International Journal for Research in Health Science and Nursing
(ISSN: 2208- 2670)
Vol. 12, Issue 02, June 2026
DOI: 10.65327/hsn.v12i2.2492

TELEHEALTH IN NURSING PRACTICE: IMPROVING ACCESS, CONTINUITY OF CARE, AND PATIENT OUTCOMES

Prof. Nabeel Al-Yateem[1], Prof. Wegdan Bani Issa[2]

[1]Department of Nursing, College of Health Sciences, University of Sharjah, Sharjah, United Arab Emirates. Email: nalyateem@sharjah.ac.ae

[2]Department of Nursing, College of Health Sciences, University of Sharjah, Sharjah, United Arab Emirates. Email: wbaniissa@sharjah.ac.ae

raza.afsheen@adu.ac.ae

Received: 19/01/2026 **Revised:** 06/05/2026 **Acceptance:** 18/06/2026 **Published:** 29/06/2026

ABSTRACT-

Telehealth has become an increasingly important component of nursing practice, enabling healthcare delivery beyond conventional clinical settings through virtual consultation, remote monitoring, digital communication, and technology-supported follow-up. This review explores the potential of telehealth to enhance access to health services, continuity of care, chronic disease management, patient outcomes, and patient experience, as well as key implementation issues and opportunities for the future. Data shows that the use of Telehealth can decrease geographical barriers, enhance access for those who are rural, mobility impaired, or have a need for post-discharge and transition care, as well as enhance continued nurse–patient communication. Telehealth can help support self-management, medication compliance, patient education, lifestyle change and home monitoring in the management of chronic diseases like diabetes, hypertension, cardiovascular disease, and respiratory disease. It may also improve patient satisfaction, convenience, engagement, and selected clinical outcomes, although effectiveness varies according to patient characteristics, healthcare setting, intervention design, and technological infrastructure. The problem of digital inequality, lack of digital literacy, weak internet connectivity, privacy and security issues, workload and physical evaluation are all important challenges. Appropriate patient selection, clear clinical protocols, and competent nursing staff are necessary to support safe, sustainable telehealth, along with organization support and equal digital access. Future studies should determine the best, safest and most cost-effective models of telehealth for population-specific groups and assess the long-term consequences of these models on health quality and health equity.

Keywords – Telehealth; Telenursing; Nursing Practice; Continuity of Care; Chronic Disease Management; Patient Outcomes

International Journal for Research in Health Science and Nursing
(ISSN: 2208- 2670)
Vol. 12, Issue 02, June 2026
DOI: 10.65327/hsn.v12i2.2492

1. Introduction

With technological advancements in digital communication, remote monitoring, mobile technology, and virtual consultation platforms, telehealth has increasingly become a part of modern healthcare delivery. Digital delivery of care is increasingly prevalent in health systems to make care more accessible, improve coordination and extend services beyond the clinical setting. Digital health interventions have been identified as a promising tool to improve the capacity of health systems, enhance service delivery, communication and access to essential health services (World Health Organization, 2019). This direction was further reinforced through the global strategy on digital health, which emphasized the need for inclusive, sustainable, and person-centered digital transformation across healthcare systems (World Health Organization, 2021).

Telehealth is a general term that describes the provision and facilitation of health services across distance using information and communication technology. It comprises of video consultations, telephone services, remote patient monitoring, mobile health applications, digital education, electronic communication and other technology-enhanced care modalities. While telemedicine is viewed as a more clinical element of telehealth, telehealth includes both preventive, educational, administrative and clinical elements (Haleem et al., 2021). In the context of nursing practice, telenursing is the application of digital and telecommunication technologies for the provision of nursing assessment, consultation, health education, symptom monitoring, counseling, follow up and care coordination, where the nurse and the patient are not in the same place (Bartz, 2020).

Use of telehealth has also had an impact on the professional role of the nurse. The role of the nurse is becoming more involved in virtual consultation, monitoring physiological and symptom information remotely, supporting self-medication, delivering health education, supporting self-management and coordinating care in healthcare facilities. Thus, telehealth allows for the continuation of care outside of hospitals and clinics, and could serve to boost communication between patients and health care workers. The analysis of the approaches to telehealth nursing revealed the increasing adaptability of nursing interventions in telehealth, with virtual nursing interventions applied in various clinical settings (Búřilová et al., 2022). Meanwhile, digital nursing technologies can have an effect at a variety of levels – the level of the patient, the level of the professional, and the level of the organization – and systematic evaluation is therefore crucial to establish the impact of these technologies on healthcare quality and nursing practice (Krick et al., 2020).

Telehealth was especially crucial during the Covid-19 pandemic, as health systems quickly scaled up their virtual offerings to ensure access without the unnecessary physical touchpoint. This shift marked a rapid shift away from the use of telehealth in isolation and towards the broader incorporation of telehealth into the delivery of routine health services, and highlighted the viability of delivering many components of care via telehealth (Wosik et al., 2020). The results of this research revealed that utilization of virtual care during the pandemic could potentially help provide access to healthcare services, keep patients connected with their providers, and help ensure continuity of critical care in times of significant disruption (Monaghesh & Hajizadeh, 2020).

Telehealth is especially relevant to nursing practice as it can help to increase access to health care services, increase continuity of care, improve patient education, and increase active involvement in patient self-management. These benefits need to be balanced with issues surrounding digital

International Journal for Research in Health Science and Nursing
(ISSN: 2208- 2670)
Vol. 12, Issue 02, June 2026
DOI: 10.65327/hsn.v12i2.2492

inequality, technological barriers, fewer opportunities to assess in person, privacy and confidentiality, patient safety and the readiness of nurses to deliver quality virtual care. Telehealth should therefore be evaluated not only in terms of technological convenience but also according to its effects on clinical outcomes, patient experience, equity, and quality of care.

Accordingly, this review has three main objectives:

1. to examine the role of telehealth in improving access to nursing and healthcare services
2. to evaluate its contribution to continuity of care, chronic disease management, and patient outcomes
3. to critically assess the major challenges, safety concerns, educational needs, and future priorities associated with the integration of telehealth into nursing practice.

2. Evolution and Scope of Telehealth in Nursing Practice

Telehealth nursing has grown beyond the telephone-based follow-up and counselling to include video, mobile apps, digital platforms and physiological monitoring via remote technology. Assessment, education, monitoring of symptoms, follow-up and care coordination can all be done through the patient journey using telenursing. Nursing teleconsultation in primary health care (PHC) can facilitate a distant assessment, guidance, reinforcement of treatment plan, and identification of patients that need face-to-face evaluation (Sousa et al., 2024). Its use has expanded across hospitals, outpatient services, primary care, community programs, and home-based care, helping extend nursing support beyond conventional clinical environments (Bulto, 2024). Telenursing has been shown to have a role for patients with complex needs in cases where such access is restricted (Komariah et al., 2021) and nurses are now playing a role in the broad digital health practice and policy (Janes et al., 2025).

