e-ISSN 3083-6018

SOCIAL DEVELOPMENT:
Economic and Legal Issues

https://www.eu-scientists.com/index.php/sdel

Development of Telemedicine in Rural and Remote Territorial Communities: Economic Feasibility, Accessibility, and Social Equity

Yuliya Pereguda [1, 2 *]

[1] *National University of Life and Environmental Sciences of Ukraine (Ukraine). Associate Professor at the Department of Global Economics, Doctor of Science (Economics), Associate Professor.*

[2] *Interregional Academy of Personnel Management (Ukraine). Deputy Head, Professor at the Department of Organization of Tourism Activities of the Educational and Scientific Institute of Management, Economics and Business, Doctor of Science (Economics), Associate Professor.*

* ***Corresponding Author,*** e-mail: julilla.pereguda@gmail.com

ARTICLE INFO

Research Article

DOI: 10.70651/3083-6018/2026.4.19

Received: 16 March 2026
Accepted: 20 April 2026
Published online: 23 April 2026

Copyright © 2026 by authors

This is an open access journal and all published articles are licensed under a Creative Commons Attribution—NonCommercial 4.0 International (CC BY-NC 4.0)

ABSTRACT

The development of telemedicine in rural and remote territorial communities has gained strategic importance under the digitalization of healthcare, persistent geographical inequality in access to care, shortages of medical personnel, and the challenges created by martial law. The purpose of the study is to systematize scientific and regulatory approaches to telemedicine development in such communities, compare international and Ukrainian experience, and identify its economic, organizational, and social significance. The review of contemporary sources shows that telemedicine produces a measurable economic effect by reducing transport, time, and logistical costs, partially substituting in-person contacts, lowering the need for interhospital transfers, and improving the use of limited healthcare infrastructure. For rural and remote communities, its value also lies in broader access to consultations and specialist care, faster contact with physicians, and greater continuity of observation. At the same time, the social effect is not automatic: where digital infrastructure is weak, internet coverage is unstable, and digital competence remains low, telemedicine may reproduce existing barriers rather than remove them. Its effectiveness, therefore, depends not only on technology itself but also on the implementation model, institutional support, staff preparedness, regulatory arrangements, and the integration of remote services into the overall patient pathway. Telemedicine should be treated as an instrument of healthcare digital transformation that combines economic effectiveness, improved accessibility of medical care, and the potential to reduce social inequality. For Ukraine, its development has particular importance for healthcare resilience under martial law and in the period of post-war recovery.

KEYWORDS

telemedicine, digitalization of healthcare, rural territorial communities, remote regions, economic effectiveness, healthcare accessibility, social equity.

e-ISSN 3083-6018

СОЦІАЛЬНИЙ РОЗВИТОК:
економіко-правові проблеми

https://www.eu-scientists.com/index.php/sdel

Розвиток телемедицини в сільських та віддалених територіальних громадах: економічна доцільність, доступність і соціальна рівність

Юлія А. Перегуда [1, 2 *]

[1] *Національний університет біоресурсів і природокористування України (Україна). Доцент кафедри глобальної економіки, д-р екон. наук, доцент.*

[2] *ПрАТ «Вищий навчальний заклад «Міжрегіональна Академія управління персоналом» (Україна). Заступник завідувача, професор кафедри організації туристичної діяльності Навчально-наукового інституту управління, економіки та бізнесу, д-р екон. наук, доцент.*

*** *Автор-кореспондент*,** e-mail: julilla.pereguda@gmail.com

СТАТТЯ

Дослідницька

DOI: 10.70651/3083-6018/2026.4.19

Отримана: 16.03.2026 р.
Прийнята: 20.04.2026 р.
Опублікована: 23.04.2026 р.

Авторське право © 2026 авторів

Цей твір ліцензовано на умовах Ліцензії Creative Commons «Із Зазначенням Авторства – Некомерційна 4.0 Міжнародна» (CC BY-NC 4.0).

АНОТАЦІЯ

Розвиток телемедицини в сільських та віддалених територіальних громадах набув стратегічного значення в умовах цифровізації охорони здоров'я, територіальної нерівності доступу до медичної допомоги, кадрового дефіциту та викликів воєнного стану. Мета дослідження полягає в узагальненні наукових і нормативних підходів до розвитку телемедицини в сільських та віддалених територіальних громадах, зіставленні міжнародного й українського досвіду та визначенні її економічного, організаційного і соціального значення. Систематизація сучасних джерел показала, що телемедицина створює вимірний економічний ефект через скорочення транспортних, часових і логістичних витрат, часткове заміщення очних контактів, зменшення потреби в міжлікарняних переведеннях і раціональніше використання обмеженої медичної інфраструктури. Для сільських та віддалених громад її цінність полягає також у розширенні доступу до консультацій і спеціалізованої допомоги, підвищенні своєчасності контакту з лікарем і підтриманні безперервності спостереження. Водночас соціальний ефект не виникає автоматично: за низької цифрової інфраструктури, слабкого інтернет-покриття та недостатньої цифрової компетентності користувачів телемедицина може відтворювати наявні бар'єри, а не знімати їх. Ефективність телемедичних рішень визначається поєднанням технології, моделі впровадження, інституційної підтримки, підготовленості персоналу, нормативного регулювання та включення дистанційних сервісів у загальний маршрут пацієнт. Телемедицину доцільно розглядати як інструмент цифрової трансформації системи охорони здоров'я, здатний поєднувати економічну доцільність, підвищення доступності медичної допомоги та зниження соціальної нерівності. Для України її розвиток має особливу вагу як елемент стійкості системи охорони здоров'я в умовах воєнного стану та повоєнного відновлення.

