

# Patient and Nurse Perspectives on Hybrid Care Models: A Qualitative Study of Telehealth Integration in Nursing Specialty Services

Aiydah Aiyed A Aldhafeeri<sup>1</sup>  
Amani Hamdan Hadi Aldhafeeri<sup>2</sup>  
Al-Hanouf Julaidan Qunafid Al-Dhafiri<sup>3</sup>  
Reham Khalaf Abdullah Alenezi<sup>4</sup>  
Shama Abdullah Ali Alsafairi<sup>5</sup>  
Majdah Alshawi Samdan Alruwaili<sup>6</sup>  
Abeer Saad Alshammary<sup>7</sup>  
Ashwaq Inad Alanazi<sup>8</sup>  
Amwag Marwah Marji Al-Dhafiri<sup>9</sup>  
Samar Ali Adhman Aljameeli<sup>10</sup>

1. Nursing Technician, Maternity and Children's Hospital, Hafer AlBatin
2. Nursing Technician, King Khalid General Hospital, HafrAlbatin
3. High Diploma Nursing Technician
4. Nursing Technician, Maternity and Children's Hospital, Hafer AlBatin
5. Nursing Specialist, King Khalid General Hospital, HafrAlbatin
6. Staff Nurse
7. Staff Nurse
8. Nursing Specialist
9. Staff Nurse, Maternity and Children's Hospital
10. Nursing Specialist

## Abstract

The integration of telehealth into nursing specialty services has gained significant attention in recent years, particularly in the context of the COVID-19 pandemic. This qualitative study aimed to explore patient and nurse perspectives on hybrid care models that combine in-person and telehealth services in nursing specialty care. Semi-structured interviews were conducted with 20 patients and 20 nurses from various nursing specialty services in Saudi Arabia. Thematic analysis of the interview data revealed four main themes: (1) the benefits and challenges of telehealth integration, (2) the importance of patient-centered care and communication, (3) the need for training and support for telehealth adoption, and (4) the potential for telehealth to enhance access and continuity of care. Patients and nurses recognized the convenience and flexibility offered by telehealth, but also highlighted concerns related to technical issues, privacy, and the quality of virtual interactions. They emphasized the importance of maintaining a patient-centered approach and effective communication in hybrid care models. Additionally, participants identified the need for adequate training and support for both patients and nurses to facilitate the successful integration of telehealth into nursing specialty services. The findings suggest that hybrid care models have the potential to enhance access and continuity of care in nursing specialty services, but require careful planning, implementation, and evaluation to ensure their effectiveness and acceptability to patients and nurses.

**Keywords:** telehealth, nursing specialty services, hybrid care models, patient perspectives, nurse perspectives, qualitative research

## 1. Introduction

Telehealth, the delivery of healthcare services remotely using information and communication technologies, has been increasingly adopted in various healthcare settings, including nursing specialty services (Dorsey & Topol, 2016). The integration of telehealth into nursing specialty care has the potential to improve access, convenience, and continuity of care for patients, particularly those in underserved or remote areas (Tuckson et al., 2017). However, the successful implementation of telehealth in nursing specialty services requires the engagement and acceptance of both patients and nurses (Kruse et al., 2018).

Hybrid care models, which combine in-person and telehealth services, have emerged as a promising approach to integrate telehealth into nursing specialty care (Salisbury et al., 2020). Hybrid care models aim to leverage the strengths of both in-person and virtual interactions to provide comprehensive and patient-centered care (Shaw et al.,

2020). However, there is limited research on patient and nurse perspectives on hybrid care models in nursing specialty services, particularly in the context of Saudi Arabia.

This qualitative study aimed to address this gap by exploring patient and nurse perspectives on hybrid care models that integrate telehealth into nursing specialty services in Saudi Arabia. The specific objectives of the study were:

1. To investigate patient and nurse experiences and perceptions of telehealth integration in nursing specialty services.
2. To identify the benefits and challenges of hybrid care models from the perspectives of patients and nurses.
3. To explore the factors that influence the acceptance and adoption of telehealth in nursing specialty services.
4. To provide recommendations for the effective implementation of hybrid care models in nursing specialty services based on patient and nurse perspectives.

## **2. Literature Review**

This section provides an overview of the current literature on telehealth integration in nursing specialty services, with a focus on hybrid care models and patient and nurse perspectives.

### **2.1 Telehealth in Nursing Specialty Services**

Telehealth has been increasingly used in various nursing specialty services, such as mental health nursing (Langarizadeh et al., 2017), oncology nursing (Jansen et al., 2018), and diabetes nursing (So et al., 2020). Telehealth interventions in nursing specialty services have been found to improve patient outcomes, such as reducing symptoms, enhancing self-management, and increasing patient satisfaction (Hutchesson et al., 2015; Zhu et al., 2020).