The principal telehealth modalities used in nursing include video consultations, telephone follow-up, remote patient monitoring, mobile health applications, patient portals, and home-based digital monitoring. Video consultations facilitate real-time interaction and selected aspects of visual assessment, while telephone services remain useful for symptom review, medication guidance, education, and follow-up (Byambasuren et al., 2023). In contrast, the concept of "remote monitoring" does in fact allow the same monitoring of the physiology and symptoms as in the hospital to be carried out outside the hospital. Patient education, self-management, documentation and communication are also supported by mobile applications and digital platforms; for instance, ongoing assessment and care coordination for wounds has been supported by a nurse-led system (Brown-Johnson et al., 2023). Such developments have broadened the scope of the nursing profession, making virtual communication, digital assessment, data interpretation, and using technology to support clinical judgment more significant (Isidori et al., 2022). Through telehealth, nursing has also expanded its scope to include mental health care provision in remote settings, where therapeutic communication and engagement with patients are still crucial (Bright & Doody, 2023).

Table 1 presents the major telehealth modalities used in nursing practice and summarizes their principal clinical and patient-support functions.

International Journal for Research in Health Science and Nursing
(ISSN: 2208- 2670)
Vol. 12, Issue 02, June 2026
DOI: 10.65327/hsn.v12i2.2492

Table 1. Major Telehealth Modalities Used in Nursing Practice

Telehealth modality	**Main nursing applications**	**Principal contribution**
Video consultation	Virtual assessment, counseling, education, follow-up	Real-time visual interaction and clinical communication
Telephone follow-up	Symptom review, medication guidance, appointment follow-up	Simple and widely accessible continuing contact
Remote patient monitoring	Monitoring blood pressure, glucose, oxygen saturation, weight, and symptoms	Early identification of changes in health status
Mobile health applications	Education, reminders, self-monitoring, symptom reporting	Supports self-management and patient engagement
Patient portals	Secure messaging, information exchange, results and follow-up communication	Strengthens nurse–patient communication and information access
Home-based digital monitoring	Ongoing monitoring of patients with chronic or complex conditions	Extends nursing surveillance beyond healthcare facilities

Figure 1 illustrates how major telehealth modalities connect nursing activities with improved access, continuity of care, patient engagement, and clinical outcomes.

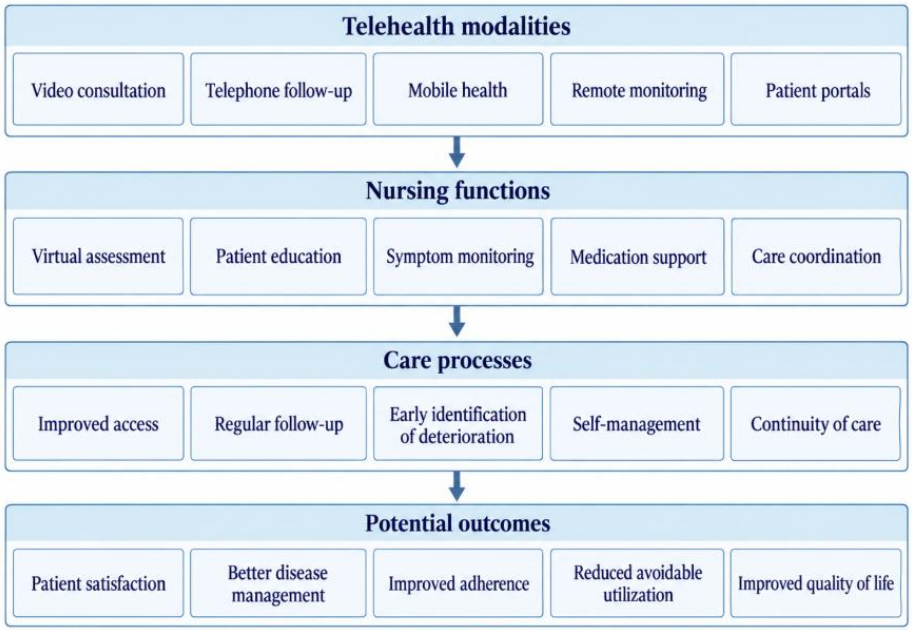


Figure 1. Telehealth Nursing Care Pathway: From Digital Access to Patient Outcomes

International Journal for Research in Health Science and Nursing
(ISSN: 2208- 2670)
Vol. 12, Issue 02, June 2026
DOI: 10.65327/hsn.v12i2.2492

3. Improving Healthcare Access Through Telehealth Nursing

Telehealth can serve as a means to provide nursing and healthcare services to patients beyond the traditional, by overcoming some geographic, physical, and service barriers. Telehealth can help extend access to professional knowledge and expertise and enable timely clinical decision making in remote and rural areas where workforce shortages and longer travel times can create lag times in reaching care (Tsou et al., 2021). It can also link isolated communities to primary, specialist and follow-up services, though this will be dependent on the local healthcare infrastructure and capacity (Butzner & Cuffee, 2021). While telehealth has created access and alleviated travel stress in India, its reach is not consistent across all regions and population groups (Rajkumar et al., 2023).

For older adults, those with limited mobility and patients with chronic conditions who might not be able to travel to the clinic regularly, telehealth is also beneficial. Virtual follow-up may lead to less travel time, fewer waiting time delays, and lower transportation expenses, and facilitate more regular follow-up, earlier detection of problems, and better access to specialist care. Telemedicine can be a helpful component of access for safety-net populations, but social and structural barriers need to be worked through as well (Tierney et al., 2024).

Telehealth access, however, is not necessarily fair. Only works with reliable Internet connection, appropriate device, digital literacy, and ability to access virtual platforms. Telehealth has had a sudden rise, bringing this overwhelming digital divide that could potentially be a disadvantage to populations who are already having difficulties accessing health care services (Chang et al., 2021). However, unequal access to the internet and digital skills may further constrain participation, as in Brazil (Nakayama et al., 2023). Other factors, such as socio-economic factors, language barriers, sensory and cognitive differences, and disability-related factors can also negatively impact usability, and certain groups are less likely to be offered or engage in remote consultations (Jones et al., 2022). Therefore, telehealth should be created as an accessible option, taking into account affordability, accessibility and digital literacy (Kuziemsky et al., 2022).

Additional provider training, technical infrastructure, organizational support and workflows are necessary for effective implementation. Provider readiness and limited technical capability, coupled with inconsistencies in institutional support, are critical factors in India (Sharma et al., 2024). The expansion of telehealth should therefore not only be in terms of access, but also in terms of a digital innovation that does not exacerbate the current inequalities in the healthcare system.

