

ORIGINAL ARTICLE


Teleconsultation in Primary Health Care: renewal of prescriptions for controlled medications*


HIGHLIGHTS

1. Teleconsultation is a valuable tool for renewing prescriptions.
2. Teleconsultation brings convenience and agility to patients and physicians.
3. The absence of physical examination is a limitation of the service.
4. The findings form the basis for service management.

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ABSTRACT

Objective: To analyze the evaluation of users and physicians regarding the teleconsultation service for the renewal of prescriptions for controlled medications in Primary Health Care, Joinville (SC), Brazil. **Method:** Cross-sectional, descriptive, quantitative study. Intentional, non-probabilistic sample, with 23 users and three physicians. Data obtained through semi-structured questionnaires, administered by telephone and email. Quantitative analysis performed using simple descriptive statistics. **Results:** 23 users participated, most of whom were women aged 51-60. Among the positive aspects, 15 mentioned practicality (65%), 11 mentioned efficiency (48%), and 6 mentioned convenience (26%). Negative aspects included: 7 (30%) needing technological assistance and 5 (22%) having difficulty accessing the Internet. The physicians (n=3) validated the flexibility and potential of the service to increase adherence, but emphasized the limitation of not being able to perform a physical examination. **Conclusion:** Teleconsultation for prescription renewals was well received by users and physicians, who highlighted its practicality, time savings, and reduced travel, despite technological barriers.

DESCRIPTORS: Telemedicine; Remote Consultation; Drug Prescription of Special Control; Health Personnel; Cross-Sectional Studies.

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INTRODUCTION

The Unified Health System (UHS), established by Law No. 8,080/1990, is based on the principles of universality, comprehensiveness, and equity in serving the Brazilian population¹. Primary Health Care (PHC) represents the gateway to this system, being responsible for promotion, prevention, treatment, and rehabilitation, with a focus on continuous and accessible care². PHC meets most of the population's health needs, acting in an integrated manner at all levels of care³.

With the COVID-19 pandemic, the UHS faced unprecedented challenges in ensuring continuity of care, which accelerated the adoption of digital technologies in healthcare. Telehealth, which encompasses the use of Information and Communication Technologies (ICTs) for the provision of remote services, stood out as a strategic tool for remote access to medical care, especially during social distancing⁴⁻⁵.

In this context, there is teleconsultation, which can be defined as a remote consultation that involves interactions between a healthcare professional and a patient to provide diagnostic or therapeutic advice electronically. This tool has proven effective in providing clinical care, including prescription renewals, especially in regions with limited access to in-person services⁶⁻⁷.

Furthermore, teleconsultation has contributed to reducing geographical and socioeconomic barriers, expanding access to healthcare services for populations in rural or remote areas, who traditionally face difficulties in receiving in-person care⁸. A recent study indicates that this modality favors the optimization of professionals' time, enabling greater coverage and efficiency in healthcare management⁹. Other benefits include reducing the risk of exposure to communicable diseases, decreasing patient travel and costs, and integrating different levels of care and multidisciplinary teams, strengthening patient-centered care¹⁰⁻¹¹.

Teleconsultation in PHC expanded significantly after the pandemic, which allowed professionals and patients to stay connected. This modality has also increased the efficiency and accessibility of services, as highlighted by the World Health Organization (WHO)¹². However, for the successful implementation of teleconsultation, it is essential to invest in robust technological infrastructure, adequate training for professionals, and clear regulations that ensure data security and confidentiality¹²⁻¹³.

A scoping review that aimed to map the skills of professionals for teleconsultation in PHC reported that it is an emerging form of healthcare delivery, but that professionals still lack training in communication, clinical, technological, ethical, and infrastructure-related skills for the teleconsultation environment¹⁴.

Despite advances in health technologies, a free search of databases revealed a gap in the literature specifically on teleconsultation for the renewal of prescriptions for controlled medications in PHC, a modality that emerged in response to demands for treatment continuity and to address the lack of physicians¹³⁻¹⁴.