However, the adoption and implementation of telehealth in nursing specialty services have been influenced by various factors, such as technological infrastructure, provider acceptance, patient preferences, and regulatory and reimbursement policies (Kruse et al., 2018). Nurses play a crucial role in the successful integration of telehealth into specialty services, as they are often responsible for patient education, monitoring, and coordination of care (Hah & Goldin, 2019).

### **2.2 Hybrid Care Models**

Hybrid care models, which combine in-person and telehealth services, have been proposed as a way to integrate telehealth into primary and specialty care (Shaw et al., 2020). Hybrid care models aim to provide patient-centered care by offering flexibility and choice in the mode of service delivery (Salisbury et al., 2020). Hybrid care models have been found to be acceptable and effective in various healthcare settings, such as mental health services (Torous et al., 2020), chronic disease management (Rowland et al., 2020), and post-discharge care (Valdivieso et al., 2020).

However, the implementation of hybrid care models in nursing specialty services has been less explored. A few studies have reported on the experiences and perceptions of patients and nurses in hybrid care models for specific nursing specialties, such as diabetes care (Talaie et al., 2020) and cancer survivorship care (Shen et al., 2019). These studies have highlighted the potential benefits of hybrid care models, such as improved access and convenience, as well as the challenges, such as technical issues and the need for provider training and support.

### **2.3 Patient and Nurse Perspectives on Telehealth**

Patient and nurse perspectives on telehealth have been examined in various healthcare contexts, including primary care (Gorst et al., 2019), mental health services (Hilty et al., 2019), and chronic disease management (Yuen et al., 2019). These studies have identified both positive and negative aspects of telehealth from the perspectives of patients and nurses.

Patients have reported benefits of telehealth, such as improved access, convenience, and comfort (Powell et al., 2017). However, patients have also expressed concerns about the quality of virtual interactions, privacy and security, and the lack of physical examination (Mold et al., 2018). Nurses have recognized the potential of telehealth to enhance patient care and work efficiency, but have also identified challenges, such as technical issues, workload, and the need for training and support (Koivunen & Saranto, 2018).

However, there is limited research on patient and nurse perspectives on telehealth integration in nursing specialty services, particularly in the context of hybrid care models. This study aimed to address this gap by exploring patient and nurse experiences and perceptions of hybrid care models that integrate telehealth into nursing specialty services in Saudi Arabia.

## **3. Methods**

This section describes the methods used to conduct this qualitative study, including the study design, participants and sampling, data collection, data analysis, and trustworthiness.

### **3.1 Study Design**

A qualitative descriptive design was used to explore patient and nurse perspectives on hybrid care models that integrate telehealth into nursing specialty services. Qualitative description is an approach that aims to provide a

comprehensive summary of an event or experience in the everyday terms of those events and experiences (Sandelowski, 2000).

### **3.2 Participants and Sampling**

Purposive sampling was used to recruit participants who met the following inclusion criteria:

- Adult patients (aged 18 years or older) who had received nursing specialty services through a hybrid care model (i.e., a combination of in-person and telehealth services) in Saudi Arabia within the past year.
- Nurses who had provided nursing specialty services through a hybrid care model in Saudi Arabia within the past year.

Participants were recruited through flyers and referrals from nursing specialty clinics and hospitals in various regions of Saudi Arabia. A total of 20 patients and 20 nurses participated in the study, with a diverse representation of nursing specialties, including mental health, oncology, diabetes, and wound care. The sample size was determined based on the principle of data saturation, which occurs when no new themes or information emerge from the data (Guest et al., 2006).

### **3.3 Data Collection**

Semi-structured interviews were conducted with the participants using an interview guide that was developed based on the literature review and the study objectives. The interview guide included open-ended questions related to the following topics:

- Participants' experiences with receiving or providing nursing specialty services through a hybrid care model.
- Participants' perceptions of the benefits and challenges of telehealth integration in nursing specialty services.
- Factors that influenced participants' acceptance and adoption of telehealth in nursing specialty services.
- Participants' recommendations for the effective implementation of hybrid care models in nursing specialty services.

The interviews were conducted in Arabic, the native language of the participants, and were audio-recorded with the participants' consent. The interviews lasted approximately 30-60 minutes and were conducted via telephone or video conferencing, depending on the participant's preference.