4. Telehealth and Continuity of Nursing Care

Patients in need of long-term monitoring, multiple follow-up visits and often coordination between hospital, primary, community and home services require continuity of care. Telehealth can help ensure continuity of care by continuing nurse–patient communications, reinforcing self-management skills, and decreasing fragmentation, but requires integration with current health care systems (Ladds et al., 2023).

Post-discharge telehealth is especially helpful because patients might have to adjust to changes in their drugs, symptoms that have not been addressed, and questions about self-care. Communication and review via remote follow-up helps to catch issues early, clarify, and review as children move from inpatient to outpatient care (Haimowitz et al., 2023). Additionally, nurse-led telehealth may

International Journal for Research in Health Science and Nursing
(ISSN: 2208- 2670)
Vol. 12, Issue 02, June 2026
DOI: 10.65327/hsn.v12i2.2492

be an effective means of supporting patients with multimorbidity, checking on symptoms, adherence, discharge instructions, and coordinating care across various services (Davis et al., 2024). The use of this in transitional care is another example of the expanding role of this in post-hospital follow-up (Anderson et al., 2021).

Telehealth also facilitates medication and symptom monitoring, allowing nurses to identify adverse effects, missed doses, and clinical deterioration. The use of remote monitoring can lead to a decrease in some types of acute healthcare utilization, but results are inconsistent across patient groups and types of interventions (Taylor et al., 2021). Virtual services for older adults and long-term care residents may decrease unnecessary transfers and still provide access to clinical services (Li et al., 2022).

Co-ordination between hospitals, nurses, primary care teams, specialists and community services are also important aspects of effective continuity. The use of telehealth for delivery of transitional care has not been linked with higher 30-day readmission or mortality (Shen et al., 2024). Similarly, virtual ward models can be adapted to enable monitoring to be carried out after the hospital setting for those who still need to be monitored (Chauhan & McAlister, 2022). Telehealth can then help to keep in touch, facilitate early intervention, and promote continuity of service along the care pathway when integrated well.

Table 2 summarizes the major patient groups and care situations in which telehealth can improve healthcare access and continuity of nursing care.

Table 2. Contribution of Telehealth to Healthcare Access and Continuity of Care

Population/care context	Main barrier or need	Contribution of telehealth nursing
Rural and remote populations	Distance and limited local services	Provides access to nursing and specialist support
Older adults and mobility-limited patients	Difficulty travelling to healthcare facilities	Enables home-based consultation and follow-up
Post-discharge patients	Risk of fragmented care and readmission	Supports symptom review, medication monitoring, and transitional care
Patients with multimorbidity	Multiple appointments and complex care needs	Facilitates coordinated and repeated follow-up
Long-term care residents	Burden associated with external transfers	Enables clinical consultation within residential settings
Underserved populations	Financial, geographical, or service-access barriers	Can expand access when digital and accessibility barriers are addressed

Figure 2 depicts the role of telehealth in maintaining continuity across the patient journey from hospital care to long-term community and home-based management.

International Journal for Research in Health Science and Nursing
(ISSN: 2208- 2670)
Vol. 12, Issue 02, June 2026
DOI: 10.65327/hsn.v12i2.2492

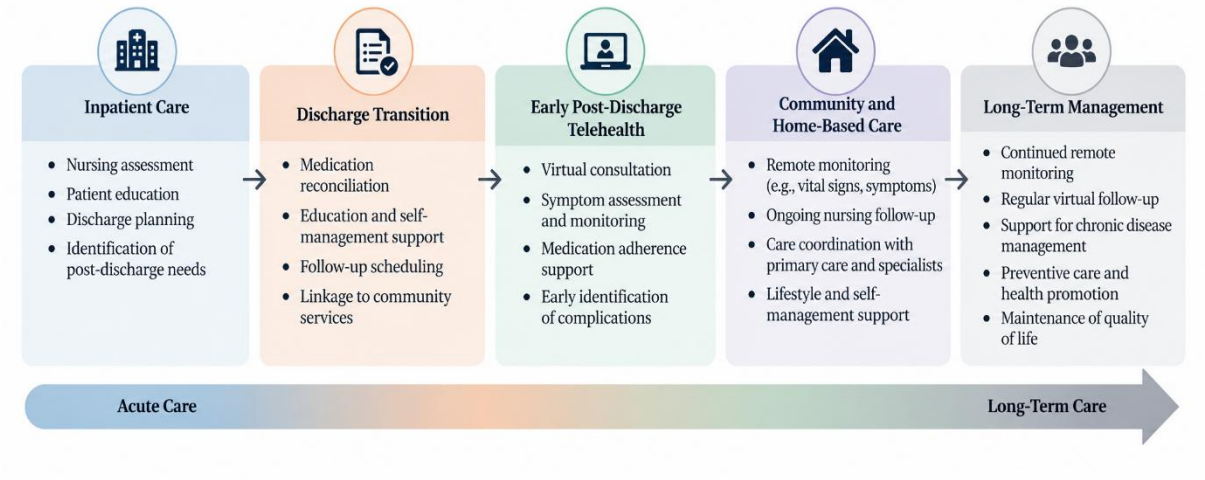


Figure 2. Telehealth-Supported Continuum of Nursing Care

5. Telehealth in Chronic Disease Management and Preventive Care

5.1 Long-Term and Metabolic Disease Management

Telehealth can be used to help manage a chronic disease by monitoring, educating, promoting adherence, and conducting regular follow-up between clinic visits. There is evidence that well-integrated telehealth interventions improve disease control and that problems start to be identified earlier (Xiao & Han, 2023; Lewinski et al., 2022). Education and personalized feedback can support remote glucose monitoring to reinforce self-management and glycemic control in type 2 diabetes (Liu et al., 2024; Hangaard et al., 2023). Medication adherence, lifestyle modification and behavioral guidance are additional benefits of telenursing (Lo Monaco et al., 2025). Home blood pressure monitoring in conjunction with the nurse-led counseling and follow-up can help improve blood pressure control and adherence to treatment in hypertension (Kappes et al., 2023).

5.2 Cardiovascular, Respiratory, and Rehabilitation Applications

Cardiovascular and respiratory care are also highly utilized for telehealth services. Remote monitoring of weight, blood pressure, heart rate and symptoms can aid in the early detection of deterioration and prompt intervention in chronic heart failure (Ding et al., 2020). Noninvasive monitoring can also help to lower healthcare utilization by assisting healthcare management outside of hospital settings (Auener et al., 2021), and randomized evidence indicates benefit for a few clinical outcomes in heart failure populations (Umeh et al., 2022). Telehealth interventions have been found to be effective in chronic obstructive pulmonary disease symptom management, adherence to treatment, pulmonary rehabilitation, and early detection of exacerbation, but have different effectiveness depending on the telehealth intervention model (Koh et al., 2023). Nurse-led telerehabilitation also enhances access to rehabilitation and facilitate functional recovery in community settings for persons with chronic conditions (Lee et al., 2022).

