Integrating Telehealth in Primary Care: An Albanian Perspective

Albana Greca (Sejdini)[1*], Klerida Shehu[2] and Rohela Mahmud[3]

[1]*Peqin Local Healthcare Unit, 3501 Peqin, Albania*
[2]*Faculty of Technical Medical Sciences, Tirana, Albania*
[3]*Former Lecturer University of Malaya, Kuala Lumpur, Malaysia*

[*]**Corresponding author**
Albana Greca (Sejdini), Peqin Local Healthcare Unit, 3501 Peqin, Albania.

ABSTRACT

Background: Telehealth involves delivering health care remotely using various telecommunication tools offering numerous advantages in primary health care (PHC). So far, Albania has been working on developing a National Telemedicine Network to enable smooth exchange of medical information and teleconsultations among healthcare providers.

Research questions:
1. What is the experience of using Telehealth tools among Albanian primary healthcare workforce?
2. What are the main challenges primary healthcare workers faces while using telecommunication tools in providing healthcare services?
3. How do they view the future of integrating telehealth in primary healthcare in Albania?

Method: An online survey was disseminated between the months of November and December 2024 through social media communications. The survey comprised questions regarding individual demographics, experiences of delivering telehealth consultations, challenges they face and future perceptions of telehealth.

Results: Only sixty-one professionals responded to the survey, including physicians, nurses, pharmacists, and other stakeholders. Overall, they recognize telehealth as a positive tool for increasing accessibility, reducing wait times, and offering alternatives in emergency or rural settings. However, poor internet connectivity, limited access to technology, lack of training, and difficulty in maintaining patient trust and data privacy were the most common challenges reported. Inability to perform physical examinations reported as a limitation in providing an accurate diagnosis. Overwhelmingly, participants viewed telehealth as an essential part of future healthcare delivery, particularly with advancements in technology, increased training, and improved infrastructure.

Conclusions: In Albania, telehealth presents a promising bridge to strengthen primary health care systems toward universal health coverage. However, its successful integration will depend on addressing technical barriers, building trust, and providing adequate training to healthcare professionals and patients.

Introduction

In today's digital era, telehealth is one of the major innovations that is transforming healthcare for the better. Telehealth refers to the practice of providing health-related services remotely via electronic and communication technologies [1]. These services may include medical consultations, diagnosis, treatment, follow-up care, education, and self-management. They are all facilitated through real-time video conferencing, phone calls, or mobile applications [2].

Indeed, this approach offers a convenient, efficient, and cost-effective alternative to traditional in-person visits, especially for individuals living in rural or underdevelopment areas, those with mobility challenges, or patients requiring frequent follow-up care [3]. Through telehealth, patients gain access to timely medical advice without the burden of travel or extended wait times, while healthcare providers are equipped to monitor,

educate, and support patients across distances.

The increasing adoption of telehealth has been catalyzed by advancements in digital infrastructure, supportive policy frameworks, and the growing demand for accessible, high-quality care [4]. National healthcare systems are increasingly recognizing telehealth as a pragmatic solution to pressing challenges such as workforce shortages, geographic disparities, and escalating healthcare costs [5]. In the context of primary healthcare (PHC), telehealth facilitates early diagnosis, preventive services, chronic disease management, and enhanced patient engagement [6].

While telehealth cannot entirely replace all aspects of in-person care—such as emergency interventions or comprehensive physical examinations—it plays an essential complementary role. It extends the reach of healthcare services, reinforces continuity of care, and promotes interdisciplinary collaboration [7]. Moreover, it empowers patients to take a more proactive role in managing their own health through remote monitoring and digital education tools [8].

In Albania, there is only the Nationwide Telemedicine Network which represents a successful implementation of the Initiate-Build-Operate-Transfer (IBOT) model, facilitated by the International Virtual e-Hospital [9]. This IBOT model has since been adopted as a regional prototype for similar programs in the Balkans and other developing nations [10]. However, little is known about the use of telehealth in primary healthcare practice in Albania, and about the experiences of doctors and patients.

This study aimed to answer the following key questions:
1. What is the experience of using telehealth tools among the Albanian primary healthcare workforce?
2. What are the main challenges primary healthcare workers faces while using telecommunication tools to provide healthcare services?
3. How do healthcare workers view the future of integrating telehealth in primary healthcare in Albania?

Methods
Study Design and Period
This cross-sectional descriptive study was conducted through an online survey between November and December 2024. This design efficiently captured experiences, challenges, and perceptions related to telehealth among primary healthcare professionals in Albania.

Participants
Sixty-one healthcare professionals responded, including physicians, nurses, pharmacists, and other stakeholders. Participants were recruited voluntarily through convenience sampling, leveraging social media and professional networks to ensure broad geographic representation.

Data Collection Tool
Data were collected using a self-administered questionnaire developed on StartQuestion. The survey covered:
- Demographics (age, gender, role, region)
- Experience with telehealth tools (frequency, purpose, types)
- Challenges and barriers (infrastructure, patient engagement, data security)
- Future perspectives on telehealth integration

The instrument was pilot-tested with healthcare professionals to ensure clarity and technical reliability.

Data Processing and Analysis
Data were exported to Microsoft Excel and analyzed descriptively through PSPP free version for Windows. Categorical variables were summarized using frequencies and percentages. Open-ended responses were manually coded thematically. All responses were anonymized, and informed consent was obtained digitally.

Results
Experience with Telehealth
Generally, all sixty-one respodents viewed telehealth positively, especially for improving access and reducing wait times for patients in remote or underserved areas. Common telehealth applications included virtual consultations, follow-up assessments, and remote patient monitoring.