Thus, the active role of UHS users, through their experiences and perceptions, is essential for improving health services², and the participation of physicians is also crucial, as they are the ones who operate remote care and face technical and ethical challenges in teleconsultation¹⁵.

This study seeks to fill this gap by characterizing the assessment of UHS users and physicians regarding teleconsultation in PHC in a municipality in Santa Catarina. Thus, the objective was to analyze the assessment of users and physicians regarding the

teleconsultation service for the renewal of prescriptions for controlled medications in the PHC in the municipality of Joinville (SC), Brazil.

METHOD

This is a cross-sectional, descriptive study with a quantitative approach, conducted in the municipality of Joinville, Santa Catarina, Brazil. This municipality is the most populous in the state, with approximately 627,000 inhabitants in 2024 (IBGE)¹⁶. The city has a PHC network consisting of 52 Basic Health Units (BHUs) and 170 Family Health Strategy (FHS) teams, which serve most of the population. The *Web-Saúde/Ligue-Saúde* telehealth service is part of the local system, offering teleconsultations and remote monitoring of UHS users.

The study population consisted of UHS users treated at the 52 UBSs and physicians who used the *Web-Saúde/Ligue-Saúde* telehealth service to renew control prescriptions. During the study, the medical team consisted of five professionals working in the telehealth service.

The sample, which was intentional and non-probabilistic, consisted of participants who met the eligibility criteria. Users aged ≥ 18 years, residing in Joinville (SC), who had used the *Web-Saúde/Ligue-Saúde* service between September 2023 and February 2024 were considered eligible. Data collection was performed via telephone contact and/or messaging application. Users who could not be contacted by these means were excluded from the study.

As for physicians, those who performed teleconsultations for the renewal of control prescriptions during the same period were included. Professionals who were not active in the service during data collection were excluded. 23 users and 3 physicians participated in the study.

Two instruments were developed for data collection: one for users, administered via telephone and/or messaging app, and another for physicians. Both consisted of closed-ended questions and one open-ended question for participants to express themselves freely. It should be noted that the responses to the open-ended question were used only as complementary illustrations to the quantitative findings (narrative analysis) and were not subjected to systematic qualitative analysis.

The questionnaire for users contained 10 questions on sociodemographic data and the telehealth service, focusing on identifying the positive and negative aspects of the service. The questionnaire for physicians contained 16 questions covering sociodemographic data and information on the telehealth service for renewing control prescriptions. The questionnaires were developed specifically to meet the research objectives, based on the literature and the authors' experience with the service, and were not subjected to prior pilot testing.

After the study was approved by the competent authorities, contact was made with the coordination of the *Web-Saúde/Ligue-Saúde* telehealth service, which provided a list of contacts of users served by the system during the period of interest. Based on this list, the stage of direct contact with users began, intending to invite them to participate in the research.

Users were contacted by phone or messaging app by the main researcher to complete the questionnaire. During the contact, the study objectives were presented,

and authorization to proceed with the application was requested. Those who agreed to participate were offered the option of receiving an electronic link to respond or answering the questionnaire during the call, at which time the researcher recorded the responses directly in the electronic form (Google Forms®). The phone calls were recorded for later review, storage, and data analysis.

To collect data from medical professionals, an email was sent, also made available by the *Web-Saúde/Ligue-Saúde* telehealth service coordination, containing an invitation to participate in the study, the Free and Informed Consent Term (FICT), and then the link to access the electronic questionnaire hosted on the Google Forms platform. The form was structured so that physicians could respond independently, at their convenience, ensuring the participants' anonymity, since no personally identifiable data was collected.

The data collected through the questionnaires were organized and tabulated on the Google Forms platform and exported to Microsoft Excel®. For quantitative analysis, simple descriptive statistics were used, with absolute and relative frequencies calculated for the variables.

Regarding ethical aspects, the study was approved by the Research Ethics Committee (REC) of both the Municipal Health Department and the Human Research Ethics Committee (HREC) of the Universidade Federal de Santa Catarina (UFSC), under opinion no. 6,793,426/2024.