Table 3 presents the principal applications of telehealth nursing across common chronic conditions and the corresponding areas of clinical benefit.

International Journal for Research in Health Science and Nursing
(ISSN: 2208- 2670)
Vol. 12, Issue 02, June 2026
DOI: 10.65327/hsn.v12i2.2492

Table 3. Applications of Telehealth in Chronic Disease Management

Clinical condition	Main telehealth nursing applications	Primary outcome focus
Type 2 diabetes	Glucose monitoring, medication support, dietary education, lifestyle counseling	Glycemic control, adherence, and self-management
Hypertension	Home blood pressure monitoring and nurse-led counseling	Blood pressure control and treatment adherence
Chronic heart failure	Weight, blood pressure, heart rate, and symptom monitoring	Early deterioration detection and reduced healthcare utilization
Chronic obstructive pulmonary disease	Symptom monitoring, treatment support, and telerehabilitation	Exacerbation recognition, functional status, and adherence
Stroke and rehabilitation needs	Telerehabilitation, education, and remote follow-up	Functional recovery and quality of life
Multiple chronic conditions	Longitudinal monitoring and coordinated follow-up	Continuity, self-management, and prevention of complications

5.3 Health Promotion and Preventive Nursing

In addition to disease management, telehealth can be used to provide health education, remind patients to get screened, counsel patients on lifestyle changes, and follow-up in a structured manner to help prevent disease. Frequent virtual contact can strengthen self-management and promote healthy behaviors, and can assist nurses in detecting potential issues before they arise or escalate (Lewinski et al., 2022). Personalized counseling and digital monitoring can also help maintain adherence to lifestyle and treatment recommendations, such as following a diet, engaging in physical activity, and taking medication (Kappes et al., 2023). Telehealth has the potential to transform nursing from episodic care to preventative, self-management and long-term health maintenance.

6. Impact of Telehealth on Patient Outcomes and Patient Experience

6.1 Remote Monitoring and Clinical Safety

Telehealth can help facilitate the ongoing monitoring of symptoms, physiological monitoring and earlier identification of signs of deterioration, which can extend clinical monitoring beyond face-to-face contact. For advanced cancer care, nurse-led telehealth has helped to report symptoms, review the situation promptly when needed, and escalate when clinical condition deteriorates (Neo et al., 2024). Similar benefits can be achieved via remote physiological monitoring: For instance,

home pulse oximetry has benefited early detection, as it is supported by the appropriate clinical oversight and escalation processes (Alboksmaty et al., 2022). These may help to enhance safety when combined with well defined clinical pathways on remote monitoring.

6.2 Functional Outcomes and Healthcare Utilization

Structured telehealth interventions can also lead to better functional outcomes and quality of life. Continuous education and follow-up have shown that nurse-led eHealth programs for stroke survivors post-stroke have a positive impact on stroke rehabilitation, functional recovery, and quality of life (Zhang et al., 2024). Telehealth has the potential to be used as a tool for risk assessment and post-discharge follow-up in post-acute care and to help optimize health care utilization (Rodriguez et al., 2024). Frequent contact can also help strengthen treatment adherence, enabling patients to talk about drugs, side effects, and challenges in implementing their treatment plans. But decreases in readmissions and admissions are not uniform in all environments and based on patient admission and intensity of intervention and integration with traditional treatment.

6.3 Patient Satisfaction and Convenience

Patient satisfaction is an important outcome of telehealth. Virtual care can minimize travel, wait time, transportation expenses and disruption to the workplace or family. The overall satisfaction with telemedicine is generally positive, but it varies depending on the quality of the technology, communication, and appropriateness of telemedicine for the clinical setting (Pogorzelska & Chlabicz, 2022). Telemedicine can also be beneficial for patients and health professionals when the convenience provided does not impact communication or perceived quality (Nguyen et al., 2020). If telemedicine is used by adults with diabetes, there is a general positive attitude, with the level of satisfaction depending on the users' digital confidence and their type of care (Hamasaki, 2022). These findings are echoed by wider evidence, which emphasises that ease of use, ease of accessibility and responsiveness to communication are all significant factors in satisfaction (Kaur et al., 2022). Patient acceptance can be improved further by the reduction of travel and indirect costs (Alanazi et al., 2022).

6.4 Patient Engagement and Variability in Outcomes

Telehealth can enhance engagement by offering more regular contact with nurses, a forum for patients to discuss symptoms, ask questions, and be involved in care decisions. Regular virtual contact may reinforce health knowledge, self-management, and confidence in following treatment plans. But it's not always a happy time. However, patients with more serious chronic obstructive pulmonary disease may be more comfortable and confident using the technology, while simultaneously experiencing limitations with technology, interpersonal interaction and distant evaluation of complicated symptoms (O'Connor & Crilly, 2025). The effectiveness of telehealth interventions is thus dependent on the clinical condition, age, digital literacy, socioeconomic status, and telehealth intervention design and setting. Its value is probably best seen when it is clinically appropriate, available and available alongside existing nursing programs.

7. Challenges, Risks, and Patient Safety Concerns

7.1 Digital and Technological Barriers

International Journal for Research in Health Science and Nursing
(ISSN: 2208- 2670)
Vol. 12, Issue 02, June 2026
DOI: 10.65327/hsn.v12i2.2492

Poor digital literacy, lack of adequate devices, lack of dependable internet access and difficulty with virtual platforms may limit the use of telehealth. Technical issues and suboptimal quality of audio or video may hinder communication, assessment or engagement in remote care (Khoshrounejad et al., 2021). Variations in digital and telecommunication access and technology can also impact the reliability and viability of telehealth services (Alenoghena et al., 2023).

7.2 Limitations of Remote Clinical Assessment

Remote care restricts direct physical examination and may make subtle clinical changes more difficult to detect. While remote monitoring can be used to obtain physiological data, healthcare practitioners have noted issues related to the interpretation of data, technology reliability, workflow integration, and the amount of monitoring data (Serrano et al., 2023). These restrictions are especially relevant in the case of complex or rapidly evolving cases.

7.3 Privacy, Workload, and Governance

The electronic transmission of health information presents risks to confidentiality, un-authorized access, insecure platforms and breaches, all of which necessitate technical and organizational safeguards (Houser et al., 2023). Documentation, consent, digital information, alerts, and technical problems are just some of the other responsibilities that can be expanded for nurses with telehealth. System integration, lack of technical support, and organizational preparedness are other factors that can adversely affect clinical workflows (Oudbier et al., 2024). There are extra complexities due to regulatory differences in reimbursement, licensing, professional accountability, and standards of virtual practice (Kruse et al., 2021).

