From fragmentation to alignment: Why telehealth societies must shape the next phase of global digital health

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Abstract

National telehealth and eHealth societies are essential actors in digital transformation, yet their impact remains uneven, fragmented, and insufficiently coordinated. Drawing on trends across ten countries, including Finland, Germany, India, the Ivory Coast, Japan, Jordan, Morocco, Nigeria, Poland, and Slovenia, this opinion argues that these societies hold crucial but underused positions in global digital health governance. They contribute to evidence generation, regulatory discourse, workforce development, and the adaptation of digital solutions to local contexts. However, without structured mechanisms for collaboration, such strengths remain isolated and global disparities deepen. We propose that the International Society for Telemedicine and eHealth (ISfTeH) can evolve from a networking platform into an orchestrator that consolidates knowledge, reduces duplication, and supports equitable digital transformation. The future of telehealth depends not only on technological innovation but also on institutions' capacity to share expertise, co-develop strategies, and build collective capabilities.

Keywords: telemedicine, digital health, ehealth, international cooperation, health organizations

The emerging role of national telehealth societies

Telehealth, defined as the remote delivery of healthcare services, clinical support, and health-related education through information and communication technologies [1,2], has become a core component of contemporary healthcare systems. Together with eHealth, which refers to the use of digital technologies to support health services, surveillance, education, knowledge dissemination, and research via electronic communication

systems [3], telehealth operates within the broader field of digital health. Digital health encompasses telehealth, eHealth, mobile health applications, health information systems, artificial intelligence, and other data-driven innovations designed to improve health outcomes and system efficiency [4].

As digital health expands, its integration into health policy, governance, regulation, reimbursement, workforce readiness, and technical standards faces challenges comparable to those posed by the technologies themselves. These challenges are intensifying as artificial intelligence is increasingly integrated into healthcare delivery. National digital health organizations complement ministries and regulators by linking clinicians, researchers, educators, policymakers, and industry partners. Across the ten countries examined, these societies help identify implementation barriers, inform policy discussions, and support coordination, while formal authority remains with governmental and professional bodies. The countries included correspond to national digital health societies that responded to a structured questionnaire circulated by the ISfTeH National Members Group [5], designed to capture institutional perspectives rather than to conduct a comparative evaluation.

The roles these societies play vary across contexts. Finland [6] combines research, policy analysis, and systemic transformation, while Germany [7] guides reimbursement for digital services and the diffusion of digital therapeutics. India [8] serves as a pivotal hub for capacity building and the extension of telemedicine services to underserved regions. Ivory Coast [9] strengthens digital health through training, multistakeholder collaboration, and support for national strategies. Japan [10] emphasizes academic rigor and evidence generation. Jordan [11] supports the field through legislative analysis and education in health and biomedical informatics. Morocco [12] highlights the importance of digital health education and emerging disciplines such as digital nursing and sports telemedicine. Nigeria [13] is working to establish standards adapted to its healthcare system. Poland [14] brings together universities, healthcare institutions, and industry, while Slovenia [15] links national institutions with scientific and technical communities and supports nationwide digital services.

As a group, these associations contribute to evidence generation, standards development, training, and the contextual adaptation of digital innovations. However, their impact remains constrained by structural limitations. Many operate on a voluntary basis, rely heavily on unpaid work, face unclear or uneven funding, and receive limited political attention, creating a tension between strategic importance and operational capacity.

Fragmentation as a barrier to equitable digital transformation

Telehealth fragmentation spans knowledge, regulation, capacity, and coordination, isolating progress and widening inequities. ISfTeH [5] can bridge these gaps by pooling evidence, aligning practices, strengthening skills, and convening actors. The primary issue is not an absence of information but rather a deficiency in cohesion. Countries possess varying capabilities due to differences in their infrastructure, resources, regulations, and political backing. Finland [6] and Germany [7] both possess highly advanced digital ecosystems. India [8] excels in skills development, whereas Japan [10] demonstrates exceptional expertise in evidence gathering. Ivory Coast [9] has the capacity to expand its training infrastructure; however, it must address the challenges that hinder individuals' access to it. Jordan [11] is affiliated with a multidisciplinary informatics organization that reviews national

telehealth legislation and supports its members' professional development. Morocco [12] and Nigeria [13] face funding constraints and regulatory uncertainty. Poland [14] navigates partial digitization and evolving legal frameworks, and Slovenia [15] benefits from strong institutional ties but struggles with communication. These differences cause organizations to work in isolation rather than in coordination.

Fragmentation also affects regulation, reimbursement, interoperability, workforce development, and evidence generation. Even when facing shared challenges, such as limited digital literacy, defined as the ability to access, understand, evaluate, and effectively use digital health tools and information [16], trust issues, or infrastructure limitations, countries often respond independently, resulting in duplication and inefficiency. Gaps in digital inclusion, understood as equitable access to digital technologies, connectivity, and skills [17], further exacerbate disparities. Telemonitoring, which involves the remote collection and transmission of patient health data for clinical assessment and follow-up, particularly in chronic disease management [18], remains unevenly implemented across contexts. Similarly, clinical informatics, defined as the application of informatics principles and information systems to deliver, manage, and improve patient-centered clinical care [19], is inconsistently embedded within healthcare systems.

This unbalanced landscape risks widening global disparities and undermining preparedness for health emergencies, where inconsistent regulations and incompatible telemedicine systems hinder rapid response. National societies possess considerable expertise, but their collective impact depends on more effective collaboration to advance the overall maturity of global digital health.

Toward a coordinated global network: The strategic role of ISfTeH

Given this wide disparity across national health systems, advancing digital health requires a collaborative global network rather than centralized directions. ISfTeH is well-positioned to support this transition by convening actors across clinical practice, policy formulation, education, and technology development. To move from facilitator to orchestrator, several priorities should be advanced.

First, shared knowledge infrastructures, including repositories of training materials, regulatory templates, and implementation toolkits developed by national societies, can reduce duplication and support countries with limited resources. Second, coordination of comparative research and joint publications across multiple countries can generate real-world evidence, particularly in areas such as telemonitoring, artificial intelligence, digital inclusion, and cross-border telemedicine. Third, structured capacity-building initiatives, such as mentorship programs and twinning partnerships, can connect more established societies in Germany, Finland, and Japan with organizations in Morocco, Nigeria, Poland, and Slovenia. Fourth, strengthening interdisciplinary collaboration can improve integration across clinical, technical, educational, and research domains. Finally, the development of aligned curriculum frameworks can help ensure consistent digital health competencies among healthcare professionals.

These methods do not restrict the sovereignty of nations. Instead, they enhance it by implementing aligned methodologies that leverage shared knowledge and mutual learning.

Conclusion

National telehealth societies are indispensable for digital health governance, professional training, evidence generation, and implementation. However, their overall influence remains constrained by fragmentation and limited international coordination. The future of telehealth depends not only on technological innovation but also on institutions' ability to collaborate, communicate, and share knowledge across borders. By evolving into a global orchestrator, ISfTeH can consolidate expertise, strengthen systems, and accelerate equitable digital transformation while respecting national contexts.

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Conflict of interest

The authors declare no conflicts of interest.

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