RESULTS

A total of 314 users who met the inclusion criteria were contacted. Of these, 83 (26.4%) answered the phone calls, and 23 (27.7%) agreed to participate in the study. Of the 23 participating users, 1 (4.35%) preferred to receive the link to the questionnaire to answer later, while the remaining 22 (95.6%) answered the questions during the phone call. As for physicians, 3 (60%) agreed to participate in the study, as shown in Table 1.

Table 1. Sociodemographic characteristics of study participants. Joinville, SC, Brazil, 2024

(continue)

Variables	Users		Physicians	
	n	%	N	%
Age group (full years)				
20-30	2	8.7	1	33.3
31-40	2	8.7	2	66.6
41-50	6	26.1		
51-60	8	34.8		
61-70	2	8.7		
>70	2	8.7		
Gender				
Female	14	60.9	2	66.6
Male	9	39.1	1	33.33
Self-reported race				
Black	2	8.7	1	33.33
Mixed race	2	8.7		
White	19	82.6	2	66.6

Table 1. Sociodemographic characteristics of study participants. Joinville, SC, Brazil, 2024

(conclusion)

Variables	Users		Physicians	
	n	%	N	%
Education Level				
Illiterate				
Incomplete Elementary Education	8	34.8		
Incomplete Secondary Education	2	8.7		
Completed Secondary Education	6	26.1		
Incomplete Higher Education	2	8.7		
Completed Higher Education	5	21.7	3	100

Source: Prepared by the authors (2024).

Regarding the positive and negative aspects of the telehealth service for renewing control prescriptions, users reported benefits and limitations associated with using the service. Table 2 shows the distribution of the responses obtained.

Table 2. Positive and negative aspects of teleconsultation for the renewal of prescriptions for controlled medications, according to UHS users. Joinville, SC, Brazil, 2024

Aspect type	Mentioned aspect	n	%
Positives	Practicality (time savings and less travel)	15	65
	Efficiency in service	11	48
	Convenience (perform from anywhere)	6	26
	Quality and helpfulness of medical care	3	13
Negatives	Need assistance in using the technology	7	30
	Difficulty accessing the Internet/device	5	22
	Occasional scheduling/connection issues	2	8
	Preference for in-person service	1	4
Suggestions	Maintain or expand the service	3	13
	More scheduling flexibility	2	8
	Support for the elderly	2	8
	No suggestions	8	35

Source: Prepared by the authors (2024).

When the open question for participants to freely express their opinions was analyzed, different aspects became evident, as shown in Chart 1.

Chart 1. User feedback regarding the evaluated aspects of the telehealth service. Joinville, SC, Brazil, 2024

(continue)

Evaluated aspect	User feedback	Identification*
Practicality	<i>What usually takes me an hour or an hour and a half there, we did in five or ten minutes.</i>	U7
Convenience	<i>I can be working [...] I can be anywhere, because I travel a lot.</i>	U9
Efficiency	<i>It's more practical, and the care is faster than in person.</i>	U13

Chart 1. User feedback regarding the evaluated aspects of the telehealth service. Joinville, SC, Brazil, 2024

(conclusion)

Evaluated aspect	User feedback	Identification*
Technological difficulty	<i>I don't know, during teleconsultations, I have to ask my son for help.</i>	U21
Family support	<i>If it weren't for my cousin in Paraná, I wouldn't be able to manage.</i>	U8
Telephone option	<i>Sometimes they couldn't get in touch through the link, so they called by phone.</i>	U12

*U= User

Source: Study data (2024).

Regarding the positive and negative aspects of telehealth services for renewing prescriptions for controlled substances, physicians reported benefits, challenges, and suggestions for improving the service. Table 3 shows the distribution of responses obtained.