7.4 Patient Selection, Safety, and Escalation

Patient selection and identification of situations in which face-to-face assessment is needed are essential components of safe telehealth. Specialized nurses can promote safety via remote surveillance, clinical judgment, patient education and care coordination (Vaismoradi et al., 2024). Communication failures, patient identification issues, incomplete assessment, medication issues, and delayed escalation are types of risks that can occur (Oliveira et al., 2025). Telehealth protocols should therefore establish criteria for who is eligible, how they are assessed, how it will be documented, what to watch for, what to escalate, and what to refer to. The successful implementation of virtual care into a clinical governance structure is important to ensure that convenience does not compromise patient safety or quality of nursing care.

Table 4 summarizes the principal challenges associated with telehealth nursing and the safeguards required to support safe and effective virtual care.

Table 4. Major Challenges in Telehealth Nursing and Recommended Safeguards

Challenge/risk	Potential effect on care	Recommended safeguard
Limited digital literacy or connectivity	Failed consultations and unequal access	Assess digital readiness and provide technical or alternative access support

International Journal for Research in Health Science and Nursing
(ISSN: 2208- 2670)
Vol. 12, Issue 02, June 2026
DOI: 10.65327/hsn.v12i2.2492

Restricted physical examination	Missed or delayed recognition of clinical signs	Clear eligibility criteria and timely escalation to face-to-face assessment
Privacy and cybersecurity concerns	Loss of confidentiality or unauthorized data access	Secure platforms, informed consent, and data-protection procedures
Increased documentation and alert burden	Nurse workload and workflow disruption	Integrated systems, appropriate staffing, and streamlined protocols
Inappropriate patient selection	Delayed diagnosis or deterioration	Structured triage and defined warning signs
Clinical deterioration during remote care	Delayed emergency treatment	Clear escalation thresholds and emergency referral pathways
Unclear accountability or inconsistent practice	Variation in quality and professional risk	Standardized protocols, documentation requirements, and regulatory guidance

8. Strengthening Telehealth Nursing: Education, Practice, Policy, and Future Directions

8.1 Nursing Competence and Education

The ability of nurses to provide safe, responsive and patient-focused care virtually is also a critical factor in the effectiveness of telehealth within the nursing profession. The digital literacy, therefore, is evolving as a requisite to professionalism. Nurses need to master how to use the telehealth interfaces, understand what data can be captured remotely, and be able to troubleshoot minor technical issues, as well as assist patients with some limited experience using digital systems. Digital health competency is also the critical appraisal of information, the use of electronic systems, and an awareness of the impact of technology on clinical decision making and professional practice (Longhini et al., 2022).

Virtual communication necessitates further skills as nurses need to develop rapport, gather relevant clinical information, offer reassurance and be able to pick up on non-verbal cues via a limited digital environment. In the same way, there is a need for good clinical judgment in the case management of situations that can be managed virtually from those that need physical exam or urgent referral. Preparation is, therefore, a focus in planning, assessing patient needs, communicating with patients, and utilizing technology appropriately in nursing practice as critical competencies in telehealth (Rutledge et al., 2021). Ethical awareness is equally important, particularly in relation to informed consent, privacy, confidentiality, and secure handling of patient information.

These skills should be integrated into nursing undergraduate and postgraduate curricula in a planned manner. The findings suggest that, although there is growing demand for nursing graduates to participate in technology-driven health care systems, the content of digital health training is still not uniform in nursing programs. (Kleib et al., 2024) In general, nursing students

International Journal for Research in Health Science and Nursing
(ISSN: 2208- 2670)
Vol. 12, Issue 02, June 2026
DOI: 10.65327/hsn.v12i2.2492

are interested in telenursing, but their previous experience, education and practice have an impact on their confidence and attitude towards telenursing (Mun et al., 2024). Structured telehealth learning, simulation, and supervised practice can, therefore, be used to help close the gap between theory and practice. A survey of nursing students also shows a need to improve skills in practical telehealth knowledge and experience prior to professional practice (Rettinger et al., 2024). Even for current employees, continuous education is required, and technology facilitation provides flexibility for continuous education and updating of digital competencies (Kimura et al., 2023).

8.2 Organizational and Policy Support

Successful telehealth delivery depends on the individual in addition to their competence. Healthcare organizations require clear institutional protocols defining patient eligibility, documentation, clinical responsibilities, escalation procedures, and quality standards. Nurses also need reliable technical support, appropriate staffing, manageable workloads, and access to interoperable digital systems. Interprofessional collaboration is especially relevant since virtual care may involve multiple health care providers such as nurses, physicians, pharmacists, rehabilitation providers and community services.

Professional guidance should also address accountability, scope of practice, and competency expectations. Gaps in clinical nurse specialist preparation for telehealth and clear standards for safe telehealth practice have been recommended (Purvis et al., 2021). Policy-wise, telehealth systems need to be standardized and consistent in terms of data security, reimbursement, regulation of professionals, investment in infrastructure, quality assurance, and more. More comprehensive digital health strategies should enable coordinated implementation, not the implementation of individual technological solutions; especially in countries where national health care systems have significantly varying resources and digital readiness (World Health Organization, 2024).

8.3 Future Directions

Future telehealth nursing is likely to develop around hybrid models in which virtual and face-to-face care are combined according to patient needs and clinical complexity. For example, remote patient monitoring and wearables might collect more physiological and behavioral data over a period of time, and better integration with electronic health records will enable a nurse to use this data in conjunction with their clinical history.

Personalized telehealth models may also tailor communication, monitoring intensity, and education to individual risk profiles, digital abilities, and preferences. More focus needs to be placed on accessible platforms for older adults, people with disabilities, linguistically diverse, and communities with limited digital resources. Future studies need to go beyond feasibility and satisfaction studies to assess the clinical effectiveness, cost-effectiveness, safety, workload impact and patient outcomes of the proposal in the long term. Especially, attention must be paid to the underserved population to ensure that future digital nursing models can be built to enhance access and not exacerbate inequalities. Enhancing education, preparation, regulation, and inclusive design will thus play a key role in telehealth's ability to become a viable component of quality nursing care.

International Journal for Research in Health Science and Nursing
(ISSN: 2208- 2670)
Vol. 12, Issue 02, June 2026
DOI: 10.65327/hsn.v12i2.2492

Figure 3 presents an integrated framework for safe, equitable, and sustainable telehealth nursing, emphasizing the interaction between patient needs, nursing competence, organizational support, and digital infrastructure.