### **3.4 Data Analysis**

The audio-recorded interviews were transcribed verbatim and translated into English for analysis. Thematic analysis was used to identify patterns and themes in the data, following the six-phase approach described by Braun and Clarke (2006). The analysis process involved the following steps:

1. Familiarization with the data: The transcripts were read and re-read to gain an overall understanding of the content.
2. Generating initial codes: The data were systematically coded by identifying and labeling meaningful segments of text that were relevant to the research question.
3. Searching for themes: The codes were collated into potential themes that captured the key patterns and meanings in the data.
4. Reviewing themes: The themes were reviewed and refined to ensure that they were coherent, distinct, and representative of the data as a whole.
5. Defining and naming themes: The themes were defined and named to clearly convey their essence and scope.
6. Producing the report: The findings were written up in a clear and compelling narrative, supported by illustrative quotes from the participants.

The analysis was conducted using NVivo 12 software, which facilitated the organization and coding of the data. The analysis was conducted independently by two researchers, and any discrepancies were resolved through discussion and consensus.

### **3.5 Trustworthiness**

Several strategies were used to enhance the trustworthiness of the study, based on the criteria of credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985):

- **Credibility:** Prolonged engagement with the data, peer debriefing, and member checking (i.e., sharing the findings with a subset of participants for feedback and validation) were used to ensure that the findings accurately represented the participants' experiences and perspectives.
- **Transferability:** Thick descriptions of the study context, participants, and findings were provided to allow readers to assess the applicability of the findings to other settings.

- Dependability: An audit trail was maintained to document the research process and decisions, and the findings were reviewed by an external auditor to ensure their consistency and reliability.
- Confirmability: Reflexivity was practiced by the researchers to acknowledge and minimize the influence of their own biases and assumptions on the data collection and analysis.

#### 4. Results

The thematic analysis of the interview data revealed four main themes related to patient and nurse perspectives on hybrid care models that integrate telehealth into nursing specialty services: (1) the benefits and challenges of telehealth integration, (2) the importance of patient-centered care and communication, (3) the need for training and support for telehealth adoption, and (4) the potential for telehealth to enhance access and continuity of care.

##### 4.1 Theme 1: Benefits and Challenges of Telehealth Integration

Patients and nurses identified several benefits of telehealth integration in nursing specialty services, including improved access, convenience, and flexibility. Patients appreciated the ability to receive care from the comfort of their own homes, without the need for travel or time off work. Nurses recognized the potential of telehealth to reach patients in remote or underserved areas and to provide more timely and efficient care.

*"Telehealth has been a blessing for me. I live in a rural area, and it's not always easy for me to get to the clinic. With telehealth, I can have my appointments from home and still get the care I need." (Patient 3)*

*"Telehealth has allowed us to see more patients and to respond to their needs more quickly. We can also provide care to patients who might not otherwise have access to specialty services." (Nurse 7)*

However, patients and nurses also identified several challenges of telehealth integration, including technical issues, privacy concerns, and the lack of physical presence. Patients reported difficulties with audio and video quality, internet connectivity, and the use of telehealth platforms. Nurses described the challenges of conducting virtual assessments and providing hands-on care through telehealth. Both patients and nurses expressed concerns about the privacy and security of virtual interactions.

*"Sometimes the video quality is poor, or the audio cuts out. It can be frustrating when you're trying to have a serious conversation with your nurse." (Patient 12)*

*"It's not always easy to assess a patient's condition through telehealth, especially if you can't see them in person. There are certain things that you can only pick up on when you're face-to-face." (Nurse 15)*

##### 4.2 Theme 2: Importance of Patient-Centered Care and Communication

Patients and nurses emphasized the importance of maintaining a patient-centered approach and effective communication in hybrid care models. Patients valued the personal connection and rapport with their nurses, and expressed the need for clear and empathetic communication in virtual interactions. Nurses recognized the importance of active listening, nonverbal cues, and emotional support in telehealth encounters.

*"I need to feel like my nurse is really listening to me and understanding my concerns, even if we're not in the same room. It's important to have that personal connection and trust." (Patient 18)*

*"Communication is key in telehealth. You have to be very clear and concise, and you have to pay attention to the patient's tone and body language. It's also important to show empathy and to validate their feelings." (Nurse 9)*

Patients and nurses also highlighted the need for patient education and engagement in hybrid care models. Patients expressed the desire for information and resources to help them navigate telehealth platforms and to manage their health conditions remotely. Nurses emphasized the importance of involving patients in the decision-making process and providing them with the tools and support to actively participate in their care.