Modalities used included video conferencing, electronic prescribing, and mobile health applications. Usage frequency varied: 47.6% used telehealth sometimes, 14.3% often, and 14.3% not at all. No participant reported daily or continuous use, indicating uneven adoption and infrastructure gaps.

Reported Challenges
Technological Barriers
Poor internet connectivity—particularly in rural areas—was the most frequent obstacle, affecting communication quality and care delivery. Limited access to appropriate hardware and software for providers and patients constrained telehealth scalability.

Lack of Training
Only 28.6% had formal telehealth training. The remainder relied on self-directed learning through scientific literature (52.4%), colleagues (42.9%), and conferences (33.3%), which affected confidence and proficiency.

Clinical and Operational Limitations
The inability to perform physical examinations remotely was widely cited as a barrier to accurate diagnosis and clinical decision-making. Additional concerns included limited use of diagnostic tools and difficulty adapting to patient-specific needs without direct interaction.

Data Privacy and Trust
While 61.9% reported using privacy policies, only 4.76% encrypted patient data. Notably, 38.1% felt insufficiently informed about data protection protocols, raising concerns about institutional preparedness and patient trust.

Future Perspectives
A majority (76.2%) believed telehealth could improve healthcare quality, and 80.3% anticipated it becoming central to Albania's national health system. Key enablers for this included improved infrastructure, expanded training, and investment in digital health. Participants emphasized policies to include vulnerable populations, improve usability, and foster public trust.

Discussion
This study provides a timely assessment of telehealth adoption among healthcare professionals in Albania, highlighting both

the opportunities and persistent barriers that influence its integration into routine clinical practice. The findings contribute to a growing body of evidence from low- and middle-income countries on the uneven uptake and variable effectiveness of digital health technologies in resource-constrained settings.

Adoption and Utilization Patterns

The survey revealed that while telemedicine is increasingly recognized as a beneficial adjunct to traditional care, its actual utilization remains inconsistent, with only a minority of healthcare professionals reporting frequent use. This partial integration may reflect the early stage of institutional telehealth implementation, a lack of standardized protocols, or disparities in digital infrastructure across urban and rural settings. Comparable studies in Southeast Europe and Central Asia have identified similar patterns, where enthusiasm for telemedicine exceeds its actual deployment due to infrastructural and policy limitations [6,10,11].

Perceived Benefits and Value

Consistent with global findings, Albanian healthcare professionals cited time savings, cost reduction, and improved access as major benefits of telehealth [12]. Interestingly, access — often a primary driver in underserved areas — was underemphasized (4.76%), suggesting either low awareness of its impact or limited local success in reaching remote populations. This underscores the need for more targeted telemedicine campaigns aimed at improving rural outreach and access equity.

Barriers to Telemedicine Implementation

Technological limitations, particularly related to internet reliability and hardware access, emerged as major barriers. These findings align with previous research indicating that infrastructure readiness is a key determinant of telehealth scalability in transitional economies [4]. Importantly, only a minority of professionals had access to encrypted platforms or secure data environments, raising critical data security concerns. This issue is further compounded by the fact that over one-third of respondents were not well-informed about privacy standards, which may erode both provider and patient trust.

The lack of formal training, reported by 71.4% of respondents, presents a substantial barrier to effective telemedicine deployment. This suggests a systemic need for continuous professional development programs focused on digital literacy and platform-specific competencies. Training gaps are not unique to Albania; similar findings have been documented in post-pandemic evaluations of telehealth readiness across Central and Eastern Europe [13].

Clinical Concerns and Diagnostic Limitations

The most frequently reported clinical challenge was the inability to conduct physical examinations remotely, reflecting a fundamental limitation in asynchronous and video-based consultations. This concern is particularly salient in primary care, where nuanced physical assessments often guide diagnosis and triage. While telemedicine offers significant advantages in follow-up care and chronic disease management, it cannot fully substitute for in-person evaluation, particularly for acute presentations or complex cases [7].

Patient Perspectives and Future Adoption

A notable discrepancy was observed between healthcare professionals' willingness to recommend telehealth (Net Promoter Score: +33.3) and their perception of patient willingness to reuse telehealth (NPS: −38.1). This gap may be driven by patient concerns about data security, limited digital literacy, or negative initial experiences, which warrant further qualitative research. Patient-centered design improvements and awareness campaigns may help address these concerns and close the provider–patient satisfaction gap.

Despite these challenges, the majority of respondents expressed optimism about the future of telehealth in Albania. Their responses highlighted the need for expanded infrastructure, inclusive service models, and more robust regulatory frameworks to support secure, equitable, and effective telehealth systems [14].

Conclusions

In Albania, telehealth presents a promising bridge to strengthen primary health care systems toward universal health coverage. However, it faces significant challenges including technological barriers, limited training, and concerns about data security. While healthcare professionals are optimistic about the future integration of telemedicine, inconsistent usage and patient reluctance highlight the need for targeted infrastructure improvements, education, and trust-building measures. Addressing these obstacles will be essential to fully realize telehealth's benefits and ensure equitable, high-quality care across the country.

Author Biography

Albana Greca (Sejdini) is a healthcare researcher and contributor to All About Beating Diabetes, where she explores digital health solutions for chronic disease management. Her current focus is on the role of AI in enhancing telemedicine. While basic telehealth tools already improve access and continuity of care, she advocates that integrating AI is essential for maximizing diagnostic support, personalization, and healthcare efficiency especially in resource-limited settings

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