КЛЮЧОВІ СЛОВА

телемедицина, цифровізація охорони здоров'я, сільські територіальні громади, віддалені регіони, економічна ефективність, доступність медичної допомоги, соціальна рівність.

1. Introduction

The development of telemedicine in rural and remote territorial communities has gone beyond a purely technological topic and has become a matter of organizing access to medical care in spatially unequal conditions. Such communities are characterized by a limited network of health care facilities, a shortage of doctors, a long time spent on getting to a specialist, as well as increased sensitivity to failures of transport, communications and local infrastructure. Under these conditions, it is advisable to evaluate digital formats of interaction between the patient and the doctor as one of the mechanisms for restructuring the patient's route and redistributing the load in the health care system [1; 2].

For Ukraine, the topic has additional weight due to the combination of three factors. The first is related to long-term structural disparities between urban centers and rural areas in access to health care. The second stems from the digital transformation of the industry, which transfers part of the administrative, communication and clinical processes to a remote format. The third factor is due to martial law, when the continuity of medical support, in particular in communities with complicated logistics, becomes independent. The regulatory framework of Ukraine already enshrines the possibility of using telemedicine both in general mode and under martial law [3-5]. Because of this, the subject of analysis is no longer the question of the feasibility of telemedicine as such, but the conditions under which it really increases the availability of care and reduces inequality.

2. Literature Review

K. Maita, M. Maniaci, D. Perelman et al. [1] The Scoping Review of Digital Solutions for Rural Areas shows that telemedicine should not be evaluated as an assistive technical service, but as a mechanism for bridging the structural gap between the need for care and the real availability of medical infrastructure. A close statement of the problem is offered by S. Colluri, T. Stead, R. Mangal, R. Coffey Jr., J. S. Smith. Littell and L. Ganty [2], who consider telemedicine as a response to rural inequality in access to health care and emphasize that territorial remoteness, personnel shortages, and transport barriers form not episodic, but systemic demand for remote models of care.

K. Tsou, S. Robinson, J. Boyd et al. [6] A systematic review of rural and remote emergency departments proves that telemedicine in the emergency room provides clinically comparable or better outcomes, proper care delivery processes, and, depending on the context, faster decision-making. M. Butzner and J. Coffey [7], analyzing rural communities in the United States, clarify this conclusion: telemedicine models demonstrate positive results for both patients and health workers, but the empirical base remains uneven in terms of nosologies and types of interventions. These authors actually shift the focus from the abstract usefulness of telemedicine to the question of in which segments and under what conditions it produces a reproducible result.

F. Velayati, H. Ayatollahi, M. Hemmat and R. Dehghan [8] transfer the discussion from the clinical plane to the organizational and economic one. Their systematic review of telemedicine business models shows that the scaling of digital services is constrained by both technology and funding architecture, value proposition, partnership configuration, and monetization mechanisms. For this article, such a conclusion is fundamental, since the economic feasibility of telemedicine in rural communities cannot be reduced to the cost of a separate consultation; It depends on the entire model of service organization.

Further deepening of this line is given by S. Wang, E. von Guben, P. P. Sivaprakash et al. [9], which in the review reviews analyze telemedicine through six dimensions of access: physical accessibility, availability of services, acceptability, financial feasibility, adequacy, and awareness. The contribution of this work is that it shows that the positive effect of telemedicine for non-urbanized areas remains incomplete if digital literacy, infrastructure constraints, and cultural barriers are left out of the analysis. D. Simpson, K. Ahmad, M. P. Mosharaf, B. F. Nasir et al. [10] complement this approach with a systematic review of the economic value of virtual primary care for rural populations. The authors summarized 15 studies and showed that telemedicine in rural primary care often provides real cost savings and better cost-benefit ratios, especially for older people, indigenous communities, veterans, and rural adults, but at the same time emphasized the weakness of some economic designs and incomplete reporting.

OECD analytical documents consolidate the transition from a narrow clinical vision of telemedicine to a systemic one. The OECD report [14] considers telemedicine as a tool for maintaining

access to care, which, after the pandemic, requires a new assessment from the standpoint of regulation, payment, quality and proper return on costs. R. Kilara, E. Sutherland, and M. Almiranti [18] develop this logic in a working paper on the post-pandemic implementation of telemedicine: they highlight practices without which scaling remains unsustainable, including granular data, continuous assessment, stakeholder engagement, inclusive governance, and sustainable funding models. For the topic of rural and remote communities, this is important because the problem is not only in the launch of the service, but in its ability to work without deepening spatial and social inequalities.

