

THE TELEMEDICINE EXPERIENCE IN RURAL AREAS: A QUALITATIVE SYNTHESIS OF THE LITERATURE

A EXPERIÊNCIA DA TELEMEDICINA EM ÁREAS RURAIS: UMA SÍNTESE QUALITATIVA DA LITERATURA

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RESUMO

A crescente demanda por assistência à saúde em áreas rurais impulsiona a adoção da telemedicina, porém as experiências subjetivas de pacientes vulneráveis nesses cenários necessitam de maior elucidação. O objetivo deste estudo foi analisar e comparar as percepções, os benefícios vivenciados e os desafios enfrentados por pacientes e residentes rurais atendidos por meio de serviços de telessaúde. Para isso, realizou-se uma síntese qualitativa de literatura baseada em busca retrospectiva na base de dados PubMed, selecionando-se dois estudos empíricos qualitativos publicados em 2026. Os resultados indicam que a telemedicina gera benefícios expressivos, incluindo conveniência de acesso, acessibilidade geográfica, melhoria clínica e sentimentos de conexão e empoderamento. Contudo, os usuários enfrentam entraves importantes, como limitações técnicas estruturais, riscos de redução da privacidade e da autonomia individual, além dos impactos negativos causados pela alta rotatividade de assistentes técnicos. Evidenciou-se que fatores relacionais, como a atitude do profissional de saúde, a familiaridade com o prestador do serviço e a estabilidade das equipes, são os elementos mais determinantes para a satisfação do paciente, independentemente de sua idade. Conclui-se que a telemedicina atua de forma ideal como um complemento e não como substituta absoluta do atendimento presencial, sendo indispensável capacitar as equipes de apoio e mitigar a rotatividade de pessoal para garantir a humanização, a segurança e a sustentabilidade dos cuidados de saúde remotos em regiões rurais.

Palavras-chave: TELEMEDICINA. SAÚDE RURAL. PESQUISA QUALITATIVA. ASSISTÊNCIA DE LONGA DURAÇÃO.

ABSTRACT

The growing demand for healthcare services in rural areas drives the adoption of telemedicine; however, the subjective experiences of vulnerable patients in these settings require further elucidation. The objective of this study was to analyze and compare the perceptions, experienced benefits, and challenges faced by rural patients and residents cared for through telehealth services. To this end, a qualitative literature synthesis was conducted based on a retrospective search in the PubMed database, selecting two empirical qualitative studies published in

2026. The results indicate that telemedicine generates significant benefits, including convenience of access, geographical accessibility, clinical improvement, and feelings of connection and empowerment. However, users face major barriers, such as structural technical limitations, risks of reduced privacy and individual autonomy, as well as the negative impacts caused by the high turnover of technical assistants. It was evidenced that relational factors, such as the attitude of the healthcare professional, familiarity with the service provider, and staff stability, are the most determining elements for patient satisfaction, regardless of their age. It is concluded that telemedicine ideally acts as a complement to — and not an absolute substitute for — face-to-face care, making it essential to train support teams and mitigate staff turnover to ensure the humanization, safety, and sustainability of remote healthcare in rural regions.

Keywords: TELEMEDICINE. RURAL HEALTH. QUALITATIVE RESEARCH. LONG-TERM CARE.

INTRODUCTION

The advancement of technology over the years has demonstrated the broad applicability of this tool, especially regarding Information and Communication Technologies (ICTs) in the healthcare field. As an example, telemedicine can be cited, which has a great capacity to assist in conducting medical consultations remotely, connecting doctors and patients across different contexts and locations. In this sense, this modality has the potential to transform healthcare by overcoming geographical, social, and cultural barriers, reaching diverse audiences and reducing the flow of in-person clinic appointments.

However, its practical implementation still faces significant obstacles, as access remains limited due to the costs of consultations, internet connectivity, and the availability of digital tools (such as cell phones and computers), reflecting a clear relationship of dependency on individuals' socioeconomic status. Against this backdrop, the objective of this research is to evaluate the advantages and disadvantages (pros and cons) of using telemedicine in the current healthcare context.

METHODS

This literature review was developed based on the question: "What are the perceptions, experienced benefits, and challenges faced by patients and residents under healthcare who use telemedicine services across different geographical contexts and specialties?" The search for these materials was conducted in the "PubMed" database during the first weeks of August 2026. The search descriptors used were ("telemedicine" OR "telehealth") AND "qualitative" AND ("rural" OR "long-term care" OR "patients' experiences"). Studies published within the last 5 years (2021–2026) resulted in the identification and selection of two articles for synthesis in

this text. The articles under analysis are qualitative and investigate the end-user experience in telehealth.