Table 3. Positive and negative aspects of teleconsultation for the renewal of prescriptions for controlled medications, according to physicians. Joinville, SC, Brazil, 2024

Aspect type	Mentioned aspect	n	%
Positives	Flexibility/practicality (care from anywhere)	3	100
	Increased adherence to appointments and treatments	3	100
	Benefit for patients with mobility difficulties	2	67
	Quality and effectiveness of care	3	100
Negatives	Inability to perform physical examinations	3	100
	Difficulty patients have using technology	3	100
	Failure to respect scheduled appointments	5	22
	Unstable internet access (on the patient's part)	2	67
Suggestions	Government planning and investment	2	67
	Guidance and support for patients	1	33
	More publicity for the service	1	33
	Focus on eligible patients	1	33

Source: Prepared by the authors (2024).

As for the analysis of the open question for the free expression of physician participants, aspects related to ease of use and convenience, access to health services, and difficulties arising from the impossibility of performing physical examinations were highlighted, as shown in Chart 2.

Chart 2. Statement by medical professionals regarding telehealth services. Joinville, SC, Brazil, 2024

Evaluated aspect	User feedback	Identification*
Ease of use	<i>I see greater ease for patients with mobility difficulties. The service reduces absenteeism at work and increases adherence to appointments and treatments.</i>	M2, M3
Convenience and flexibility	<i>It is very beneficial because it allows us to reach young patients, who are often unable to visit the health center during business hours due to their work commitments.</i>	M2, M3
Qualidade do atendimento	<i>The only thing that teleconsultation does not allow us to do is perform a physical examination. All other steps inherent to a medical consultation can be performed through teleconsultation, without compromising the quality of care when compared to an in-person consultation.</i>	M1, M2, M3
Access to health services	<i>Teleconsultation amplifies access to healthcare services in the postmodern world. Patients with mobility issues who depend on others for transportation, patients who do not need to miss work for the entire day to attend appointments, can take 15-20 minutes to conduct a teleconsultation, facilitating access.</i>	M1, M2
Limitation of teleconsultation	<i>The main disadvantage is the inability to perform a physical examination of the patient. Patients have difficulty using technology. Users could be selected based on their ability to use digital media, or it could be ensured that they are accompanied by people who can help them join the meeting.</i>	M1, M2, M3

Source: Prepared by the authors (2024).

DISCUSSION

The implementation of teleconsultation for the renewal of control prescriptions, as observed in this study, both by users and physicians in Joinville (SC), Brazil, represents a step forward in the search for greater efficiency and access to health services. Despite this, the American Telemedicine Association projects that more than half of all health services will be provided virtually by 2030, given that patients have adapted to this type of care and expect to continue to be treated through it¹⁷.

In the Brazilian context, a cross-sectional study based on data from BHU teams showed an increase in the use of telehealth resources as a strategy to support clinical practice and continuing health education. In the North and Northeast regions, there was a doubling in the use of these technologies, which played an important role in strengthening the UHS, contributing to the consolidation of a continuous, qualified care flow based on the principles of universality and equity of access¹⁸.

This study showed that most users say that renewing prescriptions using Telehealth Web-Saúde/Ligue-Saúde is convenient because it saves time and reduces travel. The adoption of this tool in the UHS has significant implications that go beyond the clinical aspect, also impacting the socioeconomic lives of patients. Eliminating the need for transportation to health units not only offers financial and operational advantages but

also contributes to greater adherence to treatment, which is a crucial benefit in regions with difficult access or poor public transportation¹⁹.

Another aspect detected was the need for help in using technology and difficulties in accessing the Internet, and connection problems. In this sense, Brazil's socioeconomic vulnerability poses a significant challenge to the dissemination of digital technologies in health. This scenario results in a "digital divide", as millions of Brazilians are disconnected from the Internet or unable to access it daily, which hinders the reach and effectiveness of digital solutions in health²⁰.

Besides the connection issues and the need for help using the platforms mentioned above, it's worth noting that the findings should also be interpreted in light of the participants' sociodemographic profile, since most of them had only completed Elementary School. Moreover, the literature indicates that low educational attainment is associated with lower digital and health literacy, understood as the ability to locate, understand, and apply information in digital media and healthcare contexts, factors that can limit autonomy in the use of technologies and, consequently, reduce the effectiveness of telehealth strategies²¹.