The Ukrainian segment of literature is still developing in a different logic. K. Lagutina [11] focuses on the legal and organizational issues of the functioning of the telemedicine network of Ukraine, i.e., forms a basic idea of the regulatory and institutional framework. S. Kvitka and M. Myrhorodska [12] consider the digital transformation of healthcare in a broader context as a factor in the quality of life of the population and outline the systemic problems of digitalization of the industry. S. Kvitka and V. Shebanov [13] already directly transfers the analysis to the plane of rural territorial communities and proposes an integrated approach that combines the coordination of public power, the development of digital infrastructure, the training of personnel and ensuring the availability of technologies. However, even in these works, economic efficiency, the actual change in the availability of medical care, and the impact on social equality have not yet been brought together into a single analytical framework. The identified scientific gap is the subject of this study.

3. Problem Statement

The scientific problem is that telemedicine in rural and remote communities is often evaluated in fragments: either as a technical innovation, or as a legal tool, or as a separate form of medical advice. This approach does not allow us to see its systemic effect, which is formed at the intersection of three planes – economic feasibility, actual availability of assistance and social equality. For the digitalization of healthcare, such an integrated assessment is decisive, since the technological availability of the service does not yet mean its real accessibility for the community.

The purpose of the study is to generalize scientific and regulatory approaches to the development of telemedicine in rural and remote territorial communities from the standpoint of economic efficiency, accessibility of medical care and social equality, comparison of international and Ukrainian experience, as well as to determine the economic, organizational and social importance of telemedicine for such communities.

For territorial communities, this means that decisions on the development of telemedicine should not be made in isolation at the level of an individual medical institution, but in a broader management circuit. It is important to take into account which medical services should be transferred to a remote format, how to organize repeated contacts, what should be the ratio of primary care, specialized care and telemedicine consultations, and how to avoid a situation where the digital channel simply duplicates an already overloaded face-to-face route. Economic feasibility in such optics turns into a question of managerial design, and social equality turns into a question of territorially sensitive policy.

Hence, the practical criterion for assessing the success of telemedicine in the context of digitalization of healthcare. A model that reduces unproductive costs, speeds up access to necessary assistance, and does not deepen differences between different groups of the population should be considered successful. For rural and remote communities, this criterion is stricter, but also more accurate, because it is best seen whether telemedicine works as a real mechanism for increasing accessibility, or remains a formal digital option without a clear social effect.

4. Methods and Materials

The materials of the study were scientific articles, systematic and scoping reviews, analytical reports of international organizations, industry reviews, applied case studies and regulations on the development of telemedicine in rural and remote regions. The methodological framework of the study was formed by bibliographic, systemic, comparative and logical-analytical methods, the method of scientific generalization and content analysis of regulatory documents. The systematic approach made it possible to consider telemedicine as part of the organization of the medical route; comparative – to

compare international practices with the Ukrainian normative field; logical-analytical – to identify the conditions under which the economic and social effect arises or, conversely, is leveled.

The source base of this review is not limited to a single country or one type of service, so the results should not be interpreted as a universal recipe for implementation. Instead, it allows you to identify recurring patterns: the higher the spatially determined cost of access to face-to-face care, the more tangible the benefits of telemedicine become; The weaker the digital infrastructure and user skills, the higher the risk that formal accessibility will not turn into real use. For rural and remote territorial communities, these patterns are of applied importance, as they make it possible to move from general approval of telemedicine to the specific design of models for its use.

5. Results and Discussion

The analysis of sources showed that the economic effect of telemedicine in rural and remote territorial communities is measurable and practical. Its basic basis is the reduction of costs directly related to distance: transport, time, organizational and logistics. According to the OECD, in Canada, the use of teleconsultations instead of face-to-face visits gave patients an average saving of CAD 144 per contact, and in England, video consultations provided a cumulative savings of £40 million in transportation costs and 530 years of travel and waiting time [14]. For rural areas, such results are especially indicative, since the cost of access to assistance here is often determined not only by the price of the service itself, but by the cost of travel, accompaniment and lost time.

The economic effect is enhanced when telemedicine avoids unnecessary transfers of patients between institutions. A summary of the Rural Health Information Hub shows that the use of tele-emergency care in rural hospitals provides about $3,800 in savings per patient in cases where the transfer was avoided [15]. Reviews of virtual care for the rural population contain a similar conclusion: for individual programs, the average savings for patients were about 475 Canadian dollars per visit, and the avoided distance exceeded 500 km [16]. Telemedicine works as a tool to reduce the cost not of a single consultation, but of the entire way of receiving help.

