 for not comfortable at all and 5 for quite comfortable. Lastly, the survey

completion timeframe was short; a longer timeframe could have allowed more follow-up and more responses.

Clinical Implications

The clinical significance of this study is to help prepare and transition APRNs to the widespread implementation and advocate for best telehealth practices. The study will reinforce the value of telehealth training among APRNs and will push for its integration into the curriculum rather than mandated in the context of pandemic response. The need for early exposure to telehealth education to harness virtual technology's full potential is also implicated in this study. Early and repeated exposure will provide a more thorough "tour" of available telehealth approaches and techs and help students feel that telehealth is ingrained into their clinical workflow. This study will charge openness among institutions that have implemented telemedicine training to share experiences, stimulate research on best practices, and develop standard core competencies to be implemented in the curricula. The data and feedback on telehealth experiences can be utilized to make improvements and develop protocols. It can also be used to look for opportunities to restructure the program for improvement. The survey tool can also be used to standardize the telehealth curriculum's development and also serve as a metric of success. Finally, the evidence will support the lobbying of telemedicine integration in APRN education and launching medical virtualism accreditation and certification.

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