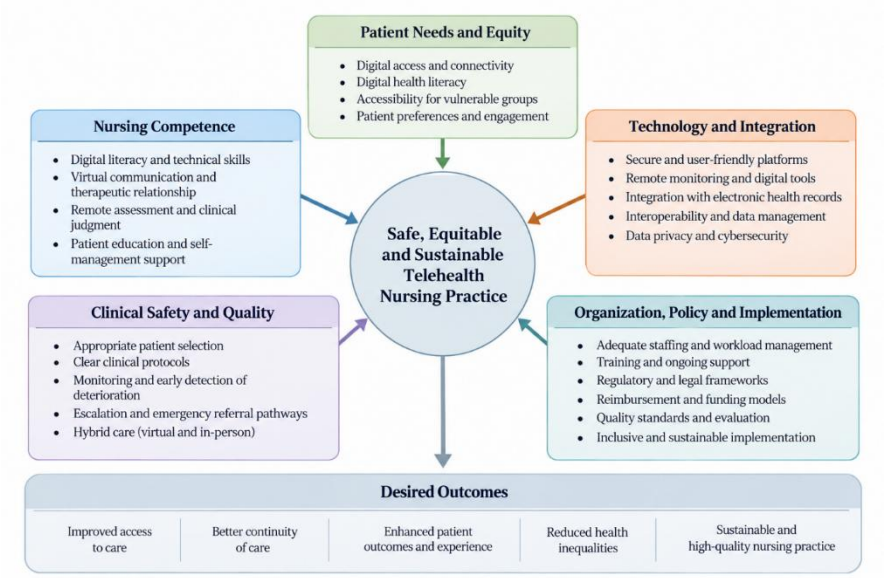


Figure 3. Integrated framework for safe, equitable, and sustainable telehealth nursing practice

9. Conclusion

Telehealth is a growing part of today's nursing practice, increasing the scope of the ways that nurses assess, monitor, educate and support patients in various health care environments. Telehealth can address geographical and logistical challenges, enhance access to care, and improve continuity of care, especially for the individual needing regular follow-up, for those living in remote areas, for the mobility-impaired and for those relying on the need for long-term disease management.

Its value is especially evident in chronic disease care, post-discharge monitoring, patient education, symptom surveillance, and the promotion of self-management. Telehealth can also improve patient engagement through increased communication with nurses and more flexibility of accessing health services. While there is evidence of some benefits for clinical outcomes, treatment adherence, functioning, satisfaction, and health care utilization, these benefits are not consistent. The outcomes will vary by the population served, clinical condition, characteristics of the intervention, technological infrastructure, and level of integration with the existing health system.

There are thus important restrictions. Compromised access and patient safety may be caused by digital inequality, poor connectivity, limited device access, low digital literacy, privacy and security issues, additional workload, and decreased physical access. Telehealth must then be considered as a complement and not a complete substitute for the attendance of nurses in person.

Proper nurse training, clinical protocols, organizational and technical support, equal access to the Internet, regulatory and service design that puts patients first are all crucial factors for successful

implementation. Future studies are needed to determine the best, safe and cost effective models of telehealth for certain patient populations and clinical contexts, alongside the long term impacts on nursing workload, quality and health equity.

References

1. Alanazi, A. T., Al Hader, B., & Al Alkhaibari, E. (2022). Telemedicine patient satisfaction and cost: a comparative study in the COVID-19 era. Cureus, 14(10).
2. Alboksmaty, A., Beaney, T., Elkin, S., Clarke, J. M., Darzi, A., Aylin, P., & Neves, A. L. (2022). Effectiveness and safety of pulse oximetry in remote patient monitoring of patients with COVID-19: a systematic review. The Lancet Digital Health, 4(4), e279-e289.
3. Alenoghena, C. O., Ohize, H. O., Adejo, A. O., Onumanyi, A. J., Ohihoin, E. E., Balarabe, A. I., ... & Alenoghena, B. (2023). Telemedicine: a survey of telecommunication technologies, developments, and challenges. Journal of Sensor and Actuator Networks, 12(2), 20.
4. Anderson, T. S., O'Donoghue, A. L., Dechen, T., Herzig, S. J., & Stevens, J. P. (2021). Trends in telehealth and in-person transitional care management visits during the COVID-19 pandemic. Journal of the American Geriatrics Society, 69(10), 2745-2751.
5. Auener, S. L., Remers, T. E., van Dulmen, S. A., Westert, G. P., Kool, R. B., & Jeurissen, P. P. (2021). The effect of noninvasive telemonitoring for chronic heart failure on health care utilization: systematic review. Journal of Medical Internet Research, 23(9), e26744.
6. Bartz, C. C. (2020). Telehealth nursing research: adding to the evidence-base for healthcare. Journal of the International Society for telemedicine and eHealth, 8, e19-1.
7. Bright, A. M., & Doody, O. (2023). Mental health service users' experiences of telehealth interventions facilitated during the COVID-19 pandemic and their relevance to nursing: An integrative review. Journal of Psychiatric and Mental Health Nursing, 30(6), 1114-1129.
8. Brown-Johnson, C. G., Lessios, A. S., Thomas, S., Kim, M., Fukaya, E., Wu, S., ... & Winget, M. (2023). A nurse-led care delivery app and telehealth system for patients requiring wound care: Mixed methods implementation and evaluation study. JMIR Formative Research, 7(1), e43258.
9. Bulto, L. N. (2024). The role of nurse-led telehealth interventions in bridging healthcare gaps and expanding access. Nursing open, 11(1), e2092.
10. Búřilová, P., Pokorná, A., Búřil, J., Kantorová, L., Slezaková, S., Svobodová, Z., & Táborský, M. (2022). Identification of telehealth nursing approaches in the light of the COVID-19 pandemic—A literature review. Journal of Nursing Management, 30(8), 3996-4004.
11. Butzner, M., & Cuffee, Y. (2021). Telehealth interventions and outcomes across rural communities in the United States: narrative review. Journal of Medical Internet Research, 23(8), e29575.