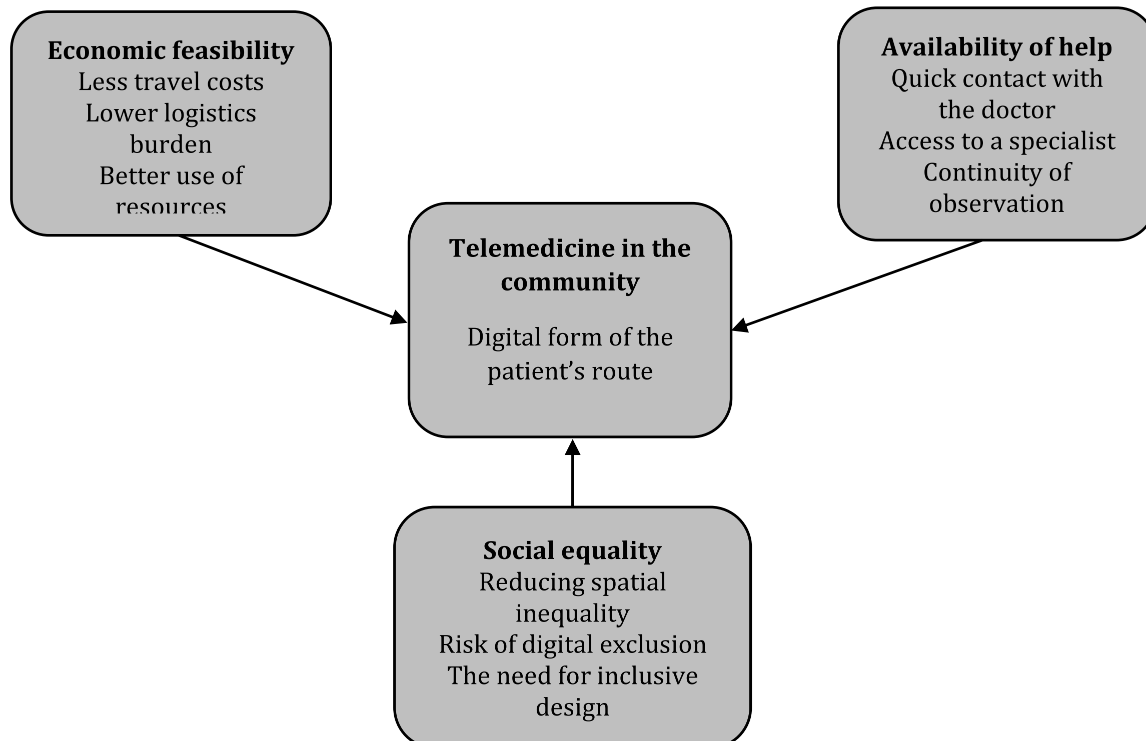

Figure 1. Integrated model of telemedicine effects in the territorial community

Source: Developed by the author based on [1; 9; 18].

The systematization of these channels gives grounds to identify several key lines of economic effect: reducing private household expenses, reducing the logistical burden on the system, reducing the number of transfers and more rational use of local infrastructure. Figure 1 summarizes an integrated

model of the impact of telemedicine on economic feasibility, access to care and social equality. A stable result in this model occurs only when these three planes do not conflict with each other, but are mutually reinforcing.

At the same time, economic efficiency reviews emphasize that a positive financial result is not automatic. It appears that remote contact really replaces part of face-to-face care, and does not generate additional unreasonable demand, and where a digital solution is embedded in the organizational logic of service delivery [8; 10; 14]. Because of this, telemedicine cannot be evaluated separately from the funding model, patient routing, staffing, and degree of institutional support.

Figure 2 summarizes several quantitative benchmarks that best illustrate the applied content of the economic effect for rural and remote communities. We are talking about concrete shifts in costs and accessibility: less travel, less loss of time, less need for transfers, lower burden on the household and the health care system. In this area, telemedicine is an element of digitalization of medical care, which has a direct socio-economic dimension, and not just technological novelty.