Original articles directly addressing subjective experiences, perceptions of benefits, and practical challenges from the perspective of the patient/resident users of telemedicine systems themselves were adopted as inclusion criteria. Conversely, studies strictly focused on the perceptions of healthcare professionals, literature reviews, or research containing exclusively quantitative clinical efficacy data were excluded. Specifically, the emotional experiences (of feeling connected yet apart) and the contextual conditions that facilitate or shape video consultations for residents in long-term care facilities were analyzed based on the inductive qualitative study by Årlebrant et al. Finally, the benefits of convenience and healthcare access, as well as the practical challenges arising from technical assistant turnover and the physical absence of the specialist, were integrated using the qualitative program evaluation by Evans et al.

RESULTS

The comparative analysis of the studies revealed that, although applied to distinct specialties and telehealth models, the rural patient experience is deeply shaped by relational factors and care team stability. The findings regarding the benefits, challenges, and risks perceived by users in both programs are summarized in Table 1, which is detailed below.

Table 1. Comparative synthesis of benefits, challenges, and risks of telemedicine from rural patients' perspectives.

Aspect	Study 1 (Sweden) ¹	Study 2 (USA) ²
Service Model	Video consultations with a designated physician	Hybrid model (Intermediate Care Technicians under tele-supervision of a podiatrist)
Experienced Benefits	Enhanced emotional connection, courage, and patient empowerment	Greater convenience, improved geographical accessibility, and high staff quality
Challenges & Risks	Privacy concerns, technical limitations, and risks of reduced individual autonomy	Staff (ICT) turnover leading to care variability, scheduling issues, and the physical absence of the specialist

Source: Developed by the authors (2026).

Regarding benefits, the study conducted in Sweden identified that video consultations can promote feelings of connection and empowerment among elderly residents in long-term care facilities. Participants demonstrated progressively more positive attitudes toward the telehealth system, highlighting that tailored solutions and the presence of familiar providers are crucial for preserving their autonomy in the care process. Similarly, the American HELPP program, aimed at preventing lower limb amputations in rural veterans, achieved high user satisfaction. The primary benefits highlighted were the technical and human quality of the care team, a significant increase in convenience by eliminating the need to travel long distances, and actual clinical improvement in their foot health.

On the other hand, both investigations converge in demonstrating that telemedicine imposes operational and ethical challenges that extend beyond technical limitations. In the Swedish context, residents pointed out risks of reduced decision-making autonomy, privacy concerns during video transmissions, and structural technical limitations. It was shown that the physician's behavior plays a central role in dictating whether the experience will be humanizing or excluding. In the American context, the main operational bottleneck identified was related to the high turnover of assistant technicians, which generated undesirable variability in communication and care quality. Veterans also resented the physical absence of the podiatry specialist during procedures and reported difficulties with scheduling processes.

In short, the results of both studies suggest that telemedicine ideally serves as a complement to—rather than an absolute substitute for—in-person care. The stability, attitude, and training of healthcare teams (whether physicians or assistant technicians) stand out as the most decisive factors for the success and sustainability of these technologies in rural regions.

CONCLUSION

The primary evidence found reveals that telemedicine in rural areas generates significant benefits, such as greater convenience, geographical accessibility, and direct improvements in patient health, in addition to fostering feelings of courage and empowerment in vulnerable populations. However, the success of these interventions faces critical operational and ethical challenges, which include the high turnover of technical support teams (generating inconsistency in care quality) and concerns regarding the reduction of autonomy and privacy of patients under long-term care. This review contributes to scientific knowledge by demystifying age barriers, demonstrating that the acceptance and efficacy of telehealth are not dictated by the patient's age, but rather by contextual factors, physician behavior, and the

stability of support teams.

As practical implications, the findings suggest that telemedicine programs must act strictly in a complementary manner to in-person care—and not as absolute substitutes. It is recommended to involve familiar healthcare providers to strengthen patient autonomy, as well as to develop technical staff retention strategies to ensure the sustainability of care. For future research, there is a pointed need to investigate models to connect a larger number of rural users to services and ensure continuous follow-up care, in addition to evaluating practical solutions that safeguard data privacy and preserve the decision-making integrity of residents in long-term care facilities.

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