An integrative review highlighted that, despite the widespread increase in Internet use globally, connectivity issues still exist, especially in rural areas and among older adults who do not have access at home. There are also individual variables linked to opinions about information and communication technologies and their use in healthcare. Lack of familiarity with platforms, such as those used in teleconsultations, together with the perception of a possible decrease in the quality of care, can lead to a refusal to abandon in-person health services²².

In this study, physicians' agreement on the potential of teleconsultation to promote adherence and increase flexibility in care is consistent with a review study that reports similar benefits in different primary and specialized health care settings²³. However, the limitation resulting from the absence of physical examination, also highlighted in the literature, remains a central barrier to the consolidation of this modality, requiring complementary strategies, such as the use of virtual physical examinations or the support of multidisciplinary teams.

Despite this, teleconsultation is already widely established in several countries, demonstrating significant benefits that reinforce the relevance of its incorporation into medical practice in the Brazilian context. In a study conducted in England, in which 10 consultations conducted by videoconference were analyzed, it was observed that the absence of direct access by physicians to patients' signs and symptoms was compensated by the performance of nurses who, physically present with the patient, played a fundamental role in performing the physical examination, in the diagnostic process, and in defining treatment. The study concluded that teleconsultation enables the exchange of relevant information between healthcare professionals and allows patient-related concerns to be considered within a collaborative care model focused on diagnosis and treatment²⁴.

The absence of physical examinations during teleconsultations has prompted research into the feasibility and implementation of Virtual Physical Examinations (VPE)²⁵. A scoping review that addressed the implementation of VPE during the COVID-19 pandemic reported that this type of examination involves different methods. According to the study, VPE can be performed through self-examination by patients themselves or with the assistance of third parties, such as family members, lay people, or trained health professionals²⁶.

A review study²⁶ also highlighted the use of innovative health devices to support the performance of VPE, such as a smartphone-based otoscope, a personalized ophthalmic e-device for eye exams, and a virtual reality-based system with haptic feedback for musculoskeletal exams, integrated with technology that allows the user to feel the interactions. Thus, it is believed that, with the advent of Artificial Intelligence (AI) and the exponential advancement of technology, there is significant potential for VPE to show substantial improvements in the near future.

Finally, the narrative analysis of the open-ended questions in this study provided a comprehensive overview of the telehealth service. In general, the results indicated a positive perception among both healthcare professionals and users, who value the benefits of this modality, such as convenience and improved access. However, this study also identified challenges, notably barriers related to patients' technological competence and the limitations inherent in remote care.

This study's findings have some methodological limitations. The main one is the nature of the sample, which, because it's intentional and limited to a single service, restricts how much the results can be generalized. Another critical point is the absence of multivariate analyses, which prevents the assessment of the impact of confounding variables on the observed outcomes. For future investigations, we recommend the inclusion of a systematic qualitative analysis, which may reveal other outcomes not identified in this study.

CONCLUSION

Teleconsultation for the renewal of prescriptions for controlled medications in Joinville (SC) was evaluated favorably by most users and physicians, who highlighted convenience, time savings, and reduced travel as the main benefits, although technological barriers remain. It is a viable and accepted alternative in the UHS, with the potential to expand access, promote treatment adherence, and support managers and professionals in formulating strategies that ensure the sustainability and equity of the service in Primary Health Care.

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Role of Authors:

Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work - **do Amarante KK, Alvarez AG**. Drafting the work or revising it critically for important intellectual content - **Alvarez AG, de Malfussi LBH, Marques JLB, Barra DCC, Dalcól CX**. Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved - **do Amarante KK, Alvarez AG**. All authors approved the final version of the text.

Conflicts of interest:

The authors have no conflicts of interest to declare.

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The authors declare that the data are available in an online repository: <https://repositorio.ufsc.br/handle/123456789/263338>

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