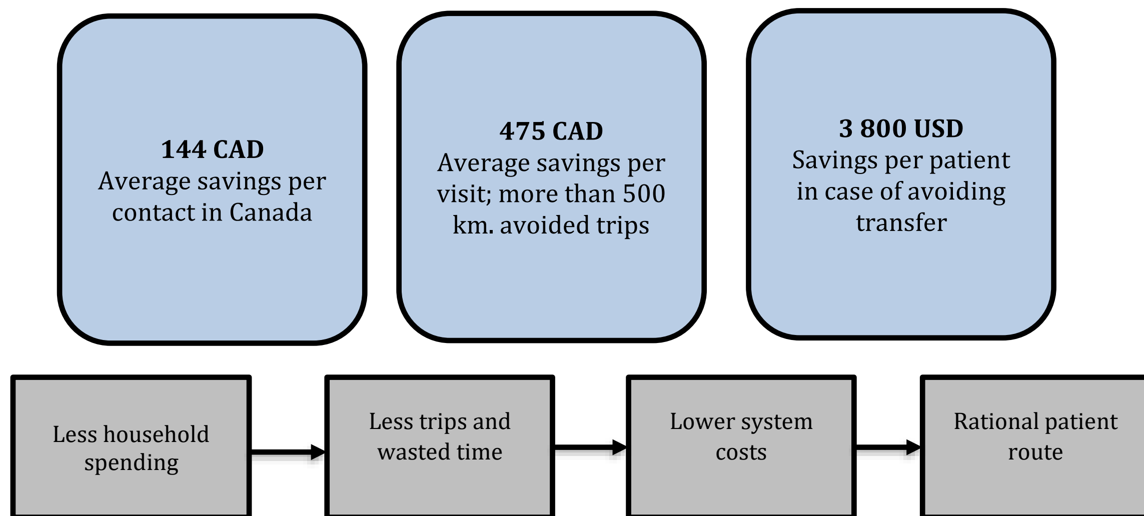

Figure 2. Key channels of the economic effect of telemedicine for rural and remote communities

Source: Developed by the author based on [14–16].

The second dimension is related to the availability of care. For rural areas, it is determined not only by the presence of a doctor in the system, but also by the patient's ability to actually make contact at an acceptable time and without high costs. In this sense, telemedicine reduces the spatial barrier, expands access to specialized consultations and maintains continuity of follow-up in cases where a face-to-face visit is not mandatory [1; 6; 7]. At the same time, the organizational effect depends on the extent to which the remote service is integrated into the work of the primary link, the hospital level, and the referral system [17].

A separate block of factors concerns the organizational architecture of telemedicine services. A systematic review of business models in telehealth shows that the result depends on who acts as the integrator of the service, how the costs are distributed between the patient, the institution and the payer, what the compensation mechanism is, and whether there is a stable channel of technical support and administration [8]. For rural communities, this is of particular importance, since even a clinically feasible solution can be unsustainable if it is based only on a short-term project or a local initiative of an individual institution. In this case, economic efficiency will be one-time, not systemic.

Studies on the implementation of telemedicine in inaccessible critical access hospitals also show that the key prerequisites for sustainable use are staff training, clear operating protocols, technical compatibility of solutions, and external support at the launch stage [17]. For the Ukrainian context, this is an important clarification: the lack of equipment or communication is only part of the problem. No less important are the organizational skills of local teams, a clear distinction between cases where remote consultation is sufficient and cases where it should only accompany the face-to-face route. Otherwise, telemedicine either overloads staff with additional functions or remains nominally available, but little used.

Telemedicine has another advantage: it reduces the dependence of access to care on the density of physical infrastructure. For urban areas, this advantage is often secondary, as eye contact is mostly achievable. For rural communities, the situation is different: the spatial gap between patient and specialist forms a large part of the inequality. Therefore, even a relatively small reduction in the number of face-to-face trips can have a disproportionately large effect for individual households, especially in older age groups, for patients with chronic conditions, and for people with limited mobility [10; 16].

The third dimension concerns social equality. In this area, it is not the availability of digital services that is of key importance, but the relationship between the digital infrastructure of the community and the willingness of users to use them. If internet coverage is unstable, devices are unavailable, and the digital competence of patients and healthcare professionals is low, then the formal availability of telemedicine does not remove barriers. It can even consolidate them by transferring some services to a format to which vulnerable groups do not have real access [9; 13; 18]. Figure 3 shows a matrix demonstrating different configurations of this effect depending on the combination of infrastructure and digital readiness of users.

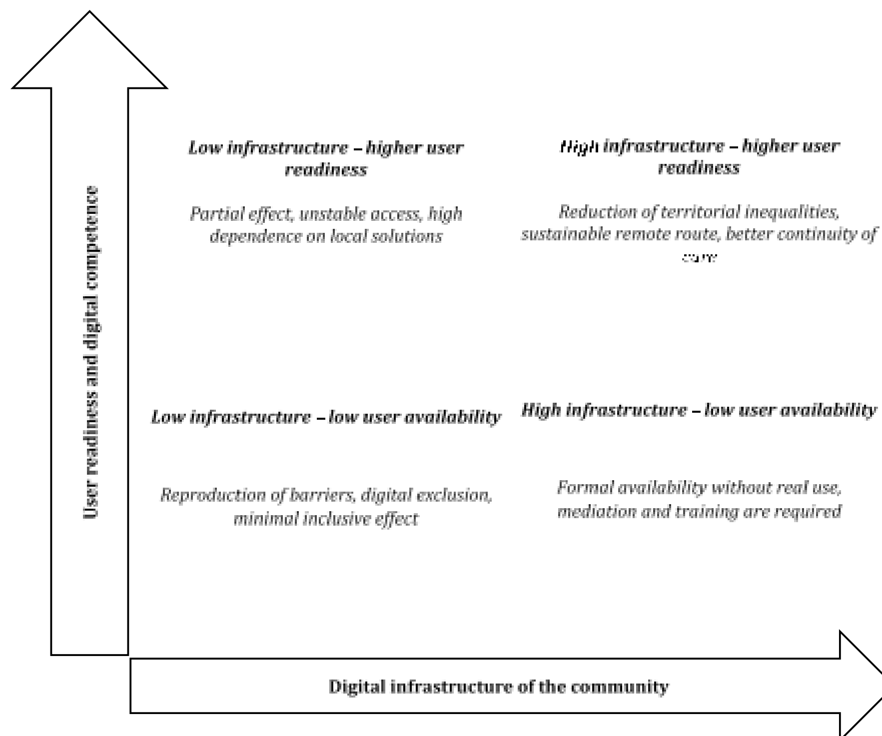

Figure 3. Matrix of the impact of telemedicine on social equality

Source: Developed by the author based on [9; 13; 18].