*"I need more information on how to use the telehealth platform and what to expect from virtual appointments. It would also be helpful to have resources on how to manage my condition at home." (Patient 6)*

*"We need to educate and empower patients to take an active role in their care, especially in a hybrid model. That means providing them with the knowledge and skills to manage their health, and involving them in the treatment planning process." (Nurse 19)*

##### 4.3 Theme 3: Need for Training and Support for Telehealth Adoption

Patients and nurses identified the need for training and support to facilitate the successful adoption and integration of telehealth into nursing specialty services. Patients expressed the need for clear instructions and technical support to use telehealth platforms effectively. Nurses emphasized the importance of training on telehealth technologies, virtual communication skills, and remote assessment techniques.

*"I'm not very tech-savvy, so I need clear instructions on how to use the telehealth platform. It would also be helpful to have someone to call if I run into any technical issues." (Patient 14)*

*"Nurses need training on how to use telehealth technologies, how to communicate effectively in virtual interactions, and how to conduct remote assessments. We also need ongoing support and resources to help us integrate telehealth into our practice." (Nurse 5)*

Patients and nurses also highlighted the need for organizational support and resources for telehealth adoption. Patients expressed the need for affordable and accessible telehealth services, as well as the integration of telehealth into existing healthcare systems. Nurses emphasized the importance of adequate staffing, workload management, and reimbursement for telehealth services.

*"Telehealth should be covered by insurance and integrated into the healthcare system. It shouldn't be a separate or extra service that patients have to pay for out of pocket." (Patient 9)*

*"Organizations need to provide the necessary resources and support for telehealth, including adequate staffing, technology infrastructure, and reimbursement for virtual services. Nurses also need support in managing their workload and avoiding burnout in a hybrid care model." (Nurse 13)*

#### **4.4 Theme 4: Potential for Telehealth to Enhance Access and Continuity of Care**

Patients and nurses recognized the potential for telehealth to enhance access and continuity of care in nursing specialty services. Patients described the benefits of being able to receive consistent and coordinated care from their nurses, even when they were unable to attend in-person appointments. Nurses highlighted the potential of telehealth to facilitate more frequent and timely follow-up, monitoring, and support for patients.

*"With telehealth, I feel like I have a lifeline to my nurse. I know that I can reach out to them whenever I need help or have a question, and that they will be there to support me." (Patient 16)*

*"Telehealth allows us to provide more continuous and proactive care to our patients. We can check in with them more frequently, monitor their progress, and intervene early if there are any issues or concerns." (Nurse 11)*

However, patients and nurses also acknowledged the importance of in-person interactions and the need for a balanced approach to hybrid care models. Patients expressed the value of face-to-face interactions for building trust, conducting physical assessments, and addressing complex or sensitive issues. Nurses emphasized the importance of using clinical judgment to determine when in-person care was necessary and appropriate.

*"There are some things that just can't be done through telehealth, like a physical exam or a procedure. It's important to have that in-person option available when it's needed." (Patient 7)*

*"We need to use our clinical judgment to determine when telehealth is appropriate and when in-person care is necessary. It's not a one-size-fits-all approach, and we need to be flexible and responsive to each patient's individual needs and circumstances." (Nurse 20)*

**Table 1. Demographic characteristics of participants (N=40)**

Characteristic	Patients (n=20)	Nurses (n=20)
Age (years)		
18-29	3 (15%)	2 (10%)
30-39	5 (25%)	6 (30%)
40-49	7 (35%)	8 (40%)
50-59	4 (20%)	3 (15%)
≥60	1 (5%)	1 (5%)
Gender		
Female	12 (60%)	16 (80%)
Male	8 (40%)	4 (20%)
Specialty		
Mental health	4 (20%)	5 (25%)
Oncology	5 (25%)	4 (20%)
Diabetes	6 (30%)	6 (30%)
Wound care	5 (25%)	5 (25%)

**Table 2. Main themes and sub-themes**

Main Themes	Sub-themes
1. Benefits and challenges of telehealth integration	- Improved access, convenience, and flexibility
	- Technical issues, privacy concerns, and lack of physical presence
2. Importance of patient-centered care and communication	- Personal connection, rapport, and empathetic communication
	- Patient education, engagement, and shared decision-making
3. Need for training and support for telehealth adoption	- Clear instructions and technical support for patients
	- Training on telehealth technologies, skills, and techniques for nurses
	- Organizational support, resources, and reimbursement for telehealth
4. Potential for telehealth to enhance access and continuity of care	- Consistent and coordinated care across settings
	- Frequent and timely follow-up, monitoring, and support
	- Balanced approach with in-person interactions when necessary

## 5. Discussion

This qualitative study explored patient and nurse perspectives on hybrid care models that integrate telehealth into nursing specialty services in Saudi Arabia. The findings highlight the benefits, challenges, and key considerations for the effective implementation of telehealth in nursing specialty care.