12. Byambasuren, O., Greenwood, H., Bakhit, M., Atkins, T., Clark, J., Scott, A. M., & Glasziou, P. (2023). Comparison of telephone and video telehealth consultations: systematic review. Journal of Medical Internet Research, 25, e49942.
13. Chang, J. E., Lai, A. Y., Gupta, A., Nguyen, A. M., Berry, C. A., & Shelley, D. R. (2021). Rapid transition to telehealth and the digital divide: implications for primary care access and equity in a post-COVID era. The Milbank Quarterly, 99(2), 340-368.
14. Chauhan, U., & McAlister, F. A. (2022). Comparison of mortality and hospital readmissions among patients receiving virtual ward transitional care vs usual postdischarge care: a systematic review and meta-analysis. JAMA network open, 5(6), e2219113.
15. Davis, K., Ramsey, I., Sharplin, G., Eckert, M., & Shakib, S. (2024). A nurse-led, telehealth transitional care intervention for people with multimorbidity: A feasibility study. The Australian Journal of Advanced Nursing, 41(4), 43-52.
16. Ding, H., Chen, S. H., Edwards, I., Jayasena, R., Doecke, J., Layland, J., ... & Maiorana, A. (2020). Effects of different telemonitoring strategies on chronic heart failure care: systematic review and subgroup meta-analysis. Journal of medical Internet research, 22(11), e20032.
17. Haimowitz, R. L., Halley, T. V., Driskill, C., Kendall, M., & Parikh, K. (2023). Implementing a post-discharge telemedicine service pilot to enhance the hospital to home transition. Hospital Pediatrics, 13(6), 508-519.
18. Haleem, A., Javaid, M., Singh, R. P., & Suman, R. (2021). Telemedicine for healthcare: Capabilities, features, barriers, and applications. Sensors international, 2, 100117.
19. Hamasaki, H. (2022). Patient satisfaction with telemedicine in adults with diabetes: A systematic review. Healthcare, 10(9), 1677.
20. Hangaard, S., Laursen, S. H., Andersen, J. D., Kronborg, T., Vestergaard, P., Hejlesen, O., & Udsen, F. W. (2023). The effectiveness of telemedicine solutions for the management of type 2 diabetes: a systematic review, meta-analysis, and meta-regression. Journal of diabetes science and technology, 17(3), 794-825.
21. Houser, S. H., Flite, C. A., & Foster, S. L. (2023). Privacy and security risk factors related to telehealth services–a systematic review. Perspectives in health information management, 20(1).
22. Isidori, V., Diamanti, F., Gios, L., Malfatti, G., Perini, F., Nicolini, A., ... & Gaudino, A. (2022). Digital technologies and the role of health care professionals: scoping review exploring nurses' skills in the digital era and in the light of the COVID-19 pandemic. JMIR nursing, 5(1), e37631.
23. Janes, G., Chesterton, L., Heaslip, V., Reid, J., Lüdemann, B., Gentil, J., ... & Shannon, M. (2025). Current nursing and midwifery contribution to leading digital health policy and practice: An integrative review. Journal of advanced nursing, 81(1), 116.

24. Jones, J. E., Damery, S. L., Phillips, K., Retzer, A., Nayyar, P., & Jolly, K. (2022). Real-time remote outpatient consultations in secondary and tertiary care: A systematic review of inequalities in invitation and uptake. PLoS One, 17(6), e0269435.
25. Kappes, M., Espinoza, P., Jara, V., & Hall, A. (2023). Nurse-led telehealth intervention effectiveness on reducing hypertension: a systematic review. BMC nursing, 22(1), 19.
26. Kaur, K. N., Niazi, F., Thakur, R., Saeed, S., Rana, S., & Singh, H. (2022). Patient satisfaction for telemedicine health services in the era of COVID-19 pandemic: a systematic review. Frontiers in public health, 10, 1031867.
27. Khoshrounejad, F., Hamednia, M., Mehrjerd, A., Pichaghsaz, S., Jamalirad, H., Sargolzaei, M., ... & Aalaei, S. (2021). Telehealth-based services during the COVID-19 pandemic: a systematic review of features and challenges. Frontiers in public health, 9, 711762.
28. Kimura, R., Matsunaga, M., Barroga, E., & Hayashi, N. (2023). Asynchronous e-learning with technology-enabled and enhanced training for continuing education of nurses: a scoping review. BMC medical education, 23(1), 505.
29. Kleib, M., Arnaert, A., Nagle, L. M., Ali, S., Idrees, S., da Costa, D., ... & Darko, E. M. (2024). Digital health education and training for undergraduate and graduate nursing students: scoping review. JMIR nursing, 7, e58170.
30. Koh, J. H., Chong, L. C. Y., Koh, G. C. H., & Tyagi, S. (2023). Telemedical interventions for chronic obstructive pulmonary disease management: umbrella review. Journal of Medical Internet Research, 25, e33185.
31. Komariah, M., Maulana, S., Platini, H., & Pahria, T. (2021). A scoping review of telenursing's potential as a nursing care delivery model in lung cancer during the COVID-19 pandemic. Journal of Multidisciplinary Healthcare, 3083-3092.
32. Krick, T., Huter, K., Seibert, K., Domhoff, D., & Wolf-Ostermann, K. (2020). Measuring the effectiveness of digital nursing technologies: development of a comprehensive digital nursing technology outcome framework based on a scoping review. BMC health services research, 20(1), 243.
33. Kruse, C. S., Williams, K., Bohls, J., & Shamsi, W. (2021). Telemedicine and health policy: A systematic review. Health Policy and Technology, 10(1), 209-229.
34. Kuziemsky, C., Hunter, I., Udayasankaran, J. G., Ranatunga, P., Kulatunga, G., John, S., ... & Basu, A. (2022). Telehealth as a means of enabling health equity. Yearbook of medical informatics, 31(01), 060-066.
35. Ladds, E., Khan, M., Moore, L., Kalin, A., & Greenhalgh, T. (2023). The impact of remote care approaches on continuity in primary care: a mixed-studies systematic review. British Journal of General Practice.
36. Lee, A. Y. L., Wong, A. K. C., Hung, T. T. M., Yan, J., & Yang, S. (2022). Nurse-led telehealth intervention for rehabilitation (telerehabilitation) among community-dwelling patients with chronic diseases: systematic review and meta-analysis. Journal of medical Internet research, 24(11), e40364.

37. Lewinski, A. A., Walsh, C., Rushton, S., Soliman, D., Carlson, S. M., Luedke, M. W., ... & Goldstein, K. M. (2022). Telehealth for the longitudinal management of chronic conditions: systematic review. Journal of medical Internet research, 24(8), e37100.
38. Li, S., Hossain, M., Gilman, B., Forrow, L. V., Lee, K. M., & Brown, R. (2022). Effects of a nursing home telehealth program on spending and utilization for Medicare residents. Health Services Research, 57(5), 1191-1200.
39. Liu, F., Li, J., Li, X., Yang, Z., Wang, W., Zhao, L., ... & Xu, Y. (2024). Efficacy of telemedicine intervention in the self-management of patients with type 2 diabetes: a systematic review and meta-analysis. Frontiers in public health, 12, 1405770.
40. Lo Monaco, M., Profeta, A., & Corrao, S. (2025). Telenursing as an effective ally for improving patient outcomes in diabetes? An umbrella review. Nursing Open, 12(7), e70265.
41. Longhini, J., Rossettini, G., & Palese, A. (2022). Digital health competencies among health care professionals: systematic review. Journal of medical Internet research, 24(8), e36414.
42. Monaghesh, E., & Hajizadeh, A. (2020). The role of telehealth during COVID-19 outbreak: a systematic review based on current evidence. BMC public health, 20(1), 1193.
43. Mun, M., Choi, S., & Woo, K. (2024). Investigating perceptions and attitude toward telenursing among undergraduate nursing students for the future of nursing education: a cross-sectional study. BMC nursing, 23(1), 236.
44. Nakayama, L. F., Binotti, W. W., Link Woite, N., Fernandes, C. O., Alfonso, P. G., Celi, L. A., & Regatieri, C. V. (2023). The digital divide in Brazil and barriers to telehealth and equal digital health care: analysis of internet access using publicly available data. Journal of Medical Internet Research, 25, e42483.
45. Neo, S. H. S., Mok, N., Ng, X. H., & Zhu, X. (2024). Enhancing palliative care for advanced cancer patients: evaluating implementation and impact of a virtual nurse-led symptom monitoring and telehealth initiative. BMC Palliative Care, 23(1), 238.
46. Nguyen, M., Waller, M., Pandya, A., & Portnoy, J. (2020). A review of patient and provider satisfaction with telemedicine. Current allergy and asthma reports, 20(11), 72.
47. O'Connor, Ú., & Crilly, G. (2025). The experiences and perceptions of telehealth in patients living with advanced chronic obstructive pulmonary disease: a qualitative evidence synthesis. Journal of advanced nursing, 81(4), 1700-1716.
48. Oliveira, J. S. R. D., Fernandez, R. S., Molina, M. R., Pinto, A. C. P., Rocha-Filho, C. R., Ferreira, T. M., & Peres, S. V. (2025). Patient safety risk associated with synchronous telehealth: A scoping review. Plos one, 20(12), e0336992.
49. Oudbier, S. J., Souget-Ruff, S. P., Chen, B. S., Ziesemer, K. A., Meij, H. J., & Smets, E. M. (2024). Implementation barriers and facilitators of remote monitoring, remote consultation and digital care platforms through the eyes of healthcare professionals: a review of reviews. BMJ open, 14(6), e075833.