Significantly, reviews on equity in the field of telemedicine interpret equality not as formal access to the platform, but as a real ability to use the service without losing the quality of care [9]. This changes the evaluation criteria. It is not enough to record the fact of launching a telemedicine service or the number of connected institutions. It is necessary to analyze who uses the service, which groups fall out of its coverage, and whether telemedicine replaces the necessary face-to-face visit with a cheaper, but clinically insufficient interaction. For rural and remote communities, this framework is particularly appropriate, as the risk of hidden digital exclusion is highest here.

For Ukraine, this conclusion is of fundamental importance. Legislative and by-laws create a basic opportunity for the use of telemedicine [3–5], but its actual effectiveness will be determined not by the norm as such, but by the state of the digital infrastructure of territorial communities, the availability of services, staff training, and the ability to include remote care in the standard patient route. Digitalization of healthcare ceases to be a set of separate electronic solutions and moves into the plane of service availability management. Ukrainian research rightly emphasizes the need for an integrated approach to the digitalization of the industry, but for rural communities, this approach should also be spatially sensitive [12; 13].

The Ukrainian context adds to this problem the dimension of the resilience of the health care system. During martial law, not only the usual disproportions between the center and the periphery are important, but also the interruption of aid routes, the displacement of the population, the instability of staffing, the burden on primary care and the restriction of the physical security of certain territories. In such conditions, telemedicine can compensate for part of the loss of availability, but only if there is a digital infrastructure and an organizational readiness to work in a mixed format [5]. Therefore, its development in rural communities should be evaluated not only as an element of modernization, but also as part of the architecture of health sustainability.

Regulations of Ukraine created a basic mode of functioning of telemedicine even before the full-scale war, and subsequent decisions adapted it to emergency conditions [3-5]. However, the rule of law alone does not eliminate asymmetry between communities. The combination of legal permission with the infrastructural and managerial capacity of a particular territory becomes decisive. The development of telemedicine in rural and remote communities should be considered in connection with broader digital alignment policies, and not only within the medical field of narrowly understood digitalization.

Generalization shows that telemedicine gives the highest result where it reduces the number of unnecessary patient movements, provides quick access to a specialist or consultation, does not break away from the general clinical route and is accompanied by training and technical support for users. Without this, the digital service may remain outwardly modern, but internally it is not very effective. For the analysis of rural and remote communities, this is a key thesis, since it is not the presence of innovation itself that is valued here, but its ability to really change access to assistance for the benefit of the community.

It is advisable to interpret telemedicine as a tool for the digital transformation of the health care system, the effect of which is manifested in three interrelated results: economic rationalization of medical care, expansion of the actual availability of services, and the potential for reducing territorial and social inequality. Its effect disappears or weakens when at least one of the components falls out: when there is technology, but there is no inclusion; when there is a regulatory permit, but there is no local infrastructure; when there is a service, but it is not built into the clinical and organizational logic of care. The development of telemedicine in rural and remote communities should be assessed within the broader framework of digitalization of health care, rather than as an isolated technical project.

The above provisions are confirmed by modern cases of telemedicine implementation in spatially vulnerable areas. In British Columbia, the Rural Urgent Doctor in-aid pathway was deployed as part of the Real-Time Virtual Support network to support Dawson Creek District Hospital in the face of a shortage of doctors. In six months, remote doctors covered 39-night shifts and acted as responsible doctors for 245 patients, which made it possible to avoid the closure of the emergency department and reorient the flow of patients to another rural hospital. In this case, telemedicine performed not an auxiliary, but a system-sustaining function, while maintaining the availability of care and the resilience of the local institution [19].

In northern Sweden, a model of video consultations between rural community hospitals and a general practitioner demonstrated another aspect of the effect. Patients in seven small Västerbotten hospitals perceived this format as a real expansion of access to the doctor, appreciated the possibility of direct communication with him and a sense of inclusion in the decision-making process. At the same time, experience has shown that the quality of remote interaction directly depends on the training of a nurse as a local coordinator and on technical equipment, that is, even with a positive perception, telemedicine remains sensitive to the organizational architecture of the service [20].