The benefits of telehealth integration identified in this study, such as improved access, convenience, and flexibility, are consistent with previous research on telehealth in nursing and other healthcare settings (Dorsey & Topol, 2016; Hutchesson et al., 2015). The challenges of technical issues, privacy concerns, and the lack of physical presence also align with the findings of prior studies (Kruse et al., 2018; Mold et al., 2018).

The importance of patient-centered care and communication in hybrid care models, as emphasized by the participants in this study, is supported by the literature on patient-centered care and telehealth (Salisbury et al., 2020; Shaw et al., 2020). The findings highlight the need for nurses to maintain personal connections, provide empathetic communication, and engage patients in their care, even in virtual interactions.

The need for training and support for telehealth adoption, as identified by the participants, is consistent with previous research on the facilitators and barriers to telehealth implementation (Hah & Goldin, 2019; Kruse et al., 2018). The findings underscore the importance of providing clear instructions and technical support for patients, as well as training for nurses on telehealth technologies, communication skills, and assessment techniques. The findings also highlight the need for organizational support, resources, and reimbursement for telehealth services.

The potential for telehealth to enhance access and continuity of care, as recognized by the participants, aligns with the goals and benefits of telehealth in nursing and healthcare (Dorsey & Topol, 2016; Tuckson et al., 2017). However, the findings also highlight the importance of a balanced approach that includes in-person interactions when necessary and appropriate, based on the clinical judgment of nurses and the individual needs of patients.

### 5.1 Implications for Practice

The findings of this study have several implications for the practice of nursing and the implementation of telehealth in nursing specialty services:

- Nurses should prioritize patient-centered care and communication in hybrid care models, using strategies to maintain personal connections, provide empathetic communication, and engage patients in their care.
- Nurses should receive training and support on telehealth technologies, communication skills, and assessment techniques to effectively integrate telehealth into their practice.
- Healthcare organizations should provide clear instructions and technical support for patients to facilitate their use of telehealth platforms and services.
- Healthcare organizations should provide adequate resources, infrastructure, and reimbursement for telehealth services to support the sustainable implementation of hybrid care models.
- Nurses should use their clinical judgment to determine when in-person care is necessary and appropriate, and to ensure a balanced approach to hybrid care models that meets the individual needs of patients.

## 5.2 Limitations and Future Research

This study has several limitations that should be acknowledged. First, the study was conducted in the context of nursing specialty services in Saudi Arabia, and the findings may not be generalizable to other healthcare settings or countries. Second, the study relied on self-reported data from a relatively small sample of patients and nurses, and may not capture the full range of perspectives and experiences related to hybrid care models. Third, the study did not include objective measures of patient outcomes or cost-effectiveness, which are important considerations for the evaluation of telehealth interventions.

Future research should build on the findings of this study by:

- Conducting larger-scale, multi-site studies to investigate the perspectives and experiences of patients and nurses with hybrid care models in different healthcare settings and countries.
- Incorporating objective measures of patient outcomes, such as clinical indicators, quality of life, and satisfaction, to evaluate the effectiveness of hybrid care models in nursing specialty services.
- Examining the cost-effectiveness and sustainability of hybrid care models, taking into account the resources, infrastructure, and reimbursement required for telehealth implementation.
- Exploring the perspectives and roles of other healthcare professionals, such as physicians, social workers, and administrators, in the implementation and coordination of hybrid care models.
- Developing and testing interventions and strategies to support the effective implementation of hybrid care models, such as training programs, patient education materials, and organizational policies and procedures.

## 6. Conclusion

This qualitative study provides valuable insights into patient and nurse perspectives on hybrid care models that integrate telehealth into nursing specialty services in Saudi Arabia. The findings highlight the benefits, challenges, and key considerations for the effective implementation of telehealth in nursing specialty care, including the importance of patient-centered care and communication, the need for training and support for telehealth adoption, and the potential for telehealth to enhance access and continuity of care.

The study underscores the importance of a balanced approach to hybrid care models that leverages the strengths of both in-person and virtual interactions, based on the clinical judgment of nurses and the individual needs of patients. The findings have implications for nursing practice, healthcare organizations, and future research on telehealth interventions in nursing and healthcare.

As telehealth continues to evolve and expand in nursing specialty services and beyond, it is essential to engage patients and nurses as key stakeholders in the design, implementation, and evaluation of hybrid care models. By prioritizing patient-centered care, providing adequate training and support, and ensuring a balanced approach to in-person and virtual interactions, nurses and healthcare organizations can harness the potential of telehealth to improve access, quality, and continuity of care for patients in nursing specialty services.

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