50. Pogorzelska, K., & Chlabicz, S. (2022). Patient satisfaction with telemedicine during the COVID-19 pandemic—a systematic review. International Journal of Environmental Research and Public Health, 19(10), 6113.
51. Purvis, S. L., Peterson, J. K., LaBorde, P. L., Pan, S., Pullium, C. L., Tuite, P. K., ... & Witt, S. J. (2021). NACNS White Paper on Telehealth Competency for the Clinical Nurse Specialist: Gap Analysis and Recommendations.
52. Rajkumar, E., Gopi, A., Joshi, A., Thomas, A. E., Arunima, N. M., Ramya, G. S., ... & Abraham, J. (2023). Applications, benefits and challenges of telehealth in India during COVID-19 pandemic and beyond: a systematic review. BMC Health Services Research, 23(1), 7.
53. Rettinger, L., Putz, P., Aichinger, L., Javorszky, S. M., Widhalm, K., Ertelt-Bach, V., ... & Kuhn, S. (2024). Telehealth education in allied health care and nursing: web-based cross-sectional survey of students' perceived knowledge, skills, attitudes, and experience. JMIR Medical Education, 10(1), e51112.
54. Rodriguez, G., Meltzer, D., Rodriguez, L., Lewis, V., & Krishnamurthy, R. (2024). Post-acute care: Advancing population health interventions, risk assessment, and implications for readmissions and cost-effectiveness through telehealth. Telemedicine Reports, 5(1), tmr-2024.
55. Rutledge, C. M., O'Rourke, J., Mason, A. M., Chike-Harris, K., Behnke, L., Melhado, L., ... & Gustin, T. (2021). Telehealth competencies for nursing education and practice: the four P's of telehealth. Nurse educator, 46(5), 300.
56. Serrano, L. P., Maita, K. C., Avila, F. R., Torres-Guzman, R. A., Garcia, J. P., Eldaly, A. S., ... & Forte, A. J. (2023). Benefits and challenges of remote patient monitoring as perceived by health care practitioners: a systematic review. The Permanente Journal, 27(4), 100.
57. Sharma, P., Rao, S., Krishna Kumar, P., R. Nair, A., Agrawal, D., Zadey, S., ... & Patel, V. (2024). Barriers and facilitators for the use of telehealth by healthcare providers in India—A systematic review. PLOS Digital Health, 3(12), e0000398.
58. Shen, E., Huang, C.-W., Huynh, D. N., Lee, J. S., & Nguyen, H. Q. (2024). Telehealth transitional care and 30-day readmission during the COVID-19 pandemic. The American Journal of Managed Care, 30(1), e1–e3.
59. Sousa, V. L. P., Dourado, F. W., Anjos, S. D. J. S. B. D., & Moreira, A. C. A. (2024). Nursing teleconsultation in primary health care: scoping review. Revista Latino-Americana de Enfermagem, 32, e4329.
60. Taylor, M. L., Thomas, E. E., Snoswell, C. L., Smith, A. C., & Caffery, L. J. (2021). Does remote patient monitoring reduce acute care use? A systematic review. BMJ open, 11(3), e040232.

61. Tierney, A. A., Mosqueda, M., Cesena, G., Frehn, J. L., Payán, D. D., & Rodriguez, H. P. (2024). Telemedicine implementation for safety net populations: a systematic review. Telemedicine and e-Health, 30(3), 622-641.
62. Tsou, C., Robinson, S., Boyd, J., Jamieson, A., Blakeman, R., Yeung, J., ... & Hendrie, D. (2021). Effectiveness of telehealth in rural and remote emergency departments: systematic review. Journal of Medical Internet Research, 23(11), e30632.
63. Umeh, C. A., Torbela, A., Saigal, S., Kaur, H., Kazourra, S., Gupta, R., & Shah, S. (2022). Telemonitoring in heart failure patients: systematic review and meta-analysis of randomized controlled trials. World journal of cardiology, 14(12), 640.
64. Vaismoradi, M., Rae, J., Turunen, H., & Logan, P. A. (2024). Specialized nurses' role in ensuring patient safety within the context of telehealth in home care: A scoping review. Digital Health, 10, 20552076241287272.
65. World Health Organization. (2019). WHO guideline: Recommendations on digital interventions for health system strengthening. World Health Organization.
66. World Health Organization. (2021). Global strategy on digital health 2020–2025. World Health Organization.
67. World Health Organization. (2024). Global Initiative on Digital Health: Coordinated support for country-led digital health transformation. World Health Organization.
68. Wosik, J., Fudim, M., Cameron, B., Gellad, Z. F., Cho, A., Phinney, D., ... & Tcheng, J. (2020). Telehealth transformation: COVID-19 and the rise of virtual care. Journal of the American Medical Informatics Association, 27(6), 957-962.
69. Xiao, Z., & Han, X. (2023). Evaluation of the effectiveness of telehealth chronic disease management system: systematic review and meta-analysis. Journal of Medical Internet Research, 25, e44256.
70. Zhang, W., Mei, Z., Feng, Z., & Li, B. (2024). Effects of a nurse-led eHealth programme on functional outcomes and quality of life of patients with stroke: a pooled analysis of randomized controlled trials. Frontiers in public health, 12, 1395270.