In hard-to-reach areas of Balotra district in the Indian state of Rajasthan, telemedicine through primary health centers has increased the speed of consultations, reduced patient transportation costs and improved case management. At the same time, a qualitative study recorded that the effect of implementation is constrained by a weak Internet connection, insufficient staff training, and low digital literacy of some users, confirming that telemedicine is able to reduce access inequality, but does not automatically remove barriers under unfavorable infrastructure conditions [21].

The economic and organizational effect was even more pronounced in the Brazilian project UBS+Digital, implemented in 15 primary care units in different regions of the country. In 2023, the project provided 6312 telemedicine sessions, trained 342 specialists, and achieved 85% case resolution without additional referrals. The isolated river area was especially indicative, where 872 teleconsultations were held in seven months, and a total of 205,792 km of patient trips were avoided.

Here, telemedicine has proven the ability to simultaneously reduce logistics costs, maintain primary care without the constant presence of a doctor on site, and increase territorial equity of access [22].

In the UK, experience of remote video consultations for patients in need of palliative care and living in rural and remote areas, faster and more convenient access to professional support and reduced travel needs have been recorded. At the same time, the researchers emphasized that this format is most effective in a mixed model, when video consultation complements rather than displaces face-to-face home visits. For the argumentation of the article, this is indicative, since social equality in telemedicine depends not only on the very fact of digital contact, but also on the extent to which the service is adapted to the clinical situation, age, social status, and practical capabilities of the patient [23].

Collectively, these cases confirm that telemedicine in rural and remote territorial communities gives the best result where it simultaneously reduces spatial barriers, is embedded in the local organization of care, is accompanied by staff training, and takes into account digital inequality as a separate management risk.

6. Conclusions

Telemedicine in rural and remote territorial communities is one of the working mechanisms for restructuring access to medical care, and not just an auxiliary digital channel. Its practical value is determined by the ability to reduce the cost of time and money for receiving services, increase the timeliness of contact with a doctor, expand access to specialized care and maintain continuity of observation in conditions of spatial distance. In the economic dimension, telemedicine is most effective where it replaces part of eye contact, reduces the logistical burden and allows some cases to be left at the local level without unnecessary transfers.

The social effect of telemedicine depends on the inclusiveness of its implementation. With proper digital infrastructure, accessible communications, technical support, and sufficient digital competence, it reduces territorial inequalities and makes medical care more accessible to rural populations. Under opposite conditions, telemedicine risks reproducing existing barriers in a new form. For Ukraine, this means that the development of telemedicine should be considered as a component of the digitalization of healthcare, combined with a policy of infrastructure alignment, user training, and organizational integration of remote services into the overall system of assistance under martial law and post-war recovery.

Prospects for further research are related to the construction of applied models for assessing the economic efficiency of telemedicine for different types of territorial communities, measuring its impact on patient routing, and analyzing under which combinations of infrastructure, funding and digital competence it really reduces inequality of access to medical care.

References

1. Maita, K. C., Maniaci, M. J., Perelman, D., et al. (2024). The impact of digital health solutions on bridging the health care gap in rural areas: A scoping review. *The Permanente Journal*, *28*(2), 189–201. https://doi.org/10.7812/TPP/23.134
2. Kolluri, S., Stead, T. S., Mangal, R. K., Coffee, R. L., Jr., Littell, J., & Ganti, L. (2022). Telehealth in response to the rural health disparity. *Health Psychology Research*, *10*(3), Article 37445. https://doi.org/10.52965/001c.37445
3. Verkhovna Rada of Ukraine. (2017, November 14). *Pro pidvyshchennia dostupnosti ta yakosti medychnoho obsluhovuvannia u silskii mistsevosti* [On increasing the accessibility and quality of medical care in rural areas] (Law No. 2206-VIII). https://zakon.rada.gov.ua/laws/show/2206-19 (in Ukrainian)
4. Ministry of Health of Ukraine. (2015, October 19). *Pro zatverdzhennia normatyvnykh dokumentiv shchodo zastosuvannia telemedytsyny u sferi okhorony zdorovia* [On approval of regulatory documents on the use of telemedicine in healthcare] (Order No. 681). https://zakon.rada.gov.ua/laws/show/z1400-15 (in Ukrainian)
5. Ministry of Health of Ukraine. (2022, September 17). *Pro zatverdzhennia Poriadku nadannia medychnoi ta/abo reabilitatsiinoi dopomohy iz zastosuvanniam telemedytsyny na period dii voiennoho stanu v Ukraini abo okremykh yii mistsevostiakh* [On approval of the procedure for providing medical and/or rehabilitation care using telemedicine during martial law in Ukraine or in certain localities] (Order No. 1695). https://zakon.rada.gov.ua/laws/show/z1155-22 (in Ukrainian)

6. Tsou, C., Robinson, S., Boyd, J., et al. (2021). Effectiveness of telehealth in rural and remote emergency departments: Systematic review. *Journal of Medical Internet Research*, *23*(11), Article e30632. https://doi.org/10.2196/30632
7. 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), Article e29575. https://doi.org/10.2196/29575
8. Velayati, F., Ayatollahi, H., Hemmat, M., & Dehghan, R. (2022). Telehealth business models and their components: Systematic review. *Journal of Medical Internet Research*, *24*(3), Article e33128. https://doi.org/10.2196/33128
9. Wang, S., von Huben, A., Sivaprakash, P. P., et al. (2025). Addressing health service equity through telehealth: A systematic review of reviews. *Digital Health*, (11), 20552076251326233. https://doi.org/10.1177/20552076251326233
10. Simpson, D., Ahmad, K., Mosharaf, M. P., Nasir, B. F., Kondalsamy-Chennakesavan, S., McGrail, M., Wallis, K. A., & Alam, K. (2025). The economic value of virtual primary healthcare services for rural populations: A systematic review. *Health Policy and Technology*, *14*(5), 101067. https://doi.org/10.1016/j.hlpt.2025.101067
11. Lahutina, K. O. (2020). Telemedychna merezha v Ukraini [Telemedicine network in Ukraine]. *Yurydychnyi naukovyi elektronnyi zhurnal*, (2), 38–41. https://doi.org/10.32782/2524-0374/2020-2/8 (in Ukrainian)
12. Kvitka, S., & Myrhorodska, M. (2024). Tsyfrova transformatsiia systemy okhorony zdorovia: Faktory vplyvu na yakist zhyttia naselennia [Digital transformation of the healthcare system: Factors influencing quality of life of the population]. *Aspekty publichnoho upravlinnia*, *12*(1), 14–21. https://doi.org/10.15421/152402 (in Ukrainian)
13. Kvitka, S., & Shebanov, V. (2025). Tsyfrovizatsiia systemy okhorony zdorovia v silskykh terytorialnykh hromadakh Ukrainy: Intehrovanyi pidkhid [Digitalization of the healthcare system in rural territorial communities of Ukraine: An integrated approach]. *Aspekty publichnoho upravlinnia*, *13*(2), 75–84. https://doi.org/10.15421/152522 (in Ukrainian)
14. OECD. (2023). *The COVID-19 pandemic and the future of telemedicine*. OECD Publishing. https://doi.org/10.1787/ac8b0a27-en
15. *Telehealth and health information technology in rural healthcare*. (2024). *Rural Health Information Hub*. https://www.ruralhealthinfo.org/topics/telehealth-health-it
16. Rush, K. L., Seaton, C., Li, E., et al. (2022). Rural use of virtual care: A scoping review. *International Journal of Environmental Research and Public Health*, *19*(3), Article 1206. https://doi.org/10.3390/ijerph19031206
17. Haque, S. N., DeStefano, S., Banger, A., Rutledge, R., & Romaire, M. (2021). Factors influencing telehealth implementation and use in frontier critical access hospitals: Qualitative study. *JMIR Formative Research*, *5*(5), Article e24118. https://doi.org/10.2196/24118
18. Keelara, R., Sutherland, E., & Almyranti, M. (2025). *Leading practices for the future of telemedicine: Implementing telemedicine post-pandemic* (OECD Health Working Papers No. 173). OECD Publishing. https://doi.org/10.1787/496a8ffe-en
19. Novak Lauscher, H., Blacklaws, B., Pritchard, E., Wang, E. J., Stewart, K., Beselt, J., Ho, K., & Pawlovich, J. (2023). Real-Time Virtual Support as an Emergency Department Strategy for Rural, Remote, and Indigenous Communities in British Columbia: Descriptive case study. *Journal of Medical Internet Research*, (25), Article e45451. https://doi.org/10.2196/45451
20. Ärlebrant, L., Dubois, H., Creutzfeldt, J., & Edin-Liljegren, A. (2024). Emergency care via video consultation: Interviews on patient experiences from rural community hospitals in northern Sweden. *International Journal of Emergency Medicine*, *17*(1), Article 109. https://doi.org/10.1186/s12245-024-00703-4
21. Huda, R. K., Chowhan, R. S., Arora, S., Seervi, D., Verma, S., Singh, J., Kalra, S., Choudhary, A., Sangwan, R. K., Khetan, M., & Babu, B. V. (2025). Perceptions of healthcare workers and patients on the implementation of telemedicine in hard-to-reach areas: A qualitative study from Rajasthan, India. *Digital Health*, (11), 20552076251331874. https://doi.org/10.1177/20552076251331874
22. de Almeida Lamas, C., Santana Alves, P. G., de Araújo, L. N., et al. (2025). Telehealth Initiative to Enhance Primary Care Access in Brazil (UBS+Digital Project): Multicenter prospective study. *Journal of Medical Internet Research*, (27), Article e68434. https://doi.org/10.2196/68434
23. Dismore, L., Frew, K., Wakefield, D., Bryan, C., Swainston, K., et al. (2025). Remote and rural communities face inequalities in access to specialist palliative care, could telemedicine enhance care? A qualitative study of patient, carer and healthcare professionals' experiences of video consultation. *Palliative Care and Social Practice*, (19), 26323524251380632. https://doi.org/10.1177/26323524251380632